

# Climate Change: The Role of Judges

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*As the most serious problem facing humanity and the most important legal issue facing judges globally, climate change merits consideration within the framework of environmental courts and the Global Judicial Institute on the Environment.*



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## Introduction

Something extraordinary is about to happen. Either people will reduce carbon emissions or the planet will be damaged so that it will grow less agriculture, provide less freshwater, produce vastly more diseases and kill unprecedented millions of people with storms, waves of heat and famine. This is so as we head toward a world population projected to grow from 7.4 billion to 11.2 billion by the year 2100.<sup>1</sup> The catastrophic future the Paris Agreement<sup>2</sup> is intended to save us from will arrive by the time the earth warms two degrees above its preindustrial temperature—a ceiling we are already rapidly approaching.<sup>3</sup> Thus, climate change is a social issue with an unprecedented “solution horizon.” We must attain a solution before we reach the horizon of two degrees. Humanity’s quest to achieve orderly mitigation of and adaptation to climate change is dependent upon the just application of the environmental rule of law -- the legal framework that protects and sustains the environment upon which life depends. Environmental courts and tribunals are proving to be critical to the world judiciary’s just application of the environmental rule of law to issues of climate change. To further equip the men and women judges who must contend with application of the environmental rule of law, Brazil Supreme Court Justice Antonio Benjamin in collaboration with the World Commission on Environmental Law of the International Union for the Conservation of Nature (WCEL/IUCN),

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<sup>1</sup> U.N. Dept. of Economic and Social Affairs, World Population Prospects: The 2015 Revision, ESA/P/WP.241, [https://esa.un.org/unpd/wpp/publications/files/key\\_findings\\_wpp\\_2015.pdf](https://esa.un.org/unpd/wpp/publications/files/key_findings_wpp_2015.pdf).

<sup>2</sup> Paris Agreement, U.N. Framework Convention on Climate Change (UNFCCC) Conference of the Parties 21, Nov. 30-Dec. 12, 2015, [http://unfccc.int/files/essential\\_background/convention/application/pdf/english\\_paris\\_agreement.pdf](http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf).

<sup>3</sup> Eric Holthaus, *Our Planet Just Reached a Terrifying Milestone*, SLATE (March 12, 2016), [http://www.slate.com/blogs/future\\_tense/2016/03/01/february\\_2016\\_s\\_shocking\\_global\\_warming\\_temperature\\_record.html](http://www.slate.com/blogs/future_tense/2016/03/01/february_2016_s_shocking_global_warming_temperature_record.html); see also *Global Temperature*, NASA, <https://climate.nasa.gov/vital-signs/global-temperature/>.

the United Nations Environment Programme (UNEP), and the Organization of American States (OAS) has led the establishment of the Global Judicial Institute on the Environment. Through the empowering framework of environmental courts and the Global Judicial Institute on the Environment judges will be trained to apply the environmental rule of law in the anthropocene era of climate change. This paper posits that both institutions fortify the world judiciary as it performs its duty to protect humanity and the earth—within the solution horizon—through responsible, resilient application of the environmental rule of law.

### **Humanity Notices Climate Change: The Big Picture**

The need for participation of judicial institutions to address the importance of climate change is apparent. Humanity is demanding solutions. Large-scale demonstrations have become commonplace. The largest single gathering in history to protest climate change was the People's Climate March September 21, 2014 when an estimated 311,000 participants marched at the United Nations in New York City.<sup>4</sup> At the same time, marches were conducted throughout the world including Berlin, London, New Delhi, Rio and Amsterdam. During the 2015 United Nations Conference of the Parties in Paris (COP 21), more than 600,000 people marched in 175 countries.<sup>5</sup> On April 29 of this year, climate change marchers marched in Washington, D.C.<sup>6</sup>

Consistent with the views of the many marchers, a growing number of humanity's iconic representatives declare climate change to be the preeminent problem facing humanity. China's

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<sup>4</sup> Lisa W. Forderaro, *Taking a Call for Climate Change to the Streets*, NY TIMES (Sept. 21, 2014), <https://www.nytimes.com/2014/09/22/nyregion/new-york-city-climate-change-march.html>.

<sup>5</sup> Claire Phipps, Adam Vaughan & Oliver Milman, *Global climate march 2015: hundreds of thousands march around the world – as it happened*, THE GUARDIAN (Nov. 30, 2015), <https://www.theguardian.com/environment/live/2015/nov/29/global-peoples-climate-change-march-2015-day-of-action-live>.

<sup>6</sup> People's Climate Movement, <https://peoplesclimate.org/>.

President Xi Jinping highlighted climate change in his address to the United Nations in Geneva January 18 of this year: “We should make our world clean and beautiful by pursuing green and low-carbon development. . . . Industrialization has created material wealth never seen before, but it has also inflicted irreparable damage to the world.”<sup>7</sup> At the Paris climate summit in 2014 then-President of the United States Barack Obama defined climate change as the “one issue that will define the contours of this century more dramatically than any other.”<sup>8</sup> Pope Francis’s message to 1.2 billion Catholics in his June, 2015 encyclical on the environment described climate change as “one of the principal challenges facing humanity in our day.”<sup>9</sup> It represents a rupture of the relationship between humanity and the earth that “is sin.”<sup>10</sup> One of the world’s most renowned scientists, Stephen Hawking, describes “runaway” human-caused climate change as the greatest threat facing the world: “A rise in ocean temperature would melt the ice-caps, and cause a release of large amounts of carbon dioxide from the ocean floor. Both effects could make our climate like that of Venus, with a temperature of 250 degrees.”<sup>11</sup> E.O. Wilson, Professor

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<sup>7</sup> Tom Phillips, *China’s Xi Jinping says Paris climate deal must not be allowed to fail*, THE GUARDIAN (Jan. 18, 2017), <https://www.theguardian.com/world/2017/jan/19/chinas-xi-jinping-says-world-must-implement-paris-climate-deal>.

<sup>8</sup> *Remarks by the President at U.N. Climate Change Summit*, OBAMA WHITE HOUSE ARCHIVES (Sept. 23, 2014), <https://obamawhitehouse.archives.gov/the-press-office/2014/09/23/remarks-president-un-climate-change-summit>.

<sup>9</sup> *Enciclica Laudato Si*, [http://w2.vatican.va/content/francesco/pdf/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si\\_en.pdf](http://w2.vatican.va/content/francesco/pdf/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si_en.pdf).

<sup>10</sup> *Id.*

<sup>11</sup> Emily Atkin, *The Media Is Ignoring The Most Important Part of Stephen Hawking’s Comments on Trump*, THINKPROGRESS (May 31, 2016), <https://thinkprogress.org/the-media-is-ignoring-the-most-important-part-of-stephen-hawkins-comments-on-trump-d97a5fdbf55>.

Emeritus, Entomology Department, Harvard University, offers a similar view of “human-forced climate change”—“the great, wrathful demon that threatens all our lives.”<sup>12</sup>

Underlying the preeminent attention paid to climate change by famed leaders from the political, economic, scientific and religious sectors is the immediacy of its peril. Thomas Lovejoy, the climate change scientist known as the founder of climate change biology and the originator of the term “biodiversity,” warns that at 2 degrees global warming “there undoubtedly will be massive extinctions and widespread ecosystem collapse. . . . A 2-degree world will be one without coral reefs.”<sup>13</sup> Substantial portions of the great barrier reef are now dying due to global warming and acidification of the ocean caused by increasing levels of carbon.<sup>14</sup> The loss of coral reefs is alarming for Hawai‘i, where I live, because coral supports the near shore ocean ecosystem of fish and protects recreational and residential development from the impacts of the ocean.<sup>15</sup> With the arrival of two degrees of warming, climate change will not only bring massive die-off of earth’s plant and animal species—increases in infectious diseases such as cholera, malaria, dengue fever, Lyme disease, Bird flu, Ebola and tuberculosis will also occur.<sup>16</sup>

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<sup>12</sup> Edward O. Wilson, *The Global Solution to Extinction*, NY TIMES (March 12, 2016), <https://www.nytimes.com/2016/03/13/opinion/sunday/the-global-solution-to-extinction.html>.

<sup>13</sup> Thomas E. Lovejoy, *The Climate Change Endgame*, NY TIMES (Jan. 21, 2013), <http://www.nytimes.com/2013/01/22/opinion/global/the-climate-change-endgame.html>.

<sup>14</sup> Brian Clark Howard, *Corals Are Dying on the Great Barrier Reef*, NATIONAL GEOGRAPHIC (March 21, 2016), <http://news.nationalgeographic.com/2016/03/160321-coral-bleaching-great-barrier-reef-climate-change/>.

<sup>15</sup> *State of Hawai‘i Coral Reef Program*, DEPT. OF LAND AND NAT. RESOURCES, <http://dlnr.hawaii.gov/coralreefs/>.

<sup>16</sup> Xiaoxu Wu et al., *Impact of climate change on human infectious diseases: Empirical evidence and human adaptation*, Vol. 86 ENVT. INT’L 14-23 (Jan. 2016), available at <http://www.sciencedirect.com/science/article/pii/S0160412015300489>.

An obvious consequence of the collapse of ecosystems will be social unrest. The President of the World Bank, Jim Yong Kim, has noted “fights over water and food are going to be the most significant direct impacts of climate change in the next five to ten years. There’s just no question about it.”<sup>17</sup>

No one can predict the future with certainty. Yet a formidable consensus of the world scientific community has provided convincing evidence to world leaders of the severe consequences of maintaining the instant level of greenhouse/carbon emissions. The most reliable projections of future climate impacts are those generated from global climate change models that simulate the Earth system and human interventions on key natural processes. The Intergovernmental Panel on Climate Change (IPCC) was established to review current scientific knowledge about climate change and provide regular reports to the world community. The IPCC’s conclusions are “conservative” in that they represent published, peer reviewed science and what has been established as reliable scientific knowledge to date. The major conclusions of the most recent IPCC comprehensive review are therefore sobering and warrant close consideration:

Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.

Over the last two decades, the Greenland and Antarctic ice sheets have been losing mass, glaciers have continued to shrink almost worldwide, and Arctic sea ice and Northern Hemisphere spring snow cover have continued to decrease in extent.

The rate of sea level rise since the mid-19th century has been larger than the mean rate during the previous two millennia

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<sup>17</sup> Larry Elliott, *Climate Change will ‘lead to battles for food,’ says head of World Bank*, THE GUARDIAN (April 3, 2014), <https://www.theguardian.com/environment/2014/apr/03/climate-change-battle-food-head-world-bank>.

The atmospheric concentrations of carbon dioxide, methane, and nitrous oxide have increased to levels unprecedented in at least the last 800,000 years. Carbon dioxide concentrations have increased by 40% since pre-industrial times, primarily from fossil fuel emissions and secondarily from net land use change emissions. The ocean has absorbed about 30% of the emitted anthropogenic carbon dioxide, causing ocean acidification.

Human influence on the climate system is clear....This evidence for human influence has grown since AR4<sup>18</sup>. It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century.

Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions.<sup>19</sup>

These IPCC conclusions are unqualified, they have been formally accepted by the world's national governments,<sup>20</sup> and thus they can be considered, both scientifically and politically, as "known facts." They cannot be dismissed or ignored if one is committed to an evidence-based approach to public policy and the environmental rule of law. They are the scientific authority upon which the leaders of all but two countries in the world agreed to reduce carbon emissions at the 2015 Conference of the Parties in Paris.

### **Environmental Rule of Law Evolves from Principle to Precedent**

The capacity of judicial institutions to contend with the impending consequences of climate change within the framework of environmental law is proving to be strong and resilient. Contemporary principles have arisen empowering judges to address the rapid onset of climate

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<sup>18</sup> IPCC Fourth Assessment Report: Climate Change 2007 (AR4)

<sup>19</sup> IPCC, 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

<sup>20</sup> The Intergovernmental Panel on Climate Change (IPCC) was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988 to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts. In the same year, the UN General Assembly endorsed the action by WMO and UNEP in jointly establishing the IPCC. Membership of the IPCC is open to all member countries of the United Nations (UN) and WMO. Currently 195 countries are Members of the IPCC. See IPCC "Organization"; <http://www.ipcc.ch/organization/organization.shtml>.

change through evolved environmental rules of law. Intergenerational equity, public trust, the precautionary principle, the prevention principle, the right to a clean and healthy environment, polluter pays and the doctrine of “danger creation” are the propitious progeny of many foundational legal devices – including Principle 1 of the 1992 Rio Declaration,<sup>21</sup> Sustainable Development Climate Action Goal 13 of the 2015 United Nations Sustainable Development Summit and, most recently, the intended nationally determined contributions to carbon mitigation decided among 197 countries at COP21 in Paris in December 2015.

The hegemony of contemporary environmental law has been applied by judges who command an understanding of emerging environmental science and the social consequences of large-scale industrial pollution of land, air and water. Climate change was identified by the Lahore High Court of the Federation of Pakistan as “a defining challenge of our time” which has “resulted in heavy floods and droughts, raising serious concerns regarding water and food security” and representing “a clarion call for the protection of fundamental rights of the citizens of Pakistan.”<sup>22</sup> In response to the claim of an “agriculturalist” that the government was not fulfilling its duty to prepare a national climate change policy, Judge Syed Mansoor Ali Shah ordered the convening of government ministries to prepare such a policy.<sup>23</sup> Intergenerational equity was recognized by the Supreme Court of the Philippines to grant standing to children who represented the interests of future generations in protected forests that were the subject of large-

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<sup>21</sup> “Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.” United Nations Conference on Environment and Development, June 3-14, 1992, Rio Declaration on Environment and Development, Principle I, U.N. Doc. A/CONF.151/26.

<sup>22</sup> Ashgar Leghari v. Federation of Pakistan (W.P. No. 25501/2015), available at [https://elaw.org/pk\\_Leghari](https://elaw.org/pk_Leghari).

<sup>23</sup> *Id.*

scale illegal deforestation.<sup>24</sup> The constitutional right to a healthy environment was recognized by the Supreme Court of India as early as 1991.<sup>25</sup> The right of the sacred Rivers Ganga and Yamuna to legal protection as “legal persons/living persons” was recently established by the High Court of the state of Uttarakhand in India.<sup>26</sup> The Court found the rivers to “have spiritual and physical sustenance. They support and assist both the life and natural resources and health and well-being of the entire community. Rivers Ganga and Yamuna are breathing, living and sustaining the communities from mountains to sea.”<sup>27</sup> The court’s decision was grounded upon Articles 48-A and 51A(g) of the Constitution of India, which provide that the State “shall endeavor to protect and improve the environment and to safeguard the forests and wild life of the country” and that citizens of India have the duty “to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures,” respectively. A public trust facsimile was identified in the responsible public officials:

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<sup>24</sup> Oposa vs. Factoran, G.R. No. 101083 July 30, 1993, available at <http://hrlibrary.umn.edu/research/Philippines/Oposa%20v%20Factoran,%20GR%20No.%20101083,%20July%2030%201993,%20on%20the%20State's%20Responsibility%20To%20Protect%20the%20Right%20To%20Live%20in%20a%20Healthy%20Environment.pdf>.

<sup>25</sup> “Right to live is a fundamental right under Art. 21 of the Constitution and it includes the right of enjoyment of pollution free water and air for full enjoyment of life. If anything endangers or impairs that quality of life in derogation of laws, a citizen has right to have recourse to Art. 32 of the Constitution for removing the pollution of water or air which may be determined to the quality of life.” Subhas Kumar V. State of Bihar (AIR 1991 SC 420), available at <http://www.globalhealthrights.org/wp-content/uploads/2013/10/Kumar-India-1991.pdf>.

<sup>26</sup> Mohd. Salim v. State of Uttarakhand, Writ Petition (PIL) No.126 of 2014, decided on 20.03.2017, available at <https://www.nonhumanrightsproject.org/content/uploads/WPPIL-126-14.pdf>.

The Whanganui river in New Zealand was likewise recently granted legal personhood status in recognition of the local Māori tribe’s belief that the river is an ancestor. In the words of the tribe’s lead negotiator, treating the river as a person “is not an anti-development, or anti-economic use of the river but [means] to begin with the view that it is a living being, and then consider its future from that central belief.” Eleanor Ainge Roy, *New Zealand river granted same legal rights as human being*, THE GUARDIAN (March 16, 2017), <https://www.theguardian.com/world/2017/mar/16/new-zealand-river-granted-same-legal-rights-as-human-being>.

<sup>27</sup> *Id.*

The Director NAMAMI Gange, the Chief Secretary of the State of Uttarakhand and the Advocate General of the State of Uttarakhand are hereby declared *persons in loco parentis* as the human face to protect, conserve and preserve Rivers Ganga and Yamuna and their tributaries. These Officers are bound to uphold the status of Rivers Ganges and Yamuna and also to promote the health and well being of these rivers.<sup>28</sup>

### **Environmental Courts and the Global Judicial Institute on the Environment Capacity-build Judges for Decision-making in a Time of Increasing Threats from Climate Change.**

It is beyond cavil that the evolution of the environmental rule of law from emerging legal instruments to accepted judicial precedent will accelerate as the severity of carbon-induced global warming grows. The grave consequences of global warming of two degrees deemed unacceptable by 197 countries at COP 21 are fast approaching. At the present rate of carbon emission, global temperatures are predicted to rise by up to 4 °C by 2100.<sup>29</sup> One of the world's most acclaimed environmental jurists, Brazil Supreme Court Justice Antonio Benjamin, has described climate change "as the single most important legal issue facing judges globally".

Effective application of evolving environmental law and understanding of concomitant science is the gravamen of a world judiciary equipped to achieve just decision-making as global warming threatens the well-being of humanity. The compelling guide for policy makers published by UN Environment on environmental courts and tribunals is a paean to the extraordinary capacity of environmental courts to prepare judges for the rigors of applying the environmental rule of law as society seeks to contend with global warming and climate change.<sup>30</sup>

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<sup>28</sup> *Id.*

<sup>29</sup> Damian Carrington, *Planet likely to warm by 4C by 2100, scientists warn*, THE GUARDIAN (Dec. 31, 2013), <https://www.theguardian.com/environment/2013/dec/31/planet-will-warm-4c-2100-climate>.

<sup>30</sup> 2016 United Nations Environment Programme. [Environmental Courts and Tribunals, A Guide for Policy Makers](https://wedocs.unep.org/bitstream/handle/20.500.11822/10001/environmental-courts-tribunals.pdf?sequence=1&isAllowed=y), available at <https://wedocs.unep.org/bitstream/handle/20.500.11822/10001/environmental-courts-tribunals.pdf?sequence=1&isAllowed=y>

Two of the world's three largest carbon emitters, China and India, have developed extensive environmental court systems to supply judges with specialized knowledge of environmental law and related science. The country with the second largest carbon footprint, the United States, has only one environmental court with broad statewide criminal and civil jurisdiction encompassing regulation of land, air and water-- Hawai'i.<sup>31</sup> The handful of other environmental courts in the United States are of limited civil or municipal jurisdiction.<sup>32</sup>

The strong support for environmental courts expressed by UN Environment is especially apt for the United States. Climate change has been the subject of a divided United States Supreme Court, with a majority recognizing in 2007 that the federal government had abdicated its responsibility by failing to regulate greenhouse gases,<sup>33</sup> but a different majority in 2016 indefinitely halting implementation of the government's efforts to reduce carbon emissions from existing power plants.<sup>34</sup> Climate change litigation in the United States recently brought judicial

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<sup>31</sup> HAWAI'I REV. STAT. (HRS) tit. 32, §§ 604A-1-604A-3.

<sup>32</sup> The state of Vermont established the nation's first environmental court in 1990, but it does not have criminal jurisdiction. *Compare* VT. STAT. ANN. tit. 4, §§ 1001–04 with HRS tit. 32, §§ 604A-1-604A-3.

<sup>33</sup> See Massachusetts v. EPA, 549 U.S. 497, 534 (2007). In *Mass. v. EPA*, the U.S. Supreme Court heard a challenge brought by states, local governments, and environmental organizations to the Environmental Protection Agency (EPA)'s decision to deny a petition for rulemaking to regulate greenhouse gas emissions from motor vehicles under the federal Clean Air Act. *Id.* at 504. The court first rejected the EPA's argument that the generalized and widespread harm caused by greenhouse case emissions made standing an "insuperable jurisdictional obstacle." *Id.* at 517. The court concluded that the "risk of catastrophic harm" from climate change-induced sea level rise on Massachusetts "though remote, is nevertheless real" and "would be reduced to some extent" if EPA were to regulate greenhouse gas emissions as petitioners desired. *Id.* at 526. After upholding petitioners' standing to bring the suit, the court concluded that EPA had a statutory obligation to consider whether greenhouse gases caused or contributed to climate change. *Id.* at 534 ("EPA has offered no reasoned explanation for its failure to decide whether greenhouse gases cause or contributed to climate change.").

<sup>34</sup> See West Virginia v. EPA, 136 S.Ct. 1000 (2016). The EPA's most ambitious attempt to regulate greenhouse gas emissions under President Obama was the Clean Power Plan, a Clean Air Act regulation to reduce greenhouse gas emissions from existing coal- and natural gas-fired power plants. Several states sued the EPA, arguing the regulation exceeded the agency's authority. After the DC Circuit denied petitioners' motion to stay implementation of the regulation pending the outcome of the litigation, they appealed to the U.S. Supreme Court, which granted the stay. *West Virginia v. EPA*, 136 S.Ct. 1000 (2016). This stay was unprecedented; the court had never previously granted an interlocutory stay of a generally applicable regulation while initial judicial review was

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attention to the issue of intergenerational equity in *Juliana v. United States*, in which a group of children argue that the United States is causing them ongoing harm by failing to act on climate change.<sup>35</sup> The District Court of Oregon, in confirming that the youth plaintiffs in *Juliana* had standing to sue the federal government, cited to *Urgenda Foundation v. State of the Netherlands*,<sup>36</sup> another climate change standing case indicative of evolving precedent due to the danger posed by global warming.

In *Urgenda*, the Hague District Court found that, due to the alleged failure of the Dutch government to comply with its carbon mitigation responsibilities under the COP 21 agreement, the Urgenda Foundation had standing to assert claims on behalf of Dutch citizens. The court's decision was grounded upon recognition that the alleged failure of the government was a violation of a public trust responsibility to protect its citizens from the imminent danger caused by carbon-caused warming of the atmosphere. The "danger creation" analysis has been

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still pending at a lower court. Adam Liptak & Coral Davenport, *Supreme Court Deals Blow to Obama's Efforts to Regulate Coal Emissions*, NY TIMES (Feb. 9, 2016), <https://www.nytimes.com/2016/02/10/us/politics/supreme-court-blocks-obama-epa-coal-emissions-regulations.html>.

<sup>35</sup> *Juliana v. United States*, \_\_ F. Supp. 3d \_\_, 2016 WL 6661146 (D. Or. Nov. 10, 2016). Our Children's Trust, an organization which advocates for United States youth, helped organize a group of young people between 8 and 19 years old (along with noted climate scientist Dr. James Hansen) to file this suit in the federal District Court of Oregon. The children allege that the federal government knew that greenhouse gas emissions were destabilizing the climate system and that the government's failure to act on climate change "violate[s] their substantive due process rights to life, liberty, and property," and that the government has "violated their obligation to hold certain natural resources in trust for the people and for future generations." *Id.* at \*1. In November, the court issued a order denying defendants and intervenors' motion to dismiss. *Id.* The court noted that the lawsuit was "not about proving that climate change is happening or that human activity is driving it. For the purposes of this motion, those facts are undisputed." *Id.* at \*2. Rather, the court recognized that the questions before it were whether the U.S. government was responsible for some of the harms caused by climate change, and whether the youth plaintiffs had standing to challenge the government's policies in court. *Id.* The court concluded that the plaintiffs did have standing because "EPA's action/inaction with respect to the regulation of greenhouse gases allegedly results in the numerous instances of emissions that purportedly cause or will cause the plaintiffs harm," allowing the case to proceed to trial. *Id.* at \*10.

<sup>36</sup> *Urgenda Foundation v. State of the Netherlands*, The Hague District Court, Chamber for Commercial Affairs, Case No. C/09/456689/HA ZA 13–1396 (June 24, 2015) (<http://deeplink.rechtspraak.nl/uitspraak?id=ECLI:NL:RBDHA:2015:7196>)

criticized as a deviation from the traditional requirement of tort law that causation be established between the defendant's act and the damage suffered. Under this analysis, Urgenda's claim should fail because there is no direct causal connection between Dutch emissions and the global problem being created primarily by countries with much larger carbon emissions. However, the Hague District Court recognized that climate change is a problem that eludes traditional tort analysis because of its large-scale, generalized impacts:

It is an established fact that climate change is occurring partly due to the Dutch greenhouse gas emissions. It is also an established fact that the negative consequences are currently being experienced in the Netherlands, such as heavy precipitation, and that adaptation measures are already being taken to make the Netherlands "climate-proof". Moreover, it is established that if the global emissions, partly caused by the Netherlands, do not decrease substantially, hazardous climate change will probably occur. In the opinion of the court, the possibility of damages for those whose interests Urgenda represents, including current and future generations of Dutch nationals, is so great and concrete that given its duty of care, the State must make an adequate contribution, greater than its current contribution, to prevent hazardous climate change.<sup>37</sup>

Clearly, precedent is evolving rapidly as the world-judiciary meets its constitutional, statutory, common law and civil-code<sup>38</sup> duties to protect humanity within its jurisdiction from the devastation of a world warmed to two degrees. Pivotal issues of causation, imminence of danger, sufficiency of evidence of damage, proper remediation, scale of injury, and valuation of cost of carbon emissions vs benefits of carbon emission confront the men and women judges who persevere to achieve a just application of the environmental rule of law to cases involving

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<sup>37</sup> *Id.*

<sup>38</sup> For example, the constitutional court of Colombia recognized the critical role of wetlands in water security and climate change mitigation. Law 1450 of 2011 Colombian National Development Plan (Decision C-035/16), (2016) General Secretariat of the Organization of American States (OAS) Climate Change: A Comparative Overview of the Rights Based Approach in the Americas. Available at [http://www.oas.org/en/sedi/dsd/docs/climate\\_change.pdf](http://www.oas.org/en/sedi/dsd/docs/climate_change.pdf)

the most serious environmental crisis ever encountered by the world judiciary. Environmental courts offer a veritable prescription for an arena of enlightened decision making on such issues. This is so because the environmental court judge receives training in fast-evolving areas of relevant science and environmental law and thereafter remains as a decision maker to amass the insight and experience that accompanies just decisions on cases with complex technical/scientific issues.

Likewise, the Global Judicial Institute on the Environment (GJIE)<sup>39</sup> is a forum vital to strengthening the vanguard of judges who must decide the plight of those who resort to the courts for relief from global warming. Led by judges for judges, its mandate is to equip judges whose interest is the environment.<sup>40</sup> Regardless of jurisdiction or court-assignment, judges who wish to capacity-build for decisions involving the environment are eligible for membership.<sup>41</sup>

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<sup>39</sup> GJIE was formally established at the International Union for the Conservation of Nature World (IUCN) Environmental Law Congress in Rio de Janeiro on April 29, 2016. Thereafter, it was approved by the IUCN World Congress in Honolulu in September 2016.

<sup>40</sup> The Charter for the GJIE outlines two categories of judicial members, institutional and individual. Individual membership is open to the following:

- 1) Individuals currently serving as judges or in a capacity as judicial decision-makers on specialized environmental courts or tribunals; or
- 2) Individuals currently serving as judges or in a capacity as judicial decision-makers on other courts or tribunals, with an expressed interest or expertise in environmental matters.

Charter of the Global Judicial Institute for the Environment, available at <http://iucnael2016.no/wp-content/uploads/2016/06/Charter-of-the-Global-Judicial-Institute-Rio-de-Janeiro-29-April-2016-v2.pdf>.

<sup>41</sup> Institutional membership in the GJIE includes the following:

Institutional Membership is open to any international, regional, national, and subnational courts and tribunals, and to judicial institutions, such as judicial institutes, schools, associations, academies, and other similar organizations that are directed by judges and are composed of or provide services to judges and judiciaries. The Institute particularly encourages the participation of

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The mission of the GJIE is to “support the role of courts and tribunals in applying and enforcing environmental laws and in promoting the environmental rule of law and the fair distribution of environmental benefits and burdens.”<sup>42</sup> To fulfill its mission GJIE has established specific objectives including:

- (a) Provide research, analysis, and publications on environmental adjudication, environmental dispute resolution, court practices and procedures, court administration, legal claims and actions, judicial remedies, and environmental justice, including access to environmental information, public participation in environmental decision-making, and access to justice;
- (b) Strengthen the capacity of judges in administration and resolution of cases and disputes related to the environment;
- (c) Provide a forum for convening international, regional, national, and subnational judges, court officials, and judicial institutions, to create partnerships for collaboration and information exchange on environmental law issues[.]<sup>43</sup>

Any judge tasked with applying the environmental rule of law will have the GJIE as a resource. It will be a repository for decisions of judicial colleagues who are decision-makers on the frontline of global warming litigation. It will be a collaborative center to facilitate global communication between judges and support those whose independence may be threatened in response to the just application of the environmental rule of law.

## Conclusion

The world judiciary is embedded in humanity’s struggle to prevent the earth from reaching the two degrees of global warming identified by 197 countries as catastrophic for the human race. Within the parameters of the environmental rule of law, judges strive to protect the

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(continued. . .)

courts, tribunals, and institutions of judges that include within their jurisdiction the consideration of environmental, land use, or natural resources issues.

*Id.*

<sup>42</sup> *Id.*

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

earth and its people from the impending consequences of human-induced carbon emitted at the present rate. Their decisions must be based on command of rapidly developing science and complete understanding of accelerating change in judicial precedent. The endeavor to reach a solution that avoids two degrees of warming is time-limited to no more than the year 2100, at present levels of emission. The men and women who are tasked as judges with the duty to decide the manner in which the environmental rule law is applied to the most important social issue yet facing humanity will be greatly empowered by the instruction, support and collaboration of environmental courts and the Global Judicial Institute on the Environment.