In RE: National Inquiry on the Human Rights Violations or Threats of Violations Resulting from the Impacts of Climate Change and the Responsibility Therefor

CHR- NI-2016-0001

Amicus Curiae Brief submitted by Our Children’s Trust to the Honourable Commission on Human Rights of the Philippines

6 December 2016
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.

Our Children’s Trust advises and supports a global network of lawyers in litigating comprehensive climate change cases rooted in the fundamental and inalienable rights of citizens and future generations to have vital natural resources protected for their use.

Our Children’s Trust has developed a specialized legal expertise in the duty of care that governments around the world owe to their people and to future generations to protect and preserve the stability of the climate system. In particular, Our Children’s Trust possesses significant legal expertise in the inherent public trust obligation of sovereign governments and the corresponding rights of citizens that together protect our core interest in survival and survival resources, like air, water, oceans, shorelines, and climate.

Our Children’s Trust also holds relevant expertise in the science of climate recovery, as we work closely with world renowned climate scientists and experts.

Our Children’s Trust submits the following amicus curiae brief to the Honourable Commission on Human Rights (Commission) in the hope that this information may assist the Commission in its investigation.

Our Children’s Trust declares to the Commission that this brief was independently prepared by Our Children’s Trust; that no counsel for any party to this investigation (including the Petitioners) authored this brief, in whole or in part; and that no person or entity contributed money specifically for the preparation or submission of this brief.
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I. INTRODUCTION

Global climate change is the most pressing ecological and human rights issue of our time. 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 collectively 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).

This Honourable Commission on Human Rights (Commission) should utilize this clear scientific prescription as the standard Carbon Majors and States need to meet in order to uphold the rights of children now and into the future for an environment free of the worst effects of climate change. In setting such a standard of protection, this Commission will take an historic step to protect the fundamental human rights of all Filipinos, especially Filipino children, guaranteed by numerous international conventions and by the Constitution of the Philippines, a step that will be a touchstone for courts and political bodies of the world.

Children of today and the future will disproportionately suffer from 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 with 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. These threats will only intensify for future generations of Filipino children and children around the globe, who may never have a chance of realizing their human rights, unless urgent action by States and the Carbon Majors is taken to curtail emissions and restore natural sequestration services of plants and soil in line with the scientific standard of climate recovery.

As a sovereign government, the Philippines has the authority and fiduciary public trust obligation to safeguard crucial natural resources so that current and future generations of Filipinos may enjoy their constitutional and public trust rights, including the right to a “balanced and healthful ecology in accord with the rhythm and harmony of nature.”¹ This Commission would support the fulfillment of those obligations by establishing the responsibility of Carbon Majors to account and pay for the damage to the atmosphere and climate system that their actions have already caused and will continue to cause in the absence of climate policies and actions guided by the best available scientific standard for climate recovery. Setting the standard and establishing responsibility for the substantial impairment of these crucial public trust resources will support the Philippines’ ability to recover Natural Resource Damages (NRDs) from the Carbon Majors. Recovering Natural Resource Damages would help fund carbon sequestration programs in the Philippines and ensure that the government fulfills its obligation to safeguard crucial natural resources for current and future generations of Filipinos.

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

Current science indicates that, to protect the earth’s systems, the long-term increase in the average global surface temperature of the earth above preindustrial temperatures must stay below 1°C.² Having global average surface temperatures approach 2°C for any length of time would be highly dangerous.³ In 2015, for the first time ever, global average surface temperatures reached 1°C.⁴

Populations around the world are already experiencing significant impacts from the 1°C warming that has occurred.⁵ 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.⁶ 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.”⁷ Such changes would be irreversible and yield a different planet from the one on which human civilization developed.⁸

The non-binding emission reduction pledges made by States pursuant to the Paris Climate Agreement would likely result in an increase in emissions through 2030 and cause climate

² 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 above preindustrial levels. To stabilize at 1 °C requires a mean atmospheric concentration of CO₂ of no more than 350 ppm. 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 the Child Regarding State Obligations, Children’s Rights and Climate Change (Aug. 19, 2016), attached and available at http://www.ourchildrenstrust.org/s/HansenCRCDeclaration.pdf; 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; see also 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); James Hansen, Storms of My Grandchildren 166 (2009) [hereinafter Storms].
³ Exhibits A, B; see also Hansen et al., Assessing “Dangerous Climate Change,” at 15 (noting that a 2°C increase would result in an “unacceptably high risk of global catastrophe”).
⁴ World Meteorological Organization (WMO), WMO Statement on the Status of the Global Climate in 2015, WMO-No. 1167, 1, 5 (2016) [hereinafter Status Global Climate 2015], available at http://www.cma.gov.cn/en2014/News/News/201603/P020160322334697539255.pdf (“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.
⁵ For a list of global impacts felt in 2015, see, e.g., WMO, Status Global Climate 2015, at 11-20.
⁷ Exhibit A, ¶ 17; see also Hansen et al., Assessing “Dangerous Climate Change,” at 15.
⁸ Exhibit A, ¶ 69; Hansen et al., Assessing “Dangerous Climate Change,” at 15.
warming of between 2.7 °C and 3.5 °C, temperature increases deemed catastrophic by experts, far above the **1 °C-maximum scientific standard of protection and climate stabilization** identified by scientists.⁹ 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.¹⁰

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.¹¹ To meet this scientific standard 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.¹² While the pre-industrial atmospheric CO₂ concentration was 280 ppm, today’s atmospheric CO₂ levels are over 400 ppm and continue to rise.¹³ An increase to 2 °C above preindustrial levels is expected if atmospheric CO₂ levels are allowed to reach 450 ppm.

Leading scientists have identified a two-step prescription for meeting the scientific standard of limiting the long-term global temperature increase to a maximum of 1°C and reducing atmospheric CO₂ levels to below 350 ppm within this century.¹⁴ **First,** global CO₂ emissions must be reduced, starting in 2017, at a rate of approximately eight percent annually.¹⁵ To do so, States, including the Philippines, 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 in line with this trajectory.¹⁶

**Second,** these actions to reduce emissions on the prescribed trajectory must be coupled with programs to “drawdown” an additional 100 gigatons of carbon (GtC) through natural sequestration projects, such as reforestation and improved agricultural and forestry practices.¹⁷

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¹⁰ Paris Agreement, FCCC/CP/2015/L.9, 20 (Dec. 12, 2015), available at http://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf. 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.

¹¹ Hansen, Assessing “Dangerous Climate Change,” at 15; Exhibits A, B.


¹⁴ Hansen et al., Assessing “Dangerous Climate Change,” at 10; Exhibit A, ¶ 68; Exhibit B, at 1, 6.

¹⁵ Exhibit A, ¶ 68; Exhibit B, at 1, 6.

¹⁶ 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.

According to experts, “[t]here is great potential for carbon sequestration projects in the Philippines, primarily due to its biophysical condition and the presence of land areas that could and should be reforested.”\(^{18}\) It is important to emphasize that the 350 ppm target cannot be accomplished without this significant drawdown of atmospheric carbon and that such a drawdown is distinct from reducing emissions. Both CO\(_2\) emissions reductions \textit{and} 100 GtC drawdown are required to restore climate stability.

\textbf{It is essential that the Commission declare this scientific standard for protecting the rights of Filipino children and future generations from the dangerous threats posed by unabated climate destabilization, threats that have been significantly caused by the actions and inactions of the Carbon Majors named in the Petition to this Commission. This standard must guide the investigation of the obligations of Carbon Majors identified by the Petition to fulfill their human rights obligations and to remedy the human rights violations suffered by petitioners, Filipino children, and future generations of Filipinos. Carbon Majors bear substantial responsibility for the climate impacts and human rights violations already suffered by Filipinos, and must cease infringing upon the rights of Filipino children and future generations.}

There is a small window of opportunity for States and Carbon Majors to take the urgent science-based action needed to protect human rights and mitigate catastrophic climate change. However, any further delay increases the danger of passing critical climate tipping points which would lead to runaway heating and produce survival-threatening changes that would be irreversible on any time scale relevant to current and future generations of Filipinos.\(^{19}\) States and Carbon Majors that continue to allow, through their cumulative action and inaction, global temperature increases to approach 1.5 °C or higher, are violating the rights of Filipino children and future generations and must be held accountable.

\textbf{By establishing a scientific standard for climate stability and the protection of the rights of Filipinos, this Commission will not only clarify the human rights obligations owed to the Filipino people by the Carbon Majors, but will also assist the government of the Philippines in fulfilling its constitutional public trust obligations to the Filipino people (discussed in Section III, \textit{infra}).}


\(^{19}\) 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, \textit{Understanding Earth’s Deep Past: Lessons for Our Climate Future}, 79 (2011), http://www.nap.edu/download/13111 (last visited Aug. 18, 2016).
III. THE PUBLIC TRUST AND FUNDAMENTAL HUMAN RIGHTS OF FILIPINOS REQUIRES THE GOVERNMENT TO PROTECT THE ATMOSPHERE AND CLIMATE SYSTEM ACCORDING TO BEST AVAILABLE SCIENCE AND HOLD CARBON MAJORS LIABLE FOR FUNDING ATMOSPHERIC RECOVERY

The Public Trust Doctrine is an ancient legal principle that “speaks to one of the most essential purposes of government: protecting crucial ecology for the continuing survival and welfare of citizens.”20 Under the doctrine, citizen beneficiaries of vital natural resources held in trust by governments have reserved and inalienable rights to “a sustained natural endowment.”21 Many nations around the world, including the Philippines, “embrace the doctrine as a central principle in their legal systems,” and “the overarching position of the public trust in political and legal traditions around the world reflects the character of the doctrine as a fundamental attribute of sovereignty – a constitutive principle that government cannot shed.”22

Government trustees hold two core fiduciary duties: 1) protect trust resources from damage and substantial impairment, and 2) recover Natural Resource Damages (NRDs) from third parties that damage trust resources.23 The remainder of this section explains how these two duties relate to this Commission’s ongoing investigation of the Carbon Majors and how that investigation should inform the duty of the Philippine government to seek NRDs from the Carbon Majors.

A. THE PHILIPPINE GOVERNMENT HAS A SOVEREIGN DUTY AND CONSTITUTIONAL OBLIGATION TO PROTECT THE PUBLIC TRUST RIGHTS AND RESOURCES OF THE FILIPINO PUBLIC

The sovereign public trust obligation of the Philippine government is articulated in the 1987 Philippine Constitution (“Constitution”). Under the Constitution, the Filipino people have a right to health, equal protection of the laws, and a “balanced and healthful ecology in accord with the rhythm and harmony of Nature.”24 In the landmark case Oposa v. Factoran, the Philippine Supreme Court interpreted “the right to a balanced and healthful ecology” as “concern[ing] nothing less than self-preservation and self-perpetuation” and that “these basic rights need not even be written in the Constitution for they are assumed to exist from the inception of humankind.” The Court declared that without these basic rights, “the day would not be too far when all else would be lost not only for the present generation, but also for those to come - generations which stand to inherit nothing but parched earth incapable of

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24 See Petition for Writ of Kalikasan and Writ of Continuing Mandamus in re: Segovia, et. al. v. The Climate Change Commission, et. al., 3 (2014), https://www.ourchildrenstrust.org/s/Philippines-Petition.pdf (citing Article II, Section 15 (right to health), Article III, Section 1 (right to equal protection of the laws), and Article II, Section 16 (right to a balanced and healthful ecology) of the 1987 Philippine Constitution).
The Court also ruled that “every generation has a responsibility to the next to preserve that rhythm and harmony for the full enjoyment of a balanced and healthful ecology.”

The public trust obligation of the Philippine government was reinforced by the Metro Manila case in 2008, in which the Philippine Supreme Court ruled the government had an obligation to clean up Manila Bay.

Even assuming the absence of a categorical legal provision specifically prodding petitioners to clean up the bay, [the government agencies] cannot escape their obligation to future generations of Filipinos to keep the waters of the Manila Bay clean and clear as humanly as possible. Anything less would be a betrayal of the trust reposed in them.

It is important to note that the Philippine government not only has the obligation to protect Filipinos’ “right to a balanced and healthful ecology,” but it also has the authority to do so because it is the owner of “all lands of the public domain, waters, minerals, coal, petroleum, and other mineral oils, all forces of potential energy, fisheries, forests or timber, wildlife, flora and fauna, and other natural resources…” and is entrusted to care for these sovereign assets.

Analyzing the Court’s ruling in the Metro Manila case and previous jurisprudence interpreting the public trust obligation of the Philippine government, public trust scholar and Law Professor Michael Blumm notes that “the purposes of the public trust doctrine in the Philippines extend not only to the management and conservation of natural resources, but also to their equitable distribution among generations.”

The Philippines is not alone in this interpretation of the scope of the public trust and constitutional rights protecting the interests of future generations. In November 2016, U.S.

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25 Oposa v. Factoran, G.R. No. 101083, 224 SCRA 792 (S.C., July 30, 1993) (Phil.).
26 Id.
30 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.”); Blumm & Guthrie, Internationalizing the Public Trust Doctrine, at 750 (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 et 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
District Court Judge Ann Aiken issued a landmark decision in the constitutional and public trust climate change case brought by 21 young people, Juliana v. United States of America, where she denied the United States government defendants’ and fossil fuel industry intervenor-defendants’ motions to dismiss the case. Ruling in favor of the youth plaintiffs, Judge Aiken referenced the Philippine Supreme Court’s decision in Minors Oposa twice in her opinion. Drawing in part from the Philippines’ constitutional protection of “a balanced and healthful ecology,” Judge Aiken determined that the U.S. Constitution provides a fundamental right to a stable climate system. She stated that “the right to a climate system capable of sustaining human life is fundamental to a free and ordered society. . . a stable climate system is quite literally the foundation ‘of society, without which there would be neither civilization nor progress.’” Judge Aiken also cited Minors Oposa for the proposition that the public trust doctrine is an inherent aspect of sovereignty, stating that “the right of future generations to a ‘balanced and healthful ecology’ is so basic that it ‘need not even be written in the Constitution for [it is] assumed to exist from the inception of humankind.’” She wrote that public trust rights, which “both predated the Constitution and are secured by it,” cannot be “legislated away.”

This Commission should follow in the courageous footsteps of Judge Aiken by issuing a strong statement affirming the public trust rights of current and future generations of Filipinos to a stable climate system, which is undoubtedly essential to maintain a “balanced and healthful ecology” for current and future generations of Filipinos.

In addition to the duties that the public trust doctrine imposes on sovereign States for the protection of domestic natural resources, States have responsibilities to safeguard resources shared in common with other nations. For example, the atmosphere, oceans, and climate system are shared planetary resources that cannot be divided, and the harm of climate change occurs within and outside the national borders of the agents causing the damage. These facts necessitate States to act as co-tenants and co-trustees of these global trust resources. States, therefore, have a shared sovereign obligation to manage the borderless natural resources of this global trust in a manner that avoids waste and destruction of the resources, as is required of any co-tenant to a shared piece of property. Pursuant to the jurisprudence in the Philippines and abroad, as

33 Id. at 32.
34 Id. at 50.
35 Id. at 49.
well as the broad tenets of the public trust doctrine\textsuperscript{38} and international law,\textsuperscript{39} the Philippine State is obligated to act to help reduce atmospheric CO\textsubscript{2} to below 350 ppm by 2100 in order to avoid continued violations of fundamental human rights and to preserve a stable climate system.\textsuperscript{40}

B. THE PHILIPPINE GOVERNMENT SHOULD SEEK NATURAL RESOURCE DAMAGES FROM THE CARBON MAJORS AND IMPLEMENT CARBON SEQUESTRATION PROJECTS

In order to fulfill its sovereign public trust obligations, the Philippine government should seek Natural Resource Damages (NRDs) from the Carbon Majors for damages to the atmosphere and climate system. For example, under statutory law frameworks, Natural Resource Damages may be recoverable from a private party when statutorily protected natural resources have been harmed by a release of a hazardous substance that threatens human health and the environment.\textsuperscript{41} Natural resources must be restored to their pre-injury status, and in the absence of complete restoration by the entity (or entities) responsible for the damage, Natural Resource Damages will be sought by the government to fund restoration measures.\textsuperscript{42}

Even in the absence of specific statutory authority, the core tenets of the public trust doctrine allow for Natural Resource Damages to be recovered for impairment to the atmosphere and the climate system, and for such damages to fund restoration of the public trust resources to a non-impaired state.\textsuperscript{43} Currently, the best available science indicates that atmospheric

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”).

\textsuperscript{38} For an initial introduction of the public trust doctrine, see Torres & Bellinger, \textit{Public Trust: Law’s DNA}, at 288 (“The public trust doctrine is “inherent to humankind and merely secured by government.”); Blumm & Guthrie, \textit{Internationalizing the Public Trust Doctrine}, at 750 (stating that the doctrine is approaching becoming a “general principle of international law”); Wood, \textit{Atmospheric Trust Litigation}.


\textsuperscript{40} Exhibit A, \textsuperscript{41} 86, 102; see generally \textit{State Obligations Regarding Children’s Rights and Climate Change: Submission to UN Committee on the Rights of the Child} (2016) [hereinafter \textit{Children’s Rights and Climate Change}] available at https://www.ourchildrenstrust.org/s/OCT-et-al-CRC-Submission.pdf.


\textsuperscript{42} \textit{Id.}

\textsuperscript{43} Wood & Galpern, \textit{Atmospheric Recovery Litigation}, at 292.
concentrations of CO₂ must decline to at least 350 ppm by 2100 in order to restore the atmospheric resource and the long-term stability of the climate system (see Section II, supra).

This Commission can aid in a global atmospheric and climate recovery effort by continuing the investigation of the Carbon Majors’ responsibility for violations or threats of violations of human rights, which will help provide the Philippine government and other States with the necessary information to pursue Natural Resource Damage recovery from the Carbon Majors. Recovery of atmospheric and climate system Natural Resource Damages from the Carbon Majors would fund carbon sequestration programs that satisfy the Philippines’ “proportionate share” of the carbon drawdown necessary to return to 350 ppm of CO₂ by the end of this century. Such carbon sequestration programs may also have the added co-benefit of helping the government to limit and adapt to the climate harm and human rights infringements experienced by Filipinos due to the actions of the Carbon Majors. It is important to note, however, that Natural Resource Damages are distinct from damages owed to the people for the violation of human rights or damages for the cost of adapting to climate impacts. Recovery for all types of damages is crucially important, but this submission focuses on the steps that the Philippines can pursue to restore the atmosphere and climate system public trust resources from their presently impaired states. Moreover, achieving long-term atmospheric recovery and climate stability is necessary to prevent continued human right violations and threats of human right violations.

Briefly, there are three steps that the Philippine government could follow to seek Natural Resource Damages from the Carbon Majors. First, carbon sequestration projects need to be identified in the Philippines.

Second, the Philippines would sue the Carbon Majors for Natural Resource Damages to the atmosphere and climate system in order to fund these carbon sequestration projects. Amounts

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44 Ideally, “proportionate share” would be determined by the capacity of each sovereign to restore the health of the atmosphere and climate system through select carbon sequestration measures within its jurisdiction. Thus, “proportionate share” would not necessarily equate to population, land mass, historical responsibility, gross domestic product (GDP), etc. For more information on the concept of “proportionate share” in this context, see Wood & Galpern, Atmospheric Recovery Litigation, at 297-98.

45 For example, in addition to the global and local benefits of atmospheric and climate recovery, well-designed carbon sequestration projects will provide significant co-benefits to the Filipino people. Depending on the type of carbon sequestration project pursued, these benefits could include 1) flood control and/or soil stability; 2) improved ecosystem services; 3) enhanced food production; and 4) local economic benefits from ecotourism and other activities promoted by restored landscapes. See, e.g., Rodel D. Lasco et al., Agroforestry systems: helping smallholders adapt to climate risks while mitigating climate change, WIREs Climate Change, doi: 10.1002/wcc.301 (2014); Hansen, Assessing “Dangerous Climate Change,” at 10.

46 See Wood & Galpern, Atmospheric Recovery Litigation, at 322 (“To be clear, the object in atmospheric recovery litigation is supplemental and complementary to efforts [to compensate early victims of climate change]. It is also, in a real sense, essential to [the victims’] interests because, in the absence of atmospheric recovery, persons remaining in highly vulnerable regions-regions that, we must observe, will expand as global warming intensifies—will be devastated again by the next global warming-amplified superstorm, or the one after that. Climate justice, then, requires atmospheric restoration no less than victim compensation.”).

47 See, e.g., supra, note 17.

48 These carbon sequestration projects could be identified unilaterally by the Philippines, or could be integrated into a larger Planetary Atmospheric Recovery Plan administered through a Trustee Council within the United Nations institutional structure or between a smaller number of sovereigns. See Wood & Galpern, Atmospheric Recovery Plan, at 271, 320 et seq.
recovered from any Carbon Major would be deducted from that Carbon Major’s overall proportionate liability for the 100 GtC of carbon sequestration necessary to restore the atmospheric resource to below 350 ppm atmospheric CO\textsubscript{2} by 2100.

Third, the amounts recovered would be applied to fund the implementation of the carbon sequestration projects identified in the Philippines.\footnote{For an initial formulation of the Carbon Majors’ proportionate liability, see R. Heede, \textit{Carbon Majors: Accounting for Carbon and Methane Emissions 1854-2010, Methods and Results Report}, 5 (2014), http://climateaccountability.org/pdf/MRR%209.1%20Apr14R.pdf (last visited Dec. 1, 2016).} An accurate carbon and financial accounting must be maintained for each of the projects to ensure that the implementation of the projects is accomplished in a transparent and effective manner. Moreover, all States, including the Philippines, must ensure that they respect, promote, and consider their human rights obligations during the implementation of such projects. If other sovereign co-trustees also seek Natural Resource Damages for damage to the atmosphere and climate system public trust resources, the Philippines should consider taking a leadership role in the implementation of a Planetary Atmospheric Recovery Plan\footnote{Given these substantial co-benefits of atmospheric and climate recovery and the limited (albeit large) financial reserves of the Carbon Majors, it is possible that sovereign co-trustees might compete for the recovery of NRDs once recovery suits are initiated. However, careful attention must be paid to how NRD recovery funds are spent. Carbon sequestration, rather than climate adaptation, must be the primary focus if we are to achieve climate recovery and long-term climate stability by the end of this century. Achieving long-term climate stability is necessary to prevent continued human right violations and threats of human right violations. Of course, there will be climate adaptation benefits with many carbon sequestration projects (as discussed above), especially if the projects are designed thoughtfully, but it is important that adaptation to the present and projected impacts of climate change be conceptually separate from the use of NRD recovery for carbon sequestration.} to recover and effectively utilize the Natural Resource Damages in a coordinated and efficient manner, much as it has exercised leadership within the Climate Vulnerable Forum.

By setting the scientific standard for climate recovery (limiting long-term climate warming to a maximum of 1°C) and establishing the Carbon Majors’ responsibility for the substantial impairment of the atmosphere and climate system public trust resources, the Commission will support the Philippines’ ability to seek Natural Resource Damages from the Carbon Majors and fulfill its constitutional and public trust obligations to the Filipino people.

IV. CLIMATE CHANGE DISPROPORTIONATELY THREATENS CHILDREN

Current and future generations of Filipino 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. 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 and Carbon Majors have placed them.

The harms of climate change start at the emissions level and impact all aspects of a child’s life, as well as the rights held by children specifically\footnote{For a comprehensive discussion of children’s rights under international law, and how climate change threatens those rights, see Children’s Rights and Climate Change, supra note 40.}, and humans generally, under international law (see Table 1 on pg. 13). 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. The harm from climate pollution is compounded by climate change impacts. For example, chemical reactions such as ozone formation are accelerated at higher temperatures, triggering respiratory ailments. 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.

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

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. 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. 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.

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54 Id. at 988.


58 McMichael, *Climate Change and Human Health*.


60 UNICEF UK, *Children’s Challenge*, at 5.

61 AAP, *Children’s Health*, at 994; Perera, *Children Likely to Suffer*, at 988.

62 Id.
weather-related events and expected to increase. 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. Finally, overlaying all of the impacts of climate destabilization that directly threaten human security, climate change impacts also pose an indirect security implication, as a “threat multiplier,” by driving and exacerbating violent conflict. 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.

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. Yet States are continuing to support the 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 do not encourage Carbon Majors and other private industry to cease actions that result in the ongoing violations of nearly all the human rights possessed by children. The threats from increasing climate instability will only be intensified for future generations of children, who may never have a chance of realizing their rights.

This Commission should continue to investigate the responsibility of the Carbon Majors named in the Petition in order to help remedy the violations or threats of violations to “the rights of Filipinos (a) to life; (b) to the highest attainable standard of physical and mental health; (c) to food; (d) to water; (e) to sanitation; (f) to adequate housing; (g) to self-determination; and (h) of those particularly likely to be affected by climate change, including . . . children” This investigation will aid the Philippines in meeting its constitutional and public trust obligations to reduce atmospheric CO\textsubscript{2} in line with the

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66 Exhibits A, B.
67 See Petition to the Commission on Human Rights of the Philippines Requesting for Investigation of the Responsibility of the Carbon Majors for Human Rights Violations or Threats of Violations Resulting from the Impacts of Climate Change, 5-6 (Sept. 22, 2016).
scientific standard for climate recovery, which this Commission should also set pursuant to
the information presented in Section II, *supra*.

TABLE 1: Climate Change Impacts and Human Rights Implicated

<table>
<thead>
<tr>
<th>CLIMATE IMPACTS</th>
<th>HUMAN IMPACTS</th>
<th>RIGHTS THREATENED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glacier Melt &amp; Sea Level Rise</td>
<td>- Loss of agricultural land and beaches</td>
<td>- Self-determination [ICCPR, ICESCR, 1]</td>
</tr>
<tr>
<td>- Flooding</td>
<td>- Damage to coastal infrastructure, homes, and property</td>
<td>- Life [ICCPR, 6; CRC, 6]</td>
</tr>
<tr>
<td>- Storm surges</td>
<td>- Population displacement</td>
<td>- Health [ICESCR, 12; CRC, 24]</td>
</tr>
<tr>
<td>- Erosion</td>
<td>- Social disruption, civil unrest, and exploitation</td>
<td>- Water [CEDAW, 14; CRC, 24]</td>
</tr>
<tr>
<td>- Salinization of land and water</td>
<td>- Threat to economy, culture, and tourism</td>
<td>- Means of subsistence [ICESCR, 1]</td>
</tr>
<tr>
<td>- Species extinction</td>
<td>- Drowning and injury</td>
<td>- Adequate standard of living [ICESCR, 12; CRC, 27]</td>
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<tr>
<td></td>
<td>- Lack of clean water</td>
<td>- Adequate housing [ICESCR, 12]</td>
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<tr>
<td></td>
<td>- Increased disease and psychological distress</td>
<td>- Culture [ICCPR, 27; CRC, 30, 31]</td>
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<tr>
<td></td>
<td>- Disruption of educational services</td>
<td>- Property [UDHR, 17]</td>
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<tr>
<td></td>
<td>- Loss of biological diversity</td>
<td>- Education [ICESCR, 13; CRC, 28]</td>
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<tr>
<td></td>
<td></td>
<td>- Parental [CRC, 7, 9]</td>
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<tr>
<td></td>
<td></td>
<td>- Freedom from exploitation [CRC, 34, 36, 37]</td>
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<tr>
<td>Ocean Warming &amp; Acidification</td>
<td></td>
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<tr>
<td>- Coral bleaching</td>
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<tr>
<td>- Fisheries decline</td>
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<tr>
<td>- Species extinction</td>
<td></td>
<td></td>
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<tr>
<td>Temperature Increase, Changes in Precipitation, &amp; Extreme Weather</td>
<td>- Food shortages and civil unrest</td>
<td>- Life [ICCPR, 6; CRC, 6]</td>
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<tr>
<td>- Heat Waves</td>
<td>- Threat to economy, culture, and tourism</td>
<td>- Means of subsistence [ICESCR, 1]</td>
</tr>
<tr>
<td>- Droughts</td>
<td>- Loss of biological diversity</td>
<td>- Adequate standard of living [ICESCR, 12; CRC, 27]</td>
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<tr>
<td>- Wildfire</td>
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<tr>
<td>- Flooding</td>
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<tr>
<td>- Higher intensity storms</td>
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<tr>
<td>- Storm surges</td>
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<tr>
<td>- Species extinction</td>
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<td>- Change in disease vectors</td>
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<td>- Increased allergens</td>
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<tr>
<td>Population displacement</td>
<td>- Food and water shortages</td>
<td>- Life [ICCPR, 6; CRC, 6]</td>
</tr>
<tr>
<td>- Social disruption, civil unrest, and exploitation</td>
<td>- Health [ICESCR, 12; CRC, 24]</td>
<td></td>
</tr>
<tr>
<td>- Damage to infrastructure, homes, and property</td>
<td>- Water [CEDAW, 14; CRC, 24]</td>
<td></td>
</tr>
<tr>
<td>- Damage to agricultural lands</td>
<td>- Means of subsistence [ICESCR, 1]</td>
<td>- Adequate standard of living [ICESCR, 12; CRC, 27]</td>
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<tr>
<td>- Threat to economy, culture, and tourism</td>
<td>- Adequate and secure housing [ICESCR, 12]</td>
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<tr>
<td>- Contamination of water supply</td>
<td>- Education [ICESCR, 13]</td>
<td>- Property [UDHR, 17]</td>
</tr>
<tr>
<td>- Delays in medical treatment</td>
<td>- Education [ICESCR, 13; CRC, 28]</td>
<td>- Parental [CRC, 7, 9]</td>
</tr>
<tr>
<td>- Outbreak and increased spread of disease</td>
<td>- Freedom from exploitation [CRC, 34, 36, 37]</td>
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<tr>
<td>- Increased respiratory illnesses and mortality rates</td>
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<tr>
<td>- Increased psychological distress</td>
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<tr>
<td>- Disruption of educational services</td>
<td></td>
<td></td>
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<tr>
<td>- Loss of biological diversity</td>
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</tbody>
</table>
V. RECOMMENDATIONS

It is essential that the Honourable Commission on Human Rights set out the scientific standard for protecting current and future generations of Filipino children from the dangerous threats posed by unabated climate destabilization. The Commission should clearly state the scientific standard States and Carbon Majors must meet to protect public trust and fundamental human rights: reduce dangerous levels of atmospheric CO\textsubscript{2} to below 350 ppm in order to stabilize the long-term average global temperature increase at no higher than 1 °C. The Commission should also state that the actions and inactions of the Carbon Majors that result in the continuing dangerous increase of atmospheric CO\textsubscript{2} levels and further destabilization of the climate system are a violation of the public trust and fundamental human rights of Filipino children and future generations.

After completing its investigation, the Commission should also state in its findings that in order for the government of the Philippines to meet its obligations to current and future generations of Filipinos under the Constitution, public trust doctrine, and international law, it must:

1. Prepare an accounting and inventory of each and every substantial source of GHG emissions within the Philippines’ borders, the emissions embedded in imported goods, and the emissions from extraterritorial activities over which the Philippines has control;

2. Prepare quantifiable targets or a “Carbon budget” for the total amount of CO\textsubscript{2} emissions that can be released until 2050 ensuring that the Philippines and each State does its share as a responsible member of the global community to achieve global climate stabilization and reduce atmospheric CO\textsubscript{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 CO\textsubscript{2} reduction targets and mitigation actions tiered to achieving the Philippines’ carbon budget, with priority actions aimed at reducing GHG emissions by transitioning away from the development and use of fossil fuels; protecting forests, peatlands, grasslands, soil, mangroves, and other natural resources that store carbon; and engaging in massive reforestation and other methods of natural carbon sequestration such as improved agricultural and forestry practices;

4. Keep all untapped fossil fuel reserves in the ground; and

5. Take immediate steps to transition power generation to non-CO\textsubscript{2} emitting energy sources, such as wind, solar, and geothermal; and

6. Seek all possible means of financial, technological and capacity-building support to enhance the implementation of the Philippines’ mitigation efforts—including the recovery of Natural Resource Damages from the Carbon Majors for natural sequestration programs.\textsuperscript{68}

\textsuperscript{68} See, e.g., supra, note 17.
VI. CONCLUSION

Climate change is occurring and the window of opportunity for States, including the Philippines, to act and prevent catastrophic and irreversible environmental harm is closing.\(^69\) Despite their lack of access to decision-making processes related to climate change, children are mobilizing and engaging with political decision-makers, advocating for meaningful action before it’s too late.\(^70\) Youth collaborating with Our Children’s Trust are mounting legal actions at the municipal,\(^71\) state,\(^72\) and federal level in the United States,\(^73\) as well as at the national level in other countries,\(^74\) such as Pakistan\(^75\) and Uganda.\(^76\) These children are directly invoking the legal obligations of States to restore a stable climate system and protect their public trust and fundamental human rights.\(^77\)

Because of the urgency of the situation, and the imminent and ongoing threat to the rights of Filipino children and future generations, this Commission should continue its investigation of Carbon Majors’ responsibility for violations or threats of violations of human rights, set a scientific standard for the protection of those rights and climate stability, and assist the Philippine government in meeting its obligations under the constitution, the public trust doctrine, and international law.

States and Carbon Majors must reduce emissions and support reforestation and other carbon sequestration efforts in line with the scientific prescription discussed above, targeted to achieve less than 350 ppm global atmospheric CO\(_2\) levels by 2100 and 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 and other governmental bodies across the globe.

In determining that the constitutional and public trust case brought by youth in the U.S. against the U.S. government could proceed, Judge Aiken opined that “Even when a case

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\(^69\) Exhibits A, B. \\
\(^70\) See, e.g., Claire Caruana, Kids Tell Politicians ‘Stop Listening, Start Acting’ on Climate Change, Times of Malta (June 3, 2016), available at http://www.timesofmalta.com/articles/view/20160603/local/kids-tell-politicians-stop-listening-start-acting-on-climate-change.614136. \\
implicates hotly contested political issues, the judiciary must not shrink from its role as a coequal branch of government.” 78 Likewise, this Commission must not shrink from its role to “take cognizance of and investigate, on its own or on complaint by any party, all forms of human rights violations and abuses involving civil and political rights…”79 While petitioners’ claims regarding these violations and abuses may be hotly contested, this Commission has an obligation under the Philippine Constitution to investigate the Carbon Majors’ responsibility for climate change induced human rights violations and abuses. Failing to do so, the Commission would be betraying its public trust responsibilities to petitioners and current and future generations of Filipino children. As Judge Ann Aiken noted, the “[T]he term ‘public trust’ refers to the fundamental understanding that no government can legitimately abdicate its core sovereign powers.” 80 This Honourable Commission on Human Rights must fulfill its core duty to investigate the human rights violations of the Carbon Majors and has the opportunity to assist the Philippine government to exercise its core sovereign powers to protect the public trust for current and future generations of Filipino children.

Respectfully submitted,

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