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# Vulnerability and the Climate Change Regime

*Atieno Mboya*

## ABSTRACT

Climate change is precipitating social issues that are not traceable to a discreet, culpable actor. This is because greenhouse gas accumulation in the stratosphere is a global problem transcending the socio-political boundaries that law uses to assign responsibility. The diffuse nature of climate change calls for new legal approaches that can provide greater juridical responsiveness<sup>1</sup> to social problems and universal human vulnerability that is emerging in the wake of one of the most pressing environmental challenges facing the international community today.<sup>2</sup> Those social problems include displacement and dispossession of indigenous communities whose livelihoods depend directly on their environment, such as Arctic communities in Alaska, rural dwellers in the Himalayas, livestock farmers in the Kalahari, and forest-dwellers in the Amazon.<sup>3</sup> Farming communities reliant upon rain-fed

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1 Anna Grear, *Vulnerability, Advanced Global Capitalism and co-Symptomatic Injustice: Locating the Vulnerable Subject*, in *VULNERABILITY: REFLECTIONS ON A NEW ETHICAL PARADIGM FOR LAW AND POLITICS* 41, 41 (Martha Alberston Fineman & Anna Grear eds., 2013).

2 David Hunter, James Salzman & Durwood Zaelke, *INTERNATIONAL ENVIRONMENTAL LAW & POLICY* 3RD ED. 631. Foundation Press, NY (2007).

3 *Climate Change and Indigenous Peoples*, UNITED NATIONS PERMANENT FORUM ON INDIGENOUS ISSUES, [http://www.un.org/en/events/indigenoustday/pdf/Backgrounder\\_ClimateChange\\_FINAL.pdf](http://www.un.org/en/events/indigenoustday/pdf/Backgrounder_ClimateChange_FINAL.pdf) [<http://perma.cc/7G3H-M9MP>].

agriculture also face food insecurity due to changing, unpredictable rainfall patterns.<sup>4</sup> While social impacts may be most keenly felt at the local level, the global nature of climate change means that jurisprudential bases of law at all levels— local, national, regional, and international<sup>5</sup>—need to promote coherent legal responses that recognize the global genesis of what may be seen as localized problems.

This essay will draw on human vulnerability theory to discuss law's role in promoting social justice in the wake of climate change. Vulnerability is the "characteristic that positions us in relation to each other as human beings and also suggests a relationship of responsibility between the state and its institutions and the individual."<sup>6</sup> Vulnerability theory critiques the contemporary understanding of "the legal subject," which is built on an ideology that values liberty over equality and manipulates contractual concepts such as choice and consent to justify exploitation and structural inequality.<sup>7</sup> That inequality has distorted and constrained the conception of the legal subject into a narrow and limited autonomous subject that is at the center of the analysis that law uses to organize society.<sup>8</sup> Human vulnerability theory calls for enriching the legal subject by

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4 Berhanu F. Alemaw & Timothy Simalenga, *Climate Change Impacts and Adaptation in Rainfed Farming Systems: A Modeling Framework for Scaling-Out Climate Smart Agriculture in Sub-Saharan Africa*, 4 AM. J. OF CLIMATE CHANGE 313 (2015).

5 See Klaus Bosselmann, *THE RULE OF LAW GROUNDED IN EARTH* (2013), p.5.

6 *Vulnerability and the Human Condition*, EMORY UNIVERSITY, <http://web.gs.emory.edu/vulnerability/index.html> [<http://perma.cc/D363-SFCR>] [hereinafter Vulnerability Index].

7 *Definitions of Vulnerability and the Human Condition Initiative*, EMORY UNIVERSITY, <http://web.gs.emory.edu/vulnerability/about/definitions.html> [<http://perma.cc/D363-SFCR>].

8 See Martha Albertson Fineman, *THE AUTONOMY MYTH*, The New Press (2004). In this book, Fineman argues that popular ideology in the United States (and adopted in other common law based legal systems) has become fixated on the myth that citizens are and should be autonomous. However, the fact is that dependency is unavoidable in any society and human beings are more or less dependent on others at all stages in the human life-cycle. I extend the notion of dependency to our dependence on the environment and the resources it provides for our subsistence on Earth throughout our lives.

placing it in social context, and engaging with its complex and dynamic characteristics.

The paper is divided into five Parts. Part I provides an overview of human vulnerability theory. Part II presents a vulnerability perspective on liberalism and neoliberalism, two theories that underlie the current global climate regime. Part III examines the concept of vulnerability in the climate discourse, while Part IV applies human vulnerability theory to the global climate regime. The final part states the conclusions.

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#### I. HUMAN VULNERABILITY THEORY

Human vulnerability analysis is a mode of studying law and institutions. It draws from empirical realities of the human condition, situating the legal subject as a complex, multifaceted person whose engagement with the law is normally begins at birth (through birth registration, for example) and continues into childhood, adolescence, adulthood, and old age. At each stage, a constant characteristic of the human condition is that of vulnerability, which arises from physical embodiment. This *vulnerable subject*, it is posited, should be regarded as the true subject of law and placed at the center of state and institutional programs whose role is to foster resilience across the life-span. In this context, resilience is best understood as the capacity to withstand or survive harm, deprivation, or injury.

The vulnerable subject is a legal entity that transcends the autonomous, independent, liberal legal subject that captures just one stage in the life course—that of the independent adult at the peak of physical resilience. When placed at the center of political

and social endeavors, the vulnerable subject expands current ideas of state responsibility that revolve around a static legal subject, and refocuses the state toward responsiveness to the dynamic social and material lives of vulnerable subjects embedded in social relationships and institutions.<sup>9</sup> This calls for incorporation of the inevitability of change into the political project of conceiving the legal subject, thereby creating a complex subject to guide the way we define individual, institutional and state responsibilities. This approach provides a basis for questioning and critiquing current allocations of responsibility for individual and societal well-being across the individual, the state, and societal institutions.<sup>10</sup>

Vulnerability theory sees resilience as not merely a response to tragedy or injury, but as how we generate individual and collective well-being during all stages of life. The State and societal institutions are at the heart of fostering human resilience, a perspective that compels us to ask: Which institutions should provide resources to support human flourishing while encouraging environmental sustainability? The central issue involved is how we arrange our social institutions for successful environmental management, which requires balancing our natural resource extraction needs with conservation.

Resilience, therefore, is measured only in part by an individual's ability to survive or recover from harm or setbacks that inevitably occur in one's lifetime. Rather, resilience has important positive implications for individual and social progress as well. Resilient individuals can form relationships, undertake transactions, take advantage of opportunities, and take risks, confident that they will likely have the means and ability to recover should they fail such challenges or meet unexpected obstacles. In other words, resilience allows us to respond to life—to not only survive, but thrive within the circumstances in which

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9 Martha Albertson Fineman, *Fineman on Understanding Vulnerability and Law*, NEW LEGAL REALISM, <https://newlegalrealism.wordpress.com/2015/11/30/fineman-on-vulnerability-and-law> [<https://perma.cc/JRN3-V5M6>].

10 *Id.*

we find ourselves.

The inequality of resilience is at the heart of vulnerability theory because it focuses us on society and social institutions. Human beings are not seen as more or less vulnerable because they possess certain characteristics or are at certain stages in life; rather, they experience the world with differing levels of resilience based on their relationship with the state, societal institutions, and the assets each confers. Those assets or resources can take five forms: physical, human, social, ecological or environmental, and existential. Nobody is born resilient. Rather, resilience is produced within and through institutions and relationships that confer socio-economic support, privilege, and power. Those institutions and relationships, whether public or private, are at least partially defined, legitimized and reinforced by law.

Human vulnerability analysis focuses on the role of the state and institutions in mitigating “vulnerabilities inherent in bio- and socio-materiality”<sup>11</sup> of living on Earth, especially the state’s role in allocating assets that promote socio-economic resilience. The paradigm seeks to deepen “ethico-juridical responsiveness to the complexity, affectability and vulnerability of the living order and of the multiple beings co-constituted by and within it”<sup>12</sup> by engaging the physical vulnerability common to all human beings as the foundational theoretical premise for law and order. Universal physical vulnerability should be the starting point for the creation of more equitable institutional responses to socio-economic issues.<sup>13</sup>

The theory holds that vulnerability arising from physical embodiment is a common, constant, and shared condition among all human beings, regardless of social status or geographic location, a vulnerability that should be understood not just as a potential source of harm and injury, but also as a generative and creative condition that propels us to form relationships and build

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11 Grear, *supra* note 1.

12 *Id.*

13 Martha Albertson Fineman, *The Vulnerable Subject and the Responsive State*, 60 EMORY L.J. 251, 266–69 (2010).

institutions that strengthen our individual and collective resilience. Through the generative aspect of vulnerability, it is possible to craft “an alternative foundation for legal and political subjectivity”<sup>14</sup> that is responsive to claims for justice from all strata of society and that does not privilege the more resilient, wealthier subjects, over the less resilient. In this context, vulnerability is defined as “the characteristic that positions us in relation to each other as human beings and also suggests a relationship of responsibility between the state and its institutions and the individual.”<sup>15</sup>

The theory explores “the commonalities of the human condition—most centrally the universal vulnerability of human beings and the imperfection of the societal institutions created to address that vulnerability.”<sup>16</sup> Its aim is to promote the establishment of a just society, taking a life-cycle perspective of the individual and a collective perspective of the society in which the individual lives. Every individual faces unique vulnerabilities at various stages in their life. For example, children and the elderly are more dependent on others in meeting their daily needs. Similarly, all members of any given society also face a collective, constant vulnerability to harm or injury arising from their positions with respect to each other and to other groups, with their resilience increasing based upon the collective’s organizational capacity and availability of assets.

In the context of climate change, individual vulnerability to severe and unpredictable weather events (such as infant and elderly deaths from heat waves, or injury and even death for Inuit traveling routes with unexpected ice melts) exists alongside collective vulnerability. Thus, a society itself can be vulnerable and must therefore acquire resources that can be used to build resilience or the long-term ability to recover from such severe environmental situations. The state’s ability to provide emergency resources in such situations and which

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14 Gear, *supra* note 1, at 42.

15 Vulnerability Index, *supra* note 6.

16 VULNERABILITY: REFLECTIONS ON A NEW ETHICAL FOUNDATION FOR LAW AND POLITICS 1 (Martha Albertson Fineman & Anna Gear eds., 2013).

emergencies the state chooses to support have a direct bearing on the collective resilience of its society.

The example of a child growing up in an impoverished family helps explain individual and collective vulnerability. As an individual, the child is subject to harm and deprivation arising from the family's poverty. Since children are dependent on others for their well-being, adults' inability to meet the child's basic needs—like healthy food—may leave the child vulnerable to stunted growth and development because of her vulnerability in this stage of the life-cycle. The adults, on the other hand, despite sharing the collective vulnerability of the family's poverty, are not uniquely vulnerable to stunted growth because they are already fully grown. Universal human vulnerability therefore has specific and particular manifestations depending on a person's stage in life, personal positioning within societal networks, and the collective's positioning in relation to the state and socio-economic institutions.

This “vulnerable subject,”<sup>17</sup> which can be an individual, a collective, an institution, or even the state itself, is the unit of analysis in human vulnerability theory. This “new” social subject is more complex than the liberal subject of mainstream legal theory, which has historically been presented as an ideal, self-sufficient, autonomous (male) adult. Vulnerability analysis focuses on the human part of the rights discourse and uses the human condition to bring “societal institutions, in addition to the state and the individual, into the discussion and under scrutiny.”<sup>18</sup> It is a ‘mid-level theory’ that engages the empirical reality of the human condition on the ground, with the goal of achieving a just, equitable and sustainable society.

Vulnerability initially should be understood as arising from our embodiment, which carries with it the ever-present possibility of harm, injury, and misfortune from mildly adverse to

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17 Martha Albertson Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, 20 *Yale J.L. & Feminism* 1, 2 (2008).

18 Fineman, *supra* note 13, at 255.



catastrophically devastating events, whether accidental, intentional, or otherwise. . . . Our bodies are also vulnerable to other forces in our physical environment . . . . Undeniably universal, human vulnerability is also particular: it is experienced uniquely by each of us and this experience is greatly influenced by the quality and quantity of resources we possess or can command.”<sup>19</sup>

By contrast, the liberal subject around which law currently revolves is a product of the “closures of mainstream legal and political theory”<sup>20</sup> through “excision of [both] the body—and relatedly, of essential aspects of socio-material context”<sup>21</sup> from the archetypal subject of law. This subject has been linked to the fungibility of the human body, which, in a neoliberal global order, is a “commodified, fragmented construct available for market exploitation.”<sup>22</sup> The vulnerable subject, on the other hand, is a unique, relational being who also shares constant, common physical vulnerability with everyone else, and whose physical subsistence and resilience is ultimately dependent on the available environmental resources on our planet.

The example of the individual in a family can be extended to the state level, where the nation-state would be analogous to the individual, and the international community analogous to the family. The state is the vulnerable subject under both international law and in regard to climate change, with the extent of that vulnerability linked to both geographic location and the state’s positioning in the global political economy. Within each state, domestic vulnerability to climate change also depends on geographic location and the socio-economic positioning of individuals and groups the country. On the global level, vulnerability theory scrutinizes inter-state vulnerability and its effects on domestic or intra-state vulnerability. At the

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19 Fineman, *supra* note 17. at 9–10.

20 Gear, *supra* note 1, at 43.

21 *Id.*

22 *Id.*

domestic level, the theory scrutinizes state and institutional privileging of certain segments of society which, given limited material resources, results in disadvantaging people that are less-privileged, and benefitting the wealthy who are already more resilient.

Just as individuals are considered equal under domestic law, states are regarded as juridical equals under international law. Legal equality notwithstanding, the vast economic inequalities existing between industrial and non-industrial states in the international arena are considered justifiable under the meritocracy of a “free” global market. The United Nations Framework Convention on Climate Change (UNFCCC) divides countries into three categories based on economic development: industrial or developed, developing, and countries in transition (mostly consisting of former Soviet republics).<sup>23</sup> These groupings reflect degrees of economic resilience, with developed countries having the most assets with which to mitigate and adapt to the negative impacts of climate change, and developing countries having the fewest assets. On the global level, therefore, human vulnerability analysis scrutinizes global state privilege and inequality, along with the role that international law and institutions play in increasing or reducing state resilience to climate change.

## I. LIBERALISM AND HUMAN VULNERABILITY

Liberalism is “the structuring of individual interactions in society on the basis of a set of rights that require human beings to respect each other’s liberty and equality.”<sup>24</sup> Liberalism aims to “promote social outcomes that are, as far as possible, the result of free individual choices.”<sup>25</sup> Transposing this definition to the inter-state level, it is posited that liberalism structures state

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23 UNFCCC at

[http://unfccc.int/parties\\_and\\_observers/items/2704.php](http://unfccc.int/parties_and_observers/items/2704.php). Accessed 11/22/17.

24 John Charvet & Elisa Kaczynska-Nay, *THE LIBERAL PROJECT AND HUMAN RIGHTS* 3 (2008).

25 *Id.* at 2.

interactions on the basis of the sovereignty and equality of states, thus promoting the outcomes that result from free (i.e. sovereign) state choices. In practice, however, international agreements like the UNFCCC, its Kyoto Protocol, and the Paris Agreement reflect the power dynamics of the global political economy in which industrial states drive the agenda despite state juridical equality.<sup>26</sup> Therefore, just as individual liberty and equality is structured by the domestic legal framework and social relations like those found in the family, state sovereignty, as in the climate arena, is regulated by the climate treaties and international relations between countries.

The liberal approach to industrialization has resulted in unsustainable global greenhouse gas emissions. Fossil-fueled industrialization is approaching its limits with regard to sustainability, which means that non-industrial states that are looking to access cheapest energy sources for their industrialization are limited in the extent to which they can use fossil fuels if they are to support the sustainable development agenda. This limitation negates the principle of state equality in exercising sovereign rights to exploit Earth's resources, because developed countries did not face a similar limitation while they industrialized. In fact, many developed countries continue to emit unsustainable amounts of greenhouse gases. While the limits to the planet's capacity to hold greenhouse gases were not understood at the beginning of the Industrial Revolution, continuing unchecked emissions in light of our far more sophisticated understanding reflects a self-interested ethic that

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26 The lead-up to the 2015 Paris Agreement is a case in point. The leaders of the USA and China, the two largest economies in the world, committed to significant greenhouse gas reductions in bilateral negotiations that were seen as largely responsible for generating the momentum that led to the successful conclusion of the Paris Agreement. See [https://www.theguardian.com/environment/2016/apr/18/us-and-china-lead-push-to-bring-paris-climate-deal-into-force-early?CMP=share\\_btn\\_gp](https://www.theguardian.com/environment/2016/apr/18/us-and-china-lead-push-to-bring-paris-climate-deal-into-force-early?CMP=share_btn_gp). Accessed 11/24/17.

underlies market-based development, i.e. neoliberalism.<sup>27</sup> Neoliberalism is an economic system that advocates freedom from state regulation (except to facilitate a self-regulating market) through which wealth distribution will trickle down from the wealthy to the rest of society and individual responsibility replaces public and community goods like pensions, health and education.<sup>28</sup> This emphasis on the individual—whether human or corporate—over the society and community invariably leads to people protect their self-interest over community-based or environmental interests.

Legal theory built on individual self-interest cannot lead to social justice, whether in the climate change context or any other, because social justice is about promoting collective self-interest, which is tied to wealth distribution in society. The current neoliberal approach to law and the institutional response to this approach are aggravating inequality between nations, where today almost half of formerly colonized countries (the developing world) live in slums and consumption appetites of the wealthy, together with climate change, threaten environmental sustainability.<sup>29</sup>

If left unchecked, the resulting rising global temperatures and severe, unpredictable, weather events will take the global community into uncharted territory with respect to economic development and even survival of the human species. Vulnerability to negative impacts from climate change is universal. Developed countries are vulnerable because their economies are built on fossil-fueled industrialization, a model of development that is no longer sustainable and whose resilience has not been tested in a century.<sup>30</sup> Developing countries are

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27 See George Gilder, *Capitalism and Selfishness*, March 1, 1987 at <https://www.commentarymagazine.com/articles/capitalism-selfishness>. Accessed 11/24/17.

28 Elizabeth Martinez & Arnold Garcia, *What is Neoliberalism?* at <http://www.corpwatch.org/article.php?id=376>. Accessed 11/24/17.

29 See Philip McMichael, DEVELOPMENT AND SOCIAL CHANGE: A GLOBAL PERSPECTIVE, 12–15 (2012).

30 Craig M. Pease, *Knot Good: How Climate Change Harms Rich, Industrial Economies*, 33(4) THE ENVIRONMENTAL FORUM at 19 (July-Aug. 2016), [http://www-assets.vermontlaw.edu/Assets/directories/FacultyDocuments/Pease\\_ForumJulAug2016.pdf](http://www-assets.vermontlaw.edu/Assets/directories/FacultyDocuments/Pease_ForumJulAug2016.pdf). Accessed 11/24/17.

vulnerable because they lack resources to adapt to the negative impacts of climate change, and their ability to grow their economies with the cheapest energy sources will be increasingly limited as fossil fuels are phased out. Universal vulnerability to climate change is also evident in the limited understanding of humanity's capacity to adapt to the continuing environmental change that fossil-fueled industrialization is precipitating.

The atmosphere is a common-pool resource<sup>31</sup> for all nations. Universal cooperation is critical to prevent dangerous climate change, and such cooperation exposes the limits of liberalism's "individual choice," or paradigm of unbridled state sovereignty. Neoliberal climate change response mechanisms such as the Kyoto Protocol and Paris Agreement that aim to offset continuing high emissions at home push the problem of mitigating climate change into the future, thus raising issues about the rights of future generations, by merely by expanding the geographical range in which countries can emit greenhouse gases. Vulnerability to climate change is not about the survival of industrial societies at the expense of developing countries. Rather, it is about how to survive—and even thrive—as one global community, and this begins with responsive state programs on the local, national, regional, and global levels. It continues responsive global institutional programs that promote resilience, especially for the least-resilient nations. Such an approach calls for a move away from a system in which states compete for power and influence to the point of jeopardizing human survival on the planet.

Liberal doctrines range from "anarchical libertarianism at one extreme through *laissez faire* and the minimal state to the big bureaucratic state of welfare liberalism . . . on to . . . liberal

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31 A common-pool resource is one that is shared by a collectivity. The term was coined by Elinor Ostrom, whose work in various parts of the world has shown that use of common pool resources don't necessarily have to lead to a tragedy of the commons, which is the widely held view following the work of Garrett Hardin.

socialism.”<sup>32</sup> Classical liberalism “upheld the *laissez-faire* economy and the night watchman state, while the new liberalism became concerned with ensuring that everyone enjoyed a sufficient level of social and economic rights in order to exercise their liberty effectively as an equal member of society.”<sup>33</sup> Anarchical liberalism rejects a role for the state, believing that state functions are “best left to voluntary agencies or self-help.”<sup>34</sup> Socialist liberalism “rejects the economic liberalism of the market society altogether on the grounds of its incompatibility with equality but otherwise affirms liberal values regarding opinion, religion, movement, association, sexual orientation, and so on.”<sup>35</sup> Human vulnerability theory can be understood as a liberal theory that calls for moving away from the selfish ethic that underlies liberal approaches to state regulation of market-based programs, with the ultimate goal of achieving substantive social equality. Vulnerability analysis thus calls for structuring the climate regime in ways that produce substantive resilience for all states, in contrast to the current approaches that mirror and maintain an unequal global status quo.

## I. VULNERABILITY IN THE CLIMATE REGIME

The concept of vulnerability has been used in a variety of ways in the climate regime, including in the context of vulnerability science, where it “first emerged in the context of food security.”<sup>36</sup> Vulnerability science analyzes a “broad range of social, material and contextual elements”<sup>37</sup> of vulnerability “as a means of studying risks and related outcomes (and the related concepts of adaptation and resilience).”<sup>38</sup> Human vulnerability analysis, on the other hand, is “a critical normative project—in the sense that it combines a critique of the liberal order and its fallout . . . with

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32 Charvet & Kaczynska-Nay, *supra* note 24, at 7.

33 *Id.* at 6.

34 *Id.* at 7.

35 *Id.*

36 Gear, *supra* note 1, at 42.

37 *Id.*

38 *Id.*

an attempt to imagine an alternative foundation for the ethics of the legal and political order.”<sup>39</sup>

The concept of vulnerability has become increasingly mainstream in the climate change discussion,<sup>40</sup> and is one of four new norms that herald the evolution of international environmental law into its third, current stage.<sup>41</sup> While definitions of vulnerability within the regime have evolved, the UNFCCC frames the concept narrowly. Article 3.2 of the Convention states:

*The specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention, should be given full consideration.*<sup>42</sup>

Vulnerability in this context is presented as a disadvantaged condition specific to developing countries, and is considered a special problem for countries that “bear a disproportionate or abnormal burden under the Convention.”<sup>43</sup> Vulnerability can be seen as a condition that forces certain countries to fall outside the norm of resilience in the face of climate change. Countries that bear a disproportionate burden under climate change can be construed as both geographically vulnerable to negative climatic impacts and lacking sufficient economic resources to allocate to

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<sup>39</sup> *Id.*

<sup>40</sup> In 2009, 48 developing countries formed the Climate Vulnerable Forum, which is an international partnership of countries that consider themselves particularly vulnerable to climate change. *See Climate Vulnerable Forum*, U.N. Dev. Programme Office in Geneva, [http://www.europe.undp.org/content/geneva/en/home/partnerships\\_initiatives/cvf.html](http://www.europe.undp.org/content/geneva/en/home/partnerships_initiatives/cvf.html) [<https://perma.cc/EV6C-SN2C>].

<sup>41</sup> The three other norms of this stage are intergenerational equity, the principle of common but differentiated responsibilities (CBDR) and the precautionary principle. *See* Sumudu Atapattu, *EMERGING PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW*, 203 (2006).

<sup>42</sup> UNFCCC Article 3.2 at [http://unfccc.int/cop4/conv/conv\\_005.htm](http://unfccc.int/cop4/conv/conv_005.htm). Accessed 11/25/17.

<sup>43</sup> *Id.*

adaptation.

The reality, however, is that vulnerability to climate change and its impacts is universal, and resilience is attributable not to geographic positioning, but to having the resources and capacity to adapt to and mitigate negative climate impacts. Framing legal standards under the rubric of common human vulnerability would also have to take into account state positioning in the global political economy, which differs from the current approach, in which legal standards are primarily shaped and determined by the experience of industrial countries. Vulnerability, as defined in the Protocol (low resilience to negative climatic impacts), correlates with unequal global resource access and distribution.

Human vulnerability theory notes that “[t]he use of the designation *vulnerable* to set aside some groups considered disadvantaged within the larger society often also results in their stigmatization. “The term *vulnerable population* has an air of victimhood, deprivation, dependency, or pathology attached to it.”<sup>44</sup> Article 3.2 can be read in that same exclusionary, stigmatizing way. By contrast, vulnerability theory uses the term “vulnerable” in a way that is “detached from specific subgroups,”<sup>45</sup> and stipulates that vulnerability defines “the very meaning of what it means to be human.”<sup>46</sup> Vulnerability theory argues that this approach to vulnerability “must be at the heart of our ideas of social and state responsibility.”<sup>47</sup>

The Intergovernmental Panel on Climate Change (IPCC)<sup>48</sup> has used evolving definitions of vulnerability in relation to climate change, stating in 2000 that vulnerability is

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44 Fineman, *supra* note 13, at 266.

45 *Id.*

46 *Id.*

47 *Id.* at 267.

48 The IPCC is the international body that assesses the science relating to climate change. *IPCC Factsheet: What is the IPCC?*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (Aug. 30, 2013), [https://www.ipcc.ch/news\\_and\\_events/docs/factsheets/FS\\_what\\_ipcc.pdf](https://www.ipcc.ch/news_and_events/docs/factsheets/FS_what_ipcc.pdf) [<https://perma.cc/66MH-LUR5>].



[t]he extent to which a natural or social system is susceptible to sustaining damage from climate change, and is a function of the magnitude of climate change, the sensitivity of the system to changes in climate and the ability to adapt the system to changes in climate. Hence, a highly vulnerable system is one that is highly sensitive to modest changes in climate and one for which the ability to adapt is severely constrained. (IPCC 2000)<sup>49</sup>

While the IPCC definition is focused on systems *as they are* and on how current social and natural systems can adapt to climate change, the human vulnerability approach would look at systems *as they ought to be* to promote environmental resilience and encourage acquisition of needed resources to adapt to or mitigate climate change. More recently, the IPCC stated:

[v]ulnerability to climate change is the degree to which geophysical, biological and socio-economic systems are susceptible to, and unable to cope with, adverse impacts of climate change . . . . The term “vulnerability” may therefore refer to the vulnerable system itself, e.g., low-lying islands or coastal cities; the impact to this system, e.g., flooding of coastal cities and agricultural lands or forced migration; or the mechanism causing these impacts, e.g., disintegration of the West Antarctic ice sheet.<sup>50</sup>

This broader definition also emphasizes the negative aspects of vulnerability, which are characterized as failures of normally resilient geophysical, biological, and socio-economic systems.

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49 IPCC at <http://www.ipcc.ch/ipccreports/tar/wg2/index.php?idp=60>. Accessed 11/17/18.

50 S.H. Schneider et al., *Assessing Key Vulnerabilities and the Risk from Climate Change*, in CLIMATE CHANGE 2007: IMPACTS, ADAPTATION, AND VULNERABILITY, CONTRIBUTION OF WORKING GROUP II TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 783 (M.L. Parry et al. eds., 2007).

The IPCC has stated in one of its Assessments that socio-economic systems “typically are more vulnerable in developing countries where economic and institutional circumstances are less favorable,” and that vulnerability is highest where there is “the greatest sensitivity to climate change and the least adaptability.”<sup>51</sup> Here, too, vulnerability is portrayed as a condition found in “other” societies (developing countries). Equating increased vulnerability with reduced economic and institutional adaptation capacity, however, is a premise supported by the vulnerability paradigm. The paradigm would go further to require input from constituents on the less-resilient end of the vulnerability spectrum.

Human vulnerability theory does not frame vulnerability solely negatively; it also focuses on its generative and creative aspects, which lead human beings to “reach out to others, form relationships and build institutions.”<sup>52</sup> Current relationships and institutions formed under a neoliberal approach are limited in their capacity to equitably solve issues arising from climate change. A human vulnerability approach, which emphasizes interrelationship at all levels, can make it possible for individual communities, states, and the global community to pursue a unified and cooperative response to climate change, rather than the fragmented, competitive, winner-take-all approach of neoliberalism.

#### I. HUMAN VULNERABILITY ANALYSIS AND THE CLIMATE REGIME

The goal of the human vulnerability paradigm is to establish a regime of justice and equality. As already mentioned, it focuses on how the state and institutions use the allocation of assets to confer privilege and favor on some segments of society while disadvantaging others. The paradigm challenges inequality

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51 Santiago Olmos, *Vulnerability and Adaptation to Climate Change: Concepts, Issues Assessment Methods* 3 (Jul. 2001) (unpublished manuscript) (on file with CLIMATE CHANGE KNOWLEDGENETWORK).

52 Martha Albertson Fineman, ‘Elderly’ as Vulnerable: *Rethinking the Nature of Individual and Societal Responsibility*, 20 *THE ELDER* L.J. 101, 126 (2012).

within and between states while maintaining an ethic of universal applicability. It sees the state and its institutions as existing to respond to the needs of the complex, vulnerable subject, whose social resilience varies over the course of life. Vulnerability theory notes that the autonomy of the current “liberal subject” of law “is not a naturally occurring characteristic of the human condition, but a product of social policy.”<sup>53</sup> It calls for law to embrace a more holistic vulnerable subject, rather than just focus on subjects at the most resilient stage of life—adults, and it asks law to respond to the complexity and vulnerability found throughout life. The state, as the ultimate source of public authority, should intervene to monitor and guarantee equality.

In the climate context, where states are the vulnerable subjects, promotion of global equality and resilience can be achieved through international agreements and institutional arrangements designed to mitigate vulnerability. Since the current neoliberal climate regime is skewed in favor of industrial states, application of a human vulnerability ethic would lead to a change in state relationships that recognizes the importance of fashioning climate law, ethics, and politics around “a complete, comprehensive vision of the human experience.”<sup>54</sup> Vulnerability in this context is not associated with victimhood or pathology but is rather a universal, inevitable, enduring aspect of the human condition.

States, communities, and individuals are placed in social context, and institutions need to respond to and be responsible for contextual vulnerability to reduce inequalities, with priority for asset allocation going to the least resilient. The paradigm calls for restructuring state institutions to prioritize the vulnerable subject. Where the state confers privilege or advantage, “there is an affirmative obligation for it to either justify the disparate circumstances or rectify them.”<sup>55</sup> Vulnerability analysis draws the whole of society under scrutiny,

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53 Fineman, *supra* note 17, at 23.

54 *Id.* at 10.

55 Fineman, *supra* note 17, at 22.

and calls for implementation of a positive equality that recognizes that equality must be a universal benefit for all.

In the climate context, a human vulnerability approach calls for a responsive Conference of Parties to create and implement equitable global response mechanisms that ensure resilience for all states, including the least resilient. Climate agreements should not be structured to benefit more resilient parties to the detriment of the less resilient. The state is the unit of analysis at the global level, and some developing countries have grouped themselves under the banner of the Climate Vulnerable Forum.<sup>56</sup> The intent of the Forum may be to signal that these countries are on the less resilient end of the climate vulnerability spectrum and thus need the international community to respond to their particularly acute need for resilience. This approach can be construed as a generative, creative response to vulnerability on the global level. Coming together as a bloc of developing countries to advocate for resilience under the common vulnerability umbrella could bring equipoise in resilience for all members of the UNFCCC.

Human vulnerability analysis would scrutinize how privilege and favor conferred in the climate regime may work to the detriment of other states, given the universality of climate change. The paradigm would posit that state sovereignty is a geo-political construct that is given recognition by other states and is not an intrinsic, naturally occurring characteristic of any nation.<sup>57</sup> Therefore, in light of climate change, sovereignty needs to be recalibrated in a manner that promotes global

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56 CLIMATE VULNERABLE FORUM, <http://www.thecvf.org/web/climate-vulnerable-forum> [<https://perma.cc/7EMA-T4PT>].

57 For example, the Republic of Somaliland, a break-away territory of Somalia, is a self-declared state but the international community does not recognize it as a sovereign state: <https://worldpolicy.org/2017/02/21/somaliland-a-stable-and-independent-state-but-no-recognition/> Accessed 11/24/17. State sovereignty, which has many dimensions, at its core is about the monopoly of power over a given territory that is defined by borders respected by other states: See John H. Jackson, *Sovereignty-Modern: A New Approach to an Outdated Concept*, 97 AM. J. INT'L L. 782–802 (2003), and the whole article in general. Available at <http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1108&context=facpub>. Accessed 11/24/17.

sustainability and climate justice, given that all states share the same atmosphere, all the world's citizens are dependent on the environment for sustenance, and states will come under increasing threats because of environmental stressors precipitated by climate change.<sup>58</sup> Human vulnerability analysis spotlights the need for operationalizing a common global premise for climate change response that can promote global equality and justice in the face of varying degrees of environmental and socio-economic resilience.

To reduce resilience inequality among states, global institutions need to be responsive to contextual vulnerability, which is often aggravated by lack of assets. They must build responsive international structures to empower vulnerable states. The international community has an affirmative obligation to actively structure conditions for equality while responding to the particular vulnerabilities of states facing severe climate change.<sup>59</sup> A starting point would be to consider whether global institutions have met their obligation to fairly distribute global resources among states. Formal equality still leaves out many states when it comes to such distribution an issue that is also bad for global economic growth.<sup>60</sup> Where such [global](#) institutions confer privilege or advantage, there should be an affirmative obligation to either justify the disparate circumstances or rectify them. In this way, equality can become a universal resource, a guarantee that benefits all states.

Policy responses to climate change are centered on adaptation and mitigation. The IPCC defines adaptation as “the process of

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58 See Caitlin E. Werrell & Franceso Femia, *Climate Change, the Erosion of State Sovereignty and World Order*, BROWN JOURNAL OF WORLD AFFAIRS, Vol. XXII, Iss. II 222–224 (2016) at

[https://climateandsecurity.files.wordpress.com/2012/04/werrell\\_femia\\_final-article\\_climate-change\\_state-sovereignty\\_world-order.pdf](https://climateandsecurity.files.wordpress.com/2012/04/werrell_femia_final-article_climate-change_state-sovereignty_world-order.pdf). Accessed 11/26/17.

59 UN Department of Economic and Social Affairs at

<http://www.un.org/apps/news/story.asp?NewsID=55194#.Wh9uYUqnHLb>. Accessed 11/26/17.

60 World Economic Forum, *Economic growth and fair development are not in conflict* (2016) at <https://www.weforum.org/agenda/2016/01/promoting-inclusive-growth-for-healthy-economies/>. Accessed 11/26/17.

adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.”<sup>61</sup> For communities living in low-lying areas threatened by sea-level rise, for instance, migration to higher land is a form of adaptation. The IPCC’s definition of adaptation is consistent with the vulnerability paradigm, which recognizes that the vulnerable subject can take steps to lessen the risk faced.<sup>62</sup>

All states, whether developed or developing, must adapt to climate change. Heightened vulnerability to climate change can stem from geographic location, but also from degree of development, the latter of which corresponds to the amount of economic resources with which a country has to respond to climate threats. Developed countries have more adaptation capacity and resilience because of stronger economic resource bases. Developing countries possess weaker economic resource bases, putting them on the less resilient end of the vulnerability spectrum. The coastal region of Kenya, for example, is geographically vulnerable to sea-level rise from climate change. Kenya does not have the resources to build dykes in response to that threat, which makes its coastal communities less resilient to sea-level rise than those of Holland, a country with the economic resources to successfully adapt to high sea-levels by building dykes.

This example demonstrates the recognition of the human vulnerability paradigm that while all human beings are in a constant state of physical vulnerability, individuals, and by extension their communities and states, are positioned differently “within webs of economic and institutional

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61 Intergovernmental Panel on Climate Change, *Summaries, Frequently Asked Questions, and Cross-Chapter Boxes*, in CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY, CONTRIBUTION OF WORKING GROUP II TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 5 (C.B. Field et al. eds., 2014).

62 Fineman, *supra* note 13, at 267.

relationships.”<sup>63</sup> Individuals’ positioning impacts their ability to improve resilience and mitigate vulnerability. Vulnerability analysis thus allows us to examine actual lived experiences and to use those experiences to create legal and institutional arrangements that improve substantive equality.

When it comes to reducing greenhouse gas emissions, the Kyoto Protocol places the primary responsibility on developed countries because of their historically high contributions. Meanwhile, the Paris Agreement calls for all states to set standards for emissions reductions regardless of their degree of industrialization. Mitigating emissions requires pursuing “actions and policies that seek to prevent global warming from causing ‘dangerous anthropogenic interference’ with the climate.”<sup>64</sup> Examples of mitigation include switching from fossil fuels to biofuels or renewable energy sources, and undertaking afforestation and forest preservation projects. States can also levy carbon taxes to reduce demand for fossil fuels. With the Paris Agreement’s requirement that all states adopt mitigation goals, energy choices for developing countries’ industrialization are beginning to be limited; by 2030, all states are expected to be under an emissions cap regardless of their degree of development.

The vulnerability paradigm holds that although vulnerable subjects can take steps to “mitigate possible manifestations of [their] vulnerability,” the reality of constant vulnerability as an enduring characteristic of the human condition means “the possibility of [all] harm cannot be eliminated.”<sup>65</sup> Even if greenhouse gas emissions were immediately reduced to zero, gases that have accumulated in the stratosphere to date will continue to negatively impact the planet, in some cases taking a century or longer to dissipate.

Resilience to climate change can be bolstered through the acquisition of five sets of resources or assets: human, physical,

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<sup>63</sup> *Id.* at 269.

<sup>64</sup> Stephen Humphreys, *Introduction* to HUMAN RIGHTS AND CLIMATE CHANGE 19–20 (Stephen Humphreys ed., 2010).

<sup>65</sup> Fineman, *supra* note 13, at 267.

social, ecological, and existential.<sup>66</sup> Human assets are “innate or developed abilities to make the most of a given situation.”<sup>67</sup> In the climate change context, useful mitigation and adaptation lessons can be learned from all communities, as they have intimate knowledge of the environment in which they have lived for millennia. Indigenous groups’ traditional knowledge and livelihood strategies would become an important global resource. Physical assets, on the other hand, refer to “material goods” that are acquired through “the distribution of wealth and property.”<sup>68</sup> The current neoliberal approach to climate change, which does not fairly distribute wealth and resources based on common human need, would need to be revisited.

Social assets are “networks of relationships from which we gain support and strength, including the family and other cultural groupings and associations.”<sup>69</sup> These assets are the bedrock human ecological resources that can be deployed to mitigate climate change. Ecological resources and assets, like forests and biodiversity, must also be protected so that the services that they provide will not be lost, which would create new environmental and human vulnerabilities. Lastly, existential assets, which consist of people’s “systems of belief or aesthetics, such as religion, culture, or art, and perhaps even politics,”<sup>70</sup> can also bolster resilience to climate change. This is especially true in communities where the environment is seen as a trust bequeathed to each new generation by previous ones and which must be safeguarded for the future, making each individual take personal responsibility for its preservation as a matter of conscience. Existential assets, in the final analysis, may become the foundation for achieving environmental sustainability and human resilience.

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66 *Id.* 270–71.

67 Fineman, *supra* note 17, at 14.

68 *Id.*

69 *Id.* at 15.

70 Fineman, *supra* note 13, at 271.



## CONCLUSIONS

Adopting human vulnerability as a foundational premise for climate change response would mean moving away from the selfish ethic operationalized under neoliberal theory, and advancing an approach of common concern for all states regardless of degree of development. The doctrine of state sovereignty would need to give way to a wider loyalty to the international community, given that all stand to be impacted by Earth's changing climate, and that rising temperatures threaten to take human society into uncharted territory where no prior experience can be drawn upon for survival. The neoliberal approach that entrenches global inequality would need to be replaced by one that enables even the least resilient states to access the resources they need for adaptation, mitigation, and clean, sustainable development.

The human and economic impacts of climate change must be addressed in a balanced fashion, unlike the current approach which has emphasized economic well-being (especially that of developed countries) over the well-being of societies everywhere. This balance requires rethinking of our fossil-fueled model of industrialization, as well as translation of juridical state equality into substantive equality that can respond to the actual lived experience of communities.

Liberalism's propensity to divide, separate, and foster self-interest above common well-being needs to evolve into an ethic of interrelationship and fair reciprocity at all societal levels. Constant, common human vulnerability provides the physical rationale for pursuing that evolution. Additionally, we can use existential assets to foster an ethic of human oneness in response to atmospheric oneness that can serve as a catalyst for building an equitable global climate regime that recognizes earth as one ecosystem in which all communities can be resilient. Such a regime would take into consideration the positioning of a given state in the global political economy, with greater responsiveness to those countries projected to suffer the worst impacts of climate change. Within countries, the less resilient communities should be given similar special attention.

The Conference of Parties should forge agreements that

respond to states across the full spectrum of human and geographic vulnerability—from the least to the most resilient. Such an approach could lead to the creation of global institutions and relationships that would safeguard the integrity of the atmosphere, ensure that developing countries are not left on the weak end of the vulnerability spectrum, and implement the strategies for sustainable living generated over millennia by the various communities living in diverse environments throughout the planet.