



State Obligations Regarding Children's Rights and Climate Change

Submission to UN Committee on the Rights of the Child

2016 Day of General Discussion "Children's Rights and the Environment"

Our Children's Trust Earth Guardians Global Initiative for Economic, Social and Cultural Rights **Our Children's Trust** is a nonprofit organization, elevating the voice of youth, those with most to lose, to secure the legal right to a healthy atmosphere and stable climate on behalf of present and future generations. We lead a global human rights and environmental justice campaign to implement enforceable science-based Climate Recovery Plans that will return atmospheric carbon dioxide concentration to levels below 350 ppm. www.ourchildrenstrust.org/

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EXECUTIVE SUMMARY

Global climate change is the most pressing ecological and human rights issue of our time. In order to protect our planet's climate system and vital natural resources on which human survival and welfare depends, and to ensure that the fundamental and inalienable human rights of young people and future generations are protected, climate policies of States *must* be based on the best available climate science. The best climate science provides a prescription for climate recovery that requires States to decrease atmospheric carbon dioxide (CO₂) levels to below 350 parts per million (ppm) by 2100 and stabilize the long-term average global temperature increase at no higher than 1 degree Celsius (°C). With this clear scientific prescription, this Committee has the opportunity and the mandate to set a standard that will uphold the right of children now and into the future for an environment free of the worst effects of climate change. In doing so, this Committee will take an historic step to protect fundamental rights of children guaranteed by the Convention on the Rights of the Child (CRC), a step that will be a touchstone for courts and political bodies of the world.

Without action by States around the world to immediately start reducing CO₂ emissions and other greenhouse gases (GHGs) that cause climate change, in line with the clear scientific prescription, children of today and the future will disproportionately suffer the dangers and catastrophic impacts of climate destabilization and ocean acidification. Indeed, the current generation of children are growing up during a time of increasing climate instability. As threats from more frequent catastrophic weather events, increasing ocean acidification, loss of coastline and even entire geographic regions to rising sea levels, rising rates of epidemiological disease, dislocation, and social disruption occur, the failure of States to cease supporting GHG emitting industries and to implement comprehensive, science-based climate recovery plans represents an ongoing violation of nearly all of the rights possessed by children under the CRC. These threats will only intensify for future generations of children, who may never have a chance of realizing their CRC rights, unless States step in now to curtail emissions and restore natural sequestration services of plants and soil in line with the scientific standard of climate recovery. However, the non-binding emission reduction pledges made by States in the run up to the Paris Climate Agreement would likely result in an *increase* in emissions through 2030 and cause climate warming of around 2.7 °C, a temperature increase deemed catastrophic by experts, far above the 1 °C-maximum scientific standard of protection and climate stabilization identified by scientists.

The UN Committee on the Rights of the Child should clearly specify the scientific prescription for climate stabilization and protecting children discussed in Section III, and that this standard must be followed by States in order to fulfill their obligations under the CRC. States have the power to prevent the worst effects of climate change from manifesting, and thus meet their respective obligations to protect the rights of the world's children, by working to reduce atmospheric CO₂ concentration to less than 350 ppm by the end of the century and limit the long-term average global temperature increase to no more than 1 degree Celsius (°C). Moreover, the science and technology are currently available to do so. States that continue to allow, through their cumulative action and inaction, global temperatures to approach 2°C, are violating the rights of children and must be held accountable to their obligations under the CRC. It is essential that the Committee set out the scientific standard for protecting children and children's rights from the dangerous threats posed by unabated climate destabilization.

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I. INTRODUCTION

Global climate change is the most pressing ecological and human rights issue of our time.¹ In order to protect our planet's climate system and vital natural resources on which human survival and welfare depends, and to ensure that fundamental and inalienable human rights of young people and future generations are protected, climate policies of States *must* be based on the best available climate science. The best climate science provides a prescription for climate recovery, which requires States to decrease atmospheric carbon dioxide (CO₂) levels to below 350 parts per million (ppm) by 2100 and stabilize the long-term average global temperature increase at no higher than 1 degree Celsius (°C). States must meet this scientific standard of protection in order to fulfill their obligations under the Convention on the Rights of the Child (CRC).² With this clear scientific prescription, this Committee has the opportunity and the mandate to set a standard that will uphold the right of children now and into the future for an environment free of the worst effects of climate change. In doing so, this Committee will take a historic step to protect fundamental rights of children guaranteed by the CRC, a step that will be a touchstone for courts and political bodies of the world.

Without action by States around the world to immediately start reducing CO₂ emissions, and other greenhouse gases (GHGs) that cause climate change, in line with the clear scientific prescription, children of today and the future will disproportionately suffer the dangers and catastrophic impacts of climate destabilization and ocean acidification.³ Indeed, the Committee on the Rights of the Child has previously recognized the direct threats climate change poses to children and their rights protected under the CRC.⁴ Along with creating irreversible and unprecedented dangers, climate change will exacerbate current ecological and societal threats, ensuring an increase in extreme weather disasters, sea level rise, mass extinction, epidemic disease, and social instability.⁵ People across the globe, particularly the most marginalized, are

¹ James Hansen et al., Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature, PLOS ONE 8:12, 3763 (2013) [hereinafter Assessing "Dangerous Climate Change"]; Exhibit A, Declaration of Dr. James E. Hansen in Support of Our Children's Trust et al.'s Submission to the UN Committee on the Rights of Child Regarding State Obligations, Children's Rights and Climate Change (Aug. 19, 2016), attached and available at <u>http://www.ourchildrenstrust.org/s/HansenCRCDeclaration.pdf</u>; Exhibit B, Our Children's Trust, Policies Must Be Based on 350 ppm and 1 Degree Celsius to Protect Young People and Future Generations (2016), attached and available at http://www.ourchildrenstrust.org/s/OCT Why350ppm.pdf.

² Hansen, et al. *Assessing "Dangerous Climate Change*," at 18; Exhibits A, B; Convention on the Rights of the Child, Nov. 20, 1989, 1577 U.N.T.S. 3 [hereinafter CRC], http://www.ohchr.org/en/professionalinterest/pages/crc.aspx; see also James E. Hansen et al., *Target Atmospheric CO₂: Where Should Humanity Aim?* 2 The Open Atmospheric Sci. J. 217, 217-31 (2008), http://www.columbia.edu/~jeh1/2008/TargetCO2_20080407.pdf ("If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, Paleoclimate evidence and ongoing climate change suggest that CO₂ will need to be reduced from its current 385 ppm to at most 350 ppm."); James Hansen et al., *Ice Melt, Sea Level Rise and Superstorms; Evidence from Paleoclimate Data, Climate Modelling, and Modern Observations that 2°C Global Warming Could be Dangerous.* 16 Atmos. Chem. Phys., 3761, 3801 (2015) [hereinafter *Sea Level Rise*]; James Hansen, Pushker Kharecha & Makiko Sato, *Climate Forcing Growth Rates: Doubling Down on Our Faustian Bargain.* 8 Envtl. Res. Letters 1, 7 (2013); James Hansen, Storms of My Grandchildren 166 (2009) [hereinafter *Storms*]; Matt Vespa, *Why 350? Climate Policy Must Aim to Stabilize Greenhouse Gases at the Level Necessary to Minimize the Risk of Catastrophic Outcomes*, 36 Ecology L. Currents 185, 186 (2009).

³ Hansen et al., Assessing "Dangerous Climate Change," at 6-9; Exhibits A, B; UNICEF UK, Climate Change: Children's Challenge, 1, 2 (2013) [hereinafter Children's Challenge].

⁴ Committee on the Rights of the Child, General Comment No. 15 (2013) on the Right of the Child to the Enjoyment of the Highest Attainable Standard of Health (art. 24), ¶ 50 (Apr. 17, 2013) (indicating that climate change "is one of the biggest threats to children's health and exacerbates health disparities...States should, therefore, put children's health concerns at the center of their climate change adaptation and mitigation strategies.").

⁵ Hansen et al., *Assessing "Dangerous Climate Change*," at 6-9; Exhibits A, B; Mark C. Urban, *Accelerating Extinction Risk from Climate Change*, 348 Sci. 571, 572 (2015) [hereinafter *Accelerating Extinction*]; Intergovernmental Panel on Climate

already experiencing the adverse effects of climate change.⁶ Despite the clearly catastrophic consequences of inaction and inadequate action to curtail the GHG emissions, sovereign States around the world are continuing down this disastrous path, ignoring the scientific prescription for climate recovery.⁷

While previous international climate change agreements failed to directly address the rights of children, more recent agreements explicitly identify them as a unique group with a unique set of rights. For example, the preamble to the Paris Agreement calls on States to

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*.⁸

This is an important first step. However, to uphold and protect children's rights, the legal obligations of States must be clearly defined and enforced. States around the world are obligated to manage natural resources for the benefit of current and future generations.⁹ With respect to climate change, this translates into an obligation to take science-based action immediately to stabilize the climate system by reducing atmospheric CO_2 levels to below 350 ppm.¹⁰

http://www.aaas.org/sites/default/files/migrate/uploads/aaas_climate_statement.pdf ("The scientific evidence is clear: global climate change caused by human activities is occurring now, and it is a growing threat to society."); *see also* UNICEF UK, *Children's Challenge*, at 5.

⁷ Hansen et al., Assessing "Dangerous Climate Change," at 20-22; Exhibits A, B.

¹⁰ Mary Christina Wood, *Beyond Borders: Shared Ecology and the Duties of Sovereign Co-Tenant Trustees, in* Nature's Trust: Environmental Law for a New Ecological Age, 208, 218 (2014) [hereinafter *Beyond Borders*].

Change (IPCC), *Climate Change 2014 Synthesis Report Summary for Policymakers*, 1, 13, 15-16, 31 (2014) [hereinafter *Climate Change 2014*], http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf.

⁶Adel Daoud, Bjorn Halleröd & Debarti Guha-Sapir, *What is the Association between Absolute Child Poverty, Poor Governance, and Natural Disasters? A Global Comparison of Some of the Realities of Climate Change*, 11 PLOS ONE 1, 16 (2016) [hereinafter *Child Poverty Natural Disasters*] (finding that "natural disasters victimization correlates with increasing rates of child poverty"); Luke J. Harrington et al., *Poorest Countries Experience Earlier Anthropogenic Emergence of Daily Temperature Extremes*. 11 Envtl. Res. Letters 1, 7 (2016) [hereinafter *Poorest Countries Earlier Temperature Extremes*] (noting "if cumulative emissions continue to increase at current rates, the impacts, in terms of frequency of heat extremes, will become significantly worse for poorer nations when compared with their wealthier counterparts"); American Association Advancement of Science (AAAS), *Board Statement on Climate Change* (Feb. 18, 2007),

⁸ Paris Agreement, FCCC/CP/2015/L.9, 20 (Dec. 12, 2015) [hereinafter *Paris Agreement*], http://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf.

The fundamental obligation of sovereign States to protect and maintain crucial natural resources on behalf of current and future generations arises out of the public trust doctrine. The fiduciary duty of the Sovereign trustees and the rights conferred to the beneficiary present and future generations under the doctrine predate and exist independent of modern articulation and codification of the doctrine. See, e.g., Gerald Torres & Nathan Bellinger, The Public Trust: The Law's DNA 4 Wake Forest J.L. & Pol'y 281, 288 (2014) [hereinafter Public Trust: Law's DNA] ("The public trust doctrine is "inherent to humankind and merely secured by government."); Michael C. Blumm & Rachel D. Guthrie, Internationalizing the Public Trust Doctrine: Natural Law and Constitutional and Statutory Approaches to Fulfilling the Saxion Vision, 45 U.C. Davis L. Rev. 741, 750 (2012) (stating that the doctrine is approaching becoming a "general principle of international law"); Mary Christina Wood, Atmospheric Trust Litigation Across the World, in Fiduciary Duty and the Atmospheric Trust (Ken Coghill at al. eds., 2012) [hereinafter Atmospheric Trust Litigation]. This obligation is articulated in various international treaties from those directly requiring action on climate change, such as the Paris Agreement, to those that address the range of human rights impacted as a result of climate change, such as the Convention on the Rights of the Child and the International Covenant on Economic, Social and Cultural Rights. Finally, the obligations and rights under the public trust doctrine exist within the fabric of Constitutions and other domestic laws of nations, implicitly and, at times, explicitly. Torres & Bellinger, Public Trust: Law's DNA, at 288 ("the public trust doctrine provides the background and context for the [U.S.] Constitution"); see also Const. of Norway, art. 112 (2014); Const. of Kenya (2010); Const. of The Republic of Ecuador, tit. 2, ch. 7, art. 71-74 (2008); S. Afr. Const., § 24 (1996); Const. of Ukraine, tit, I. art, 13 (1991).

States have the power to prevent the worst effects of climate change from manifesting, and thus meet their respective obligations to protect the rights of the world's children.¹¹ The actions needed by States to meet the clear scientific prescription for climate recovery—i.e., return atmospheric CO₂ levels to below 350 ppm by 2100 in order to limit the long-term average global temperature increase to 1 °C-are both technically and economically feasible, and would move the world completely off of a fossil fuel-based energy system by 2050.¹² By taking science-based action. States will meet their sovereign obligations and prevent the continuing escalation of catastrophic effects of climate change that threatens human life, and in particular, the lives of the world's children.¹³ This Committee should take the historic step of identifying this scientific prescription as the standard that must be met to ensure that the rights of children are protected now and into the future.

CLIMATE CHANGE DISPROPORTIONATELY THREATENS CHILDREN II.

A. Climate change is caused by excessive anthropogenic GHG emissions, deforestation, and destructive agricultural practices and, if unchecked, will result in catastrophic effects on human life

Climate change is the result of the anthropogenic emissions of GHGs, primarily CO₂, from the combustion of fossil fuels.¹⁴ Climate destabilization resulting from these emissions is worsened by the decreasing ability of oceans, forests and soils to sequester carbon, also a result of human activities and State action in facilitating deforestation.¹⁵ These emissions have led to a global energy imbalance and consequent dangerous disruption of the climate system and oceans upon which all life on earth depends.¹⁶ The increasing concentration of CO₂ in the atmosphere serves as a buffer, preventing the planet from returning as much heat into space as it receives from the sun.¹⁷ As a result, the mean global surface temperature is increasing.¹⁸ Current science indicates that, to protect the earth's systems, the *long-term* increase in the average global surface

¹¹ See Hansen et al., Assessing "Dangerous Climate Change," at 20-22; Exhibit A; see, e.g., Mark Z. Jacobson, et al., 100% Clean and Renewable Wind, Water, and Sunlight (WWS) All Sector Energy Roadmaps for 139 Countries of the World, draft article, 1, 59 (Apr. 24, 2016) [hereinafter 100% Clean and Renewable],

http://web.stanford.edu/group/efmh/jacobson/Articles/I/CountriesWWS.pdf; Mark Z. Jacobson, et al., 100% Clean and Renewable Wind, Water, and Sunlight (WWS) All-Sector Energy Roadmaps for the 50 United States, 8 Energy & Envtl. Sci. 2093, 2133 (2015). For plans on how the United States and over 100 other countries can transition to a 100% renewable energy economy see www.thesolutionsproject.org. See also Arjun Makhijani, Carbon-Free, Nuclear-Free; A Roadmap for U.S. Energy Policy (2007).

¹² See Hansen et al., Assessing "Dangerous Climate Change," at 20-22; Jacobson et al., 100% Clean and Renewable, at 1, 59. ¹³Exhibits A, B.

¹⁴ See Exhibits A, B.

¹⁵ See Exhibits A, B; see also IPCC, Summary for Policymakers, Climate Change 2014: Impacts, Adaptation, and Vulnerability: Contribution of Working Group II to the Fifth Assessment Report of the IPCC, 37 (Christopher B. Field et al. eds., 2014), http://ipcc-wg2.gov/AR5/images/uploads/IPCC WG2AR5 SPM Approved.pdf; Hansen et al., Sea Level Rise; Hansen Storms; Susan Solomon et al., Irreversible Climate Change Due to Carbon Dioxide Emissions, 106 Proc. Nat'l Acad. Sci. 1704, 1704 (2009).

 ¹⁶ Hansen et al., Assessing "Dangerous Climate Change," at 12; see also Hansen et al., Sea Level Rise; Hansen, Storms.
 ¹⁷ Hansen et al., Assessing "Dangerous Climate Change, 4; see also John Abatzoglou et al., A Primer on Global Climate Change and Its Likely Impacts, in Climate Change: What It Means for Us, Our Children, and Our Grandchildren 11, 15-22 (Joseph F. C. DiMento & Pamela Doughman eds., 2007).

¹⁸ Environmental Protection Agency ("EPA"), Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act 17 (Dec. 9, 2009), at ES-2 ("Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations." (emphasis added)).

temperature of the earth above preindustrial temperatures must stay below 1°C.¹⁹ Having global average surface temperatures approach 2°C for any length of time would be highly dangerous.²⁰ In 2015, for the first time ever, global average surface temperatures reached 1°C.²¹

Populations around the world are already experiencing significant impacts from the 1°C warming that has occurred.²² These impacts include more frequent and severe extreme weather events, including drought and flooding, ocean acidification, extensions in the range of vector-borne infectious disease, and accelerated mass extinction.²³ These impacts constitute harbingers of far more dangerous changes to come. If unabated, continued GHG emissions, in particular CO₂, "will initiate dynamic climate change and effects that spin out of human control, as the planet's energy imbalance triggers amplifying feedbacks and the climate and biological systems pass critical tipping points."²⁴ Such changes would be irreversible and yield a different planet from the one on which human civilization developed.²⁵

B. Children will disproportionately suffer the disastrous effects of climate change

Current and future generations of children will disproportionately experience the harms of climate change, due to the progressive nature of climate change impacts and the unique life phase of childhood. While the disastrous effects of climate change threaten all children, at this very moment in time, the 600 million children living in the 10 countries most vulnerable to climate changes are facing imminent danger.²⁶ Furthermore, given the nature of the climate threat, children and their caregivers have no meaningful way of protecting themselves from the dangerous situation in which States have placed them. Only States, by initiating an emissions reduction trajectory and soil and forest restoration effort that will satisfy the clear scientific prescription of reducing global atmospheric CO_2 levels to below 350 ppm by 2100 can reverse the danger.

The harms of climate change start at the emissions level and impact all aspects of a child's life (see Table 1). Children are more vulnerable than adults to pollution from the burning of fossil fuels that causes global climate change, since exposure to climate pollution results in, among other things, increased infant mortality, asthma, developmental disorders and impaired lung function.²⁷ The harm from climate pollution is compounded by climate change impacts. For

¹⁹ Given the long-term effects of CO₂ in the atmosphere, past emissions may result in 1.5 °C peak in global surface heating for a period of time; however, emissions must be reduced to ensure that long-term temperatures, after peaking, stabilize at no more than 1 °C over preindustrial levels. To stabilize at 1 °C requires a mean atmospheric concentration of CO₂ of no more than 350 ppm. Exhibits A, B; Hansen et al., *Assessing "Dangerous Climate Change*," at 15; see also Hansen et al., *Sea Level Rise;* Hansen, *Storms*.

Hansen, *Storms*. ²⁰ Exhibits A, B; *see also Hansen* et al., *Assessing "Dangerous Climate Change*," 15 (noting that a 2°C increase would result in an "unacceptably high risk of global catastrophe.")

²¹ World Meteorological Org. (WMO), WMO-No. 1167, WMO Statement on the Status of the Global Climate in 2015, 1, 5 (2016) [hereinafter Status Global Climate 2015],

<u>http://www.cma.gov.cn/en2014/news/News/201603/P020160322334697539255.pdf</u> ("The global average temperature for the year was about 0.76 ± 0.09 °C above the 1961–1990 average, and approximately 1 °C above the 1850–1900 average."). While the increase in temperature averaged across the surface of the globe was 1 °C in 2015, local temperature increases were much higher in some portions of the world. For example, Alaska reached 4 °C above 1961–1990 levels. *Id.* at 6.

²² For a list of global impacts felt in 2015, see, e.g., WMO, Status Global Climate 2015, at 11-20.

²³Exhibits A, B.; see also Anthony J. McMichael, Globalization, Climate Change, and Human Health. 368 N. Engl. J. Med. 1335, 1340 (2013) [hereinafter Climate Change and Human Health]; Urban, Accelerating Extinction, at 572.

²⁴ Exhibit A, ¶ 17; see also Hansen et al., Assessing "Dangerous Climate Change," at 15.

²⁵ Exhibit A, ¶ 69; Hansen et al., Assessing "Dangerous Climate Change," at 15.

²⁶ UNICEF UK, Children's Challenge, at 5.

²⁷ See, e.g., Federica P. Perera, *Children Are Likely to Suffer Most from Our Fossil Fuel Addiction*, 116 Envtl. Health Persp. 987, 987-988 (2008) [hereinafter *Children Likely to Suffer*].

example, chemical reactions such as ozone formation are accelerated at higher temperatures, triggering respiratory ailments.²⁸ Increases in childhood asthma and allergies also result from changes in the distribution and seasonality of plants, increases in plant growth and pollen release, and the increased frequency of severe wildfires.²⁹

Children are particularly susceptible to injury and death as a result of extreme heat, drought, floods and other disasters caused by climate change.³⁰ They are also at risk from food and water shortages caused by crop failure, ocean acidification, water and soil salinization, and species extinction.³¹ Similarly, the range expansion of vector-carried disease will result in increased childhood mortality and morbidity.³² Indeed, the World Health Organization estimates that children suffer more than 80 percent of the illness and mortality attributable to climate change.³³ UNICEF expands on this point and highlights that

[b]ecause of climate change, children in developing countries already face a greater risk of climate-linked diseases like malaria and cholera, increased risk of food and water shortages, and disruption to their education. It is estimated that more than 88 percent of the existing global burden of disease due to climate change occurs in children under the age of five.³⁴

Finally, children will suffer profoundly from social, emotional, and cognitive impacts of climate change. Displacement from rising sea levels, extreme weather events, and conflict related to food and water insecurity disrupts and destroys family and community structures, as well as access to education, health care, and adequate nutrition.³⁵ The loss of family and home and the sense of imminent danger and disruption suffered by children in the face of climate change also threaten cognitive and emotional development.³⁶ Vulnerable populations, including children, will suffer the greatest from climate-related mental health impacts, such as depression, anxiety, and post-traumatic stress disorder, which are documented effects of climate change weather-related events and expected to increase.³⁷ However, a generalized sense of loss and solastalgia (emotional suffering caused by environmental harm) occurs across the range of individuals whose land, surrounding biodiversity, and local opportunity have been harmed by climate change.³⁸ Finally, overlaying all of the impacts of climate destabilization that directly

²⁸ Id. at 988.

 ²⁹ American Academy of Pediatrics Council on Environmental Health (AAP), *Policy Statement on Global Climate Change and Children's Health*, 136 Pediatrics 993, 994 (2015) [hereinafter *Children's Health*]; Perera, *Children Likely to Suffer*, at 988.
 ³⁰ See Janet Currie & Livier Deschênes, *Children and Climate Change: Introducing the Issue*, 26 The Future of Children:

Children and Climate Change 3, 4 (2016) [hereinafter *Children and Climate Change*];

Zhiwei Xu et al., *The Impact of Heat Waves on Children's Health: A Systematic Review*, 58 J. Biometeorology 239, 245-246 (2014). ³¹ See, e.g., Paolo Vineis, Queenie Chan, Aneire Khan, *Climate Change Impacts on Water Salinity and Health*, 1 Journal of

³¹ See, e.g., Paolo Vineis, Queenie Chan, Aneire Khan, Climate Change Impacts on Water Salinity and Health, 1 Journal of Epidemiology and Global Health 5-10 (2011) [hereinafter Water Salinity]; J.-P. Gattuso, et al., Contrasting Futures for Ocean and Society from Different Anthropogenic CO2 Emissions Scenarios, 349 Science 6243 (2015) [hereinafter Future for Ocean and Society]: Urban, Accelerating Extinction, at 572.

³² McMichael, *Climate Change and Human Health.*

³³ Currie, *Children and Climate Change*, at 4.

³⁴ UNICEF UK, Children's Challenge, at 5.

³⁵ AAP, Children's Health, at 994; Perera, Children Likely to Suffer, at 988.

³⁶ Id.

 ³⁷ François Bourque and Ashlee Cunsolo Willox, *Climate Change: The Next Challenge for Public Mental Health*, 26 Int'l Rev. of Psychiatry 415, 416 (2014) [hereinafter *Climate Change Mental Health*]; *see also* Thomas J. Doherty & Susan Clayton, *The Psychological Impacts of Global Climate Change*, 66 Am. Psychologist 265 (2011).
 ³⁸ Glenn Albrecht et al., *Solastalgia: the Distress Caused by Environmental Change*, 15S Australasian Psychiatry S95, S96

³⁶ Glenn Albrecht et al., *Solastalgia: the Distress Caused by Environmental Change*, 15S Australasian Psychiatry S95, S96 (2009); Nick Watts et al., *Health and Climate Change: Policy Responses to Protect Public Health*, 386 Lancet 1861, 1877 (2015) [hereinafter *Health and Climate Change*]; Georgina Kenyon, *Have You Ever Felt Solastalgia*, BBC Future (Nov. 2, 2015),

threaten human security, climate change impacts also pose an indirect security implication, as a "threat multiplier," by driving and exacerbating violent conflict.³⁹ Conflict from climate change impacts serves to increase the adverse physical, mental, and emotional impacts to children. resulting in further deprivation of their fundamental human rights.

THE SCIENTIFIC STANDARD NECESSARY TO PROTECT CHILDREN III. FROM CLIMATE CHANGE REQUIRES ATMOSPHERIC CO2 LEVELS BE **REDUCED TO LESS THAN 350 PPM BY THE END OF THE CENTURY**

The non-binding emission reduction pledges made by States in the run up to the Paris Climate Agreement would likely result in an *increase* in emissions through 2030 and cause climate warming of around 2.7 °C, a temperature increase deemed catastrophic by experts, far above the 1 °C-maximum scientific standard of protection and climate stabilization identified by scientists.⁴⁰ In the Paris Climate Agreement itself, the parties committed to a non-binding target of temperature increases well below 2 °C above pre-industrial levels and agreed to pursue efforts to limit global temperature increase to 1.5 °C.⁴¹

Unfortunately, even the lowest of those targets, 1.5°C, is dangerously high, since current science indicates that, to prevent catastrophic ecological harm, warming must be limited to a long-term maximum of 1°C above preindustrial temperatures.⁴² To meet this scientific prescription of limiting global temperature increase to a maximum of 1°C, atmospheric CO₂ must be reduced to less than 350 ppm by the end of this century.⁴³ While the pre-industrial atmospheric CO₂ concentration was 280 ppm, today's atmospheric CO₂ levels are over 400 ppm and continue to rise.⁴⁴ An increase to 2°C above preindustrial levels is expected if atmospheric CO₂ levels are allowed to reach 450 ppm.

In order to reduce atmospheric CO₂ levels to below 350 ppm within this century, global CO₂ emissions must be reduced, starting in 2017, at a rate of approximately eight percent annually.⁴⁵ To do so, States must immediately cease actions supporting industries that extract. process, transport and burn fossil fuels, such as oil, gas, and coal, and must implement comprehensive climate recovery plans, programs, and policies to rapidly reduce GHG emissions

http://www.bbc.com/future/story/20151030-have-you-ever-felt-solastalgia (last visited July 28, 2016); Glenn Albrecht, Solastalgia: the Distress Caused by Environmental Change, 15 Australasian Psychiatry S95 (2007) [hereinafter Solastalgia]; James R. Miller, Biodiversity Conservation and the Extinction of Experience, 20 Trends in Ecology & Evolution 430, 430-434 (2005) [hereinafter Extinction of Experience].

Patrick Huntjens & Katharina Nachbar, Climate Change as a Threat Multiplier for Human Disaster and Conflict, The Hague Institute for Global Justice, Working Paper No. 9, 1-3 (2015) [hereinafter Threat Multiplier], http://www.thehagueinstituteforglobaljustice.org/wp-content/uploads/2015/10/working-Paper-9-climate-change-threatmultiplier.pdf.

⁴⁰UNFCCC, Synthesis Report on the Aggregate Effect of the Intended Nationally Determined Contributions, 1, 41 (Nov. 2015), [hereinafter Aggregate INDCs]. http://unfccc.int/resource/docs/2015/cop21/eng/cop21/eng/07.pdf; Louise Jeffrey, et al., 2.7°C is Not Enough—We Can Get Lower, Climate Action Tracker Update (Dec. 8, 2015) [hereinafter Climate Action Tracker Update], http://climateactiontracker.org/news/253/Climate-pledges-will-bring-2.7C-of-warming-potential-for-more-action.html (last visited Aug. 10, 2016); Exhibits A, B.

⁴¹ Paris Agreement. While earlier models of climate change dynamics indicated that a 2°C increase might be sustainable, these models failed to incorporate the slow feedback, system inertia and other dynamics that influence the effect of current temperature change on future climate change. Hansen et al., *Assessing "Dangerous Climate Change*," at 15. ⁴² Hansen, *Assessing "Dangerous Climate Change*," at 15; Exhibits A, B.

⁴³ See Hansen et al., Assessing "Dangerous Climate Change"; Hansen, Storms.

⁴⁴ NASA, Facts, Carbon Dioxide, http://climate.nasa.gov/vital-signs/carbon-dioxide/ (last visited July 10, 2016).

⁴⁵ Exhibit A, ¶ 68; Exhibit B, at 1,6.

in line with this trajectory.⁴⁶ These actions must be coupled with programs to sequester an additional 100 GtC (gigatons of Carbon) via reforestation and improved agricultural and forestry practices.⁴⁷

There is a small window of opportunity for States to fulfill their legal obligations by taking the urgent science-based action needed to protect children and uphold their rights. However, any further delay increases the danger of passing critical climate tipping points which would lead to runaway heating and produce changes that would be irreversible on any time scale relevant to the world's children and threaten their survival.⁴⁸

IV. THE FAILURE OF STATES TO TAKE SCIENCE-BASED ACTION TO HALT AND REVERSE CLIMATE CHANGE VIOLATES THE RIGHTS OF CHILDREN UNDER THE CRC

The experience of children during childhood profoundly affects, and directly determines, their physical, cognitive, emotional and social development as well as their opportunities as adults.⁴⁹ This experience is deeply colored by the ecological effects of climate change. Even now, the current generation of children are developing into adults as States fail to address the causes of climate change; they live their lives in a time of increasing climate instability under threat of increasingly frequent and severe extreme weather events, increasing ocean acidification, loss of coastline and even entire geographic regions to rising sea levels, rising rates of epidemiological disease, dislocation, and social disruption.⁵⁰ Yet States are continuing to support industries driving climate change, failing to implement science-based policies reducing GHG emissions, and facilitating the loss of natural sequestration services by trees, peat and soil. These actions and inactions by States result in the ongoing violations of nearly all of the rights possessed by children under the CRC. The threats from increasing climate instability will only be intensified for future generations of children, who may never have a chance of realizing their CRC rights, unless States step in now to curtail emissions on a trajectory necessary to meet the scientific standard of climate recovery.

The current actions by State governments supporting the fossil fuel industry and increasing GHG emissions, as well as inaction and inadequate measures taken by States to address climate change will result in, by 2050, approximately 1.45 billion children living in zones where the global average surface temperature will have increased by greater than 2 °C,⁵¹ an increase deemed catastrophic by experts.⁵² Moreover, as discussed above, the non-binding emission reduction pledges made by States in December 2015 would result in around 2.7 °C

⁴⁶ See Exhibit A, ¶ 97-98; Exhibit B, at 6, 7. For an outline of an approach for States to take to successfully reduce emissions, see Jacobson, et al., *100% Clean and Renewable*, at 59.

⁴⁷ See, e.g., I. A. Janssens, et. al., *The Carbon Budget of Terrestrial Ecosystems at Country-Scale—a European Case Study*, 2 Biogeosciences 15, 23-25 (2005) [hereinafter *European Carbon Budgets*]; Robert Lal, *Soil Carbon Sequestration Impacts on Global Climate Change and Food Security*, 304 Science 1623, 1623-1626 (2004) [hereinafter *Soil Sequestration*].

⁴⁸ Exhibit B, at 3,4. Indeed, models indicate that under a business-as-usual scenario, the effects of anthropogenic GHG emissions will continue to affect the climate 100,000 years from now. Committee on the Importance of Deep-Time Geologic Records for Understanding Climate Change Impacts, Board on Earth Sciences and Resources; Division on Earth and Life Studies National Research Council, *Understanding Earth's Deep Past: Lessons for Our Climate Future*, 79 (2011), http://www.nap.edu/download/13111 (last visited Aug. 18, 2016).

⁴⁹ Exhibits A, B; AAP, *Children's Health*, at 993, 994; Perera, *Children Likely to Suffer*, at 987-88; see also Currie, *Children and Climate Change*; Burgess, *Children's Challenge*.

⁵⁰Exhibits A, B.

⁵¹ UNICEF, Unless We Act Now: The Impact of Climate Change on Children, 1, 61 (Nov. 2015) [hereinafter Impact of Climate Change on Children], http://www.unicef.org/publications/index 86337.html.

⁵² See Exhibits A, B; supra Section III.

global warming, far above the 1 °C-maximum scientific standard of protection and climate stabilization identified by scientists.⁵³ An increase of this magnitude promises environmental effects such as the evaporation of rivers and lakes and the cessation of plant germination.⁵⁴ It also promises the slow feedback loops that will augment climate instability and impede attempts at future reversal of climate change effects.⁵⁵ Unchecked climate change will result in an estimated 30 million more malnourished children by 2050.⁵⁶

The UN Committee on the Rights of the Child should clearly specify the scientific prescription for climate stabilization and protecting children discussed in Section III, and that this standard must be followed by States in order to fulfill their obligations under the Convention. States have the power to prevent the worst effects of climate change from manifesting and thus meet their respective obligations to protect the rights of the world's children, by working to reduce atmospheric CO_2 concentration to less than 350 ppm by the end of the century, and the science and technology are currently available to do so.⁵⁷ It is essential that the Committee set out the scientific standard for protecting children and children's rights from the dangerous threats posed by unabated climate destabilization.

A. In spite of knowing of the severe dangers posed by carbon pollution, States created and enhanced the danger through fossil fuel extraction, production, consumption, transportation, and exportation, as well as deforestation, peatland conversion, and agricultural practices that impair and destroy the environment's carbon sequestration services

States have known for decades that CO₂ pollution from burning fossil fuels causes global warming and dangerous climate change, and that continuing to burn fossil fuels while simultaneously systematically destroying forest and peatland carbon sinks would destabilize the climate system.⁵⁸ Despite this knowledge, States have utterly failed to implement a rational course of effective action to phase out carbon pollution. Instead, States have, through the exercise of sovereign authority over the atmosphere and fossil fuel resources, permitted, encouraged, and otherwise enabled continued exploitation, production, and combustion of fossil fuels. Furthermore, States have permitted, encouraged, and otherwise facilitated excessive deforestation, and failed to provide for sustainable forest management practices to improve sequestration and reduce wildfires, thus ensuring a loss of net carbon sequestration.

More specifically, State contributions to increasing emissions include encouraging fossil fuel extraction, production, and transport on State-managed lands as well as across the ocean; subsidizing the fossil fuel industry; approving the increasing interstate and international transport

⁵³ Louise Jeffrey et al., 2.7°C is Not Enough—We Can Get Lower, Climate Action Tracker Update (Dec. 8, 2015),

http://climateactiontracker.org/news/253/Climate-pledges-will-bring-2.7C-of-warming-potential-for-more-action.html. ⁵⁴ See Exhibits A, B; *supra* Section III.

⁵⁵ Exhibits A, ¶¶ 41, 102.

⁵⁶ UNICEF UK, *Children's Challenge*, at 7.

⁵⁷ Hansen et al., Assessing "Dangerous Climate Change," at 20-22; Jacobson, 100% Clean and Renewable, at 1, 59.

⁵⁸ See, e.g., Roger Revelle & Hans Suess, Carbon Dioxide Exchange Between Atmosphere and Ocean and the Questions of an Increase of Atmospheric CO₂ During the Past Decades, 9 Tellus 18 (1957) (identifying the risk of excessive CO₂ emissions); Waldemar Kaempffert, Warmer Climate on the Earth May be Due to More Carbon Dioxide in the Air, 191, N.Y. Times (Oct. 28, 1956), <u>http://www.nytimes.com/packages/pdf/weekinreview/warm1956.pdf</u> (last visited Aug. 8, 2016); United States President's Science Advisory Committee, *Restoring the Quality of Our Environment*, 9, Report of the Environmental Pollution Panel (Nov. 5, 1965) (identifying that the burning of coal, oil, and natural gas add carbon dioxide to the earth's atmosphere, have altered on a global scale the carbon dioxide content of the air, and "will modify the heat balance of the atmosphere to such an extent that marked changes in climate, not controllable through local or even national efforts, could occur").

of fossil fuels; and allowing CO₂ pollution from combustion of fossil fuels by energy, refinery, and manufacturing industries. States facilitate further exploitation of fossil fuels by ensuring financial institutions such as the World Bank and the Export Import Bank have leeway to finance carbon intensive operations by multinational corporations. States have also failed to effectively cap and reduce emissions through transportation, neither acting to reduce emissions of their own governmental fleets at the rate necessary, nor sufficiently facilitating alternative transportation structures and the sale of low emission vehicles to drive the reduction in emissions necessary to mitigate climate change.

In addition to actions that are increasing GHG emissions, States have mismanaged natural resources by permitting and encouraging deforestation, destructive agricultural practices, peatland conversion, and other actions resulting in a loss of carbon sequestration services of plants and soil. ⁵⁹ States have encouraged the conversion of forests, grasslands, and peatland to agriculture, pastureland, residential, and other uses; permitted forestry practices, such as clearcutting, that reduce the capacity of trees and the soil to store carbon; and subsidized agricultural approaches that have led to widespread soil depletion. The result of these actions is a net loss of the essential carbon sequestration services of natural resources across the globe.

Thus, by and through their aggregate actions and omissions, States deliberately allowed atmospheric CO_2 concentrations to escalate to levels unprecedented in human history, resulting in a dangerously destabilizing climate system for the children of the world and violating their rights under the CRC. Even in the actions professed to address climate change, States fail to protect children's rights. By bringing forward pledges to reduce emissions under international agreements that are far below what is scientifically needed to address climate change, States are acting in contravention to the CRC.⁶⁰

B. The failure of States to consider and include children in decision-making results in discrimination against children and violates their right of participation

States have repeatedly and directly violated their obligations (under the CRC, various national and international laws, and the public trust doctrine) to consider, include, and not discriminate against children in decisions affecting climate change and thus every aspect of their lives. The status of children as a unique group relative to climate change has, until very recently, been overlooked.⁶¹

Article 2(1) of the CRC mandates that States "shall respect and ensure the [CRC enumerated] rights...without discrimination of any kind, irrespective of the child's or his or her parent's or legal guardian's race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status." The CRC also requires States to take all appropriate measures to ensure that the child is protected against discrimination on the basis of status as a child (Art. 2(2)).

States, through their actions and inactions, are causing the catastrophic effects of climate change, effects that States know will be disproportionately and more severely experienced by

⁵⁹ See, e.g., Janssens, European Carbon Budgets, at 23-25; Lal, Soil Sequestration, at 1623-1626.

⁶⁰ Jeffrey, et al., *Climate Action Tracker Update*.

⁶¹ The Paris Agreement represents the increasing inclusion of children as a special group, requiring unique consideration in light of the threat of climate change. COP 21 also included Young and Future Generations Day on December 3, 2015 involving children in "side events, workshops, and activities" to bring the centrality of children's concerns to the fore. *See, e.g.*, UNFCCC, Young and Future Generations Day (Dec. 3, 2015),

http://unfccc.int/cooperation_support/education_outreach/overview/items/9191.php (last visited July 28, 2016).

children and future generations. States further violate Art. 2(1) because the disproportionate harms of climate change experienced by current and future generations of children will fall most heavily on the most disenfranchised populations of children, for example, those born into vulnerable regions of the globe, those who rely most heavily upon local natural resources, and those without sufficient resources to adapt to the ecological ravages that will come in the wake of an increasing average global surface temperature.⁶²

Perhaps the most explicit and intentional forms of discrimination against children engaged in by States include the ongoing subsidization of the fossil fuel industry and numerous decisions related to GHG emissions that States make for the short-term benefit of a small group of economic elites while ignoring the astronomical costs of climate change to children and future generations. Through such actions, States disperse these costs among the global population, particularly the most marginalized, ensuring that this generation and future generations of children will continue to pay through the loss of health, environment, community, and opportunity.⁶³

Children "ought to be central to these debates [about climate change] because they – as well as future generations – have a much larger stake in the outcome than [today's adult] do."⁶⁴ Under Article 3(1) of the CRC, States must put the "best interests" of children at the forefront of decision-making processes that affect the rate of climate change. Also, under Article 12(2) of the CRC, States must ensure children are "provided the opportunity to be heard in any judicial and administrative proceedings affecting the child, either directly, or through a representative or an appropriate body." Currently, however, children do not have the rights of participation in the State level political processes where the decisions are being made that, at least to this point, will result in a planet unlikely to be able to sustain them.

Despite their lack of access, children are mobilizing and engaging with these discussions and decision-making processes, both in the context of the Paris Agreement, and in alternative formats, speaking to politicians and governing bodies and insisting they be heard.⁶⁵ Youth collaborating with Our Children's Trust are mounting legal actions at the municipal,⁶⁶ state,⁶⁷ and federal level in the United States,⁶⁸ as well as at the national level in other countries,⁶⁹ such

⁶² Daoud, Child Poverty and Natural Disasters, at 16; Harrington, Poorest Countries Earlier Temperature Extremes, at 7.

⁶³ Exhibits A, B; AAP, *Children's Health*, at 993, 994; Perera, *Children Likely to Suffer*, at 987-88; see also Currie, *Children and Climate Change*; UNICEF UK, *Children's Challenge*.

⁶⁴ Currie, *Children and Climate Change*, at 4. Children, through legal actions, demonstrations, participation in hearings, are pushing States to recognize and protect their rights in the face of policies driving climate change. See e.g., Our Children's Trust, <u>http://www.ourchildrenstrust.org/</u>. However, children have had to push for this recognition and do not have seats at the table where these decisions are being made.

 ⁶⁵ See, e.g., Claire Caruana, Kids Tell Politicians 'Stop Listening, Start Acting' on Climate Change, Times of Malta (June 3, 2016); Louisa Casson, How Young Climate Change Activists are Taking Over at COP 19, UNICEF Blog (Nov. 19, 2013), https://blogs.unicef.org.uk/2013/11/19/climate-change-cop-19-young-activists/.
 ⁶⁶ See, e.g., Our Children's Trust, Grassroots Community Actions, http://www.ourchildrenstrust.org/grassroots-legal-actions/ (last

⁶⁶ See, e.g., Our Children's Trust, Grassroots Community Actions, http://www.ourchildrenstrust.org/grassroots-legal-actions/ (last visited Aug. 10, 2016).

⁶⁷ See, e.g., Our Children's Trust, *State Legal Actions*, http://www.ourchildrenstrust.org/state-legal-actions (last visited Aug. 5, 2016).

⁶⁸ See, e.g., Our Children's Trust, Landmark U.S. Federal Climate Lawsuit, http://www.ourchildrenstrust.org/us/federal-lawsuit/ (last visited Aug. 5, 2016).

⁶⁹ See, e.g., Our Children's Trust, *Global Legal Actions*, http://www.ourchildrentrust.org/global-legal-actions (last visited Aug. 5, 2016).

as Pakistan,⁷⁰ Uganda,⁷¹ and the Philippines.⁷² These children are directly invoking the legal obligations of States to restore a stable climate system and protect their fundamental rights.⁷³

Through these actions, these youth are exercising their rights to be educated about, and participate in, decisions being made about them.⁷⁴ Article 12(1) of the CRC requires States to allow children to "express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child." Furthermore, Article 12(2) indicates that States should provide children the "opportunity to be heard" during administrative procedures that will affect them. Article 13 more generally confers on children the right of expression. Similarly, Article 14 articulates the right to freedom of thought and Article 15, the right to free association. Finally, Article 17 requires children have access to information, and Article 29(1)(e) requires that education ensure "the development of respect for the natural environment." Thus, States must provide children access to information about climate change (its causes and solutions) and their legal rights, and provide them the forum to assemble and communicate their ideas regarding mitigation, prevention, and the response planning for current and future ecological threats. Given the catastrophic nature of the imminent threat to current and future generations of children. States must take actions to include children in the conversation and decision-making processes affecting climate change; children should not have to fight to participate in order to protect their futures.

C. State action and inaction resulting in increased atmospheric CO₂ violates substantive rights and obligations under the CRC

Nearly all of the substantive rights and obligations under the CRC are and will continue to be violated by State actions and inaction resulting in the dangerous increase of atmospheric CO₂ and climate destabilization. As detailed above, climate change affects all aspects of the lives of children ranging from access to food and water to access to a secure home and stable community.⁷⁵ Through actions that exacerbate dangerous climate change, States are ensuring the increased frequency of food and water shortages, increased rates of disease, and loss of access to a safe and secure community structure, which results in the violation of the fundamental human right guaranteed in the CRC and other international and national legal structures—the right to life. Additional substantive rights violated by these State actions and inactions that result in the harmful effects of climate change are identified in Table 1.

http://www.dawn.com/news/1269246/seven-year-old-girl-sues-pakistan-government-over-climate-change (last visited July 28, 2016); Clayton Aldern, *Massachusetts Kids Latest to Nab Win in Lawsuit for Climate Action*, Grist (May 17, 2016),

http://grist.org/news/massachusetts-kids-latest-to-nab-win-in-lawsuit-for-climate-action/ (last visited July 28, 2016); John Schwartz, In Novel Tactic on Climate Change, Citizens Sue Their Governments, N.Y. Times (May 5, 2016),

http://www.nytimes.com/2016/05/11/science/climate-change-citizen-lawsuits.html? r=0 (last visited July 28, 2016). ⁷⁴ CRC, Art. 12-15.

⁷⁰ See, e.g., Our Children's Trust, *Global Legal Actions: Pakistan*, http://www.ourchildrenstrust.org/pakistan (last visited Aug. 5, 2016).

⁷¹ See, e.g., Our Children's Trust, *Global Legal Actions: Uganda*, http://www.ourchildrenstrust.org/uganda (last visited Aug. 5, 2016).

⁷²See, e.g., Our Children's Trust, *Global Legal Actions: Philippines*, http://www.ourchildrenstrust.org/philippines (last visited Aug. 5, 2016).

⁷³ See Our Children's Trust, *Mission Statement*, <u>http://www.ourchildrenstrust.org/mission-statement/</u> (last visited July 28, 2016); see also Zofeen T. Ebrahim, Seven-Year-Old Girl Sue Pakistan Over Climate Change, Dawn (July 5, 2016),

⁷⁵ See *supra* Section II.B.

| ASPECTS OF CLIMATE CHANGE | PHYSICAL & BIOLOGICAL EFFECTS | IMPACTS ON CHILDREN | CRC RIGHTS THREATENED & VIOLATED |
|--|--|---|---|
| | | | |
| Ocean Warming, Ocean Acidification, Deoxygenation | Coral Bleaching, Inhibition of Shell Formation, Reproductive Disorders in Fish, Increasing Extinction Rates of Marine Organisms ⁷⁶ | Food Shortages, General Loss of Biological Diversity and Natural Beauty, Civil Unrest ⁷⁷ | Life, Art. 6 Adequate Standard of Living, Art. 27 Freedom from Risks of Environmental Pollution, Art. 24 |
| | | | |
| Melting of Glacier and Sea Ice, Sea Level Rise | Sea Surges, Flooding, Erosion, Salinization of Land and Water, Loss of Low Lying Land, Increasing Extinction of Arctic Ice Dependent Organisms ⁷⁸ | Water Shortages, Displacement, Social Disruption, Civil Unrest, Exposure to Exploitation, Increase in Rates of Trauma Related Psychological Disorders. Loss of Time in School ⁷⁹ | Life, Art. 6 Adequate Standard of Living, Art. 27 Freedom from Risks of Environmental Pollution, Art. 24 Parental Care, Art. 7 Freedom From Separation from Parents, Art. 9 Protection Against Inhumane Treatment, Arbitrary Deprivation of Liberty, Art. 37 Protection Against Exploitation, Art. 34, 36 Access to Education, Art. 28 Freedom to Engage in Play, Recreation, Leisure, Cultural, Artistic Life, Art. 31 Maintenance of the Culture, Religion, Language of Indigenous and Cultural Minorities Art. 30 |
| | | | |
| Increase in Temperature, Rate, Extent and Geographic Range of High Temperature Events, Higher Variation in Precipitation | Drought, Flooding, Wildfires, Increasing Rates of Extinction of Terrestrial Organisms ⁸⁰ | Displacement, Food Shortages, General Loss of Biological Diversity and Natural Beauty, Civil Unrest, Increase in Rates of Trauma Related Psychological Disorders, Increased Rates Mortality and Morbidity from Asthma, Loss of Time in School ⁸¹ | Life, Art. 6 Adequate Standard of Living, Art. 27 Freedom from Risks of Environmental Pollution, Art. 24 |

⁷⁶ See, e.g., Andrea Y. Frommel, et al., Ocean Acidification has Lethal and Sub-Lethal Effects on Larval Development of Yellowfin Tuna Thunnus Albacares, 482 Experimental Marine Biology and Ecology 18, (2016)[hereinafter Lethal and Sub-Lethal Effects]; J.-P. Gattuso, Future for Ocean and Society; Kristy J. Kroeker, et al., Meta-Analysis Reveals Negative Yet Variable Effects of Ocean Acidification on Marine Organisms, 13 Ecology Letters 1419 (2010).

http://www.biologicaldiversity.org/programs/climate_law_institute/the_arctic_meltdown/pdfs/ArcticExtinctionReport_Final.pdf. ⁷⁹ Gattuso, *Future for Ocean and Society; AAP, Children's Health*, at 994; Perera, *Children Likely to Suffer*, at 988; Bourque,

See, e.g., Cameron Harrington, The Ends of the World: International Relations and the Anthropocene, 44 Millennium Journal of International Studies 478, 480-481 (2016) [hereinafter Ends of the World]; Huntjens, Threat Multiplier; Gattuso, Future for Ocean and Society.

⁷⁸ See. e.g., Exhibit A; Hansen, Assessing "Dangerous Climate Change"; Hansen, Sea Level Rise; Vineis, Water Salinity; Shaye Wolf, Extinction, It's Not Just for Polar Bears, Center for Biological Diversity and Care for the Wild International Report (2010),

Climate Change Mental Health, at 416; Huntjens, Threat Multiplier. ⁸⁰ See, e.g., Exhibit A; Hansen, Assessing "Dangerous Climate Change"; Hansen, Sea Level Rise; UNICEF UK, Children's

Challenge. ⁸¹ See, e.g., Harrington, Ends of the World; Huntjens, Threat Multiplier; Gattuso, Future for Ocean and Society; Perera, Children Likely to Suffer, at 987-988; Harrington, Poorest Countries Earlier Temperature Extremes; IPCC, Climate Change 2014; Urban, Accelerating Extinction; Watts, Health and Climate Change; Albrecht, Solastalgia; Miller, Extinction of Experience; AAP, Children's Health, at 994; Bourque, Climate Change Mental Health, at 416; Huntjens, Threat Multiplier.

| Range Expansion of Vector-Borne Illness ⁸² | Increased Rates of Morbidity and Mortality from Disease, Increased Rates of Loss of Family and Society from Disease Epidemics, Loss of Time in School ⁸³ | Life, Art. 6 Adequate Standard of Living, Art. 27 Freedom from Risks of Environmental Pollution, Art. 24 |
|---|---|--|
| Acceleration of Ozone Production and Increase in Pollen ⁸⁴ | Increased Rates of Morbidity and Mortality from Respiratory Disease, Allergies, Asthma, Impaired Lung Function, Loss of Time in School ⁸⁵ | Life, Art. 6 Adequate Standard of Living, Art. 27 Freedom from Risks of Environmental Pollution, Art. 24 |

TABLE 1: Climate Change Impacts and CRC Rights Implicated

Additional CRC obligations relevant to how climate change detrimentally impacts the rights of children include the obligation to ensure the child such protection and care as is necessary for his or her well-being (Art. 3(2)), and the obligation to undertake all appropriate legislative, administrative, and other measures for the implementation of CRC rights (Art. 4). The failure of States to undertake science-based efforts to reduce emissions and mitigate climate change is a violation of these CRC obligations.

Ensuring that children are empowered and enabled to engage in the decision-making processes regarding GHG emissions that result in climate change may address the violation of their rights to participation. However, much more is needed to enforce the remaining substantive rights and obligations under the CRC. To halt the ongoing violation of most if not all of children's rights under the CRC, States must immediately begin reducing GHG emissions in line with the scientific standard for climate recovery to reduce atmospheric CO_2 to below 350 ppm by the end of the century.

D. In addition to the CRC, States are legally obligated to take science-based action to halt and reverse climate change

Under the public trust doctrine⁸⁶ and international law,⁸⁷ States are obligated to take action to reduce atmospheric CO₂ to below 350 ppm by 2100 in order to avoid continued violations of the fundamental human rights articulated in the CRC. Given the extraterritorial nature of the atmosphere and the oceans, States must act to prevent harm to shared resources that

 ⁸² AAP, Children's Health; Watts, Health and Climate Change; UNICEF UK, Children's Challenge.
 ⁸³ UNICEF UK, Children's Challenge; Watts, Health and Climate Change.

⁸⁴ Perera, Children Likely to Suffer, at 987-988; Watts, Health and Climate Change.

⁸⁵ Perera, Children Likely to Suffer, at 987-988.

⁸⁶ For an initial introduction of the public trust doctrine, *see supra* note 9.

⁸⁷ Numerous international legal principles, declarations, and laws assert that environmental rights are human rights. The first was the Stockholm Declaration adopted at the United Nations Conference of the Human Environment in 1972. Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration), U.N. Doc. A/Conf.48/14 2, 3 (1972), available at http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503. Subsequently, people were declared "entitled" to a healthy environment in the Rio Declaration. Rio Declaration on Environment and Development, U.N. Doc. A/Conf.151/26, 31 I.L.M. 874 (1992), available at

http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163. The first binding international legal document to articulate a right to environmental health and safety is the 1981 African Charter on Human and Peoples' Rights. African [Banjul] Charter on Human and Peoples' Rights, June 27, 1981, O.A.U. Doc. CABILEG/67/3 rev. 5, 21 I.L.M. 58, available at http://www.africa-union.org/officialdocuments/treaties %20conventions %20protocols/banjul%20charter.pdf; see also Svitlana Kravchenko, Environmental Rights in International Law: Explicitly Recognized or Creatively Interpreted, 7 Fla. A&M U. L. Rev.163, 163-180 (2012).

affect children outside their borders.⁸⁸ It is therefore incumbent upon States to immediately adopt and implement policies tiered to science-based reductions in emissions.⁸⁹ States must also cease subsidizing, permitting, and otherwise facilitating the extraction and use of fossil fuels, such as oil and coal.⁹⁰ Finally, States need to act now to prevent further loss of carbon sequestration services of forests, grasslands, and peatlands and to engage in reforestation and improved agricultural and forestry practices to increase sequestration services.⁹¹

These obligations arise out of the public trust doctrine, which imposes a fiduciary duty on States to mitigate climate change so as to protect crucial natural resources for the benefit of current and future generations.⁹² The public trust doctrine requires that natural resources, such as the atmosphere, are protected not only for present generations but for future generations as well. Without this protection of the atmosphere, the ocean, and other natural resources which humanity depends on for survival, there can be no life and therefore no fundamental human right to life.⁹³ Without these resources "there can be nothing else."⁹⁴ Thus, implicit in the public trust doctrine (and in the numerous legal instruments that echo and incorporate the fundamental principles of the doctrine) are the rights of children as beneficiaries of these natural resources held in trust by their governments.

The fact that the atmosphere and oceans are shared planetary resources that cannot be divided and the fact that the harm of climate change occurs *within* and *outside* the national borders of the agents causing the damage require States to act as co-tenants and co-trustees of these *global trust* resources.⁹⁵ The shared sovereign obligation States have, therefore, to manage these borderless natural resources of this global trust requires avoidance of waste and destruction of the resources as is required of any party that is a co-tenant to a shared piece of property.⁹⁶

States historically have been inclined to wait until some other State acts first; however, States as co-trustees of valuable resources are, in fact, bound by these legal obligations even in the absence of action on the part of other States similarly complicit in causing climate change.⁹⁷

⁸⁸ See Wood, Beyond Borders, at 212

⁸⁹ States do not have any excuse to wait, since roadmaps (that are both technologically and economically feasibly) presently exist that States can use for both target emission reductions and transitioning entirely off fossil fuel-based energy systems by 2050. *See, e.g.*, Hansen et al., *Assessing "Dangerous Climate Change,*" at 20-22; Exhibit A, ¶ 68; Jacobson, et al., *100% Clean and Renewable*, at 59.

⁹⁰ The open discussion and agreement by G7 leaders in 2015 to attempt decarbonization by the end of the century is an initial attempt to address the cause of climate change; however this goal is way too little and far too late. States must immediately cease supporting and subsidizing the companies that are inflicting such enormous global harm. *See, e.g.*, Kate Connolly, *G7 Leaders Agree to Phase Out Fossil Fuel Use by the End of Century*, The Guardian (June 8, 2015)

https://www.theguardian.com/world/2015/jun/08/g7-leaders-agree-phase-out-fossil-fuel-use-end-of-century. ⁹¹ See, e.g., Lal, Soil Sequestration.

 ⁹¹ See, e.g., Lal, Soil Sequestration.
 ⁹² See supra note 9; See, also Gerald Torres & Nathan Bellinger, Public Trust: Law's DNA, at 281; Mary Christina Wood, Atmospheric Trust Litigation.

⁹³ Torres & Bellinger, *Public Trust: Law's DNA*, at 294.

⁹⁴ *Id*.

⁹⁵ Wood, *Beyond Borders*, at 213; see also Peter H. Sand, *Sovereignty Bounded: Public Trusteeship for Common Pool Resources*, 4 Global Envtl. Pol. 47, 57 (2004).

⁹⁶For a discussion of the doctrine of waste relative to co-tenancy, *see* Joseph William Singer, Property Law: Rules, Policies, and Practices 664–65 (5th ed. 2010); 20 Am. Jur. 2d, *Co-tenancy and Joint Ownership*, § 1 (2012). For its application to the global trust, *see* Wood, *Beyond Borders*, 212-213; Evan Fox-Decent, *From Fiduciary States to Joint Trusteeship of the Atmosphere: The Right to a Healthy Environment Through a Fiduciary Prism*, Chapter in Fiduciary Duty and the Atmospheric Trust 263 (Ken Coghill et al. eds., 2012) (discussing the global trust in through the lens of a human rights analysis of climate obligations and indicating that "the idea that states are essentially joint trustees of the earth's atmosphere").

⁹⁷ See Wood, Beyond Borders, at 210 (describing the U.S. and China's refusal to act to reduce emissions unless the other State acts first).

As articulated in 2015 by a Dutch court ordering the Dutch government to act to mitigate climate change, "[t]he state should not hide behind the argument that the solution to the global climate problem does not depend solely on Dutch efforts. Any reduction of emissions contributes to the prevention of dangerous climate change and as a developed country the Netherlands should take the lead in this."⁹⁸

Co-tenancy for trust resources creates extraterritorial obligations, where the State has obligations to those outside its borders harmed by its actions. For example, when a State's excessive emissions damage the shared resource of the atmosphere and climate system and result in harm such as severe drought to people on the other side of the globe, that State's extraterritorial obligations are activated. Climate change directly affects human rights, and these co-tenancy obligations are articulated in the Maastricht Principles on Extraterritorial Obligations (ETO) on States in the Area of Economic, Social and Cultural (ESC) Rights.⁹⁹ These principles require that States address the harm they cause both intra- and extra-territorially from the acts and omissions that are causing climate change.¹⁰⁰

All of the Maastricht Principles are relevant to varying degrees to climate change. However, the following clearly indicate that States have an obligation to mitigate climate change to the greatest extent of their ability.

- 1. The "obligation to avoid causing harm,"¹⁰¹ as described in ETO Principle 13, confirms that a State must desist from acts or omissions that create a real risk of nullifying or impairing the enjoyment of ESC rights within and beyond the State's territory. In the context of climate change, this becomes an affirmative obligation for States to make science-based reductions of GHG emissions in order to reduce current climate harms *already* occurring, such as extreme weather, drought, and wildfires, and to prevent future harm.¹⁰²
- 2. The "obligation to regulate," as described in ETO Principle 24, confirms that a State must take necessary measures to ensure that a non-state actor, which they are in a position to regulate, does not nullify or impair the enjoyment of ESC rights, independent of where the harm takes place. This obligation requires governments to *cease* subsidies, credits, permits and other forms of support and aid to the fossil fuel industry and other entities that contribute directly to GHG emissions. This obligation also requires governments to *regulate* these same entities and require the reduction of GHG emissions in line with the scientific standard necessary to protect children's rights.

⁹⁸ Urgenda Foundation v. The State of the Netherlands (Ministry of Infrastructure and the Environment. (Neth.) (Hague Dist. Ct., June 24, 2015), <u>http://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2015:7196</u>; see also Juliana et al. v. United States et al., No. 6:15-cv-01517-TC, 11 (D. Or. Apr. 8, 2016), http://www.ourchildrenstrust.org/s/160408OrderDenvingMTD.pdf.

⁹⁹ ETO-Consortium (ETO), *Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights* 1, 3 (Jan. 2013) [hereinafter Maastricht Principles] (indicating that "the Maastricht Principles clarify extraterritorial obligations of States on the basis of standing international law"). <u>http://www.etoconsortium.org/nc/en/main-navigation/library/maastricht-principles/?tx_drblob_pi1%5BdownloadUid%5D=23</u>.

¹⁰⁰ Wood, *Beyond Borders*, at 212.

¹⁰¹ This obligation embodies the Precautionary Principle, which obligates States, when faced with uncertainty, to avoid an action that may cause increased risks (e.g., climate destabilization) even if these risks are not certain, barring extraordinary benefits to acting. The Precautionary Principle is widespread through international law, particularly with respect to environmental issues, and is considered a norm of customary international law. *See, e.g.*, Owen McIntyre & Thomas Mosedale, *The Precautionary Principle as a Norm of Customary International Law*, 9 J. Envtl. L. 221, 241 (1997).

- 3. The "general obligation to provide an effective remedy," as described in ETO Principle 37, requires that mechanisms that hold state and non-state actors accountable for human rights violations be in place, regardless of where the harmful conduct or harm occurred. State actors around the world have knowingly contributed to the violation of the rights of children across the globe, and young people, with the support of Our Children's Trust, are beginning to hold them accountable.¹⁰³ An effective judicial remedy for these harms would require States to rapidly and systematically reduce GHG emissions in accordance with the scientific standard of protecting children and their fundamental human rights.
- 4. States also have the general obligation to "take action, separately, and jointly through international cooperation, to respect the economic, social and cultural rights of persons within their territories and extraterritorially."¹⁰⁴ This obligation is also expressed in the preamble of the CRC, where signatories "recogniz[e] the importance of international cooperation for improving the living conditions of children in every country, in particular in the developing countries."¹⁰⁵ In realizing this obligation, States must both initiate action on their own, but also work together to reduce emissions. These obligations relative to climate change are articulated by the UNFCCC in Articles 3(1) and 4(1) that State obligations are "common but differentiated."¹⁰⁶ Thus, more developed countries and those that have contributed the most highly to climate change must both bear more of the burden to reduce emissions, and must act to aid less developed countries to cut their emissions.
- 5. Finally, ETO Principle 17 requires States to elaborate, interpret, and apply relevant international agreements and standards in a manner consistent with their human rights obligations. Such agreements include those pertaining to international trade, investment, finance, taxation, environmental protection, development cooperation, and security. Thus, all agreements implicating the levels of atmospheric CO₂ require a direct consideration of the true human rights costs of business-as-usual emissions in catastrophic climate change on balance with the benefits being considered in making the agreements. These agreements must be interpreted and applied in a manner consistent with achieving the scientific standard of emission reductions targeted to reduce atmospheric CO₂ levels to below 350 ppm by 2100 in order to ensure the fundamental human rights of children are protected.

V. RECOMMENDATIONS

In its report following the 2016 Day of General Discussion, the Committee should clearly state the scientific standard States must meet in order to protect children's rights under the CRC: reduce dangerous levels of atmospheric CO_2 to below 350 ppm in order to stabilize the long-term average global temperature increase at no higher than 1 °C. The Committee should state that the actions and failures of States that result in the continuing dangerous increase of atmospheric CO_2 levels and further destabilization of the climate system are a violation of the rights protected by the CRC, of the current and future children of the world. In its report, the Committee should

¹⁰³ Our Children's Trust supports young people around the world in seeking judicial remedies for the violations of their fundamental rights and injuries suffered from climate change. *See generally* http://www.ourchildrenstrust.org; *see, e.g.*, Amended Complaint, *Juliana et al. v. United States et al.*, No. 6:15-cv-01517-TC (D. Or. Sept. 10, 2015), *available at* http://www.ourchildrenstrust.org/s/YouthAmendedComplaintAgainstUS.pdf; Constitution Petition, *Ali v. Federation of Pakistan*

et al. (May 4, 2016), *available at* <u>http://www.ourchildrenstrust.org/s/PakistanYouthClimatePetition.pdf</u>. ¹⁰⁴ ETO, Maastricht Principles II(8)(b).

¹⁰⁵ CRC, pmbl.

¹⁰⁶ United Nations Framework Convention on Climate Change, May 9, 1992, S. Treaty Doc No. 102-38, 1771 U.N.T.S. 107.

commit to preparing a General Comment on State obligations to children and future generations in relation to climate change.

The Committee should state in its report and General Comment that in order to meet its obligations under the CRC, each State must:

- 1. Prepare an accounting and inventory of each and every substantial source of GHG emissions within the State's borders, the emissions embedded in imported goods, and the emissions from extraterritorial activities, such as arctic drilling, over which the State has control;
- 2. Prepare quantifiable targets or a "Carbon budget" for the total amount of CO_2 emissions that can be released until 2050 ensuring each State does its share as a responsible member of the global community to achieve global climate stabilization and reduce atmospheric CO_2 to below 350 ppm by 2100, limiting the long-term average global temperature increase to no more than 1 °C;
- **3.** Create a national climate recovery plan with interim CO₂ reduction targets and mitigation actions tiered to achieving each State's carbon budget, with priority actions aimed at reducing GHG emissions, transitioning away from the development and use of fossil fuels, protecting forests, peatlands, grasslands, and other natural resources that store carbon, and engaging in massive reforestation and other methods of carbon sequestration;
- 4. Keep all untapped fossil fuel reserves in the ground; and
- 5. Take immediate steps to transition power generation to non- CO_2 emitting energy sources, such as wind, solar, and geothermal.

The Committee should recommend that developing and least developed States seek all possible means of financial, technological and capacity-building support to enhance the implementation of their mitigation efforts, and that developed States provide such means.

The Committee should also take this opportunity to reinforce previous messages related to children's rights within the context of climate change:

- States should address the special vulnerabilities and needs of children, and take into account their views, in designing policies and programs addressing climate change and disaster risk management (Tuvalu, 2013; Fiji, 2014; Jamaica, 2015; Mauritius, 2015);
- States should identify the types of risk faced by children in the data available to formulate climate change policies (Mauritius, 2015);
- States should increase children's awareness of and preparedness for climate change and natural disasters by incorporating those issues into the school curriculum and teachers' training programs (Tuvalu, 2013; Fiji, 2014; Mauritius, 2015);
- States should strengthen social safety nets and social protection frameworks so as to more effectively mitigate the multiple social, economic and environmental impacts of climate change (Fiji, 2014; Saint Lucia, 2014; Jamaica, 2015); and
- States should ensure that children are informed and given opportunities to participate in discussions on the impacts of climate change and policymaking related to them (Tuvalu, 2013; Fiji 2014).

VI. CONCLUSION

Climate change is occurring and the window of opportunity for States to act and prevent catastrophic and irreversible environmental harm is closing.¹⁰⁷ Because of the urgency of the situation, and the imminent and ongoing threat to the rights of the world's current and future generations of children, this Committee should prepare a General Comment as soon as possible, setting a standard for the protection of children's fundamental rights, as guaranteed by the CRC. States must reduce emissions and engage in reforestation and other carbon sequestration efforts in line with the scientific prescription discussed above, targeted to achieve less than 350 ppm global atmospheric CO₂ levels by 2100 in order to limit the long-term average global temperature increase to no more than 1 °C. The standard set by this body will be a model for courts across the globe. Setting a standard of quantifiable¹⁰⁸ emission reductions based in science is the most important thing this Committee can do for the world's children.

¹⁰⁷ Exhibits A, B.

 ¹⁰⁸ See, e.g., Committee on Economic, Social and Cultural Rights, General Comment 15, The right to water, U.N. Doc.
 E/C.12/2002/11, 12(a) (2002), reprinted in Compilation of General Comments and General Recommendations Adopted by
 Human Rights Treaty Bodies, U.N. Doc. HRI/GEN/1/Rev.6 at 105 (2003) (setting a quantifiable water quantity standard at the amount set by the World Health Organization).

ANNEX: RECOMMENDATIONS

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