Request for an Advisory Opinion Submitted by the Republic of Colombia and the Republic of Chile on the Climate Emergency and Human Rights

Corrected Communication by the Center for Human Rights and Environment (CHRE) and FACE Intergenerational Justice (FACE)

TABLE OF ABBREVIATIONS

American Convention	American Convention on Human Rights
CEDHA	Centro de Derechos Humanos y Ambiente
CESCR	United Nations Committee on Economic, Social and Cultural Rights
CHRE	Center for Human Rights and Environment
CRC	United Nations Committee on the Rights of the Child
EIAs	Environmental Impact Assessments
ESCERs	Economic, Social, Cultural, and Environmental Rights
EU	European Union
FACE	Fast Action on Climate to Ensure Intergenerational Justice
GHGs	Greenhouse gases
HFCs	Hydrofluorocarbons
Human Rights Council	United Nations Human Rights Council
Human Rights Committee	United Nations Human Rights Committee
Commission or IACHR	Inter-American Commission on Human Rights
Court or Inter-Am. Ct. H.R.	Inter-American Court of Human Rights
ICJ	International Court of Justice
ITLOS	International Tribunal for the Law of the Sea
IPCC	Intergovernmental Panel on Climate Change
LAC	Latin America and the Caribbean
NDCs	Nationally Determined Contributions
OAS	Organization of American States
SLCPs	Short-lived climate pollutants
SRESCER	Special Rapporteur for Economic, Social, Cultural, and Environmental Rights
U.N. or UN	United Nations
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organization
WMO	World Meteorological Organization

EXECUTIVE SUMMARY

The world is facing a climate emergency resulting from human-made greenhouse gas emissions (Section III.A.1) and the Court's Advisory Opinion can establish the foundation for States to take the necessary action to respond to this unprecedented emergency. These emissions cause the planet to heat up fast with unprecedented climatic effects and disastrous consequences for people, nature, and the planet (Sections III.A.2-III.A.3). The damaging impacts are already occurring now throughout the world, with several of the most devastating effects disproportionately harming Latin America and the Caribbean (Section III.A.3). The youth, children, and future generations are also disproportionally harmed, both because children and the youth are particularly vulnerable to certain impacts of climate change, as well as because these groups will live farther into a future plagued by more devastating climate change impacts than those occurring today (Section III.A.4).

There is a strong scientific consensus that to avoid the most severe and destabilizing impacts of climate change, warming must be limited to a 1.5°C rise (above pre-industrial levels) (Section III.A.5). But States so far have failed to do what is necessary to ensure the world does not breach this 1.5°C guardrail. The voluntary pledges States have made under the Paris Agreement have been shockingly deficient – demonstrating that such voluntary pledges are an inadequate tool to mitigate climate change and protect human rights. The actual policies currently in place around the world are even worse; with current policies, global warming could surpass the 1.5°C guardrail by the end of this decade (Section III.A.6). Urgent mitigation action is thus needed. Although adaptation to the effects of climate change is also a crucially needed response, urgent mitigation is the only way to prevent disastrous climate change and its destabilizing impacts (Sections III.A.7-III.A.8).

With carbon dioxide (CO_2) being the primary greenhouse gas contributing to climate change, mitigation measures must include an *urgent* structural shift in energy, agricultural, and industrial policies that will allow society to live within a much tighter carbon budget (Section III.B.1). However, due to CO_2's long life in the atmosphere and the complexities of co-emitted cooling aerosols, decarbonization alone will be insufficient to reduce warming in the near-term (within this critical decade). It is therefore crucial that States also *immediately* implement fast mitigation measures to slow the rate of warming in the near-term and avoid irreversible feedback loops and tipping points that will derail the climate system. These include such measures as (i) cutting emissions of short-lived climate pollutants like methane and (ii) preserving natural carbon sinks such as the Amazon rainforest (Section III.B.2). Taking mitigation measures is economically and technically feasible, and scientific and accounting models are available to determine a State's "fair share" of such measures (Sections III.B.3-III.B.4).

Climate change has already impaired and further threatens numerous human rights, including the right to life, the right to health, the rights to food and water, the right to a healthy environment, and, with children being particularly vulnerable to climate change – the rights of the child (Section IV.A.1). These human rights create corresponding State obligations. The American Convention and its Protocols are living

instruments, and the State obligations derived therefrom are thus interpreted in the context of the particular threats to human rights that confront us, in this case, the current climate emergency (¶ 67). States' human rights obligations are also interpreted in light of relevant principles of international environmental and climate change law, including: First, the mitigation obligations under the climate change treaties, including the Paris Agreement, which require efforts to limit the temperature increase to 1.5°C (Section IV.A.2.i); Second, the precautionary principle, which demands that States take the required mitigation measures despite potential levels of scientific uncertainty regarding future impacts (Section IV.A.2.ii); Third, the principle of common but differentiated responsibilities, which expresses that all States have responsibilities to mitigate climate change but that those responsibilities are differentiated (Section IV.A.2.iii), and; Fourth, intergenerational justice, which requires a prioritization of immediate mitigation action to preserve the planet as much as possible for today's youth, children, and future generations (Section IV.A.2.iv).

The impacts of climate change on human rights, the above principles of international environmental and climate change law, and established human rights law, all inform and support the conclusion that States' binding human rights obligations require them to take urgent mitigation action. First, under their human rights obligations, States must urgently implement mitigation measures consistent with their "fair share" of ensuring global warming is limited to 1.5°C (Section IV.A.3.i). In practice, for States to ensure warming is limited to 1.5°C, they must take immediate action, and ensure their measures include fast mitigation (Section IV.A.3.i.a.7). Second, States' human rights obligations require their domestic courts to enforce the human rights that mandate these mitigation measures (Section IV.A.3.ii).

States have proffered various excuses for their inaction, including the costs of mitigation, that one State alone is unable to keep warming below 1.5°C, and that States' mitigation obligations do not extend beyond the Paris Agreement. However, these excuses disregard scientific consensus, economic reality, and international human rights law, and therefore cannot withstand scientific or legal scrutiny (Section IV.C).

Accordingly, the *Amici* respectfully request this Honorable Court to:

1. advise States that their human rights obligations require (i) their executive and legislative branches to immediately implement the required mitigation measures consistent with ensuring global warming is limited to 1.5°C and (ii) their domestic courts to enforce the human rights that require these mitigation measures;
2. advise States they must take the specific substantive and procedural measures included in Sections IV.D.1-IV.D.2 to implement these obligations, and;
3. consider the three administrative measures proposed in Section IV.D.3 to assist this Court in ensuring States implement the Court's Advisory Opinion.

I. INTRODUCTION

1. Youth climate activist Greta Thunberg warned States at the World Economic Forum in 2019 that "our house is on fire" – referring to the emergency posed by climate change.[1] After a year of disappointing State inaction, she again warned States that "[o]ur house is still on fire. Your inaction is fuelling the flames by the hour. We are telling you to act as if you loved your children above all else."[2] The world still has not listened: despite this and many other (much earlier) warnings,[3] States across the world have failed to take appropriate measures to protect children, the youth, and the planet from this threat. That State inaction has set the world on a collision course with its own life-sustaining environment. With current policies, global warming could surpass the 1.5°C guardrail by the end of this decade.[4] Beyond 1.5°C, many climate impacts are predicted to become non-linear, abrupt, irreversible, and catastrophic – pushing us closer to a "hothouse" climate state where billions of people live in places that become too hot for human habitation.[5] This would be catastrophic. Indeed, the disastrous effects of climate change are already all around us – including, for example, increased frequency and severity of extreme weather events and increased heat-related illness and deaths[6] – and that is with "just" ≈1.15°C of warming.[7] Accordingly, in 2021, States worldwide expressed "alarm and utmost concern that human activities have caused around 1.1°C of warming to date, [and] that impacts are already being felt in every region," and confirmed that "climate change has already caused and will increasingly cause loss and damage[.]"[8]

2. This climate emergency represents an imminent human rights crisis, for both current and especially future generations. Climate change threatens all aspects of life. It increases dangerous extreme weather events, displaces coastal communities and even entire countries, increases risk for infectious diseases and death, and leads to large-scale crop losses, to name a few of its destructive effects. Several

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[1] Greta Thunberg, *Address at World Economic Forum: Our House is on Fire*, IA State Univ., Archives of Women's Political Communication (Jan. 25, 2019). In this *Amicus* brief, the terms "climate change" and "global warming" are used interchangeably. The term "climate change" conveys that, as a result of the increase in global surface temperature (*i.e.*, global warming), a broad range of changes in the climate may occur, including in temperature, precipitation, and extreme weather events.

[2] Greta Thunberg, *Our house is still on fire and you're fueling the flames*, World Economic Forum (Jan. 21, 2020).

[3] *E.g.*, United Nations Joint Framework Initiative on Children, Youth and Climate Change, *Youth in action on climate change: inspirations from around the world*, at 53 (2013) ("Today's children and young people will bear the brunt of the climate change impacts in the future."); UNICEF, *Unless we act now: The impact of climate change on children*, at 6 (Nov. 2015) (hereinafter "UNICEF, Unless we act now") ("There may be no greater, growing threat facing the world's children – and their children – than climate change.").

[4] Hansen, *et al.*, *Global Warming in the Pipeline*, 3(1) Oxford Open Climate Change, at 1 (2023) (hereinafter "Hansen, Global warming in the pipeline").

[5] David I. Armstrong McKay, *et al.*, *Exceeding 1.5°C global warming could trigger multiple climate tipping points*, 377(6611) Science, at 7 (2022) (hereinafter "McKay, Exceeding 1.5°C global warming could trigger multiple climate tipping points"); Timothy M. Lenton, *et al.*, *Climate tipping points—too risky to bet against*, Comment, 575(7784) Nature 592 (2019) (hereinafter "Lenton, Climate tipping points").

[6] *See* IPCC, 2023: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, H. Lee and J. Romero (eds.)], § 2.1 (hereinafter "IPCC, 2023: Synthesis Report").

[7] *Id.* at 42, n. 65 ("For 1850–1900 to 2013–2022 the updated calculations are 1.15 [1.00 to 1.25]°C for global surface temperature[.]").

[8] UNFCCC Conference of the Parties, *Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on its third session, held in Glasgow from 31 October to 13 November 2021*, FCCC/PA/CMA/2021/10/Add.1, at 2, 7 (Mar. 8, 2022).

of the most devastating effects disproportionally harm Latin America and the Caribbean (LAC). The youth, children, and future generations are also disproportionally harmed, both because children and the youth are particularly vulnerable to certain impacts of climate change, as well as because the groups will live farther into a future plagued by more devastating climate change impacts than those occurring today. This is the case even though these groups have contributed the least to the causes of climate change and have historically been excluded from related decision-making processes. Human rights and the principle of intergenerational justice[9] therefore mandate that immediate action is taken to mitigate climate change and keep the planet livable for children, the youth, and future generations.

3. It is scientifically established that to provide intergenerational justice and avoid the worst of human rights violations, States must act *now* to limit overall warming to 1.5°C. Anything less will present tremendous risks of irreversible feedback loops and tipping points that will derail the climate system and seriously threaten human rights worldwide. The 1.5°C guardrail aims to avoid a level of warming that is neither stable, nor safe for human life. All States must promptly take ambitious and robust mitigation action, including through the regulation of private actors, which must include (i) an urgent structural shift in energy, agricultural, and industrial policies that will allow society to live within a much tighter carbon budget,[10] as well as (ii) emergency measures that slow the rate of warming in the near-term – known as fast mitigation[11] – in the form of cutting emissions of short-lived climate pollutants (SLCPs) and preserving natural carbon sinks.[12]

4. Thus far, States' mitigation efforts have been woefully inadequate. Moreover, domestic courts confronted with these inadequacies have been unwilling to enforce the human rights that require stronger measures than States have taken voluntarily. States have, thus, generally failed to meet their human rights obligations and secure intergenerational justice. Most States have been hiding behind various factual and legal excuses for their failures, including for example the false economic speculation that the necessary mitigation efforts are "too costly." In fact, economic analysis shows that robust mitigation is

[9] In the context of climate change, intergenerational justice means ensuring a healthy, clean, and sustainable planet for current and future generations while recognizing and redressing the unequal distribution of climate impacts.

[10] A carbon budget is the maximum amount of net global carbon dioxide (CO_2) emissions that would result in limiting global warming to a given temperature level with a given probability. IPCC, 2021: Annex VII: Glossary [Matthews, J.B.R., V. Möller, R. van Diemen, J.S. Fuglestvedt, V. Masson-Delmotte, C. Méndez, S. Semenov, A. Reisinger (eds.)]. In *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)], pp. 2215-2256, at 2220 (hereinafter "IPCC, 2021: Glossary").

[11] Fast mitigation measures are measures that can provide the most avoided warming in the shortest period of time over the next decade or two; slow the self-amplifying feedback loops and avoid or at least delay irreversible tipping points; and protect the most vulnerable people and ecosystems from heat, drought, flooding, and other weather extremes that will dramatically increase in severity and frequency with every increment of additional warming. These measures can be deployed at scale and reduce the rate of warming in the near-term such as to ensure that warming does not exceed 1.5°C above pre-industrial levels before 2030. Specifically, this would include regulatory measures that can begin within 2-3 years, be substantially implemented in 5-10 years, and produce a climate response within decades. *See* Mario Molina, *et al.*, *Reducing abrupt climate change risk using the Montreal Protocol and other regulatory actions to complement cuts in CO_2 emissions*, 106(49) Proc. Nat'l. Acad. Sci. 20616 (2009) (hereinafter "Molina, Reducing Abrupt Climate Change Risk").

[12] Herein, natural carbon sinks will refer to forests, oceans, or other natural environments viewed in terms of their ability to absorb CO_2 from the atmosphere. Oxford English Dictionary, "carbon sink," Oxford Univ. Press (2020).

technically and economically feasible and will put the planet on an ecologically sustainable path; and more importantly, a failure to mitigate will ultimately cost society much more financially and in human lives than taking the necessary mitigation measures.

5. This Court is uniquely situated to define a path to reverse the spiral of State inaction, delay, and excuses. The required mitigation measures are not the voluntary efforts that States have chosen to undertake; rather they follow from States' binding human rights obligations, which this Court, as well as domestic courts, have the power to enforce. The *Amici* therefore respectfully request this Court advise States that their binding obligations to respect and ensure numerous human rights enshrined in the American Convention and its Protocols require (i) their executive and legislative branches to immediately implement the required mitigation measures consistent with ensuring global warming is limited to 1.5°C and (ii) their domestic courts to enforce the human rights that require these mitigation measures.

II. THE AMICI

6. The first *Amicus*, the Center for Human Rights and Environment (CHRE), is a non-profit 501(c)(3) organization that was originally established in Argentina in 1999 and was relocated to the United States in 2015. CHRE seeks to build a more harmonious relationship between the environment and people. It works to guarantee the human rights of victims of environmental degradation and the non-sustainable management of natural resources, including through the promotion of greater access to justice. CHRE also works to prevent future human rights violations stemming from such environmental problems. To this end, CHRE fosters the creation of inclusive public policy that promotes socially and environmentally sustainable development through community participation, public interest litigation, the strengthening of democratic institutions, and the capacity building of key actors. Since 2016, CHRE's Spanish namesake predecessor (Centro de Derechos Humanos y Ambiente or CEDHA) became an independently run organization with its own independent board and executive team. This strictly Argentine non-profit organization is now referred to as "CEDHA Argentina". CEDHA Argentina has no legal, administrative, financial, executive, economic or operational relationship with CHRE.

7. CHRE's advocacy programs include initiatives to reverse climate change, to contain and reduce the emission of SLCPs such as black carbon, methane, and hydrofluorocarbons, to protect glaciers and permafrost environments for their value as natural water storage and basin regulators, to address the impacts of oil and gas extraction and mining operations, to reduce emissions from brick production, and to promote corporate accountability on human rights and environmental issues.

8. The second *Amicus*, the youth-created and youth-led initiative Fast Action on Climate to Ensure Intergenerational Justice (FACE Intergenerational Justice or FACE), is an initiative hosted by CHRE and the Institute for Governance & Sustainable Development. FACE focuses on climate and environmental justice as it relates to "fast action" climate mitigation strategies (also referred to as "fast mitigation"), which aim to cut emissions of SLCPs and preserve natural carbon sinks to preserve the planet for future generations. FACE's work encourages youth-led, inclusive, and intersectional discussions on climate

change mitigation, resilience, and adaptation strategies pertinent to the most affected people and areas. FACE also works through its pillars of education, support, and outreach to amplify and strengthen the work of youth climate activists advocating for urgent climate action. FACE's pillars are built on the foundation of climate and environmental justice, framed by the need to combine the fast mitigation sprint with the longer decarbonization marathon, to best address intra- and intergenerational equity by acting *now* to mitigate climate change, adapt to unavoidable changes, and build climate resilience.

III. FACTS

A. The Climate Emergency

9. We are in a climate emergency – the Earth is heating, and it is heating fast. The Earth is trapping twice as much heat today as it did in 2005.[13] Taking into account internal variability like the El Niño phase that started in June 2023 and is expected to last through 2024, this year and next are expected to be the warmest years on record.[14] The rate of warming is expected to increase over the coming decades as warming emissions continue to increase every year and cooling emissions of reflective aerosols decrease.[15]

10. This rapid heating of the planet is causing dramatic changes in the climate, with disastrous consequences for the planetary life support systems on which we all depend. Climate change has already caused severe damage, and as the heating continues, these consequences are set to get much worse, especially if warming exceeds 1.5°C – widely regarded as a guardrail,[16] and the maximum temperature allowable to secure intergenerational justice.[17] The world's leading authority on the science of climate change – the Intergovernmental Panel on Climate Change (IPCC) – stated that to avoid the worst impacts of climate change, warming must be limited to a rise of 1.5°C above pre-industrial levels.[18] However, with current policies, global warming could surpass the 1.5°C guardrail by the end of this decade.[19]

11. In a statement of the obvious, the United Nations and other institutions with responsibilities for human rights and public health have declared this situation a "climate emergency."[20] This emergency faced by the world generally, and at extreme crisis proportions in many regions in Latin America and the

[13] Norman G. Loeb, *et al.*, *Satellite and Ocean Data Reveal Marked Increase in Earth's Heating Rate*, 48(13) Geophysical Res. Letters 1 (2021).
[14] UN News, *Hottest September on record puts 2023 on track to be warmest year ever* (Oct. 5, 2023).
[15] Yangyang Xu, *et al.*, *Global warming will happen faster than we think,* 564(7734) Nature 31 (2018).
[16] *See* Kristy Dahl, *Can We Still Limit Global Warming to 1.5°C? Here's What the Latest Science Says*, The Equation (Mar. 17, 2023) ("With the increased severity of impacts associated with warming beyond 1.5°C, and with those impacts falling hardest on people in countries that have contributed the least to the climate crisis, 1.5°C is both a meaningful guardrail for our climate and a powerful rallying point for advocates of climate action."); ¶ 29, *infra*.
[17] *See* Section IV.A.5, *infra*; ¶ 138, *infra*.
[18] *E.g.*, IPCC, 2023: Synthesis Report at 95; *see also* footnote 83, *infra*.
[19] Hansen, Global warming in the pipeline at 1.
[20] William J. Ripple, *et al.*, *World Scientists' Warning of a Climate Emergency*, 70(1) BioSci. 8 (2020) (hereinafter "Ripple, World Scientists' Warning"); UNEP, *The Climate Emergency* [last accessed Nov. 27, 2023].

Caribbean, can only be addressed through urgent global action that halts further warming of the planet – *i.e.*, through climate change mitigation.[21]

1. Human Activities Cause Global Warming

12. Humans caused the climate emergency. There is a strong scientific consensus that human activities that emit greenhouse gases[22] (GHGs) into Earth's atmosphere cause global warming.[23] The IPCC has concluded that "it is unequivocal that human influence has warmed the atmosphere, ocean, and land,"[24] and that GHG emissions from human activities (anthropogenic emissions) are responsible for approximately 1.07°C of the 1.15°C warming we are experiencing today.[25] The causes and damaging impacts of climate change are global; each ton of GHGs emitted anywhere, contributes to climate change everywhere.[26]

13. The GHGs heating up the planet include primarily carbon dioxide (CO_2), and also methane (CH_4), hydrofluorocarbons (HFCs), and tropospheric ozone (smog), amongst other gases.[27] CO_2 remains in the atmosphere and continues to trap heat for a long period of time (hundreds to thousands of years).[28] In contrast, the GHGs methane,[29] HFCs,[30] and tropospheric ozone,[31] as well as the non-gas aerosol black carbon (soot)[32] are known as short-lived climate pollutants (SLCPs).[33] These SLCPs have a relatively

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[21] Mitigation is a human intervention to reduce emissions or enhance the sinks of greenhouse gases. IPCC, 2021: Glossary at 2239.
[22] GHGs are gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of radiation emitted by the Earth's surface, by the atmosphere itself, and by clouds. This property causes the greenhouse (warming) effect. IPCC, 2021: Glossary at 2233.
[23] *See* IPCC, 2023: Synthesis Report, § 2.1.
[24] *See id*. at 46; *see also* IPCC, 2021: *Climate Change 2021: The Physical Science Basis*. *Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)], at 4-5, ¶¶ A.1.1, A.1.3, 59-60, Cross-Section Box TS.1 (hereinafter "IPCC, 2021: Physical Science Basis Report").
[25] IPCC, 2021: Physical Science Basis Report at 5.
[26] IPCC, 2023: Synthesis Report at 83, Figure 3.5 ("Every ton of CO2 adds to global warming"); UNFCCC Subsidiary Body for Scientific and Technological Advice, *Report on the structured expert dialogue on the 2013–2015 review*, FCCC/SB/2015/INF.1, ¶ 59 (May 4, 2015) (hereinafter "UNFCCC, Report on the structured expert dialogue on the 2013-2015 review") ("Hence, every ton of CO2 causes about the same amount of warming, no matter when and where it is emitted."); Environment and Climate Change Canada, *Global Greenhouse Gas Emissions: Canadian Environmental Sustainability Indicators*, at 5 (Aug. 2023) ("[GHGs] have a worldwide impact, no matter where they were first emitted."); U.S. Env'l Protection Agency, *Overview of Greenhouse Gases* [last accessed Nov. 27, 2023] ("All of these [greenhouse] gases remain in the atmosphere long enough to become well mixed, meaning that the amount that is measured in the atmosphere is roughly the same all over the world, regardless of the source of the emissions.").
[27] IPCC, 2021: Glossary at 2233, 2241.
[28] *See* IPCC, 2021: Physical Science Basis Report at 642 ("This delay between a peak in emissions and a decrease in concentration is a manifestation of the very long lifetime of CO2 in the atmosphere; part of the CO2 emitted by humans remains in the atmosphere for centuries to millennia.").
[29] Methane is a potent GHG, a major component of natural gas, and associated with all hydrocarbon fuels. Methane is also associated with enteric fermentation from cattle in the agriculture sector. *See* IPCC, 2021: Glossary at 2238.
[30] HFCs are organic compounds that contain fluorine, carbon and hydrogen atoms and they are produced commercially as a substitute for ozone-depleting gases. IPCC, 2021: Glossary at 2221, 2234.
[31] Tropospheric ozone (smog) is created in the troposphere both naturally and by photochemical reactions involving gases resulting from human activities. IPCC, 2021: Glossary at 2241.
[32] Black carbon (soot) is a relatively pure form of carbon, arising from the incomplete combustion of fossil fuels, biofuel, and biomass, and a component of fine particulate matter. It is a climate forcing aerosol with a strong warming effect, both in the atmosphere and when deposited on snow or ice. IPCC, 2021: Glossary at 2220.
[33] IPCC, 2021: Physical Science Basis Report at 823-825, Table 6.1; WHO*, et al., World Health Organization Policy Brief: Short-lived Climate Pollutants (SLCPs*), at 1 (Nov. 2, 2022) (hereinafter "WHO, Policy Brief SLCPs").

shorter life in the atmosphere, with averages ranging from days to 15 years, and thus trap heat for a shorter period.[34] Anthropogenic methane emissions alone are responsible for nearly half of the current warming.[35]

14. The main source of GHG emissions is the burning of fossil fuels in their primary uses for energy and industry.[36] Land use and other agriculture practices also add tons of CO_2 and other GHGs like methane to the atmosphere every day.[37] Global warming has also been exacerbated by the ongoing destruction of natural carbon sinks such as forests and wetlands that absorb (sequester) CO_2 from the atmosphere.[38] When these natural carbon sinks are destroyed, they not only stop absorbing CO_2, they also immediately release the previously sequestered CO_2 back into the atmosphere.[39]

2. The Planet is Heating Dramatically and Rapidly

15. The concentration of GHGs in the atmosphere continues to increase and has reached record numbers – despite the COVID-19 pandemic and economic slowdown.[40] Consequently, a warming trend has been documented since the Industrial Revolution, but particularly in the last 30 years.[41] Indeed, no human civilization has experienced the global average temperatures currently experienced.[42] July 2023 was likely the warmest month in 120,000 years,[43] breaking global heat records for four days in a row.[44] Scientists have agreed that the "maximum heat like in July 2023 would have been virtually impossible to

[34] Tropospheric ozone has an atmospheric lifespan ranging from a few hours to a few weeks; black carbon has an average atmospheric lifetime of 4 to 12 days; methane has an atmospheric lifespan of around 12 years; and HFCs have an average atmospheric lifespan of 15 years. Climate & Clean Air Coalition, *Tropospheric Ozone* [last accessed Nov. 27, 2023]; Climate & Clean Air Coalition, *Black Carbon* [last accessed Nov. 27, 2023]; Climate & Clean Air Coalition, *Methane* [last accessed Nov. 27, 2023]; Climate & Clean Air Coalition, *Hydrocarbons (HFCs)* [last accessed Nov. 27, 2023].
[35] IPCC, 2021: Physical Science Basis Report at 7, Figure SPM.2 (methane responsible for 0.51°C of 1.07°C of observed warming in 2019); UNEP and Climate & Clean Air Coalition, Global Methane Assessment: 2030 Baseline Report – Summary for Policy Makers, at 5 (2022) (hereinafter "UNEP, Global Methane Assessment: 2030 - Summary").
[36] *See* IPCC, 2023: Synthesis Report, § 2.1.1.
[37] *See id*.
[38] *See* IPCC, 2019: *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems* [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)], at 84, § 1.1.2.1 (hereinafter "IPCC, 2019: Climate Change and Land: Special Report").
[39] *E.g.*, Sirui Wangh *et al.*, *Potential shift from carbon sink to a source in Amazonian peatlands under a changing climate*, Proceedings of the National Academy of Sciences (Nov. 19, 2018) (hereinafter "Wangh, Potential shift from carbon sink"); *see also* footnote 179, *infra*.
[40] Piers M. Forster, *et al.*, *Indicators of Global Climate Change 2022: annual update of large-scale indicators of the state of the climate system and human influence*, 15(6) Earth Sys. Sci. Data 2295, at 2299-2302 (2023) (hereinafter "Forster, Indicators of Global Climate Change 2022"); IPCC, 2023: Synthesis Report at 44. Total global GHG emissions dropped 4.7% from 2019 to 2020, driven by a sharp decline in CO2 emissions from fossil fuels and industry of 5.6% in 2020. However, CO2 emissions quickly rebounded to 2019 levels in 2021. UNEP, *The Closing Window: Climate crisis calls for rapid transformation of societies – Emissions Gap Report 2022*, at xvi (2022) (hereinafter "UNEP, Emissions Gap Report 2022"); UNEP, *Emissions Gap Report: Broken Record – Temperatures hit new highs, yet world fails to cut emissions (again)*, at xx-xxi (2023) (hereinafter "UNEP, Emissions Gap Report 2023").
[41] *See* IPCC, 2021: Physical Science Basis Report at 161; IPCC, 2023: Synthesis Report, § 2.1.2.
[42] WMO, *July 2023 is set to be the hottest month on record* (July 31, 2023).
[43] Karsten Haustein, *Record warm July 2023*, Universität Leipzig, at 1 (2023).
[44] Copernicus Climate Change Serv., *July 2023 sees multiple global temperature records broken* (July 27, 2023).

occur in the U.S./Mexico region and Southern Europe if humans had not warmed the planet by burning fossil fuels."[45]

3. Climate Change Has Disastrous Consequences

16. These record high temperatures are causing unprecedented climatic effects, including record levels of disappearing sea ice in the Arctic and Antarctic, soaring ocean temperatures in the North Atlantic, and more frequent and severe droughts, wildfires, and storms across the globe.[46] And this has disastrous effects, including death and disease in the human population, loss of biodiversity, and destruction of real property and infrastructure.[47] Extreme heat events have resulted in human mortality and morbidity, and the occurrence of climate-related food-borne and water-borne diseases as well as the incidence of vector-borne diseases have increased.[48] Economic damages have also occurred, with regional effects to agriculture, forestry, fishery, energy, tourism, and outdoor labor productivity.[49] Infrastructure, including transportation, water and food security, and energy systems have been compromised by extreme and slow-onset weather events, with resulting economic losses, disruptions of services, and harm to human health and wellbeing.[50]

17. Several of the most devastating effects of climate change disproportionately harm Latin America and the Caribbean, and this is exacerbated by vulnerability caused by poverty, governance challenges, and limited access to basic services and resources in the region.[51] In South America, in the last 10 years, children under 1 year old were on average exposed to 2.35 million more person-days of heatwaves per year, and people over age 65 were on average exposed to 12.3 million more person-days per year, as compared to 1996-2005.[52] Population exposure to wildfires in South America have soared in

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[45] World Weather Attribution, *Extreme heat in North America, Europe and China in July 2023 made much more likely by climate change* (July 25, 2023).
[46] *See* IPCC, 2023: Synthesis Report, § 2.1.2; *see also* IPCC, 2021: Physical Science Basis Report at 8, ¶¶ A.2-A.2.4.
[47] IPCC, 2023: Synthesis Report, § 2.1.2; IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, H. Lee and J. Romero (eds.)], pp. 1-34, at 5-8 (hereinafter "IPCC, 2023: Synthesis Report – Summary for Policymakers").
[48] IPCC, 2023: Synthesis Report – Summary for Policymakers at 6.
[49] *See id*. at 6, ¶ A.2.6.
[50] *See* IPCC, 2023: Synthesis Report at 51; CESCR, *Climate Change and the International Covenant on Economic, Social and Cultural Rights*, E/C.12/2018/1*, ¶ 4 (Oct. 31, 2018) (hereinafter "E/C.12/2018/1*"); Human Rights Council, *The Right to Food*, A/HRC/RES/16/27 (Apr. 13, 2011) (hereinafter "A/HRC/RES/16/27"); Human Rights Council, *The Right to Food*, A/HRC/RES/10/12 (Mar. 26, 2009) (hereinafter "A/HRC/RES/10/12"); Human Rights Council, *The Right to Food*, A/HRC/RES/13/4 (Apr. 14, 2010) (hereinafter "A/HRC/RES/13/4"); Human Rights Council, *The Right to Food*, A/HRC/RES/7/14 (Mar. 27, 2008) (hereinafter "A/HRC/RES/7/14"); Human Rights Council, *Human Rights and Climate Change*, A/HRC/RES/32/33 (July 18, 2016) (hereinafter "A/HRC/RES/32/33").
[51] Stella M. Hartinger *et al.*, *The 2022 South America report of the Lancet Countdown on health and climate change: trust the science. Now that we know, we must act*, 20(100470) The Lancet, at 2-3, (Apr. 2023) (hereinafter "Lancet, 2022"); IPCC, 2022: *Climate Change 2022: Impacts, Adaptation and Vulnerability*. *Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)], at 12 (hereinafter "IPCC, 2022: Impacts, Adaptation and Vulnerability Report"); IACHR, *Chapter IV Special Report - Climate Emergency and Human Rights in the Americas*, ¶ 8 (2021) (hereinafter "IACHR, Special Report").
[52] Lancet, 2022 at 2.

the last decade in 9 out of 12 countries,[53] and in 2022, the exceptionally high temperatures led to periods of record wildfires in many countries in the region.[54]

18. Climate change reduces food security in the LAC region.[55] The IPCC has concluded that increasing extreme weather events have exposed millions of people to acute food insecurity and reduced water security, with the largest impacts observed in many locations and communities in, amongst others, Central and South America.[56] Indeed, in 2020, 168.7 million people in South America suffered from moderate and severe food insecurity.[57] And in 2021, due to the pandemic and climate change related droughts and floods, 7.7 million people experienced acute food insecurity in El Salvador, Guatemala, and Nicaragua alone.[58]

19. Climate change is also increasing the risks of infectious disease in the LAC region. In particular, in South America, the risk of dengue (mosquito-borne viral disease) has increased over the last four decades; 16 million cases were reported during 2011-2021 and climate suitability for this disease increased by 35.3% in the 2012-2021 time period, as compared to 1951-1960.[59] The IPCC predicts that such impacts of climate change will get worse as global warming increases.[60] Specifically, in Central and South America, the risk of dengue will increase due to longer mosquito seasons and wider geographic distribution.[61]

20. Climate change and weather extremes are also increasingly driving displacement in Latin America and the Caribbean, generating and perpetuating vulnerability in the region.[62] Other risks associated with climate change in Central and South America include health effects due to increasing epidemics, in particular vector-borne diseases, and damages to life and infrastructure due to floods, landslides, sea level rise, storm surges, and coastal erosion.[63] In the Caribbean, States are threatened by extreme sea level and weather events, including hurricanes and tropical storms, again aggravated by poverty, which has caused a "cumulative community vulnerability."[64]

21. It is undisputed that that these adverse impacts are more frequent and more severe than anything the planet has experienced in thousands of years. It is also undisputed that global warming is the cause and that each additional ton of GHG emissions and each increment of warming contributes to worsening these disastrous impacts.[65] This destructive pattern of adverse impacts threatens the future of life as we know it on the planet; yet they are occurring and are predicted to worsen if we remain on our

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[53] *Id*.
[54] WMO, *Climate change vicious cycle spirals in Latin America and Caribbean* (July 5, 2023).
[55] IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 14.
[56] IPCC, 2023: Synthesis Report at 5, 50; *see also id.* at 49, 76.
[57] Lancet, 2022 at 11.
[58] IACHR, Special Report, ¶ 11.
[59] Lancet, 2022 at 6, 10.
[60] IPCC, 2023: Synthesis Report – Summary for Policymakers at 15.
[61] IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 15, 51.
[62] *See* IPCC, 2023: Synthesis Report – Summary for Policymakers at 6; IPCC, 2023: Synthesis Report at 51.
[63] IPCC, 2023: Synthesis Report at 76.
[64] IACHR, Special Report, ¶ 21 (*citing* IPCC, 2022: Impacts, Adaptation and Vulnerability Report, Ch. 15).
[65] *See* footnotes 23, 26, *supra*; footnote 82, *infra*.

present path of fossil fuel dependence, GHG emissions, destruction of natural carbon sinks, and inadequate climate change mitigation.[66]

22. Young people in the Americas are experiencing all these devastating impacts from climate change. The personal accounts of several youth from the Americas who are suffering harm from climate change are set forth in **Appendix 1**; they illustrate young people's current experiences and fears and hopes for the future in the context of climate change, and the motivations behind this *Amicus* brief.

4. Climate Change Disproportionately Injures Children, the Youth, and Future Generations

23. The devastating impacts of climate change are disproportionately felt by the youth, children, and future generations. This is the case even though they are least responsible for the conduct that has caused global warming and have been excluded from relevant decision-making processes.[67]

24. First, children and young people are more vulnerable to certain impacts of climate change. It is well documented that they already bear a disproportionate amount of the effects of environmental harm.[68] In particular, children are among the most vulnerable to the negative effects of climate change on physical and mental health.[69] Several GHGs are also air pollutants, which disproportionately impact children and the youth, as they spend more time outdoors and are still growing their lungs, among other reasons.[70] Children and adolescents are especially at risk of experiencing increasing mental health harm from exposure to extreme weather events, displacement, migration, famine, malnutrition, degradation or destruction of health and social care systems, climate-related economic and social losses, and anxiety and distress associated with worry about climate change.[71]

25. Second, children, the youth, and future generations will live farther into a future plagued by more devastating climate change impacts than those occurring today. Scientists evaluating the likely future impacts of global warming, have explained that today's children, youth, and future generations will inevitably bear the brunt of these impacts and suffer more severe consequences than what we are suffering now.[72]

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[66] *See* IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 1692-1693, 1719, Figure 12.6; IPCC, 2023: Synthesis Report at 98.
[67] UNICEF, *Making Climate and Environment Policies for & with Children and Young People, Climate & Environment Discussion Paper*, at 1, 8 (Nov. 2021) (hereinafter "UNICEF 2021, Making Climate and Environment Policies for and with Children"); Human Rights Council, *Right to Development*, A/HRC/33/31, Annex I, ¶ 13 and Annex II, ¶ 7 (July 26, 2016) (hereinafter "A/HRC/33/31").
[68] *See e.g.,* Human Rights Council, *The right to a clean, healthy and sustainable environment: non-toxic environment. Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*, A/HRC/49/53, ¶ 21 (Jan. 12, 2022); UNICEF, Unless we act now at 10.
[69] *See* IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 50, ¶ TS.B.5; Romanello *et al.*, *Monitoring Climate Change and Child Health*, 57 J. of Ped. & Child Health 1736 (2021) (hereinafter "Romanello, Monitoring Climate Change and Child Health"); Nick Watts, *et al.*, *The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate*, 394 The Lancet 1836, at 1836, 1841 (2019).
[70] WHO, *Air Pollution and Child Health: Prescribing clean air - Summary*, at 4 (2018).
[71] *See* IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 15, ¶ B.4.4, 63, ¶ TS.C.6.2.
[72] *E.g.*, IPCC, *Overarching Frequently Asked Questions and Answers, Question 3: How will climate change affect the lives of today's children tomorrow, if no immediate action is taken?*, at 2 (June 16, 2023) (hereinafter "IPCC, 2023: FAQ

26. For example, under continued global warming, extreme weather events such as heat waves will continue to rise in frequency, intensity, duration, and spatial extent over the next decades.[73] Such extreme events will significantly increase ill health and premature deaths in the future, including increased heat-related mortality and increased risk of exposure to climate-sensitive food-borne, water-borne, and vector-borne diseases.[74] Younger generations are expected to face more such extreme weather events across their lifetimes compared with older generations.[75] It is estimated that – under current inadequate voluntary climate policy pledges (*see* Section III.A.6, *infra*) – children born in 2020 will experience a two- to sevenfold increase in extreme weather events, particularly heat waves, as compared to people born in 1960.[76]

27. The harm experienced by these groups will increase in severity as warming increases. For example, if the planet reaches 2.4°C of warming by 2050, as compared to 1.7°C, 370 million more children worldwide will be exposed to long-lasting heatwaves.[77] And as temperature rise approaches or exceeds 1.5°C, these groups will face the harder to predict but more threatening and destabilizing consequences of what are referred to as climatic tipping points (further discussed below).[78] Children and young people are at risk globally, but in several regions of the world these risks are even more immediate, including in the LAC region.[79]

28. The fact that climate change has been caused by past and current generations but disproportionately harms future generations, raises severe consequences for intergenerational fairness.[80] A failure to effectively reduce GHG emissions now (i) commits future generations to higher levels of risk that limiting warming to acceptable levels will become impossible; (ii) if reaching those acceptable levels of warming is possible, commits future generations to steeper and more challenging GHG emissions reductions in the coming decades to reach them; (iii) commits future generations to rely on the wide-spread deployment of at-present unproven and controversial technologies to actively remove GHGs from the

3"); Wim Thiery, *et al.*, *Intergenerational inequities in exposure to climate extremes*, 374(6564) Sci. 158 (2021) (hereinafter "Thiery, Intergenerational Inequities").
[73] Thiery, Intergenerational Inequities at 158 (internal citations omitted).
[74] *See* IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 15, ¶ B.4.4.
[75] Thiery, Intergenerational Inequities at 158; Romanello, Monitoring Climate Change and Child Health.
[76] Thiery, Intergenerational Inequities at 158.
[77] UNICEF, *The Coldest Year of the Rest of their Lives: Protecting children from the escalating impacts of heatwaves*, 24 (2022).
[78] *See* IPCC, 2018: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)], at 262 (hereinafter "IPCC, 2018: Global Warming of 1.5°C: Special Report"); IPCC, 2023: Synthesis Report, § 3.1.3.
[79] *See* Section IV.A.3, *supra*.
[80] *See* Joeri Rogelj, *Climate physics consequences of further delay in achieving CO_2 emission reductions and intergenerational fairness*, Grantham Institute of Science Brief, at 1, 4-5 (Sept. 2019) (Appendix B to the Petition in *Sacchi, et al. v. Argentina, et al.*, Committee on the Rights of the Child (Sept. 22, 2021) (CRC/C/88/D/104/2019) (hereinafter "*Sacchi, et al. v. Argentina, et al.*")) (hereinafter "Rogelj, Climate Physics Consequences of Further Delay").

atmosphere; and (iv) creates an imminent risk that it will be impossible to "make up" for lost mitigation opportunities, thereby undermining the sustainable and safe livelihood of future generations.[81]

5. Warming Must be Limited to the 1.5°C Guardrail

29. There is a consensus amongst scientists that every increment of additional warming further exacerbates the disastrous impacts of climate change.[82] There is also a scientific consensus that to avoid the most severe and destabilizing impacts of climate change, warming must be limited to 1.5°C above pre-industrial levels.[83] As the IPCC has concluded, "[n]ear-term actions that limit global warming to close to 1.5°C would substantially reduce projected losses and damages related to climate change in human systems and ecosystems, compared to higher warming levels, but cannot eliminate them all[.]"[84] Beyond 1.5°C, many climate impacts are predicted to become non-linear, abrupt, irreversible, and catastrophic – pushing us closer to a "hothouse" climate state where billions of people live in places that become too hot for human habitation.[85] For example, warming of 2.7°C by the end of the century would leave about a third of the global population outside of a livable climate (2 to 2.5 billion people), while limiting warming to 1.5°C would reduce this to less than 5% (0.4 to 0.5 billion people).[86] Compared to the temperature rise that would follow from States' current mitigation pledges, limiting global warming to 1.5°C will nearly halve the additional exposure of newborns to extreme heat waves and substantially reduces the burden of wildfires, crop failures, droughts, tropical cyclones, and river floods, although it still leaves younger generations with unprecedented extreme weather event exposure.[87] The 1.5°C guardrail aims to keep warming to a level that ensures a stable climate system and a "safe and just corridor" for life.[88] It is thus crucial for current and future generations that warming is limited to that 1.5°C guardrail.[89]

30. Importantly, both warming itself and the impacts of warming are not linear. This is in part due to feedback loops and tipping points. Feedback loops are self-reinforcing processes that amplify global

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[81] *Id*. at 1.
[82] IPCC, 2023: Synthesis Report at 72; FCCC/SB/2015/INF.1 at 15 (May 4, 2015).
[83] IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 66 ("Without limiting warming to 1.5°C global warming level, many key risks are projected to intensify rapidly in almost all regions of the world[.]"); IPCC, 2018: Global Warming of 1.5°C: Special Report at 7-10; *id.* at v-vi ("[This Report] It finds that there are clear benefits to keeping warming to 1.5°C rather than 2°C or higher."); IPCC, 2023: Synthesis Report at 88 ("Limiting global warming to 1.5°C instead of 2°C would increase the costs of mitigation, but also increase the benefits in terms of reduced impacts and related risks . . . and reduced adaptation needs (high confidence)"); *id.* at 95.
[84] IPCC, 2023: Synthesis Report at 95.
[85] McKay, Exceeding 1.5°C global warming could trigger multiple climate tipping points at 7; Lenton, Climate tipping points at 592.
[86] Timothy Lenton *et al*., *Quantifying the human cost of global warming*, 6 Nat. Sustain. 1237 (2023) (hereinafter "Lenton, Quantifying the human cost of global warming"); Chi Xu *et al*., *Future of the human climate niche*, 117(21) Proc. Nat'l. Acad. Sci. 11352 (2020).
[87] IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 6.
[88] Johan Rockström, *et al.*, *Identifying a Safe and Just Corridor for People and the Planet*, 9 Earth's Future, at 2, 4 (2021).
[89] The 1.5ºC guardrail is breached when, over a 20-year period (looking at the preceding 10 years and projections for the following 10 years), the average global surface air temperature rise exceeds 1.5ºC as compared to pre-industrial levels. When such a breach (measured over a 20-year period) is temporary, this is referred to as an overshoot. *See* IPCC, 2021: Physical Science Basis Report at 42, 555; IPCC, 2021: Glossary at 2242.

warming in response to increasing GHGs.[90] In other words, such feedback loops cause additional warming beyond the initial warming, creating a loop whereby the planet increasingly warms itself.[91] As an example, warming in the Arctic melts sea ice, resulting in more open ocean area, which is darker and therefore absorbs more sunlight, further intensifying the initial warming.[92]

31. Tipping points are critical thresholds beyond which climate systems reorganize and climate change damages occur abruptly and/or irreversibly.[93] The science behind these tipping points shows that future consequences of climate change will not just be "more of the same," but rather will be damage and destruction of a more severe and frequent magnitude, as well as of a less predictable nature.[94] Beyond 1.5°C, the risk of tipping points increases, committing human and natural systems to abrupt and irreversible changes.[95] In particular, several tipping points are projected if warming surpasses the 1.5°C guardrail by 2030, which would lead to irreversible harm in the climate system.[96] The magnitude and rate of these changes may exceed the capacity of ecosystems and communities to adapt, even if warming only temporarily overshoots the 1.5°C guardrail.[97] The large-scale impact that tipping points will likely have on future societies makes them particularly important to consider in the context of intergenerational fairness.[98]

6. Current Policies to Mitigate Climate Change Are Woefully Inadequate

32. Current policies and voluntary mitigation pledges are inadequate to limit warming to the 1.5°C guardrail. States have set voluntary targets to mitigate climate change under the Paris Agreement – a landmark climate change treaty – as part of their "nationally determined contributions" (NDCs).[99] But several independent analyses have shown that these NDCs are inadequate, either at a national or global level, to limit warming to the 1.5°C guardrail.[100] The most recent NDCs recorded as at 25 September 2023 are projected to limit warming to only 2.1-2.3°C, assuming they are fully implemented (including all conditional elements).[101] In that best-case scenario (which we are not presently meeting), it is estimated that such full implementation of the NDCs would only reduce GHG emissions by 5.3% below 2019 levels

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[90] *See* IPCC, 2021: Physical Science Basis Report at 1024, FAQ 7.3.
[91] *See* William J. Ripple *et al.*, *Many risky feedback loops amplify the need for climate action*, 6(2) One Earth 86 (2023) (hereinafter "Ripple, Many Risky Feedback Loops").
[92] *See* IPCC, 2021: Physical Science Basis Report at 1024, FAQ 7.3.
[93] *See* IPCC, 2018: Global Warming of 1.5°C: Special Report at 262; IPCC, 2023: Synthesis Report at 77, 129.
[94] *See* IPCC, 2023: Synthesis Report at 77, 82.
[95] Lenton, Climate tipping points at 592-594; IPCC, 2023: Synthesis Report at 77 ("The likelihood of abrupt and irreversible changes and their impacts increase with higher global warming levels (high confidence).").
[96] *See* IPCC, 2021: Physical Science Basis Report at 71; IPCC, 2018: Global Warming of 1.5°C: Special Report at 262; McKay, Exceeding 1.5°C global warming could trigger multiple climate tipping points at 7.
[97] *See* IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 12-13, 19-20.
[98] *See* Rogelj, Climate Physics Consequences of Further Delay at 1, 5.
[99] Paris Agreement, Article 4.
[100] *See e.g.*, Joeri Rogelj, *et al.*, *Credibility gap in net-zero climate targets leaves world at high risk*, 380(6649) Sci. 1014, at 1014-1015 (2023); Lenton, Quantifying the human cost of global warming at 1; Lavanya Rajamani, *et al.*, *National 'fair shares' in reducing greenhouse gas emissions within the principled framework of international environmental law*, 21(8) Climate Pol'y 983, at 984 (2021) (hereinafter "Rajamani, National 'Fair Shares' in Reducing Greenhouse Gas Emissions").
[101] *See* UNFCCC Secretariat, *Nationally determined contributions under the Paris Agreement: Synthesis Report*, FCCC/PA/CMA/2023/12, ¶ 151 (Nov. 14, 2023) (hereinafter "FCCC/PA/CMA/2023/12").

by 2030.[102] This is alarming given that the IPCC concludes that GHG emissions must be reduced by 43% below 2019 levels by 2030 to limit warming to 1.5°C.[103] Thus, based on current NDCs, the global emissions gap between the mitigation path we are on and what is needed remains dangerously high.[104] Indeed, even in the most optimistic scenario, the voluntary commitments only give us a 14% chance to keep warming under the 1.5°C guardrail.[105] This clearly demonstrates that voluntary national promises are an inadequate tool to mitigate climate change and protect human rights.

33. Worse, States are not even meeting these NDCs. Within the Americas, most States are not expected to meet these voluntary pledges.[106] In particular, the four largest emitters in the region – Brazil, Canada, Mexico, and the U.S. – are not on course to achieve their NDCs.[107] A recently-published study shows that, amongst 42 indicators that assess whether various sub-sectors are on track to reach the 1.5°C guardrail, only a single indicator is "on track," whereas 24 of the 42 indicators are "well off track" and 6 of the 42 are heading in the "wrong direction."[108]

34. Scientists have observed that, under current policies worldwide, we are headed for a temperature rise of above 2°C or even 3°C – corresponding with an exponential increase of damage estimated to occur at those levels of warming.[109] For example, policies around the world in place as of November 2022 were projected to result in about 2.7°C warming above pre-industrial levels by 2100.[110] Indeed, with current policies, global warming could surpass the 1.5°C guardrail by the end of this decade.[111]

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[102] *Id.*, ¶ 11.
[103] *See* IPCC, 2023: Synthesis Report at 92.
[104] *Id.* at 57; UNEP, Emissions Gap Report 2022 at xix ("Globally, the NDCs are highly insufficient, and the emissions gap remains high"); UNEP, Emissions Gap Report 2023 at xx ("The emissions gap in 2030 remains high: current unconditional NDCs imply a 14 GtCO2e gap for a 2°C goal and a 22 GtCO2e gap for the 1.5°C goal. The additional implementation of the conditional NDCs reduces these estimates by 3 GtCO2e.").
[105] UNEP, Emissions Gap Report 2023 at 33 ("Even in this most optimistic scenario, the likelihood of limiting global warming to 1.5°C is only 14 per cent (table 4.4), and the various scenarios leave open a large possibility that global warming will exceed 2°C or even 3°C (table 4.4 and figure 4.3).").
[106] *See* Tania Miranda, *Nationally Determined Contributions Across the Americas, a Comparative Hemispheric Analysis*, Institute of the Americas at 11 (2021) ("According to data trackers available, out of the 16 countries analyzed, only Colombia, Costa Rica, and Peru seem to be on emissions trajectories that will allow them to achieve their NDC commitments by 2030 and 2050. Three other countries, Argentina, Chile, and Ecuador are on a trajectory that suggests it may be possible to fulfill their pledges, meaning they would need to further implement policies and align interests and investments for the country to get on the right emissions trajectory to meet their pledges.").
[107] *Id.*
[108] Sophie Boehm, *et al*., *State of Climate Action 2023*, Systems Change Lab, at 2, 6 (Figure ES-2) (2023) (On track: transport (increasing share of electric vehicles). Well off track: power (coal, unabated fossil gas in electricity generation, carbon intensity of electricity generation), buildings (energy intensity and carbon intensity of building operations), industry (electrification, carbon intensity of cement production, green hydrogen capacity), transport (public transport infrastructure, bike lanes, BEVs and FCEVs, sustainable aviation fuels, zero-emissions maritime shipping fuel), forests and land (deforestation, restoring mangroves), food and agriculture (GHG emissions intensity, crop yields, meat consumption), carbon removal capacity, and finance. Wrong direction: industry (carbon intensity of steel production), transport (passenger trips, BEVs and FCEVs for bus sales), forests and land (reduce mangrove loss), food and agriculture (food production loss), and finance (phasing out public financing for fossil fuels)).
[109] *See* Climate Analytics, *The CAT Thermometer* (Nov. 10, 2022); IPCC, 2018: Global Warming of 1.5°C: Special Report at 262; IPCC, 2023: Synthesis Report at 77, 82.
[110] *See* Climate Action Tracker, *Warming Projections Global Update*, at i-ii (Nov. 2022).
[111] Hansen, Global warming in the pipeline at 1. Certain other models do not adequately account for feedback loops. As a result, warming may occur faster than predicted by such models and the 1.5°C guardrail may be surpassed even sooner. *See id.*

35. The world's nations have a finite amount of CO_2 that can still be emitted before the planet reaches a given temperature level – called a carbon budget.[112] Cumulative CO_2 emissions in 2020-2030 based on the latest NDCs would likely use up 87% of the remaining carbon budget if warming is to be limited to 1.5°C.[113] Similarly, the IPCC has concluded that "[i]f the annual CO_2 emissions between 2020-2030 stayed, on average, at the same level as 2019, the resulting cumulative emissions would almost exhaust the remaining carbon budget for 1.5°C … and deplete more than a third of the remaining carbon budget for 2°C[.]"[114] Any further delay in concerted mitigation of climate change will miss a brief and rapidly closing window of opportunity to secure a livable and sustainable future for all.[115]

7. Adaptation to Climate Change by Itself is Not a Viable Substitute for Mitigation

36. Adaptation to climate change will be necessary, but it is not a viable substitute for mitigation.[116] Not only can adaptation not prevent all climate change impacts, "[t]he potential or effectiveness of some adaptation . . . options decreases as climate change intensifies[.]"[117] As the IPCC explained: "While currently known structural adaptation responses can reduce some of the projected risks across sectors and regions, residual impacts remain at all levels of warming, and effectiveness decreases at higher levels of warming."[118] Limiting warming to the 1.5°C guardrail is important to ensure the maximum effectiveness of adaptation; as the IPCC explained, "[a]daptation generally performs more effectively at 1.5°C, though residual damages are projected at this warming level across sectors and regions[.]"[119] Mitigation is thus essential both to reduce climate change and to stay within the limits of adaptation.

37. Although this *Amicus* brief focusses on the need for States to take immediate mitigation measures to preserve a sustainable climate, it is also clear that adaptation measures will be necessary, particularly in the near-term, to protect people from the impacts of unmitigated climate change.[120]

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[112] *See* IPCC, 2021: Glossary at 2220; Forster, Indicators of Global Climate Change 2022 at 2312; footnote 10, *supra*.
[113] *See* FCCC/PA/CMA/2023/12, ¶ 152.
[114] IPCC, 2023: Synthesis Report – Summary for Policymakers at 20, ¶ B.5.3.
[115] *See* IPCC, 2023: Synthesis Report at 88.
[116] Adaptation is the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. IPCC, 2021: Glossary at 2216.
[117] IPCC, 2023: Synthesis Report at 88; *see also id.* at 78; IPCC, 2018: Global Warming of 1.5°C: Special Report at 10, ¶ B.6.3. ("Limits to adaptive capacity exist at 1.5°C of global warming, become more pronounced at higher levels of warming and vary by sector, with site-specific implications for vulnerable regions, ecosystems and human health[.]").
[118] IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 647. For the specific example of water-related adaptation, *see id*., Figure 4.28.
[119] IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 647; *see also* IPCC, 2018: Global Warming of 1.5°C: Special Report at 10 ("Adaptation is expected to be more challenging for ecosystems, food and health systems at 2°C of global warming than for 1.5°C [.]").
[120] *See e.g.*, IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 16 (effects of adaptation on heat-related morbidity and mortality, ozone-related mortality, malaria, and dengue and other diseases carried by mosquitos); *see generally* Section IV.A.3, *supra*. For example, in Central and South America, human life is threatened by climate change driven conditions causing increases in infectious diseases and extreme weather events. The health care delivery system is an essential tool for resilience to these immediate threats and thus increased investment in healthcare systems and in early warning and response systems (such as Heat Health Action Plans) are desperately needed in the most vulnerable areas of Central and South America. *See* IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 25-26, 1698-1721; Lancet, 2022 at 3-4.

8. The World is Facing a Climate Emergency that Requires Immediate Mitigation, Including Fast Mitigation to Slow the Rate of Near-term Warming

38. As the above demonstrates, it is indisputable that the world is now experiencing a climate emergency that requires immediate measures to mitigate climate change and limit warming to the critical 1.5°C guardrail. If mitigation efforts are not significantly increased immediately, it most likely will be too late to stop the avalanche of destructive consequences that will be associated with global temperature rise above 1.5°C and temperatures that will surely exceed that if we stay on our present path of voluntary mitigation.[121]

39. Specifically, given CO_2's significant contribution to climate change and the fact that it traps heat for a long period of time, significantly accelerated measures to cut the production and use of carbon must be taken *immediately* to ensure the possibility of staying within the 1.5°C guardrail. However, even then, additional emergency measures must be taken to slow the rate of warming in the near-term – *i.e.*, the response to climate change must include what is known as fast mitigation (further discussed in the next Section).

B. Urgently Needed Mitigation

40. Adequate mitigation to ensure that warming stays within the 1.5°C guardrail will require immediate action, including (i) an urgent structural shift in energy, agricultural, and industrial policies that will allow society to live within a much tighter carbon budget, and (ii) fast mitigation in the form of cutting emissions of SLCPs and preserving natural carbon sinks. Urgent and long term decarbonization strategies, reducing emissions of SLCPs, and the preservation of natural carbon sinks are complementary and not exchangeable strategies.[122] States have the tools and finances to take these measures: taking mitigation measures *now* is economically and technically feasible, and scientific and accounting models are available to determine a State's "fair share" of such measures.

1. Structural Changes Cutting Production and Use of Carbon

41. As the IPCC has concluded, "[l]imiting global temperature increase to a specific level requires limiting cumulative net CO_2 emissions to within a finite carbon budget[.]"[123] Specifically, it concludes that to limit warming to 1.5°C, the world needs to reach net zero CO_2 emissions around 2050.[124]

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[121] IPCC, 2018: Global Warming of 1.5°C: Special Report at 15, ¶ C.2. ("Pathways limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems (high confidence)."); IPCC, 2023: Synthesis Report at 89 ("Any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all (*very high confidence*)."), 56 ("The magnitude and rate of climate change and associated risks depend strongly on near-term mitigation and adaptation actions (*very high confidence*).").

[122] *See* IPCC, 2023: Synthesis Report at 82; Gabrielle B. Dreyfus, *et al.*, *Mitigating climate disruption in time: A self-consistent approach for avoiding both near-term and long-term global warming*, 119(22) Proc. Nat'l Acad. Sci. 1, at 1, 7 (2022) (hereinafter "Dreyfus, Mitigating climate disruption").

[123] IPCC, 2023: Synthesis Report at 82.

[124] *Id.* at 68, 86.

Urgent structural changes – in our approaches to energy, industry, and agriculture – are necessary to achieve this goal.[125]

42. Cutting the burning of fossil fuels is critical: the IPCC has stated that "[p]rojected CO_2 emissions from existing fossil fuel infrastructure without additional abatement would exceed the remaining carbon budget for 1.5°C[.]"[126] Similarly, a report published by the Inter-American Development Bank concluded in 2022 that continuing use of already existing fossil fuel energy infrastructure and adding fossil fuel projects still in development would emit more GHGs than what is consistent with keeping warming to 1.5°C.[127] The IPCC has concluded that to even just keep global warming to 2°C, about 80% of coal, 50% of gas, and 30% of oil reserves cannot be burned and emitted.[128]

43. Therefore, in laying out a path to achieve net-zero emissions by 2050, the International Energy Agency stated in 2021 that, beyond projects already committed at that time, there could be no new oil and gas fields approved for development as well as no new coal mines or mine extensions.[129] The IPCC has stated that, to achieve net-zero CO_2 emissions, the ideal energy systems would entail, among other things, "a substantial reduction in overall fossil fuel use, minimal use of unabated fossil fuels, and use of Carbon Capture and Storage in the remaining fossil fuel systems[.]"[130] As the IPCC explained, "[t]he continued installation of unabated fossil fuel infrastructure will 'lock-in' GHG emissions."[131] In Latin America and the Caribbean, existing and planned power plants, especially gas power plants, would emit twice as many GHGs as what scenarios reviewed by the IPCC suggest would be consistent with the region limiting warming to the 1.5°C guardrail or even 2°C.[132] Thus, to properly mitigate climate change, all fossil-based electricity generation must be phased out as soon as possible and development of new fossil fuel-based projects must be halted immediately.[133] However, this alone will not be enough to meet the near-term climate emergency.

2. Fast Mitigation

44. Limiting global warming to the 1.5°C guardrail additionally requires what is known as fast mitigation, which is aimed at slowing the rate of warming in the near-term. Because we are now so close to dangerous tipping points, and because the adverse consequences of GHGs already emitted are locked

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[125] *See id.*, §§ 3.3, 4.5.
[126] IPCC, 2023: Synthesis Report – Summary for Policymakers at 19.
[127] Andreas Fazeka, *et al.*, *Achieving Net-Zero Prosperity: How Governments Can Unlock 15 Essential Transformations*, Inter-American Development Bank, at 21 (July 2022) (hereinafter "Fazeka, Achieving Net-Zero Prosperity").
[128] IPCC, 2023: Synthesis Report at 58.
[129] Int'l Energy Agency, *Net Zero by 2050 – A Roadmap for the Global Energy Sector*, at 21, 99, 101 (2021) (hereinafter "IEA, Net Zero by 2050").
[130] *See* IPCC, 2023: Synthesis Report – Summary for Policymakers at 28, ¶ C.3.2.
[131] IPCC, 2023: Synthesis Report at 95.
[132] *See* Esperanza González-Mahecha, *et al.*, *Committed emissions and the risk of stranded assets from power plants in Latin American and the Caribbean*, 14(12) Envt'l Res. Letters, at 5-9 (2019) (hereinafter "Mahecha, Committed Emissions and the Risk of Stranded Assets").
[133] *See id.*

into our atmosphere for decades to come, emergency measures in the form of fast mitigation are now necessary.[134] Critical fast mitigation measures include the cutting of emissions of SLCPs and the preservation of natural carbon sinks.

i. Cutting Emissions of SLCPs

45. Short-lived climate pollutants (SLCPs) include methane, HFCs, tropospheric ozone, and black carbon.[135] Because these SLCPs have a relatively short life in the atmosphere and trap heat for a shorter period, cutting the emissions of SLCPs will contribute to slowing down or reversing warming in the near-term.[136] Cutting the emissions of SLCPs also has near-term health and justice benefits due to the negative relationships between methane emissions and food security and black carbon emissions and clean air.[137] Many measures cutting emissions of SLCPs are immediately implementable and low-cost, providing a faster avenue to reducing warming rates in the critical near-term.[138]

46. Cutting emissions of SLCPs is also critical because focusing only on decarbonization by cutting fossil fuel emissions actually increases warming in the near-term. The burning of fossil fuels not only emits CO_2, but also cooling aerosols, which "mask" the true warming effect of the emitted carbon, but have a shorter atmospheric lifespan than CO_2. The IPCC confirms that strategies focusing exclusively on reducing fossil fuel burning could lead to "warming in the near- to mid-term,"[139] which could potentially cause temperatures to exceed the 1.5°C guardrail by 2035 and the 2°C level by 2050.[140] When accounting for the unmasking of cooling aerosols, policies cutting CO_2 emissions through phasing out fossil fuel burning would avoid about 0.07°C net warming by 2050 compared to 0.26°C net warming avoided by measures cutting emissions of SLCPs.[141] Further, the dual strategy that pairs urgently needed CO_2-focused

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[134] *See* Molina, Reducing Abrupt Climate Change Risk at 20616 ("Current emissions of anthropogenic greenhouse gases (GHGs) have already committed the planet to an increase in average surface temperature by the end of the century that may be above the critical threshold for tipping elements of the climate system into abrupt change with potentially irreversible and unmanageable consequences. . . . [F]ast-action strategies may reduce the risk of abrupt climate change in the next few decades by complementing cuts in CO2 emissions.").
[135] *See* Dreyfus, Mitigating climate disruption, at 1.
[136] IPCC, 2021: Physical Science Basis Report at 824, Table 6.1; IPCC, 2022: *Climate Change 2022: Mitigation of Climate Change*. *Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)], at 159 (hereinafter "IPCC, 2022: Mitigation of Climate Change Report") ("Due to its much shorter lifetime, methane has a disproportionate impact on near-term temperature. . ."); *see also* WHO, Policy Brief SLCPs at 1.
[137] Özge Geyik *et al*., *Climate-friendly and nutrition-sensitive interventions can close the global dietary nutrient gap while reducing GHG emissions*, 4 Nat. Food, at 61 (2022); UNEP and Climate & Clean Air Coalition, *Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions*, at 11 (2021) (hereinafter "UNEP, Global Methane Assessment 2021"); Bond T. C. *et al*., *Bounding the role of black carbon in the climate system: A scientific assessment*, 118(11) J. Geophys. Res. Atmos. 5380, at 5420 (2013) (hereinafter "Bond, Bounding the role of black carbon in the climate system"); Jos Lelieveld *et al*., *Effects of fossil fuel and total anthropogenic emission removal on public health and climate*, 116(15) Proc. Nat'l. Acad. Sci. 7193 (2019); IPCC, 2019: Climate Change and Land: Special Report at 451.
[138] *See* IPCC, 2021: Physical Science Basis Report at 821-822; UNEP and WMO *Integrated Assessment of Black Carbon and Tropospheric Ozone*, at 254, 262 (2011) (hereinafter "UNEP, Integrated Assessment of Black Carbon 2011"); UNEP, Global Methane Assessment 2021 at 9.
[139] IPCC, 2022: Mitigation of Climate Change Report at 24.
[140] Dreyfus, Mitigating climate disruption at 5.
[141] *Id*.

decarbonization with rapid reductions in the emissions of non-CO_2 pollutants, especially SLCPs, would result in net avoided warming by 2050 of about 0.34°C (0.07°C plus 0.26°C with rounding); this is more than four times larger than the net effect of decarbonization alone (0.07°C), would enable the world to stay well below the 2°C limit, and would significantly improve the chance of remaining below the 1.5°C guardrail.[142]

47. The International Energy Agency has recognized that "tackling non-CO_2 emissions is vital to limiting peak warming," and concludes that, assuming strong and urgent action on CO_2, the cutting of such non-CO_2 emissions "could make the difference between a scenario which substantially overshoots 1.5°C, risking triggering irreversible climate tipping points, and one which does not."[143] The IPCC similarly found that limiting warming to 1.5°C with no or limited overshoot requires deep cuts in emissions of SLCPs.[144] In particular, the International Energy Agency and the United Nations Environment Programme have concluded that pathways that limit warming to the 1.5°C guardrail and reach net zero emissions by 2050 require reductions in methane emissions of around 45% by 2030 (relative to 2030 levels).[145] The warning of the climate emergency issued in November 2019 from 11,000 scientists also emphasized the importance of cutting emissions of SLCPs: "We need to promptly reduce the emissions of short-lived climate pollutants, including methane …, black carbon (soot), and hydrofluorocarbons (HFCs). Doing this could slow climate feedback loops and potentially reduce the short-term warming trend by more than 50% over the next few decades[.]"[146]

48. Methane is likely the most threatening and actionable SLCP. It is over 80 times more potent than CO_2 in its heat trapping capacity when considered over a 20-year period and about 30 times more potent when considered over a 100-year period.[147] The IPCC estimates that anthropogenic methane emissions are responsible for nearly half of current warming.[148] The IPCC noted that concentrations of methane have increased to levels unprecedented in at least 800,000 years.[149] Methane emissions also play a critical role in the risk of reaching planetary tipping points.[150] Due to its potency and near-term impacts, it is, thus, critical (and cost-effective) that methane emissions be reduced to keep within the 1.5°C

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[142] *Id*.
[143] Int'l Energy Agency, *Credible Pathways to 1.5°C – Four pillars for action in the 2020s*, at 3 (Apr. 2023) (hereinafter "IEA, Credible Pathways to 1.5°C").
[144] IPCC, 2022: Mitigation of Climate Change Report at 17.
[145] IEA, Credible Pathways to 1.5°C at 11; UNEP, Global Methane Assessment 2021 at 8.
[146] Ripple, World Scientists' Warning, at 8 (*citing* Drew Shindell, *et al*., *A climate policy pathway for near- and long-term benefits*, 356(6337) SCI. 493, at 493-494 (2017)); *see also* Drew Shindell, *et al*., *Simultaneously Mitigating Near-Term Climate Change and Improving Human Health and Food Security*, 335(6065) SCI. 183, at 183-185 (2012); UNEP, Integrated Assessment of Black Carbon 2011 at 254, 262.
[147] *See* IPCC, 2021: Physical Science Basis Report at 1017, Table 7.15.
[148] IPCC, 2021: Physical Science Basis Report at 7, Figure SPM.2 (methane responsible for 0.51°C of 1.07°C of observed warming in 2019); UNEP, Global Methane Assessment: 2030 - Summary at 5.
[149] *See* IPCC, 2023: Synthesis Report at 42.
[150] Ripple, Many Risky Feedback Loops at 86.

guardrail.[151] The IPCC has concluded that strong, rapid, and sustained reductions in methane emissions could limit near-term warming as well as improve air quality by reducing global surface ozone.[152]

49. The primary sources of anthropogenic methane emissions in the atmosphere are agriculture (40% of emissions), energy production (35%), and waste (20%).[153] Within the agriculture and waste sectors, emissions related to livestock are the largest source of methane.[154] Landfills and waste represent the next largest component.[155] In the fossil fuel sector, oil and gas extraction, processing, and distribution account for roughly 23% of global anthropogenic methane emissions and coal mining accounts for 12%.[156] Currently available mitigation measures could reduce methane emissions from these major sectors by about 180 million metric tons per year, or by approximately 45%, by 2030.[157] Thus, measures cutting methane emissions must include a transition away from animals as a primary food source, reductions of food waste, particularly in highly developed countries, as well as structural changes leading to drastic reductions in oil and gas extraction and production.[158]

50. Other SLCPs (HFCs, tropospheric ozone, and black carbon) must be cut as well to limit warming to the 1.5°C guardrail. HFCs are produced commercially as a substitute for ozone-depleting substances and are mainly used in refrigeration and semiconductor manufacturing.[159] Their use is increasing and their emissions come from faulty equipment, poor maintenance, and the improper disposal of the equipment in which they are used.[160] To combat the emissions of HFCs, recycling systems can be set up and alternative gases with lower global warming potential can be mandated in new systems.[161]

51. Tropospheric ozone is created both naturally as well as through photochemical reactions involving various gases emitted by human activities.[162] It has been increasing since 1750 in response to anthropogenic changes.[163] Tropospheric ozone is thus not an emitted gas itself; rather it results from chemical reactions with precursor emissions, and cutting such emissions reduces the warming effect of

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[151] *See* IPCC, 2018: Global Warming of 1.5°C: Special Report at 33 ("Limiting warming to 1.5°C implies reaching net zero CO2 emissions globally around 2050 and concurrent deep reductions in emissions of non-CO2 forcers, particularly methane (high confidence)."); UNEP, Global Methane Assessment 2021 at 8 ("Reducing human-caused methane emissions is one of the most cost-effective strategies to rapidly reduce the rate of warming and contribute significantly to global efforts to limit temperature rise to 1.5°C."). This has also been recognized by the US government. White House, *Joint US-EU Press Release on the Global Methane Pledge* (Sept. 18, 2021) ("Rapidly reducing methane emissions is complementary to action on carbon dioxide and other greenhouse gases, and is regarded as the single most effective strategy to reduce global warming in the near term and keep the goal of limiting warming to 1.5 degrees Celsius within reach.").
[152] *See* IPCC, 2023: Synthesis Report at 95.
[153] Ripple, Many Risky Feedback Loops at 86.
[154] UNEP, Global Methane Assessment 2021 at 29.
[155] *Id*.
[156] *Id*. at 9, 28.
[157] *Id*. at 8-9; UNEP, Global Methane Assessment: 2030 – Summary at 5.
[158] *See* IPCC, 2023: Synthesis Report at 104-107; IPCC, 2018: Global Warming of 1.5°C: Special Report at 12.
[159] IPCC, 2021: Glossary at 2221, 2234.
[160] IPCC, 2021: Physical Science Basis Report at 69, 304, 819; Center for Climate & Energy Solutions, *Short-lived Climate Pollutants* (2020) (hereinafter "C2ES, Short-lived Climate Pollutants").
[161] C2ES, Short-lived Climate Pollutants.
[162] IPCC, 2021: Glossary at 2241.
[163] IPCC, 2021: Physical Science Basis Report at 69.

tropospheric ozone.[164] Because methane is responsible for about half of the increase in tropospheric ozone, cutting methane reduces tropospheric ozone levels as well.[165]

52. Black carbon is not a gas, but a relatively pure form of carbon aerosol, also known as soot, arising from the incomplete combustion of fossil fuels, biofuel, and biomass.[166] Black carbon is also a component of fine particulate matter ($PM_{2.5}$), and, together with ozone, causes 6.7 million premature deaths annually due to resulting air pollution.[167] By absorbing sunlight, black carbon also exerts a net warming effect, both in the atmosphere and when deposited on snow or ice (in particular in the Arctic[168]).[169] The warming effect of black carbon is very short-lived (days to weeks) and therefore largely regional.[170] Black carbon can be cut by moving to cleaner burning fuels in the case of cooking by burning wood or biomass and by transitioning from coal plants to renewables or other cleaner energy sources.[171]

ii. Preserving Natural Carbon Sinks

53. Another critical fast mitigation measure is the preservation of natural carbon sinks such as forests and oceans. The IPCC has noted that land and ocean sinks have absorbed a near-constant proportion (globally about 56% per year) of anthropogenic CO_2 emissions from the atmosphere over the past six decades.[172] When these natural carbon sinks are destroyed, they not only stop absorbing CO_2 from the atmosphere, they also immediately release the previously sequestered CO_2 back into the atmosphere.[173] The preservation of natural carbon sinks is thus critical in regulating the net emissions in the atmosphere in the near-term.[174] Various human activities destroy natural carbon sinks. The IPCC noted that in 2019, about 22% of global GHG emissions came from agriculture, forestry, and other land use, and about half of those emissions stemmed from deforestation.[175]

54. "Irrecoverable carbon" refers to the vast stores of carbon in natural sinks that are vulnerable to release from human activity and, if lost, could not be restored by 2050 – when the world must reach net-

[164] C2ES, Short-lived Climate Pollutants.
[165] *Id*.
[166] IPCC, 2021: Glossary at 2220.
[167] Richard Fuller, *et al*., *Pollution and health: a progress update*, 6 The Lancet, at e356 (2022).
[168] The impact of black carbon emissions is particularly extreme in the Arctic, which is five times more sensitive to black carbon emissions than areas in the mid-latitudes. In the Arctic, black carbon not only warms the atmosphere but also exacerbates warming by darkening the snow and ice and reducing reflectivity, causing further melting. As the Arctic is critical for climate stabilization, but one of the weakest links in the chain of climate protection, it is essential to reduce black carbon emissions in the Arctic. *See* Maria Sand *et al*., *Arctic Surface Temperature Change to Emissions of Black Carbon within Arctic or Midlatitudes*, 118(14) J. Geophys. Res., at 7788 (2013); Andreas Stohl *et al*., *Black Carbon in the Arctic: The Underestimated Role of Gas Flaring and Residential Combustion Emissions*, 13(17) Atmos. Chem. Phys., at 8848 (2013); Bond, Bounding the role of black carbon in the climate system; Durwood J. Zaelke & Paul Bledsoe, *Our Future Depends on the Arctic*, N.Y. Times, Dec. 14, 2019.
[169] IPCC, 2021: Glossary at 2220; IPCC, 2021: Physical Science Basis Report at 167; IPCC, 2022: Mitigation of Climate Change Report at 232; C2ES, Short-lived Climate Pollutants.
[170] IPCC, 2021: Physical Science Basis Report at 167; C2ES, Short-lived Climate Pollutants.
[171] C2ES, Short-lived Climate Pollutants.
[172] *See* IPCC, 2023: Synthesis Report at 42.
[173] *E.g.*, Wangh, Potential shift from carbon sink; *see also* footnote 179, *infra*.
[174] *See* IPCC, 2022: Mitigation of Climate Change Report, § 7.4.2.1; *see also Glasgow Leaders' Declaration on Forests and Land Use*, UN Climate Change Conference UK 2021 (Nov. 2, 2021).
[175] *See* IPCC, 2023: Synthesis Report at 44.

zero CO_2 emissions to avoid the worst impacts of climate change.[176] Natural sinks have already absorbed large quantities of anthropogenic emissions, preventing more intense global warming; but to stay within 1.5°C, there are natural places that we cannot afford to lose.[177] For example, in the Americas, there are high concentrations of irrecoverable carbon in the Amazon rainforest, the Valdivian forests of Chile, the mangroves and swamp forests of Guyana, and in natural carbon sinks in the Pacific Northwest of North America.[178]

55. The Amazon rainforest stores about 10 years' worth of global human CO_2 emissions; if this natural sink is not preserved, massive amounts of carbon will be released, and the planet could warm by an additional 0.3°C.[179] Scientists have concluded that the Amazon is currently under severe threat and that, if current policies and trends continue, the Amazon could reach an irreversible tipping point beyond which it will be impossible to remediate lost ecosystems and restore natural carbon sinks.[180] The IPCC has estimated that deforestation of about 40% of the Amazon in combination with global warming will raise the prospect of passing a tipping point leading to large-scale savannisation[181] of the rainforest.[182] Even with these known threats, a recent declaration from leaders of State Parties to the Amazon Cooperation Treaty failed to include an explicit commitment to ending deforestation by 2030 or to address some of the key drivers of rainforest loss – industrial agriculture and the extractive and destructive industries that expose primary forests to land conversion.[183]

56. Efforts to protect natural carbon sinks must include the recognition of Indigenous land rights and the incorporation of Indigenous land management strategies, such as silvopasture and regenerative agriculture.[184] Indigenous and local community solutions could help restore a significant portion of sinks' carbon storage potential; at least 22% of global forest carbon is stewarded by Indigenous and local communities, consisting of areas that hold 80% of the planet's biodiversity.[185] In the Amazon alone, forests managed by Indigenous people sequestered 340 million metric tons of carbon annually between 2001-2021.[186] Research has shown that establishing land rights for Indigenous and local communities lowers

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[176] *See* Allie Goldstein, *et al.*, *Irrecoverable Carbon: The places we must protect to avert climate catastrophe*, Conservation Int'l, at 7 (2021).
[177] *See id*. at 9.
[178] *See id*. at 7, 20, 22.
[179] Alex Cuadros, *Has the Amazon Reached Its 'Tipping Point'?*, N.Y. Times, Jan. 4, 2023.
[180] *See* IPCC, 2022: Mitigation of Climate Change Report at 468, § 4.4.1.10.
[181] The term "savannisation" (or "savannization") refers to the conversion of tropical forest to degraded savannah-like vegetation. *See* Daniel G. Rocha & Rahel Sollmann, *Habitat use patterns suggest that climate-driven vegetation changes will negatively impact mammal communities in the Amazon*, 26(5) Animal Conservation 663 (2023).
[182] *See* IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 2380.
[183] *See* Ctr. Int'l Envt'l Law, *Belém Declaration Falls Short on Deforestation Commitments and Fails to Address Fossil Fuels* (Aug. 9, 2023); Gov't of Brazil, *Presidential Declaration on the Occasion of the Amazon Summit – IV Meeting of Presidents of the States Parties to the Amazon Cooperation Treaty (Press Release No. 331)* (Aug. 8, 2023).
[184] Leah Penniman, *Black Gold*, In: *All We Can Save: Truth, Courage, and Solutions for the Climate Crisis*, Johnson A. E. & Wilkinson K. K. (eds.), One World, at 305 (2021); Michael Wolosin *et al.*, *Exponential Roadmap for Natural Climate Solutions*, Conservation International, at 15 (Sept. 20, 2022).
[185] Claudia Sobrevilla, *The Role of Indigenous People in Biodiversity Conservation: The Natural but Often Forgotten Partners*, World Bank, at xii (2008); *State of the World's Indigenous Peoples: Rights to Lands, Territories and Resources*, United Nations Dep't Econ. Soc. Aff., ST/ESA/375, at 163 (2021).
[186] Peter Veit *et al*., *Indigenous Forests Are Some of the Amazon's Last Carbon Sinks*, World Resources Institute (Jan. 6, 2023).

deforestation rates and carbon emissions, while deforestation rates are higher in areas where these rights are not secured.[187]

3. Economic and Technical Feasibility

57. The above outlined needed climate mitigation is economically and technically feasible. As the IPCC has noted, "[w]e have the knowledge and the tools."[188] Although strengthening climate change mitigation entails more rapid transitions and higher upfront investments in the short-term, it provides enormous benefits from avoiding worse damages from climate change as well as reduced adaptation costs.[189] The IPCC has concluded that the aggregate effects of climate change mitigation on global GDP (excluding damages from climate change and adaptation costs) are small compared to global projected GDP growth; meanwhile, projected estimates of global aggregate net economic damages and the costs of adaptation will generally increase with each degree of global warming.[190] Specifically, the IPCC concluded that although limiting warming to the 1.5°C guardrail would increase the costs of mitigation, it would also increase the benefits in terms of reduced impacts and adaptation needs and costs.[191] Thus, from a purely costs perspective, it is financially beneficial to mitigate *now*, rather than face the high adaptation costs and economic losses later.[192] This is especially true for developing countries, which face astronomical adaptation costs.[193]

58. Certain mitigation measures may even directly pay for themselves. For example, the International Energy Agency has explained that due to the value of captured natural gas, certain measures cutting methane emissions could be implemented at no costs: "Based on average natural gas prices seen from 2017 to 2021, around half of the options to reduce emissions from oil and gas operations worldwide could be implemented at no net cost; implementing these would cut oil and gas methane emissions by around 40%."[194] Similarly, the IPCC has found that maintaining emission-intensive systems may, in some regions and sectors, be more expensive than transitioning to low-emission systems.[195]

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[187] Caleb Stevens *et al*., *Securing Rights, Combating Climate Change*, World Resources Institute & Rights and Resources Initiative, at 10 (2014); Rights and Resources Initiative, *Who Owns the World's Land? A global baseline of formally recognized indigenous and community land rights*, at 22 (2015).
[188] *See* IPCC, 2023: FAQ 3 at 2.
[189] IPCC, 2023: Synthesis Report at 88.
[190] *Id*.
[191] *Id*.
[192] *See* Martin C. Hänsel *et al*., *Climate economics support for the UN climate targets*, 10 Nature Climate Change 781, at 787 (2020) ("In this analysis, we have shown that the benefits of limiting global warming . . . outweigh the costs . . . [T]here is no inherent disparity between UN climate targets and the principle of economic optimality.").
[193] *See* UN Secretary-General, *Developing Countries Could Face Annual Adaptation Costs of $300 Billion by 2030, Secretary-General Warns in Message to Climate Vulnerable Finance Summit* (July 8, 2021) ("[C]urrent adaptation costs for developing countries are $70 billion a year, and this could rise to as much as $300 billion a year by 2030. We must achieve a balanced allocation for mitigation and adaptation.").
[194] *See* Int'l Energy Agency, *Global Methane Tracker 2023: Strategies to reduce emissions from oil and gas operations* (2023); *see also id.* ("Even if there was no value to the captured gas, almost all available abatement measures would be cost effective in the presence of an emissions price of only about 15 USD/tCO2-eq."); *see generally* Christian Azar *et al*., *The social cost of methane*, 176 Clim. Change 71 (2023) (concluding it is economically optimal to make severe methane emission cuts by 2035).
[195] *See* IPCC, 2023: Synthesis Report at 88.

59. Currently, there is sufficient global capital and liquidity to close global investment gaps in climate change mitigation and adaptation.[196] The costs of several low-emission technologies, including solar, wind, and lithium-ion batteries, have also fallen consistently over the last decade.[197] There has also been a rapid growth in capacity for renewable energy along with varied progress in many other technology areas, including electric vehicles, fuel cells for both stationary and mobile applications, thermal energy, and battery and other storage technologies.[198] Thus, the technologies currently available are capable of greatly reducing different types of GHG emissions. For example, the IPCC estimates with medium confidence that about 50-80% of methane emissions from fossil fuels could be avoided with currently available technologies.[199]

4. Scientific and Accounting Models for Mitigation

60. Accepted scientific models – known as fair share accounting models – are available to determine a State's quantifiable "fair share" of the needed mitigation to ensure the planet stays within a particular temperature rise, such as the 1.5°C guardrail.[200] These models consider various characteristics of a State, most prominently its contributions to climate change, and, based on various equity principles, determine that State's "fair share" of emissions reductions to ensure warming stays limited to a certain temperature rise.[201] These models account for emissions in different ways, most commonly either based on the State's production or its consumption.[202] The literature indicates that a mixture of these different methods and principles might produce the most comprehensive results that could be utilized in allocating mitigation responsibilities.[203]

61. The IPCC has recognized this vast body of scientific literature on fair share accounting models, observing that "[v]arious assessment frameworks have been proposed to analyze fair share ranges for [mitigation targets]."[204] In particular, the IPCC highlighted "[a] recent study on national fair shares

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[196] *Id*. at 111.
[197] *Id*. at 53.
[198] *See* IPCC, 2022: Mitigation of Climate Change Report, § 1.4.3.
[199] *See id*. at 28, ¶ C.4.5.
[200] *See, e.g.,* the scientific literature containing fair share accounting models cited in Rajamani, National 'Fair Shares' in Reducing Greenhouse Gas Emissions at 984; Climate Action Tracker, *Methodology - Fair Share* [last accessed Nov. 27, 2023]; Arnold Tukker, *Consumption – Based Carbon Accounting: Sense and Sensibility*, 20 Climate Policy S1 (2020) (hereinafter "Tukker, Consumption").
[201] Rajamani, National 'Fair Shares' in Reducing Greenhouse Gas Emissions, at 983, 997, Figure 5.
[202] The production-based models are based on GHG emissions produced by the economic activities in a specific country. The consumption-based models take the production emissions and subtract those that are embedded in the exports and add those that are embedded in the imports. Within these two categories of fair share accounting models, there are various different types of models as well, differently weighing various equity considerations such as historical emissions, current emissions, per capita emissions, and capabilities to reduce future emissions. Joeri Rogelj, *A shortfall in compliance of Brazil, France and Germany in greenhouse gas emission targets under the Paris Agreement in light of international and intergenerational equity*, Grantham Institute of Science Brief (2020), at 2, 9 (Appendix A to Petitioners' Reply to the Admissibility Objections of Brazil, France, and Germany in *Sacchi, et al. v. Argentina, et al.*) [available upon request]; *see also* Tukker, Consumption (discussing different types of faire share accounting models).
[203] Tukker, Consumption at S9; Rajamani, National 'Fair Shares' in Reducing Greenhouse Gas Emissions at 984.
[204] IPCC, 2022: Mitigation of Climate Change Report at 423, § 4.2.2.7.

draw[ing] on principles of international environmental law," and thereby "narrowing the range of national fair shares previously assessed[.]"[205]

5. Conclusion: Required Complementary Mitigation Measures

62. In sum, ensuring that warming stays within the 1.5°C guardrail requires immediate mitigation action. That action needs to include, amongst others, the following complementary measures:

- An urgent structural shift in energy, agricultural, and industrial policies that will allow society to live within a much tighter carbon budget; and
- Fast mitigation in the form of cutting emissions of SLCPs and preserving natural carbon sinks.[206]

63. The response to climate change will need to be much broader than mitigation, and include, amongst others, adaptation to the inevitable effects of climate change.[207] The emphasis in this *Amicus* brief on mitigation reflects the focus of the *Amici* and the priority that mitigation must take among all responses to climate change, not a lack of importance of other types of crucial responses to climate change.

IV. STATES MUST IMPLEMENT IMMEDIATE MEASURES TO MITIGATE CLIMATE CHANGE AND ENFORCE THE BINDING HUMAN RIGHTS THAT REQUIRE THOSE MEASURES

64. Multiple human rights bodies have recognized, that climate change's "adverse impacts on human rights are already occurring with 1°C [now ≈1.15°C] of global warming; every additional increase in temperature will further undermine the realization of rights," and, that therefore, "[i]n order for States to comply with their human rights obligations . . . they must adopt and implement policies aimed at reducing emissions."[208] By failing to take immediate measures to slow the rate of warming and limit global warming to 1.5°C, "States are exposing their populations and future generations to the significant threats to human rights associated with greater temperature increases."[209]

65. As discussed herein, to meet their human rights obligations, all States must, first, implement immediate mitigation measures that regulate and limit emissions in a manner consistent with ensuring global warming stays within the 1.5°C guardrail. Second, States' domestic courts must enforce human rights, including those that require these immediate mitigation measures (Section IV.A). However, States' mitigation conduct and judicial responses have thus far failed to meet these human rights

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[205] *Id*. (*citing* Rajamani, National 'Fair Shares' in Reducing Greenhouse Gas Emissions at 984).
[206] These mitigation measures are the focus of the *Amici* and should be prioritized. This is not to say that other types of mitigation measures (not emphasized in this *Amicus* brief) are not also important in ensuring that warming stays within the 1.5°C guardrail.
[207] *See* footnote 120, *supra*.
[208] United Nations Joint Statement by the Committee on the Elimination of Discrimination against Women, the Committee on Economic, Social and Cultural Rights, the Committee on the Protection of the Rights of All Migrant Workers and Members of Their Families, the Committee on the Rights of the Child and the Committee on the Rights of Persons with Disabilities, *Statement on Human Rights and Climate Change*, HRI/2019/1, ¶¶ 5, 11 (May 14, 2020) (hereinafter "HRI/2019/1").
[209] *Id*., ¶ 9.

obligations, as they have failed to implement the necessary mitigation measures to ensure global warming is limited to 1.5°C (Section IV.B).

66. States have proffered various excuses for their inaction, but these excuses cannot withstand scientific or legal scrutiny. In doing so, States disregard scientific consensus, economic reality, and international human rights law. Notably, they overlook the disastrous consequences that will ensue if climate change is not effectively mitigated, and they disregard the binding obligations imposed by international human rights that require States to prevent such catastrophic outcomes (Section IV.C). The *Amici* respectfully request this Court advise States of their binding human rights obligations, and specifically, advise States they must take the substantive and procedural mitigation measures included in Sections IV.D.1-IV.D.2. Finally, the *Amici* respectfully request this Court consider the three administrative measures proposed in Section IV.D.3 to assist this Court in ensuring States implement the Court's Advisory Opinion.

A. Human Rights Obligations Require States to Implement Immediate Mitigation Measures Consistent with the 1.5°C Warming Guardrail and Enforce Human Rights

67. The human rights protected in the American Convention on Human Rights (American Convention) and its Protocols, and the State obligations flowing therefrom – including those in the context of climate change – are interpreted taking into account several critical principles. **First**, the characteristics of the actions and/or inactions that are threatening the human rights – here, this includes the global nature of climate change and the urgency of the needed response. As explained by this Court, "human rights treaties are living instruments, the interpretation of which must evolve with the times and contemporary conditions."[210] Thus, with climate change evolving into an unprecedented emergency and threat to the planet, human rights and corresponding State obligations evolve as well. This is demonstrated by the recent general comment of the United Nations Committee on the Rights of the Child (CRC), which comprehensively interprets children's rights and corresponding State obligations in the context of the climate emergency.[211]

68. **Second**, these human rights and corresponding State obligations must be interpreted taking into account relevant international law, here, international environmental and climate change treaties and related general principles and customary international law.[212] As this Court has previously explained

[210] *State Obligations in Relation to the Environment in the Context of the Protection and Guarantee of the Rights to Life and to Personal Integrity: Interpretation and Scope of Articles 4(1) and 5(1) in Relation to Articles 1(1) and 2 of the American Convention on Human Rights*, Advisory Opinion OC-23/17, Inter-Am. Ct. H.R. (Nov. 15, 2017), ¶ 43 (hereinafter "Advisory Opinion OC-23/17, Inter-Am. Ct. H.R.").
[211] CRC, *General Comment No. 26 on children's rights and the environment with a special focus on climate change*, CRC/C/GC/26 (Aug. 22, 2023) (hereinafter "CRC/C/GC/26").
[212] United Nations, *Vienna Convention on the Law of Treaties May 23,* 1969, 1155 U.N.T.S. 331, Article 31(3)(c) (hereinafter "Vienna Convention") ("There shall be taken into account, together with the context, . . . any relevant rules of international law applicable to the relations between the parties"); Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 44 ("According to the systematic interpretation established in the Vienna Convention on the Law of Treaties, the provisions must be interpreted as part of a whole, the significance and scope of which must be established based on the legal system to which it belongs." (internal citations omitted)); *see also* ICJ, Statute of the International Court of

"it must take international law on environmental protection into consideration when defining the meaning and scope of the [human rights] obligations assumed by the States under the American Convention, in particular, when specifying the measures that the States must take."[213] However, any obligations under related international environmental and climate change law cannot be used to *limit* States' obligations under human rights law. As this Court has explained, one cannot "invoke restrictions contained in . . . other international instruments, but which are not found in the [American] Convention, to limit the exercise of the rights and freedoms that the latter recognizes."[214] Indeed, as the Court explains, "the rule most favorable to the individual must prevail."[215]

69. **Third**, this Court has consistently drawn on the wider "*corpus juris* of international human rights law," including international treaties, international customary law, general principles of law, and "a series of norms of a general nature or soft law."[216]

70. **Fourth**, this Court has emphasized that the human rights provisions "must also be interpreted using a model based on the values that the Inter-American system seeks to safeguard, from the 'best perspective' for the protection of the individual."[217]

71. Based on these interpretative principles, this Section outlines the human rights obligations of States to mitigate climate change. Section IV.A.1 discusses how numerous human rights are threatened by climate change and provides non-exhaustive examples of the human rights under particular threat. Section IV.A.2 discusses relevant principles under international environmental and climate change law that inform the obligations of States flowing from these human rights. Section IV.A.3 shows that it follows from these impacts of climate change on human rights, the relevant environmental and climate change principles, as well as established human rights law, that States' human rights obligations require them to mitigate climate change. Specially, Section IV.A.3 concludes that States' human rights obligations require them to (i) take immediate mitigation measures consistent with the 1.5°C warming guardrail (Section IV.A.3.i) and (ii) enforce the human rights that require such immediate mitigation measures (Section IV.A.3.ii).

Justice, Article 38(1) ("The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply: a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states; b. international custom, as evidence of a general practice accepted as law; c. the general principles of law recognized by civilized nations; d. subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.").

[213] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶¶ 44, 55 ("Specifically, another consequence of the interdependence and indivisibility of human rights and environmental protection is that, when determining these State obligations, the Court may avail itself of the principles, rights and obligations of international environmental law, which, as part of the international *corpus iuris* make a decisive contribution to establishing the scope of the obligations under the American Convention in this regard . . .").

[214] *Compulsory Membership in an Association Prescribed by Law for the Practice of Journalism (Articles 13 and 29 American Convention on Human Rights)*, Advisory Opinion OC-5/85, Inter-Am. Ct. H.R. (Nov. 13, 1985), ¶ 52 (hereinafter "Advisory Opinion OC-5/85, Inter-Am. Ct. H.R.").

[215] *Id*. (*citing* American Convention, Article 29).

[216] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 45.

[217] *Id*., ¶ 41.

1. The Numerous Human Rights Threatened by Climate Change

72. As the 47 States of the United Nations Human Rights Council ("Human Rights Council") have recognized, "climate change has already had an adverse impact on the full and effective enjoyment of human rights."[218] As the Special Rapporteur on human rights and climate change[219] reported, "[t]hroughout the world, human rights are being negatively affected and violated as a consequence of climate change."[220] With temperatures rising, those effects will only get worse: "every additional increase in temperature will further undermine the realization of rights."[221] The Inter-American Commission on Human Rights ("Commission") emphasized that "climate change is one of the greatest threats to the full enjoyment and exercise of human rights of present and future generations[.]"[222] Indeed, this Court has previously recognized "the existence of an undeniable relationship between the protection of the environment and the realization of other human rights, in that environmental degradation and the adverse effects of climate change affect the real enjoyment of human rights."[223]

73. This Court has also recognized that environmental degradation generally threatens "*numerous* [] human rights."[224] Similarly, the Commission has observed that the effects of climate change "have brought with them a major threat to the enjoyment of a *wide range* of [human] rights."[225] Indeed, this Court has explained that it is "[o]wing to the close connection between environmental protection, sustainable development and human rights, [that] numerous human rights protection systems recognize the right to a healthy environment as a right in itself, particularly the Inter-American human rights system."[226]

74. Although climate change impairs "a wide range of [human] rights,"[227] and these rights are interrelated, it is instructive to focus on rights that are the most endangered. Most importantly, climate

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[218] Human Rights Council, *Human Rights and Climate Change*, A/HRC/RES/35/20, at 2 (July 7, 2017) (hereinafter "A/HRC/RES/35/20"); *see also* A/HRC/33/31, Annex II, ¶ 4 ("Climate change and its impacts, including sea-level rise, extreme weather events and droughts have already inflicted human rights harms on millions of people.").
[219] The full title is the United Nations Special Rapporteur on the promotion and protection of human rights in the context of climate change, referred to herein as the "Special Rapporteur on human rights and climate change".
[220] UN General Assembly, *Report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change*, A/77/226, ¶ 1 (July 26, 2022).
[221] HRI/2019/1, ¶ 5.
[222] IACHR, *Resolution 3/2021, Climate Emergency: Scope of Inter-American Human Rights Obligations*, at 8 (Dec. 31, 2021) (hereinafter "IACHR, Res. 3/2021"). Similarly, the OAS General Assembly has found that "the adverse effects of climate change might have a negative impact on the enjoyment of human rights." OAS General Assembly, *Human Rights and Climate Change in the Americas*, AG/RES. 2429 (XXXVIIIO/08) (June 3, 2008). The CRC observed that "it is generally accepted and corroborated by scientific evidence that . . . climate change has an adverse effect on the enjoyment of rights by individuals both within and beyond the territory of the State party." *Sacchi, et al. v. Argentina, et al.*, ¶ 10.9.
[223] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 47.
[224] *Id*., ¶ 55 (emphasis added).
[225] IACHR, Res. 3/2021, at 5 (emphasis added); *see also id.* (the effects of climate change "threaten[] the very future of human rights and would undo the last fifty years of progress in development, health and poverty reduction").
[226] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 55; *see also* CRC/C/GC/26, ¶ 8 ("A clean, healthy and sustainable environment is both a human right itself and necessary for the full enjoyment of a broad range of children's rights.").
[227] IACHR, Res. 3/2021 at 5; *see also* A/HRC/10/61, ¶ 16 (A study commissioned by the Office of the United Nations High Commission for Human Rights concluded that the effects of climate change "have implications for a wide range of human rights.").

change is major threat to the **right to life**.[228] For example, extreme heat events have already resulted in human mortality and morbidity, and in South America, children under 1 year old were on average exposed to 2.35 million more person-days of heatwaves per year in the last 10 years, as compared to an earlier period (1996-2005).[229] The United Nations Human Rights Committee ("Human Rights Committee") has recognized the climate crisis as among "the most pressing and serious threats to the ability of present and future generations to enjoy the right to life."[230] Many international human rights bodies[231] and multiple special rapporteurs[232] have similarly recognized the devastating effects of climate change on the right to life.

75. The right to life is interpreted broadly; the Human Rights Committee explained that the right can be violated even in the absence of the loss of life, including by climate change:

> [T]he right to life also includes the right of individuals to enjoy a life with dignity and to be free from acts or omissions that would cause their unnatural or premature death. The Committee further recalls that the obligation of States parties to respect and ensure the right to life extends to reasonably foreseeable threats and life-threatening situations that can result in loss of life. States parties may be in violation of article 6 [the right to life] of the Covenant even if such threats and situations do not result in the loss of life. The Committee considers that such threats may include adverse climate change impacts and recalls that environmental degradation, climate change and unsustainable development constitute some of the most pressing and serious threats to the ability of present and future generations to enjoy the right to life.[233]

76. Further, climate change is also a threat to the **right to health**.[234] For example, climate change increases food-borne, water-borne and vector-borne diseases, and, in particular, in Central and South America, the risk of dengue has increased and is set to increase further as warming continues, due

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[228] American Convention, Article 4(1) ("Every person has the right to have his life respected. This right shall be protected by law and, in general, from the moment of conception. No one shall be arbitrarily deprived of his life.").
[229] Section IV.A.3, *supra*.
[230] Human Rights Committee, *General Comment No. 36 on Article 6: right to life*, CCPR/C/GC/36, ¶ 62 (Sept. 3, 2019) (hereinafter "CCPR/C/GC/36").
[231] *E.g.*, HRI/2019/1, ¶ 3; Human Rights Council, *Human Rights and Climate Change*, A/HRC/RES/18/22 (Oct. 17, 2011) (hereinafter "A/HRC/RES/18/22"); CRC/C/GC/26, ¶ 20; *Daniel Billy, et al. v. Australia (Torres Strait Islanders Petition)*, U.N. Human Rights Committee (Sept. 22, 2022) (CCPR/C/135/D/3624/2019), ¶ 8.7 (hereinafter "*Billy, et al. v. Australia*").
[232] UN General Assembly, *Human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment,* A/74/161, ¶ 29 (July 15, 2019) (hereinafter "A/74/161"); A/77/226, ¶ 88.
[233] *Billy, et al. v. Australia*, ¶ 8.3 (internal citations omitted).
[234] *E.g.*, San Salvador Protocol, Article 10(1) ("Everyone shall have the right to health, understood to mean the enjoyment of the highest level of physical, mental and social well-being."). For those States that ratified the San Salvador Protocol, it is an integral part of the American Convention. American Convention, Articles 31 ("Recognition of Other Rights. Other rights and freedoms recognized in accordance with the procedures established in Articles 76 and 77 may be included in the system of protection of this Convention."), 77 ("1. In accordance with Article 31, any State Party and the Commission may submit proposed protocols to this Convention for consideration by the States Parties at the General Assembly with a view to gradually including other rights and freedoms within its system of protection. 2. Each protocol shall determine the manner of its entry into force and shall be applied only among the States Parties to it.").

to longer mosquito seasons and wider geographic distribution.[235] Numerous human rights bodies[236] and multiple special rapporteurs[237] have recognized the threat posed by climate change to the right to health. In particular, the United Nations Committee on Economic, Social and Cultural Rights (CESCR) aptly observed that "[c]limate change already affects, in particular, the rights to health . . . and it will do so at an increasing pace in the future."[238] These human rights bodies have also recognized that children are "at a particularly heightened risk of harm to their health, owing to the immaturity of their body systems,"[239] and are thus "among the most vulnerable to climate change, which may have a serious impact on their enjoyment of the highest attainable standard of physical and mental health[.]"[240] In particular, the CRC flagged the major concern of "children's current and anticipated psychosocial and mental health conditions caused by environmental harm, including climate change-related events."[241] The devastating effects of climate change on children's mental health has also recently been recognized by a U.S. state court in Montana: "The psychological harms caused by the impacts of climate change can result in a lifetime of hardships for children."[242]

77. Climate change is also a severe threat to the **right to food**[243] and the **right to water**[244] – both interwoven with the rights to life and health. For example, due to extreme weather events such as droughts and floods, climate change causes food and water insecurity, and the IPCC has concluded that, as a result, millions of people have been exposed to acute food and water insecurity, with locations in Central and South America being among those facing the highest risk.[245] Numerous human rights bodies[246] and multiple special rapporteurs[247] have recognized the threat posed by climate change on the rights to

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[235] Section IV.A.3, *supra*.
[236] *E.g.*, HRI/2019/1, ¶ 3; A/HRC/RES/18/22.
[237] A/77/226, ¶ 88; A/74/161, ¶¶ 30-32.
[238] E/C.12/2018/1*, ¶ 4; *see also* A/77/226, ¶ 28 ("Climate change has already harmed human physical and mental health.").
[239] HRI/2019/1, ¶ 3.
[240] A/HRC/RES/32/33, at 2; *see also* CRC/C/GC/26, ¶ 39 ("Climate change, biodiversity loss and the degradation of ecosystems are obstacles to the realization of children's right to health.").
[241] CRC/C/GC/26, ¶ 41; *see also id.* ("The clear emerging link between environmental harm and children's mental health, such as depression and eco-anxiety, requires pressing attention, both in terms of response and prevention programmes, by public health and education authorities."); Human Rights Council, *Analytical study on the relationship between climate change and the full and effective enjoyment of the rights of the child*, A/HRC/35/13, ¶ 18 (May 4, 2017) (hereinafter "A/HRC/35/13") ("Climate change and the impacts of traumatic stress connected to climate change, such as war/insecurity, sexual and physical violence and witnessing deaths and injury related to extreme weather disasters, negatively affect children's mental health.").
[242] *Held v. Montana*, 1st District Court of Montana (Aug. 14, 2023) (CDV-2020-307), ¶ 119 (hereinafter "*Held v. Montana*").
[243] *E.g.*, San Salvador Protocol, Article 12(1) ("Everyone has the right to adequate nutrition which guarantees the possibility of enjoying the highest level of physical, emotional and intellectual development.").
[244] *Indigenous Communities of the Lhaka Honhat (Our Land) Association v. Argentina*, Inter-Am. Ct. H.R. (Feb. 7, 2020) (Series C No. 420), ¶ 222 ("The right to water is protected by Article 26 of the American Convention and this is revealed by the provisions of the OAS Charter that permit deriving rights from which, in turn, the right to water can be understood.").
[245] Section IV.A.3, *supra*.
[246] HRI/2019/1, ¶ 3; A/HRC/RES/18/22.
[247] A/77/226, ¶ 88; A/74/161, ¶¶ 33-39; Human Rights Council, *Report of the Special Rapporteur on the right to food*, A/HRC/37/61 (Jan. 25, 2018); UN General Assembly, *Interim report of the Special Rapporteur on the right to food*, A/70/287 (Aug. 5, 2015); Human Rights Council, *Report of the Special Rapporteur on the human right to safe drinking water and sanitation*, A/HRC/30/39, Aug. 5, 2015.

food and water. In particular, the CESCR aptly observed that "[c]limate change already affects . . . the rights to . . . food [and] water" given that it "affects nutrition through changes in crop yields, loss of livelihoods, increases in poverty, and reduced access to food, water and sanitation," and disrupts "supplies of water and [causes] high temperatures [that] stress crops and promote algal blooms in reservoirs[.]"[248] And the Human Rights Council observed numerous times that "environmental degradation, desertification and global climate change are factors contributing to destitution and desperation and have a negative impact on the realization of the right to food, in particular in developing countries."[249] The Human Rights Council has also recognized that "children are among the most vulnerable to climate change, which may have a serious impact on their enjoyment of . . . adequate food [and] safe drinking water[.]"[250]

78. Climate change further threatens the closely related **right to a healthy environment**.[251] As the Special Rapporteur on human rights and the environment[252] explained, "[a] safe climate is a vital element of the right to a healthy environment and is absolutely essential to human life and well-being."[253] This Court has similarly concluded that "a healthy environment is a fundamental right for the existence of humankind."[254] This Court further recognized that this right "constitutes a universal value that is owed *to both present and future generations*,"[255] and the Commission has explained its basis in intergenerational justice: "[b]ased on the principle of intergenerational equity, all children and adolescents have the right to enjoy a healthy environment and to live on a planet equal to or in better conditions than their ancestors."[256] Indeed, the right to a healthy environment is recognized throughout the region, as is evident from the fact that at least 16 countries enshrined the right to a healthy environment in their constitutions.[257]

79. Although the climate crisis threatens the human rights of all people globally, it disproportionally impairs the human rights of vulnerable individuals and communities, including children. The American Convention recognizes the particular sensitivities of children and that they require additional protection; it enshrines the **rights of the child**, which provide that "[e]very minor child has the right to the measures of protection required by his condition as a minor on the part of his family, society, and the

[248] E/C.12/2018/1*, ¶ 4.
[249] *E.g.*, A/HRC/RES/16/27 at 3; A/HRC/RES/10/12 at 2; A/HRC/RES/13/4 at 2; A/HRC/RES/7/14 at 2.
[250] A/HRC/RES/32/33 at 2.
[251] San Salvador Protocol, Article 11 ("1. Everyone shall have the right to live in a healthy environment and to have access to basic public services. 2. The States Parties shall promote the protection, preservation, and improvement of the environment."); Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶¶ 56-57 (explaining that "[u]nder the inter-American human rights system, the right to a healthy environment is established expressly in Article 11 of the Protocol of San Salvador," and that, in addition, "this right is included among the economic, social and cultural rights protected by Article 26 of the American Convention," through the principle of progressive development).
[252] The full title is the United Nations Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, referred to herein as the "Special Rapporteur on human rights and the environment".
[253] A/74/161, ¶ 96.
[254] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 59.
[255] *Id*. (emphasis added).
[256] IACHR, Res. 3/2021, ¶ 21.
[257] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 59, n. 88 (*citing* the constitutions of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, the Dominican Republic, and Venezuela).

state."[258] Numerous human rights bodies have observed that children are disproportionally harmed by climate change, because, first, they are more vulnerable to the impacts of climate change[259] – particularly with respect to the physical and mental health impacts[260] – and, second, they, as well as the youth and future generations, will live further into a warmer future.[261] As summarized by the CRC, children are "particularly affected by climate change, both in the terms of the manner in which they experience its effects and the potential of climate change to have an impact on them throughout their lifetimes[.]"[262] The Special Rapporteur on human rights and the environment aptly explained that "[t]he cumulative effects of long-term environmental harm, such as climate change and the loss of biodiversity, increase over time, so that decisions taken today will affect children much more than adults."[263] Children (and young people and future generations) are disproportionally harmed by climate change even though they have historically been excluded from related decision-making processes,[264] and, as the Secretary-General and the United Nations High Commissioner for Human Rights stated, they are amongst "those who have contributed the least to greenhouse gas emissions."[265]

80. Thus, climate change threatens a wide range of interrelated and overlapping human rights, and these threats disproportionately affect children, the youth, and future generations.[266]

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[258] American Convention, Article 19; *see also* San Salvador Protocol, Article 16 ("Every child, whatever his parentage, has the right to the protection that his status as a minor requires from his family, society and the State. . . .").
[259] Section IV.A.4, *supra*; IACHR, Res. 3/2021, at 6; HRI/2019/1, ¶ 3; A/HRC/RES/18/22 at 2; *see also* A/HRC/35/13, ¶ 4 ("Children are disproportionately affected by changes in their environment, due to their unique metabolism, physiology and developmental needs.").
[260] *See* footnotes 239-240, *supra*; Section IV.A.4, *supra*; Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., n. 122 ("Environmental degradation exacerbates health risks and undermines support structures that protect children from harm."); A/74/161, ¶ 41 ("Children are particularly vulnerable to health problems exacerbated by climate change, including vector-borne diseases, malnutrition, acute respiratory infections, diarrhoea and other water-borne illnesses."); A/HRC/35/13, ¶ 18 ("Climate change and the impacts of traumatic stress connected to climate change, such as war/insecurity, sexual and physical violence and witnessing deaths and injury related to extreme weather disasters, negatively affect children's mental health.").
[261] Section IV.A.4, *supra*; Human Rights Council, *Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*, A/HRC/37/58, ¶ 33 (Jan. 25,2018) (hereinafter "A/HRC/37/58") ("Climate change and the loss of biological diversity are long-term environmental crises that will affect children"); *id.*, ¶ 35 ("[T]he effects of climate change and the loss of biodiversity not only prevent children from enjoying their rights today; by interfering with their normal development, environmental harm prevents them from enjoying their rights in the future, and often throughout their lives."); *id.*, ¶ 69 ("In addition, climate change and the loss of biodiversity threaten to cause long-term effects that will blight children's lives for years to come.").
[262] *Sacchi, et al. v. Argentina, et al.*, ¶ 10.13.
[263] A/HRC/37/58, ¶ 57.
[264] UNICEF 2021, Making Climate and Environment Policies for and with Children at 1, 8 ("National climate and environmental policies and plans inclusive of children and young people are extremely limited[.] . . . Only 12% and 40% of the [national climate policies and goals] mention the inclusion of children and young people respectively in [their] development process."); CRC/C/GC/26, ¶ 3 (quoting the consulted children as saying "Adults [should] stop making decisions for the future they won't experience. [We] are the key means [of] solving climate change, as it is [our] lives at stake.").
[265] A/HRC/33/31, Annex II, ¶ 7.
[266] The human rights discussed in this Section are by no means the only human rights impacted by climate change. For example, a Dutch court found that the State needed to take climate change mitigation measures to protect the right to private and family life. *The State of the Netherlands v. Urgenda Foundation*, Netherlands Supreme Court (Dec. 20, 2019) (ECLI:NL:HR:2019:2007), ¶¶ 8.2.2., 8.3.4 (hereinafter "*Netherlands v. Urgenda Foundation*"). This same right is recognized in Article 11(2) of the American Convention ("No one may be the object of arbitrary or abusive interference with his private life, his family, his home, or his correspondence, or of unlawful attacks on his honor or reputation."). As another example, this Court has "recognized that certain projects and interventions in the environment in which people

2. The Relevant Environmental and Climate Change Principles

81. States' obligations flowing from the human rights impaired by climate change are interpreted in light of international environmental and climate change treaties and related general principles and customary international law.[267] This Section therefore discusses the following critical rules and principles originating from international environmental and climate change law, but crucial to interpreting States' human rights obligations: the obligation to mitigate climate change under international climate change law and the 1.5°C guardrail (Section IV.A.2.i); the precautionary principle (Section IV.A.2.ii); the principle of common but differentiated responsibilities (Section IV.A.2.iii), and; intergenerational justice (Section IV.A.2.iv).

i. Mitigation Under International Climate Change Law and the 1.5°C Guardrail

82. The two international treaties of particular significance in the climate change context are the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement entered into under that framework. The "ultimate objective" of the climate change framework is "the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[268] Thus, the ultimate objective is to mitigate climate change, *i.e.*, for States to take measures that limit warming,[269] and to do so in a manner that "prevent[s] dangerous anthropogenic interference."

83. The Paris Agreement "enhance[es] the implementation of the [UNFCCC]" by "[h]olding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change."[270] The Paris Agreement thus recognizes that the temperature increase must be limited to 1.5°C to "significantly reduce the risks and impacts of climate change," which would be required to fulfill the framework's objective of "prevent[ing] dangerous anthropogenic interference."

84. This is in line with the consensus in the scientific community that 1.5°C should be the guardrail.[271] For example, the IPCC concluded that limiting warming to 1.5°C "would substantially reduce projected losses and damages related to climate change[.]"[272] Various human rights bodies have also acknowledged the guardrail, expressing "great concern" that current commitments of States under the Paris

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live can constitute a risk to their . . . personal integrity," which is protected under Article 5 of the American Convention. Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 114; *see also* American Convention, Article 5(1) ("Every person has the right to have his physical, mental, and moral integrity respected.").

[267] ¶ 68, *supra*; Vienna Convention, Article 31(3)(c).

[268] UNFCCC, Article 2.

[269] *See id.*, Articles 4(1)(b), 4(2)(a); Paris Agreement, Article 4.

[270] Paris Agreement, Article 2.

[271] Section IV.A.5, *supra*.

[272] IPCC, 2023: Synthesis Report at 95.

Agreement would not limit warming to 1.5°C, and recognizing that this "expos[es] their populations and future generations to the significant threats to human rights associated with greater temperature increases."[273]

85. With respect to these current commitments, the UNFCCC and Paris Agreement rely on a bottom-up approach, under which States must set their own mitigation goals known as "nationally determined contributions" (NDCs),[274] and have certain reporting obligations with respect to these NDCs.[275] Although the Paris Agreement requires that these NDCs "reflect [States'] highest possible ambition,"[276] in practice, States are free to set the NDCs however they want; there is no mechanism to ensure the NDCs are either set at the States' "highest possible ambition," or sufficient to ensure warming is limited to 1.5°C. However, these specific shortcomings of the international climate change treaties do not in any way "limit the exercise of the rights and freedoms that [the American Convention and its Protocols] recognize[]."[277]

86. International climate change law also recognizes the interplay between mitigation and human rights. For example, in the Cancun Agreements, States worldwide recognized "resolution 10/4 of the United Nations Human Rights Council on human rights and climate change, which recognizes that the adverse effects of climate change have a range of direct and indirect implications for the effective enjoyment of human rights."[278]

ii. The Precautionary Principle

87. The precautionary principle demands that States take the required mitigation measures and do not use some level of scientific uncertainty regarding future impacts as a basis for a failure to do so. The principle provides that "where there are threats of serious or irreversible damage," as is the case with climate change, "lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."[279] The principle is the legal expression of the common-sense approach that it is "better to be safe than sorry," and is a key principle in international environmental law.[280] The UNFCCC also embraces this principle, holding that States "should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where

[273] HRI/2019/1, ¶ 9; *see also* IACHR, Res. 3/2021 at 4-5 ("According to [the IPCC], the commitments reflected by States in their obligations under the Paris Agreement would be far from limiting the average global temperature to 1.5°C[.]"); ¶ 141, *infra*.
[274] Paris Agreement, Article 4.
[275] *See e.g.*, *id*., Article 13.
[276] *Id*., Article 4(3).
[277] Advisory Opinion OC-5/85, Inter-Am. Ct. H.R., ¶ 52; *see also* ¶ 68, *supra*.
[278] UNFCCC, Decision 1/CP.16, FCCC/CP/2010/7/Add.1, at 2 (Mar. 15, 2011).
[279] United Nations Conference on Environment and Development, *Rio Declaration on Environment and Development*, A/CONF.151/26 (Vol. 1), Principle 15 (June 13-14, 1992) (hereinafter "Rio Declaration").
[280] *Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area*, Advisory Opinion, ITLOS (Feb. 1, 2011), ¶ 135. ("The Chamber observes that the precautionary approach has been incorporated into a growing number of international treaties and other instruments, many of which reflect the formulation of Principle 15 of the Rio Declaration. In the view of the Chamber, this has initiated a trend towards making this approach part of customary international law."); Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 176 ("the precautionary principle or approach has been included in various international treaties on environmental protection in different spheres." (*citing* various treaties)).

there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures . . . ."[281]

88. Recognizing the fundamental importance of the precautionary principle in international environmental treaties and international and domestic case law,[282] this Court has found that, to protect the rights to life and personal integrity, "States must act in keeping with the precautionary principle[.]"[283] This Court further explained that States must "act with due caution to prevent possible damage," and "even in the absence of scientific certainty, . . . must take 'effective' measures to prevent severe or irreversible damage."[284] Other human rights bodies have similarly recognized the importance of the precautionary principle and its application to human rights law. In particular, the Human Rights Committee has recognized that to meet their "obligation to respect and ensure the right to life" States must take environmental protection measures and "pay due regard to the precautionary approach."[285]

89. Application of the precautionary principle will provide protection to the rights of the youth, children, and future generations. Although the consequences of climate change are projected to become more severe with time, uncertainty around the exact consequences increases as projections are farther out. As the Special Rapporteur on human rights and the environment explained:

> The cumulative effects of long-term environmental harm, such as climate change and the loss of biodiversity, increase over time, so that decisions taken today will affect children much more than adults. The lack of full information about many types of environmental harm means that their long-term effects are often poorly understood and underestimated.[286]

90. The CESCR has explained that the unacceptable harm the precautionary principle demands to be avoided or diminished, even in the absence of full scientific certainty, includes "harm to humans or to the environment that is: (a) threatening to human life or health; (b) serious and effectively irreversible; (c) ***inequitable to present or future generations***; or (d) imposed without adequate consideration of the human rights of those affected."[287] The CRC also stressed that "States have a due diligence obligation to take appropriate preventive measures to protect children against reasonably foreseeable environmental harm and violations of their rights, paying due regard to the precautionary principle."[288]

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[281] UNFCCC, Article 3(3).
[282] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶¶ 176-178.
[283] *Id*., ¶ 180.
[284] *Id*.
[285] CCPR/C/GC/36, ¶ 62; *see also* Human Rights Council, *Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment,* A/HRC/37/59, ¶ 33 (Jan. 24, 2018) ("[T]he lack of full scientific certainty should not be used to justify postponing effective and proportionate measures to prevent environmental harm, especially when there are threats of serious or irreversible damage. States should take precautionary measures to protect against such harm.'').
[286] A/HRC/37/58, ¶ 57.
[287] CESCR, *General Comment No. 25 on science and economic, social and cultural rights*, E/C.12/GC/25, ¶ 56 (Apr. 30, 2020) (emphasis added).
[288] CRC/C/GC/26, ¶ 69.

iii. The Principle of Common but Differentiated Responsibilities

91. The principle of common but differentiated responsibilities is an important component of international climate change law, recognized in its landmark treaties. The UNFCCC instructs parties they "should protect the climate system . . . in accordance with their common but differentiated responsibilities and respective capabilities."[289] Similarly, the mitigation measures taken under the Paris Agreement must "reflect [the State's] highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances."[290] Human rights bodies have also recognized this principle.[291]

92. The principle of common but differentiated responsibilities – expressing that all States have responsibilities to mitigate climate change but that those responsibilities are differentiated – recognizes the historical and physical science etiology of climate change. First, the principle recognizes that climate change is a global problem (each ton of GHG emitted anywhere in the world contributes to climate change everywhere[292]) and that accordingly *all* States have an obligation to fight it (the "common" part of the principle).[293] The UNFCCC acknowledges that "the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions."[294] Second, the principle recognizes the historical fact that developed countries have not only contributed more to climate change but also have a heightened capacity to fight it (the "differentiated" part of the principle).[295] Indeed, the UNFCCC concludes from the application of that aspect of the principle that "[a]ccordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof."[296]

93. Thus, no State is absolved from taking climate action; the multi-factorial causal nature of climate change and the flipside – that no State can properly mitigate climate change on its own – does not justify a failure to act. The Commission has stressed that human rights obligations relating to climate change

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[289] UNFCCC, Article 3(1); *see also id.*, Article 4.
[290] Paris Agreement, Article 4(3); *see also id.*, Article 2(2) ("This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.").
[291] CRC/C/GC/26, ¶ 112 ("In line with the principle of common but differentiated responsibilities and respective capabilities, States' national circumstances need to be taken into account in efforts to address climate change."); *id.*, ¶¶ 91, 98(b); A/HRC/35/13, ¶ 36 ("Equitable climate action requires that the burden of addressing and preventing the adverse effects of climate change is shared, taking into consideration the common but differentiated responsibilities of States."); Human Rights Council, *Human rights and climate change*, A/HRC/RES/38/4 (July 16, 2018) (hereinafter "A/HRC/RES/38/4"); A/HRC/RES/35/20; IACHR, Res. 3/2021, ¶¶ 7, 11.
[292] Footnote 26, *supra*.
[293] Rajamani, National 'Fair Shares' in Reducing Greenhouse Gas Emissions at 990 ("The 'common' element in this principle signals that environmental protection is a matter of 'common concern' and requires efforts by all.").
[294] UNFCCC at 2.
[295] Rajamani, National 'Fair Shares' in Reducing Greenhouse Gas Emissions at 990. (With respect to the common but differentiated responsibilities principle under the UNFCCC, "the basis of differentiation is plausibly both differing contributions to environmental harm (and thus responsibilities, historical, current and projected) as well as differing capabilities to address it[.]").
[296] UNFCCC, Article 3(1).

"should not be neglected because of the multi-causal nature of the climate crisis, as all States have common but differentiated obligations in the context of climate action."[297] Similarly, the CRC held that "[i]n accordance with the principle of common but differentiated responsibilities, as reflected in the Paris Agreement, the Committee finds that the collective nature of the causation of climate change does not absolve the State party of its individual responsibility that may derive from the harm that the emissions originating within its territory may cause to children, whatever their location."[298]

iv. Intergenerational Justice

94. Intergenerational equity is an integral principle of environmental law generally and international climate change law specifically, recognized as important in a wide range of international instruments. Indeed, this principle is the bedrock of sustainable development, which is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[299] The Rio Declaration similarly commands that "[t]he right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations."[300] Within the climate change treaty framework, the UNFCCC instructs the parties that they "should protect the climate system for the benefit of present and future generations of humankind . . . ."[301] Similarly, the Paris Agreement "[a]cknowledg[es] that climate change is a common concern of humankind," and instructs the parties that they "should, when taking action to address climate change, respect, promote and consider . . . intergenerational equity."[302]

95. The principle is also recognized outside the environmental law context, including in the human rights context. The Inter-American Democratic Charter dictates that "[i]t is essential that the States of the hemisphere implement policies and strategies to protect the environment, including application of various treaties and conventions, to achieve sustainable development for the benefit of future generations."[303] And human rights bodies,[304] including the Commission,[305] have also recognized intergenerational equity. In particular, this Court has recognized that "the right to a healthy environment constitutes a universal value that is owed both to present and future generations."[306] The recently adopted Maastricht Principles on the human rights of future generations recognizes that human rights are also owed

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[297] IACHR, Res. 3/2021, ¶ 15.
[298] *Sacchi, et al. v. Argentina, et al.*, ¶ 10.10; *see also Neubauer, et al. v. Germany,* German Federal Constitutional Court (Mar. 24, 2021) (BvR 2656/18, Rn. 1-270), ¶ 197 (hereinafter "*Neubauer, et al. v. Germany*") ("The fact that no state can resolve the problems of climate change on its own due to the worldwide nature of the climate and global warming does not invalidate the [national] obligation to take climate action . . . .").
[299] UN General Assembly, *Report of the World Commission on Environment and Development*, A/42/427, Annex, Ch. 2, ¶ 1 (Aug. 4, 1987).
[300] Rio Declaration, Principle 3.
[301] UNFCCC, Article 3(1).
[302] Paris Agreement at 2.
[303] OAS, Inter-American Democratic Charter, Article 15.
[304] *E.g.*, CRC/C/GC/26, ¶ 11 ("The Committee recognizes the principle of intergenerational equity and the interests of future generations.").
[305] IACHR, Res. 3/2021, ¶ 21 ("Based on the principle of intergenerational equity, all children and adolescents have the right to enjoy a healthy environment and to live on a planet equal to or in better conditions than their ancestors.").
[306] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 59.

to future generations, stating that "States must necessarily impose reasonable restrictions on activities that undermine the rights of future generations, including the unsustainable use of natural resources and the destruction of Nature."[307]

96. The Commission emphasized that "climate change is one of the greatest threats to the full enjoyment and exercise of human rights of present and future generations,"[308] and the Special Rapporteur in the field of cultural rights aptly observed that "[c]limate change is the most significant intergenerational equity issue of our time. Children and future generations are bearing, or will come to bear, the brunt of its impact on a polluted, degraded planet."[309]

97. However, the term intergenerational equity does not properly capture what is needed to address the serious causes and consequences of the climate change to be faced by future generations (including children and youth now) – these require the broader concept of intergenerational justice. Although often used interchangeably, the concepts of equity and justice differ in a significant way: unlike equity, justice seeks to address the causes of the inequity.[310] Whereas equity provides custom tools to address inequality (for example through affirmative action), justice seeks to change the system, including through removing systemic barriers, to provide equal access to tools and opportunities, such that the custom tools are no longer needed.[311] This brief, therefore, applies the foundations of intergenerational equity to intergenerational justice – recognizing the important distinction and calling for climate justice for the youth, children, and future generations.[312]

98. This principle of intergenerational justice imposes obligations on States and the current generation: "[it] places a duty on current generations to act as responsible stewards of the planet and ensure the rights of future generations to meet their developmental and environmental needs."[313] In particular, States "have a moral and ethical obligation to place the needs of today's children and of future generations

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[307] *Maastricht Principles on The Human Rights of Future Generations*, Article 7(c) (Feb. 3, 2023) (hereinafter "Maastricht Principles").
[308] IACHR, Res. 3/2021, at 8; *see also* CCPR/C/GC/36, ¶ 62 ("Environmental degradation, climate change and unsustainable development constitute some of the most pressing and serious threats to the ability of present and future generations to enjoy the right to life.").
[309] UN General Assembly, *Report of the Special Rapporteur in the field of cultural rights, Karima Bennoune*, A/75/298, ¶ 9 (Aug. 10, 2020) (internal citations omitted).
[310] MobilizeGreen.org, *Environmental Equity vs. Environmental Justice: What's the Difference?* (2023).
[311] *Id.*; Big Cities Health Coalition, *Understanding equity and justice* (May 2020).
[312] *See* Paris Agreement, at 2 ("noting the importance for some of the concept of 'climate justice', when taking action to address climate change").
[313] A/HRC/35/13, ¶ 35. This duty is also deeply rooted in the public trust doctrine, which in turn has its origins in Justinian's Corpus Juris Civilis, the 6th century codification of Roman law. *See* Helen Althaus, Public Trust Rights 23 (1978). Applied to climate change, this principle requires a more expanded doctrine – a planetary trust doctrine – recognizing that the climate is not within the trust of a single state, but rather within the trust of all States on the planet. *See generally* John Edward Davidson, *Never Say Never: Reconciling Generational Sovereignty with Environmental Preservation*, at 24 (Jan. 27, 2019) ("[T]he planetary trust, an approach that has been influential in the realm of international law over the past 25 years . . . provides that 'each generation receives a natural and cultural legacy in trust from previous generations and holds it in trust for future generations.'") (*citing* Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity*, United Nations University, 2 (1989)).

at the core of climate change policies and actions."[314] As the CRC emphasized, in practice this means that "States bear the responsibility for foreseeable environment-related threats arising as a result of their acts or omissions now, the full implications of which may not manifest for years or even decades."[315]

99. Intergenerational justice requires immediate mitigation action. Although adaptation to climate change is also an important component of the response to climate change, there can be no intergenerational justice unless immediate and adequate mitigation becomes an unyielding priority. Delayed or inadequate mitigation shifts the burden onto the youth, children, and future generations, both in terms of the devastating effects of climate change on human rights as well as in terms of the astronomical costs of adaptation. As the Office of the United Nations High Commissioner for Human Rights explained, "[a] child rights-based approach requires States to take urgent action to mitigate climate change by limiting emissions of greenhouse gases in order to prevent to the greatest extent possible their negative human rights impacts on children and future generations."[316]

3. States' Human Rights Obligations in the Face of the Climate Emergency

100. Every human right has corresponding State obligations. Thus, as this Court has recognized, because "the adverse effects of climate change affect the real enjoyment of human rights,"[317] this "results in a series of environmental obligations for States to comply with their duty to respect and to ensure those rights."[318] Similarly, as the Special Rapporteur on human rights and the environment explained, "[t]he foreseeable and potentially catastrophic adverse effects of climate change on the enjoyment of a wide range of human rights give rise to extensive duties of States to take immediate actions to prevent those harms."[319]

101. To interpret States' human rights obligations in the context of climate change, a few aspects of the general human rights framework are important. **First**, State obligations under international human rights law apply to all branches of government – executive, legislative, and judicial – and to all levels – national, regional, and local.[320]

102. **Second**, the American Convention obligates States to "undertake to respect the rights and freedoms recognized herein and to ensure to all persons subject to their jurisdiction the free and full exercise

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[314] A/HRC/35/13, ¶ 35.
[315] CRC/C/GC/26, ¶ 11.
[316] A/HRC/35/13, ¶ 33.
[317] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 47.
[318] *Id*., ¶ 55.
[319] A/74/161, ¶ 62.
[320] Human Rights Committee, *General Comment No. 31 on the Nature of the General Legal Obligation Imposed on States Parties to the Covenant*, CCPR/C/21/Rev.1/Add. 13, ¶ 4 (May 26, 2004) ("All branches of government (executive, legislative and judicial), and other public or governmental authorities, at whatever level - national, regional or local – are in a position to engage the responsibility of the State Party."); *Gudiel Álvarez, et al. ("Diario Militar") v. Guatemala*, Inter-Am. Ct. H.R. (Nov. 20, 2022) (Series C No. 262), ¶ 330 (hereinafter "*Álvarez, et al. v. Guatemala*") ("[W]hen a State is a party to international treaties such as the American Convention on Human Rights . . . these treaties are binding on all of its organs, including the Judiciary[.]").

of those rights and freedoms . . . ."[321] The obligation to "respect" human rights entails a restriction on the exercise of State powers.[322] It requires States to refrain from acts that violate human rights, and thus leads to so-called negative obligations.[323] The obligation to "ensure" human rights "means that States must take all appropriate steps to protect and preserve the rights[,]"[324] and thus leads to so-called positive obligations.[325]

103. This latter obligation "means that States must take positive measures to permit as well as to help private individuals exercise their rights."[326] It also encompasses "the duty to prevent third parties from violating the protected rights . . . ."[327] As this Court has held "[i]n the context of environmental protection, the State's international responsibility derived from the conduct of third parties may result from a failure to regulate, supervise or monitor the activities of those third parties that caused environmental damage."[328] These positive obligations "must be interpreted in a way that does not impose an impossible or disproportionate burden on the authorities."[329] This Court has used the following test to determine if States have positive obligations in the context of environmental damage:

> For this positive obligation to arise, it must be established that: (i) at the time of the facts the authorities knew or should have known of the existence of a situation of real and imminent danger for [the human rights] and failed to take the necessary measures within their area of responsibility that could reasonably be expected to prevent or to avoid that danger, and (ii) that there was a causal link between the impact on [the human rights] and the significant damage caused to the environment.[330]

104. Thus, as the Special Rapporteur on human rights and the environment concluded specifically with respect to climate change, "States must not violate the right to a safe climate through their own actions; must protect that right from being violated by third parties, especially businesses; and must establish, implement and enforce laws, policies and programmes to fulfil that right."[331]

105. **Third**, with respect to the general framework, States must respect and ensure human rights "without any discrimination for reasons of race, color, sex, language, religion, political or other opinion, national or social origin, economic status, birth, or any other social condition."[332] This principle of equality

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[321] American Convention, Article 1.
[322] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 117.
[323] *See id*., ¶¶ 108, 117.
[324] *Id*., ¶ 118.
[325] *See id*., ¶¶ 108, 118, 120.
[326] *Id*., ¶ 121.
[327] *Id*., ¶ 118.
[328] *Id*., ¶ 119.
[329] *Id*., ¶ 120.
[330] *Id*.
[331] A/74/161, ¶ 65; *see also* CCPR/C/GC/36, ¶ 62 ("Implementation of the obligation to respect and ensure the right to life, and in particular life with dignity, depends, inter alia, on measures taken by States parties to preserve the environment and protect it against harm, pollution and climate change caused by public and private actors.").
[332] American Convention, Article 1.

and non-discrimination requires States to take into account the differentiated impact of environmental degradation on certain groups in vulnerable situations, including children, Indigenous people, and those living in extreme poverty.[333]

106. **Fourth**, Article 2 of the American Convention requires States to "undertake to adopt, in accordance with their constitutional processes and the provisions of this Convention, such legislative or other measures as may be necessary to give effect to [the human rights recognized therein.]"[334] This provision thus requires States to give domestic legal effect to the relevant human rights.[335]

107. Under this human rights framework, as explained below, States have an obligation to take immediate mitigation measures consistent with the 1.5°C warming guardrail (Section IV.A.3.i), and domestic courts have an obligation to enforce the human rights that require such immediate mitigation measures (Section IV.A.3.ii).

i. States Have an Obligation to Take Immediate Mitigation Measures Consistent with the 1.5°C Warming Guardrail

108. In the face of the climate crisis, States' human rights obligations require them to take action to protect people from the devastating effects of the warming. As set out below, this means States must immediately take mitigation measures consistent with the 1.5°C warming guardrail. In particular, States must adopt binding and enforceable mitigation targets that are consistent with the 1.5°C guardrail and implement mitigation measures to meet these targets.

a. Obligation to Take Mitigation Measures to Prevent Climate Change

109. The principle of prevention – firmly established in both international human rights and environmental law – requires States to protect human rights by mitigating climate change. With respect to human rights law, this Court has held that "[t]he obligation to ensure the rights recognized in the American Convention entails the duty of States to prevent violations of these rights."[336]

110. Within international environmental law, "[t]he principle of prevention of environmental damage forms part of international customary law."[337] As this Court explained, "[b]earing in mind that, frequently, it is not possible to restore the situation that existed before environmental damage occurred,

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[333] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶¶ 67-68.
[334] American Convention, Article 2.
[335] *See id.*, Article 2; *Maldonado Vargas, et al. v. Chile*, Inter-Am. Ct. H.R., (Sept. 2, 2015) (Series C No. 300), ¶ 124 ("Furthermore, the Court has determined that a State that has acceded to an international treaty must introduce the necessary amendments to its domestic law to ensure the execution of the obligations assumed and that this principle, recognized in Article 2 of the Convention, establishes the general obligation of the States Parties to adapt their domestic law to the provisions of the said treaty in order to ensure the rights that it contains, which means that the domestic legal measures must be effective (*effet util*).").
[336] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 127.
[337] *Id.*, ¶ 129; *see also id.*, n. 247 ("The customary nature of the principle of prevention has been recognized by the International Court of Justice. . . . The International Tribunal for the Law of the Sea (ITLOS) and the Permanent Court of Arbitration (PCA) have also indicated this." (collecting cases)).

prevention should be the main policy as regards environmental protection."[338] Within international environmental law, the principle of prevention "was established within the framework of inter-State relations[,]"[339] and, as a result, focuses on transboundary harm – requiring States "to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."[340] This Court has explained that this does not limit the duty of prevention to inter-State issues under international human rights law. Rather, this Court has recognized that the "obligations that [the principle of prevention under international environment law] imposes are similar to the general duty to prevent human rights violations[,]"[341] and therefore, that, under human rights law, "the obligation of prevention applies to damage that may occur within or outside the territory of the State of origin[.]"[342]

111. This Court has further held that the prevention principle applies to "significant harm," and explained this is satisfied when the rights to life and personal integrity are threatened:

> States must take measures to prevent significant harm or damage to the environment, within or outside their territory. In the Court's opinion, any harm to the environment that may involve a violation of the rights to life and to personal integrity, in accordance with the meaning and scope of those rights as previously defined . . . must be considered significant harm.[343]

112. Climate change triggers States' duty of prevention: there is no question that climate change leads to "significant harm" both within and outside the contributing State's territory.[344] Climate change poses a significant threat to human rights, including the right to life, health, and food, with a disproportionate impact on already vulnerable groups, including children and the youth.[345]

113. States' duty of prevention in the context of climate change requires mitigation: the only way to prevent a further rise in global temperature is through immediate mitigation measures that cut GHG emissions and preserve natural carbon sinks. Similarly, the only way to prevent, to the maximum extent possible, further human rights violations caused by the effects of climate change, is through mitigation. Adaptation is a necessary complement but does not substitute the urgently needed mitigation. Adaptation may be unaffordable for developing countries, and most importantly, it cannot prevent all impacts of climate change, and its potential and effectiveness decreases as warming increases.[346] As a Dutch court explained in the *Urgenda* case – where it set more stringent mitigation targets for the Netherlands – "it has not been

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[338] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 130.
[339] *Id*., ¶ 133.
[340] Rio Declaration, Principle 2; United Nations Conference on the Human Environment, *Stockholm Declaration on the Human Environment*, A/CONF.48/14/Rev.1, Principle 21 (June 5-16, 1972).
[341] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 133.
[342] *Id*.
[343] *Id*., ¶ 140; *see also id.*, ¶ 242(a).
[344] Sections IV.A.3, IV.A.4, *supra*.
[345] *See* Sections IV.A.3, IV.A.4, V.A.1, *supra*.
[346] Sections IV.A.7, IV.B.3, *supra*.

demonstrated or made plausible that the potentially disastrous consequences of excessive global warming can be adequately prevented by [adaptation] measures."[347]

114. Further, the effects of climate change do not increase linearly with warming; rather, as warming continues, there is a significant risk of feedback loops and tipping points that risk accelerated warming and abrupt and irreversible effects.[348] This risk cannot be reduced without mitigation. As the CRC explained, "[s]cientists warn about tipping points, which are thresholds beyond which certain effects can no longer be avoided, posing dire and uncertain risks to children's rights. Avoiding tipping points requires urgent and ambitious action to reduce atmospheric concentrations of greenhouse gases."[349]

115. There is no question that, under the legal test for positive obligations in the case of environmental damage, discussed above, climate change triggers the positive obligations of States to take mitigation measures.[350] With respect to the first pong of the test, there is not only a general scientific consensus as to the occurrence, causes and devastating effects of climate change,[351] there is also a consensus that these effects form significant threats to numerous human rights.[352] As such, States "kn[ow] or should [know] of the existence of a situation of real and imminent danger"[353] as to these human rights.[354] With respect to the second prong of the test, there is a clear "causal link between the impact on [these human rights] and the significant damage caused to the environment,"[355] by GHG emissions.[356] Thus, the primary obligation of States under international human rights law in the face of the climate crisis is to urgently take mitigation measures that reduce GHG emissions.

116. This proposition is not novel. Many human rights bodies and special rapporteurs have come to the same conclusion. The Commission has concluded that "for the effective protection of human rights, States must take appropriate measures to mitigate greenhouse gases[.]"[357] The CRC concluded that "States have an individual responsibility to mitigate climate change in order to fulfil their [human rights]

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[347] *Netherlands v. Urgenda Foundation*, ¶ 7.5.2.
[348] Section IV.A.5, *supra*.
[349] CRC/C/GC/26, ¶ 96.
[350] *See* ¶ 103, *supra*.
[351] *See* Sections IV.A.1-IV.A.4, *supra*.
[352] *See* Section V.A.1, *supra*.
[353] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 120.
[354] *See* A/74/161, ¶ 66 (Recognizing "the foreseeability of increasing climate impacts"); *Sacchi, et al. v. Argentina, et al.*, ¶ 10.11 ("Regarding the issue of foreseeability, the Committee notes the authors' uncontested argument that the State party has known about the harmful effects of its contributions to climate change for decades and that it signed both the United Nations Framework Convention on Climate Change in 1992 and the Paris Agreement in 2016. In light of existing scientific evidence showing the impact of the cumulative effect of carbon emissions on the enjoyment of human rights, including rights under the Convention, the Committee considers that the potential harm of the State party's acts or omissions regarding the carbon emissions originating in its territory was reasonably foreseeable to the State party.").
[355] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 120.
[356] *See* Sections IV.A.1-IV.A.4, V.A.1, *supra*; *Sacchi, et al. v. Argentina, et al.*, ¶ 10.9 ("The Committee considers that it is generally accepted and corroborated by scientific evidence that the carbon emissions originating in the State party contribute to the worsening of climate change, and that climate change has an adverse effect on the enjoyment of rights by individuals both within and beyond the territory of the State party.").
[357] IACHR, Res. 3/2021, ¶ 15; *see also id.*, ¶ 1 ("States should adopt and implement policies aimed at reducing greenhouse gas emissions that reflect the greatest possible ambition[.]").

obligations under the Convention[,]"[358] and called for "urgent collective action by all States to mitigate greenhouse gas emissions, in line with their human rights obligations."[359] The CESCR concluded that "[c]omplying with human rights obligations in the context of climate change . . . requires respecting human rights, by refraining from the adoption of measures that could worsen climate change; protecting human rights, by effectively regulating private actors to ensure that their actions do not worsen climate change; and fulfilling human rights, by adopting policies that can channel modes of production and consumption towards a more environmentally sustainable pathway."[360] In a joint statement, numerous human rights bodies concluded that "[i]n order for States to comply with their human rights obligations . . . they must adopt and implement policies aimed at reducing emissions."[361] The Secretary-General and the United Nations High Commissioner for Human Rights similarly concluded that, under human rights law, "States must act to limit anthropogenic emissions of greenhouse gases (e.g. mitigate climate change), including through regulatory measures. . . ."[362]

117. Specifically with respect to children and future generations, the Office of the United Nations High Commissioner for Human Rights concluded that "[a] child rights-based approach requires States to take urgent action to mitigate climate change by limiting emissions of greenhouse gases in order to prevent to the greatest extent possible their negative human rights impacts on children and future generations."[363] The Special Rapporteur on human rights and climate change similarly concluded that under human rights law, "States must limit greenhouse gas emissions to prevent the current and future negative human rights impacts of climate change."[364]

1. The Measures Must Apply to Transboundary Harm

118. States' human rights obligations extend to transboundary harm – harm to people and property beyond their territories. Per Article 1(1) of the American Convention, State obligations apply to "all persons subject to [States'] jurisdiction[.]"[365] As this Court has explained, this means that the State obligations apply "to every person who is within the State's territory or who is in any way subject to its

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[358] CRC/C/GC/26, ¶ 98(b).
[359] *Id.*, ¶ 95; *see also Sacchi, et al. v. Argentina, et al.*, ¶ 10.6 ("Failure to take measures to prevent foreseeable harm to human rights caused by climate change, or to regulate activities contributing to such harm, could constitute a violation of States' human rights obligations[.]").
[360] E/C.12/2018/1*, ¶ 10; *see also id.*, ¶ 3 ("Quite apart from such voluntary commitments made under the climate change regime, however, all States have human rights obligations, which should guide them in the design and implementation of measures to address climate change.").
[361] HRI/2019/1, ¶ 11; *see also* Human Rights Council, *Rights of the child: realizing the rights of the child through a healthy environment*, A/HRC/RES/45/30, at 4 (Oct. 13, 2020) (hereinafter "A/HRC/RES/45/30") ("Underscoring the importance of protecting children from the adverse impact of environmental harm through decisive climate action, including through mitigation of and adaptation to climate change[.]").
[362] A/HRC/33/31, Annex II, ¶ 2.
[363] A/HRC/35/13, ¶ 33; *see also* footnote 433, *infra*.
[364] A/77/226, ¶ 9; *see also id.*, ¶ 15 ("States must take substantive measures to limit emissions of greenhouse gases and mitigate climate change, including through regulatory measures, in order to protect all persons from human rights harms."); A/74/161, ¶ 28 ("In order to uphold the right to life, States have an obligation to take effective measures to mitigate climate change[.]"); Maastricht Principles, Article 17 ("Violations of obligations to respect the human rights of future generations include . . . (d) Contributing to a decline in biodiversity or to anthropogenic climate change").
[365] American Convention, Article 1(1).

authority, responsibility or control."[366] Specifically, this Court found that "a person is subject to the 'jurisdiction' of a State in relation to an act committed outside the territory of that State (extraterritorial action) or with effects beyond this territory, when the said State is exercising authority over that person or when that person is under its effective control, either within or outside its territory."[367]

119. Specifically, the Court found that "States have the obligation to avoid transboundary environmental damage that can affect the human rights of individuals outside their territory."[368] Acknowledging that when one State causes environmental damage in another, it impairs the latter's capacity to safeguard the human rights of its citizens, this Court reasoned in part that "[t]he obligations to respect and to ensure human rights require that States abstain from preventing or hindering other States Parties from complying with the obligations derived from the Convention."[369]

120. This Court concluded from these principles that "States may be held responsible for any significant damage caused to persons outside their borders by activities originating in their territory or under their effective control or authority."[370] This test was also adopted by the CRC,[371] and the UNFCCC similarly recalls that States have responsibilities "to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."[372]

121. Because all activities contributing to climate change have transboundary effects,[373] the answer to the question whether there are transboundary effects of activities contributing to climate change will always be: yes. The Commission has recognized that the obligation of States to prevent transboundary harm also leads to the conclusion that States are required to take mitigation action to prevent harm to human rights outside their borders:

> In the context of the climate crisis, the obligation to prevent transboundary environmental harm is manifested in the development and implementation of GHG mitigation targets that reflect a level of ambition consistent with the obligations of the Paris Agreement and other applicable instruments,

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[366] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 73; *see also id.*, ¶ 74 ("The Court recalls that the fact that a person in subject to the jurisdiction of a State does not mean that he or she is in its territory."); *id.*, ¶ 78 ("Therefore, the "jurisdiction" referred to in Article 1(1) of the American Convention is not limited to the national territory of a State but contemplates circumstances in which the extraterritorial conduct of a State constitutes an exercise of its jurisdiction."); *id.*, ¶ 104.
[367] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 81.
[368] *Id.*, ¶ 101; *see also* HRI/2019/1, ¶ 10 ("States parties have obligations, including extraterritorial obligations, to respect, protect and fulfil all human rights of all peoples."); E/C.12/2018/1*, ¶ 5 ("Under the Covenant, States parties are required to respect, protect and fulfil all human rights for all. They owe such duties not only to their own populations, but also to populations outside their territories[.]").
[369] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 101.
[370] *Id.*, ¶ 103.
[371] *Sacchi, et al. v. Argentina, et al.*, ¶¶ 10.5, 10.7.
[372] UNFCCC at 2.
[373] *See* IACHR, Res. 3/2021, ¶ 39 ("[G]reenhouse gas emissions and thus the increase in frequency and intensity of meteorological phenomena attributable to climate change . . . regardless of their origin, contribute cumulatively to the emergence of adverse effects in other States.").

particularly with the obligation not to exceed global temperature to such an extent as to jeopardize the enjoyment of human rights.[374]

122. Similarly, the Special Rapporteur on human rights and the environment concluded that the principle of preventing transboundary harm is violated "as a result of greenhouse gas emissions, which, regardless of where they are emitted, are contributing, cumulatively, to adverse effects in other States[.]"[375]

123. Thus, non-citizens can fall under the jurisdiction of a State and hold it accountable for its human rights obligations (which include mitigation obligations). As the Commission stated, this general rule is necessary, because "[o]therwise, there would be a legal loophole regarding the protection of the human rights of persons that the American Convention is striving to protect, which would be contrary to the purpose and end of this instrument."[376] The Secretary-General and the United Nations High Commissioner for Human Rights explained what this general rule means with respect to climate change:

> The obligations of States in the context of climate change and other environmental harms extend to all rights holders and to harm that occurs both inside and beyond boundaries. States should be accountable to rights holders for their contributions to climate change, including for failure to adequately regulate the emissions of businesses under their jurisdiction, regardless of where such emissions or their harms actually occur.[377]

2. The Measures Must Apply to All Domestic Emissions, Domestic Sinks, Domestic Fossil Fuel Extraction, Imports, and Foreign Emissions of Domestic Entities

124. The "concept of jurisdiction under Article 1(1) of the American Convention encompasses any situation in which a State exercises effective control or authority over a person or persons, either within or outside its territory."[378] This means that "States are obliged to take all necessary measures to avoid activities implemented in their territory or under their control affecting the rights of persons within or outside their territory."[379] With respect to these "activities implemented in their territory or under their control," these include *at least* the following:

1. Territorial activities that result in GHG emissions;

2. Territorial activities that endanger natural carbon sinks;

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[374] *See id*., ¶ 41.
[375] A/74/161, ¶ 66.
[376] *Danny Honorio Bastidas Meneses, et al. v. Ecuador*, Inter-Am. Ct. H.R. (Nov. 2, 2021) (Admissibility Report No. 153/11), ¶ 21.
[377] A/HRC/33/31, Annex II, ¶ 4; *see also* Human Rights Council, *Analytical study on the relationship between human rights and the environment,* A/HRC/19/34, ¶ 72 (Dec. 16, 2011) ("the recognition of the extraterritorial obligations of States allows victims of transboundary environmental degradation, including damage to the global commons such as the atmosphere and dangerous climate change, to have access to remedies.").
[378] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 104(e).
[379] *Id*., ¶ 104(g).

3. Territorial extraction of fossil fuels (even when the GHG emissions resulting from their combustion occur extraterritorially);

4. Importation of embedded GHG emissions; and[380]

5. Extraterritorial activities of entities domestically domiciled.

125. **First and second**, the State obligation to "take all necessary measures to avoid activities . . . affecting the rights of persons," applies to all "activities implemented in their territory."[381] Thus, States' mitigation obligations apply to all territorial activities contributing to climate change, including those that result in GHG emissions and those that endanger natural carbon sinks. The State's obligations apply to the territorial activities of the State itself as well as those of third-parties, such as companies.[382]

126. **Third**, the extraction of fossil fuels within the territory of a State is also an "activit[y] implemented in [its] territory," and as such, States similarly have obligations to "take all necessary measures" to avoid that the extraction of such fossil fuels impairs human rights.[383] The extraction of fossil fuels inevitably leads to GHG emissions during their combustion, and as such States have obligations with respect to those territorial extraction activities, even if the combustion occurs extraterritorially.[384]

127. **Fourth**, the importation of embedded GHG emissions is an activity that is under a State's "control." States have control over the goods consumed, sold, and imported into their territories, and can take measures to control the GHG emissions embedded in such goods.[385] Thus, States' mitigation obligations apply to the importation of embedded GHG emissions.

128. **Fifth**, the extraterritorial activities of entities domiciled within a State are also under that State's "control." As the CESCR explained, States are required to "take steps to prevent and redress infringements of [human] rights that occur outside their territories due to the activities of business entities

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[380] "Embedded GHG emissions" refers to GHG emissions released throughout the supply chain of traded goods (including during transportation).
[381] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 104(g).
[382] *See* ¶¶ 101-104, *supra*.
[383] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 104(g).
[384] *See* Human Rights Council, *Report of the Independent Expert on human rights and international solidarity*, A/HRC/44/44, ¶ 54(b) (Apr. 1, 2020) ("States, corporations and financial institutions, particularly the highest emitting States, in historical and contemporary terms, should consider ceasing to pursue the exploration of and new investments in fossil fuels as a matter of human rights-based international solidarity, since the shared carbon budget will be exceeded if already existing and proposed fossil fuel developments proceed[.]").
[385] For example, the UK Committee on Climate Change discussed the measures available to the government to reduce consumption-based emissions and concluded that "[b]order carbon adjustments are not an alternative to a global deal but should not be ruled out as a possible transitional measure if there were to be slow progress agreeing a global deal. Policies to encourage resource efficiency and sustainable consumption could help to reduce the UK's carbon footprint." UK Committee on Climate Change, *Reducing the UK's Carbon Footprint*, at 8 (Apr. 2013); *see also id.* at 86-100. Similarly, the UK House of Commons Energy and Climate Change Committee concluded that "[c]onsideration of consumption-based emissions has allowed these local authorities to generate new policy options targeting consumption behaviour. [The Department of Energy and Climate Change] should explore the options for incorporating consumption-based emissions data into their policy making process, alongside data on territorial emissions." House of Commons Energy and Climate Change Committee, *Consumption-Based Emissions Reporting*, Twelfth Report of Session 2010–12, Vol. 1, at 3.

over which they can exercise control[,]"[386] and "States may seek to regulate [*i.e.*, they control,] corporations that are domiciled in their territory and/or jurisdiction: this includes corporations incorporated under their laws, or which have their statutory seat, central administration or principal place of business on their national territory."[387]

129. Thus, States' mitigation obligations apply to the extraterritorial activities of domestically domiciled entities. Human rights authorities endorse this scope of States' human rights obligations. The CRC concluded that "[h]ome States have obligations to address any harm and climate change-related risks to children's rights in the context of business enterprises' extraterritorial activities and operations, provided that there is a reasonable link between the State and the conduct concerned[.]"[388] Multiple human rights bodies in a joint statement on climate change concluded that "States must regulate private actors, including by holding them accountable for harm they generate both domestically and extraterritorially."[389] The Secretary-General and the United Nations High Commissioner for Human Rights concluded that "States should be accountable to rights holders for their contributions to climate change, including for failure to adequately regulate the emissions of businesses under their jurisdiction, regardless of where such emissions or their harms actually occur."[390]

130. States' control as to the emissions of domestic entities allows them to directly regulate the emissions of the corporate family of the domestic entity and to require the domestic entity to make "best efforts" with respect to the emissions of its business relations, including end-users. This is the approach that the Dutch court took in the *Shell* case, and that court's decision illustrates States' corresponding control.[391] Indeed, the CESCR explained that, under human rights law, States "should also require corporations to deploy their best efforts to ensure that entities whose conduct these corporations may influence, such as subsidiaries (including all business entities in which they have invested, whether registered under the State party's laws or under the laws of another State) or business partners (including suppliers, franchisees or sub-contractors) respect [human] rights."[392]

3. The Measures Must Protect Children and the Youth

131. Children and the youth are disproportionally affected by climate change,[393] and under the principle of equality and non-discrimination, States must take into account those differentiated impacts of climate change.[394] As a result, States have "heightened" or "additional" obligations towards these

[386] CESCR, *General Comment No. 24 on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities*, E/C.12/GC/24, ¶ 30 (Aug. 10, 2017) (hereinafter "E/C.12/GC/24").
[387] *Id*., ¶ 31.
[388] CRC/C/GC/26, ¶ 108.
[389] HRI/2019/1, ¶ 12.
[390] A/HRC/33/31, Annex II, ¶ 4.
[391] *Vereniging Milieudefensie, et al. v. Royal Dutch Shell PLC*, Hague District Court (May 26, 2021) (C/09/571932 / HA ZA 19-379), ¶ 4.4.55.
[392] *See* E/C.12/GC/24, ¶ 33.
[393] *See* Sections IV.A.4, V.A.1, *supra*.
[394] *See* ¶ 105, *supra*; Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶¶ 67-68.

vulnerable groups.[395] The CRC has explained this with respect to children, but the same applies to the youth: "[d]ue to the particular impact on children . . . States have heightened obligations to protect children from foreseeable harm."[396] This means that States must take *additional* mitigation measures so as to protect children and the youth and prevent the disproportionate adverse effects on them. As the Human Rights Council explained, "States have the obligation to respect, protect and fulfil human rights, including in all actions undertaken to address environmental harm . . . and to take measures to protect the rights of all, including the rights of the child, and . . . additional measures for those who are particularly vulnerable to the effects of environmental harm should be taken[.]"[397]

132. In addition, all mitigation measures must be designed with the protection of children and the youth in mind. As the CRC explained for children (and as also applies to the youth), considering that climate change is "one of the biggest threats to children's health and exacerbates health disparities," States need to "put children's health concerns at the centre of their climate change adaptation and mitigation strategies."[398] Further, "States must ensure that all legislation, policies and programmes that deal with environmental issues are not intentionally or unintentionally discriminatory towards children [and the youth] in their content or implementation."[399]

4. The Measures Must Be Based on the Best Available Science

133. As the CESCR has explained, "to respect, protect and fulfil all human rights [States] should act on the basis of the best scientific evidence available[.]"[400] Similarly, the Special Rapporteur on human rights and the environment observed that to "respect, promote and fulfil human rights," an environmental standard "should take into account the best available science."[401] Thus, under human rights law, climate change policies, including mitigation targets and measures, must be based on the best available science. As explained by the CRC, "[m]itigation objectives and measures should be based on the best available science."[402] Indeed, under the Paris Agreement, States "undertake rapid reductions [of GHG emissions] in

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[395] Human Rights Council, *Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*, A/HRC/31/52, ¶¶ 81-82 (Feb. 1, 2016) (hereinafter "A/HRC/31/52") ("States have heightened duties with respect to members of certain groups that may be particularly vulnerable to environmental harm, including women, children and indigenous peoples . . . . States acting individually and in cooperation should take steps to protect the most vulnerable from climate change."); Human Rights Council, *Report of the Independent Expert on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, John H. Knox*, A/HRC/25/53, ¶ 69 (Dec. 30, 2013) ("States have additional obligations with respect to groups particularly vulnerable to environmental harm.").
[396] *Sacchi, et al. v. Argentina, et al.*, ¶ 10.13.
[397] A/HRC/RES/45/30, at 2; *see also* A/HRC/35/13, ¶ 30 ("The negative impacts of climate change on children trigger obligations among all duty bearers to take action to protect all children from its actual and foreseeable adverse effects.").
[398] CRC, *General Comment No. 15 on the right of the child to the enjoyment of the highest attainable standard of health*, CRC/C/GC/15, ¶ 50 (Apr. 17, 2013).
[399] CRC/C/GC/26, ¶ 15.
[400] E/C.12/2018/1*, ¶ 5.
[401] A/HRC/37/59, ¶ 33(c).
[402] CRC/C/GC/26, ¶ 97.

accordance with [the] best available science[.]"[403] This Court has similarly recognized that environmental damages should be mitigated based on "the best available scientific data and technology."[404]

134. The Special Rapporteur on human rights and hazardous substances and wastes[405] explained that the best available science "can be identified because it is broadly accepted by the scientific community or, at a minimum, subject to minimal epistemic contestation,"[406] and further explained the best available science can be identified in the "scientific assessments of the Intergovernmental Panel on Climate Change . . . contribut[ing] critical knowledge to policymakers."[407]

5. The Measures Must Be Consistent with the 1.5°C Guardrail

135. The mitigation measures States are required to take under human rights law must be consistent with the 1.5°C warming guardrail, *i.e.*, they must ensure that warming is limited to 1.5°C.[408] This follows from application of the following: (i) the best available science, (ii) the precautionary principle, (iii) intergenerational justice, (iv) the heightened obligations of States to protect children and the youth, (v) international climate change law, and (vi) pronouncements made by human rights authorities.

136. **First**, the best available science, and in particular the reports of the IPCC (which are based on an international comprehensive review of peer reviewed scientific literature), reflect a strong scientific consensus that ensuring the global temperature rise is limited to 1.5°C is essential to avoid the worst of climate change's catastrophic and irreversible consequences.[409] The best available science shows that every additional increment of warming will significantly worsen the human rights situation and will decrease the availability of adaptation measures.[410] And, importantly, the human rights effects are not linear; as warming continues, there is a significant risk of feedback loops and tipping points that risk accelerated warming and abrupt and irreversible effects.[411] As the CRC explained, "[s]cientists warn about tipping points, which are thresholds beyond which certain effects can no longer be avoided, posing dire and

[403] Paris Agreement, Article 4; *see also id.* at 1 ("Recognizing the need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge").
[404] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 172; *see also* IACHR and OAS Resolution No. 4/2020, *Human Rights of Persons with COVID-19*, at 2 (July 27, 2020) ("[P]articipation in scientific progress and enjoyment of its benefits is a recognized universal and inter-American human right[.]").
[405] The full title is United Nations Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, referred to herein as the "Special Rapporteur on human rights and hazardous substances and wastes".
[406] A/HRC/48/61, ¶ 51.
[407] *Id*., ¶ 69.
[408] To the extent keeping warming to the 1.5°C warming guardrail is no longer possible, States' human rights obligations require them to take urgent mitigation measures consistent with keeping warming as close to 1.5°C as possible. *See* Hansen, Global warming in the pipeline; Joeri Rogelj, *et al*., *Non-CO2 emissions reductions implied by IPCC estimates of the Remaining Carbon Budget* [preprint, not yet peer reviewed by a journal] (Sept. 27, 2023).
[409] Section IV.A.5, *supra*.
[410] Sections IV.A.5, IV.A.7, *supra*; *see also* HRI/2019/1, ¶ 5 ("[E]very additional increase in temperature will further undermine the realization of rights.").
[411] Section IV.A.5, *supra*.

uncertain risks to children's rights."[412] Accordingly, as the CRC continued, the IPCC has warned "that it is imperative to accelerate mitigation efforts in the near term to limit the temperature increase to below 1.5°C above pre-industrial levels."[413]

137. **Second**, under the precautionary principle – requiring States to err on the side of safety when taking environmental measures, despite some level of scientific uncertainty regarding future impacts – warming must be limited to prevent as much harm as possible, which means ensuring it is limited to 1.5°C. As a Dutch court explained in the *Urgenda* case, the precautionary principle dictates "that more far-reaching measures should be taken to reduce greenhouse gas emissions, rather than less far-reaching measures."[414] The scientific consensus is that warming must not exceed 1.5°C in order to avoid the worst of climate change's catastrophic and irreversible consequences.[415] The application of the precautionary principle is particularly crucial here because the effects of climate change are extremely "serious [and often] irreversible."[416] These effects violate some of the most inalienable human rights of people across the planet on a massive scale, and disproportionally affect already vulnerable groups and communities.[417] The application of the precautionary principle is also particularly important to protect the rights of children, the youth, and future generations.[418] As the Commission warned, in a situation where we are "far from limiting the average global temperature to 1.5°C [and instead on] a trajectory towards a temperature above 2°C . . . [t]his would have devastating consequences, especially for millions of people living in poverty, who even in the best of scenarios, would face food insecurity, forced migration, disease and death. This threatens the very future of human rights and would undo the last fifty years of progress in development, health and poverty reduction."[419]

138. **Third**, intergenerational justice demands that warming is limited to protect the human rights of future generations to the maximum extent possible, which means ensuring it is limited to 1.5°C.[420] Intergenerational justice requires that immediate and adequate mitigation measures are implemented.[421] Inadequate mitigation shifts the burden onto the youth, children, and future generations, both in terms of the devastating effects of climate change as well as in terms of the astronomical costs of adaptation.[422]

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[412] CRC/C/GC/26, ¶ 96.
[413] *Id*., ¶ 97.
[414] *Netherlands v. Urgenda Foundation*, ¶ 7.2.10.
[415] Section IV.A.5, *supra*.
[416] Rio Declaration, Principle 15; *see also* Section V.A.2.ii, *supra*.
[417] *See* Sections IV.A.3-IV.A.4, V.A.1, *supra*.
[418] *See* Section V.A.2.ii, *supra*.
[419] IACHR, Res. 3/2021, at 4-5; *see also* HRI/2019/1, ¶ 9 ("[T]he Committees note with great concern that States' current commitments under the Paris Agreement are insufficient to limit global warming to 1.5°C above pre-industrial levels . . . Consequently, States are exposing their populations and future generations to the significant threats to human rights associated with greater temperature increases.").
[420] *See e.g.,* Maastricht Principles, Article 17. ("Violations of obligations to respect the human rights of future generations include . . . (d) Contributing to a decline in biodiversity or to anthropogenic climate change").
[421] *See* Section V.A.2.iv, *supra*.
[422] *See* Section V.A.2.iv, *supra*; Maastricht Principles, Article 17 ("Violations of obligations to respect the human rights of future generations include . . . (g) Impairing the ability of future generations to prevent and respond to climate change and other forms of environmental damage"); *id.*, Article 20 ("Necessary measures include . . . Ensuring that the burdens

Thus, the longer States fail to properly mitigate climate change (as they have done in prior decades) and allow the temperature to rise, the more of the burden is shifted onto other generations in contravention of intergenerational justice. As the CRC recognized, insufficient mitigation progress "exposes children to continuous and rapidly increasing harms associated with greater concentrations of greenhouse gas emissions and the resulting temperature increases."[423]

139. **Fourth**, ensuring that warming is limited to 1.5°C is necessary to protect children and the youth, because the predicted impacts associated with temperature rise over 1.5°C will most profoundly interfere with their lives, health, and livelihoods.[424] The CRC observed that children are "particularly impacted by the effect of climate change, both in the terms of the manner in which they experience such effects as well as the potential of climate change to affect them throughout their life," and that as a result, "States have heightened obligations to protect children from foreseeable harm."[425] The same applies to the youth.[426]

140. **Fifth**, the 1.5°C guardrail is consistent with thnnnnnne objectives set forth in international climate change agreements. The Paris Agreement recognizes that the temperature increase should be limited to 1.5°C to "significantly reduce the risks and impacts of climate change," which would be required to fulfill the framework's objective of "prevent[ing] dangerous anthropogenic interference."[427] In addition, the Paris Agreement requires that States mitigation measures "reflect [States'] highest possible ambition[.]"[428] The fact that the international climate change agreements do not explicitly require mitigation consistent with the 1.5°C guardrail or other quantitative emission reductions, cannot "limit the exercise of the rights and freedoms that [the American Convention and its Protocols] recognize[]."[429] It thus cannot preclude an interpretation of States' human rights obligations that is required to prevent the worst of climate change's catastrophic and irreversible impacts on human rights.[430]

141. **Sixth**, various human rights authorities have also committed to the 1.5°C guardrail, because climate science and the protection of human rights provide no other realistic choice. The 47 States of the Human Rights Council have called upon all States and stressed the importance for them to pursue "efforts to limit the temperature increase to 1.5°C above pre-industrial levels."[431] The Human Rights Council

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of mitigating and remedying climate change and other forms of environmental destruction are not shifted to future generations").

[423] CRC/C/GC/26, ¶ 96.

[424] *See* Sections IV.A.4, V.A.1, V.A.3.i.a.3, *supra*.

[425] *Sacchi, et al. V. Argentina, et al.*, ¶ 10.13.

[426] *See* Sections IV.A.4, V.A.1, V.A.3.i.a.3, *supra*.

[427] Paris Agreement, Article 2; *see also* Section V.A.2.i, *supra*.

[428] *Id*., Article 4(3).

[429] Advisory Opinion OC-5/85, Inter-Am. Ct. H.R., ¶ 52.

[430] Indeed, this Court has previously assessed human rights obligations on the basis of non-binding, international standards: in the Case of the *Xákmok Kásek Indigenous Community v. Paraguay*, this Court assessed whether Paraguay afforded the Indigenous community the right to life by reference to, amongst others, whether the State supplied the water required under non-binding, international standards articulated by the World Health Organization. *Xákmok Kásek Indigenous Community v. Paraguay*, Inter-Am. Ct. H.R. (Aug. 24, 2010) (Series C No. 214), ¶ 195 (hereinafter "*Xákmok Kásek v. Paraguay*").

[431] A/HRC/RES/45/30, ¶ 14; A/HRC/RES/38/4.

also called upon all States to "develop ambitious mitigation measures to minimize the future negative impacts of climate change on children to the greatest extent possible[,]"[432] which would require mitigation measures consistent with the 1.5°C guardrail. Further, (the Office of) the United Nations High Commissioner for Human Rights has consistently concluded that the maximum protection of human rights, and in particular the protection of children's rights requires immediate mitigation measures that ensure warming is limited to 1.5°C.[433]

142. Of course, a single State cannot, by itself, ensure that global warming is limited to 1.5°C. This Court has "stressed that the general obligation to prevent human rights violations is an obligation of means or behavior rather than of results [and that] the obligation of prevention established in environmental law is [similarly] an obligation of means and not of results[.]"[434] Thus, an individual State's human rights obligations require it to take mitigation measures, cutting GHG emissions and preserving natural carbon sinks, *consistent with* the 1.5°C guardrail (what this means is discussed in the next section). If *all* States were to meet these obligations, and take mitigation measures *consistent with* the 1.5°C guardrail, the best available science indicates that global warming can be limited to 1.5°C.

6. The Measures Must Be Based on Fair Share Accounting

143. To determine the level of emissions that each State must cut so as to be consistent with the 1.5°C guardrail (or, conversely, is allowed to emit), the science of fair share accounting models documented in the peer reviewed, published scientific literature provides a range of quantitative guidelines for States and their courts to utilize. As the CRC has explained "[m]itigation measures should reflect *each State party's fair share* of the global effort to mitigate climate change, in the light of the total reductions necessary to protect against continuing and worsening violations of children's rights."[435]

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[432] A/HRC/RES/45/30, ¶ 14.

[433] A/HRC/35/13, ¶ 54 ("Fundamentally, a child rights-based approach requires: (a) Ambitious mitigation measures to minimize the future negative impacts of climate change on children to the greatest extent possible by limiting warming to no more than 1.5°C above pre-industrial levels, as called for in the Paris Agreement . . . "); Human Rights Council, *Analytical study on the relationship between climate change and the human right of everyone to the enjoyment of the highest attainable standard of physical and mental health*, A/HRC/32/23, ¶ 55 (May 6, 2016) ("Limiting warming to the greatest extent possible and achieving the target of 1.5°C above pre-industrial levels should therefore be the objective of all climate action."); Human Rights Council, *Realizing the rights of the child through healthy environment*, A/HRC/43/30, ¶ 107 (Jan. 3, 2020) ("States should . . . (d) Take ambitious mitigation measures to minimize the negative impacts of climate change on children to the greatest extent possible and at the very least to limit warming to no more than 1.5°C above pre-industrial levels, in line with the Paris Agreement . . . "); Human Rights Council, *Analytical study on the promotion and protection of the rights of older persons in the context of climate change*, A/HRC/47/46, ¶ 68 (Apr. 30, 2021) (recommending to "[t]ake urgent, meaningful and ambitious action to mitigate and adapt to climate change that protects the human rights of all, including the human rights of older persons, through the following actions: (a) Prepare, commit to and implement ambitious climate action plans to limit global warming to no more than 1.5°C . . ."); Human Rights Council, *Adverse impact of climate change on the full realization of the right to food*, A/HRC/53/47, ¶ 51 (June 19, 2023) ("The urgent reduction of greenhouse gas emissions is key to limiting global warming to 1.5°C and climate change-related impacts on the full realization of the right to food.").

[434] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 143.

[435] CRC/C/GC/26, ¶ 98(b) (emphasis added).

144. Mitigation measures must be based on the best available science,[436] and the current fair share accounting models documented in the peer reviewed, published scientific literature represent that best available science.[437] In particular, the IPCC has recognized this vast body of scientific literature on fair share accounting models, observing that "[v]arious assessment frameworks have been proposed to analyze fair share ranges for [mitigation targets]."[438] Fair share accounting models offer a realistic mechanism to establish enforceable mitigation benchmarks: the application of such models allows for a determination of concrete emissions reductions for each State for any temperature limit, including the 1.5°C guardrail.[439]

145. Many of these fair share models are anchored in the principles of international environmental law, including the principle of common but differentiated treatment.[440] Indeed, fair share models that require relatively more stringent emissions reductions from the richer nations that contributed more to climate change are consistent with this principle of common but differentiated treatment, the consensus that developed countries need to take the lead on mitigation,[441] as well as the requirement that positive human rights obligations do not "impose an impossible or disproportionate burden on the authorities."[442]

7. The Measures Must Be Immediate and Include Fast Mitigation

146. As a practical matter, in order for States to ensure that warming is limited to 1.5°C, States must take *immediate* mitigation measures.[443] The urgency of emission reductions has been recognized by international climate change treaties, with the Paris Agreement calling for "rapid reductions".[444] Similarly, the CRC also called for "urgent collective action by all States to mitigate greenhouse gas emissions[.]"[445] After explaining that mitigation objectives and measures must "be based on the best available science," the CRC further explained that "[t]he Intergovernmental Panel on Climate Change has illustrated that it is imperative to accelerate mitigation efforts in the near term[.]"[446] Immediate mitigation action is further

[436] Section V.A.3.i.a.3, *supra*.
[437] *See e.g.*, the scientific literature containing fair share accounting models cited in the studies in footnote 200, *supra*.
[438] IPCC, 2022: Mitigation of Climate Change Report at 423.
[439] *See e.g.*, Rajamani, National 'Fair Shares' in Reducing Greenhouse Gas Emissions.
[440] *See id.* at 991 for a description of the indicators used in fair share models that are supported by the relevant international environmental law principles.
[441] UNFCCC, Article 3(1) ("[T]he developed country Parties should take the lead in combating climate change[.]"); CRC/C/GC/26, ¶ 95 ("[H]istorical and current major emitters should take the lead in mitigation efforts."); *Netherlands v. Urgenda Foundation*, ¶¶ 7.2.1, 7.2.4, 7.2.7, 7.3.4, 8.1 (ordering the Netherlands to take mitigation measures according to higher standards set for developed countries).
[442] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 120; *see also* ¶ 103, *supra*.
[443] *See* Section IV.A.8, *supra*.
[444] Paris Agreement, Article 4(1); *see also* UNFCCC at 4 ("Recognizing also the need for developed countries to take immediate action . . .").
[445] CRC/C/GC/26, ¶¶ 95-96.
[446] *Id.*, ¶ 97; *see also id.*, ¶ 98(d) (calling for "short-term mitigation measures").

required by the same principles that require global warming to be limited to 1.5°C, including intergenerational justice and the precautionary principle.[447]

147. A related practical consequence of the fact that the world is hurtling fast towards the 1.5°C guardrail, is that the immediate mitigation measures must not only include a greatly accelerated structural shift in energy, agricultural, and industrial policies that will allow society to live within a much tighter carbon budget, but also "fast mitigation," *i.e.*, measures that slow the rate of warming in the near-term. As the CRC explained "States should prioritize rapid and effective emissions reductions now in order to support children's full enjoyment of their rights in the shortest possible period of time and to avoid irreversible damage to nature."[448] These fast mitigation measures include measures that cut emissions of SLCPs and preserve natural carbon sinks. As the Special Rapporteur on human rights and the environment recognized, "[a] group of pollutants that must be targeted with great urgency because of their substantial negative impacts on climate change and air quality are called short-lived climate pollutants and include black carbon, methane and tropospheric ozone."[449] These SLCPs have a relatively short life in the atmosphere and cutting them will therefore contribute to slowing down or reversing warming in the near-term.[450] As for natural carbon sinks, any actions that degrade these will quickly release large amounts of GHG emissions, and their preservation is thus key in regulating *net* emissions in the atmosphere in the near-term.[451] Indeed, the UNFCCC requires that each State "shall adopt national policies and take corresponding measures on the mitigation of climate change, by . . . enhancing its greenhouse gas sinks and reservoirs."[452] The CESCR has also recognized that mitigation measures must include "slowing down deforestation and moving to agroecological farming allowing soils to function as carbon sinks[.]"[453]

b. Obligation to Cooperate Internationally

148. Climate change is a global crisis that requires a global solution and action by all States.[454] The problem of climate change and States' reactions to it represent a typical "tragedy of the commons."[455] This is where a common resource – in this case the carbon budget and natural carbon sinks, amongst

[447] Section V.A.3.i.a.5, *supra*.
[448] CRC/C/GC/26, ¶ 98(e).
[449] Human Rights Council, *Issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*, A/HRC/40/55, ¶ 21 (Jan. 8, 2019); *see also* A/74/161, ¶ 80 ("States should also consider the following mitigation priorities: . . . (b) Accelerate actions to reduce short-lived climate pollutants (methane, black carbon, ground-level ozone and hydrofluorocarbons), including through the ratification and implementation of the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer; the expansion of programmes to replace polluting cookstoves and fuels with clean technologies; and binding regulations to address methane emissions from the oil and gas industry, agriculture and waste . . . .").
[450] ¶ 45, *supra*.
[451] ¶ 53, *supra*.
[452] UNFCCC, Article 4.2(a).
[453] E/C.12/2018/1*, ¶ 9; *see also* A/74/161, ¶¶ 12, 15 (identifying deforestation as a major cause of climate change).
[454] Human Rights Council, *Human rights and climate change*, A/HRC/RES/7/23, 1 (Mar. 28, 2008) ("Recognizing that climate change is a global problem and that it requires a global solution"); UNFCCC, at 2 ("Acknowledging that change in the Earth's climate and its adverse effects are a common concern of humankind."); A/HRC/31/52, ¶ 42 ("States have consistently treated climate change as a global problem that requires a global response.").
[455] Stephen M. Gardiner, *A Perfect Moral Storm: The Ethical Tragedy of Climate Change,* at 28 (2011) (hereinafter "Gardiner, A Perfect Storm").

others – is depleted by individual actors, such as States, acting in their individual, short-term economic interests, ruining everyone's long-term collective interest.[456] Although it is collectively rational for States to invest in substantial efforts to mitigate climate change, an individual State has an incentive to continue its emissions and rather free ride on the mitigation outcomes achieved by others.[457] Avoiding the climate change tragedy of the commons requires international cooperation and global governance.[458]

149. As aptly put by the Special Rapporteur on human rights and the environment, "[c]limate change is a paradigmatic example of a global threat that is impossible to address effectively without coordinated international action."[459] The UNFCCC acknowledges that "the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response[.]"[460] The Human Rights Council has similarly acknowledged in multiple Resolutions that "the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response . . . ."[461] Further, the CRC recognized that the IPCC illustrated that international cooperation is "critical to achieving ambitious climate change mitigation goals."[462]

150. Under international law, States have a general duty to cooperate on issues such as climate change. The duty to cooperate is enshrined in the Charter of the United Nations, which requires joint and separate action on respecting and observing human rights.[463] In addition, this duty also follows from "the principle of international law that States must carry out their international obligations in good faith, so as not to undermine the ability of other States to meet their own obligations."[464] This good faith principle applies to human rights obligations; as this Court explained, "[t]he obligations to respect and to ensure human rights require that States abstain from preventing or hindering other States Parties from complying with the obligations derived from the Convention."[465] Due to the global nature of climate change, this good faith principle is particularly applicable to climate change; as the Special Rapporteur on human rights and the environment explained, "[t]he failure of States to effectively address climate change through international cooperation would prevent individual States from meeting their duties under human rights law to protect and fulfil the human rights of those within their own jurisdiction."[466] Indeed, as this Court concluded, "States

[456] *See* Garrett Hardin, *The Tragedy of the Commons*, 162(3859) Science 1243, at 1244-1245 (Dec. 13, 1968).
[457] Gardiner, A Perfect Storm at 28.
[458] *See id*. at 28-29.
[459] A/HRC/31/52, ¶ 44.
[460] UNFCCC, at 2.
[461] *E.g.*, Human Rights Council, *Human rights and climate change*, A/HRC/RES/26/27, 2 (July 15, 2014); A/HRC/RES/38/4, at 2; A/HRC/RES/35/20 at 1-2; Human Rights Council, *Human rights and climate change*, A/HRC/RES/29/15, 1 (July 22, 2015).
[462] CRC/C/GC/26, ¶ 97 (*citing* IPCC Sixth Assessment Report).
[463] A/HRC/31/52, ¶ 43; Charter of the United Nations, Articles 55-56; A/HRC/33/31, Annex II, ¶ 6.
[464] A/HRC/31/52, n. 27.
[465] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 101.
[466] A/HRC/31/52, n. 27.

have a duty to cooperate in good faith to ensure protection against environmental damage. This duty to cooperate is especially important in the case of shared resources . . . ."[467]

151. Thus, under human rights law "all States have a duty to work together to address climate change,"[468] considering that "[c]limate change is a human rights threat with causes and consequences that cross borders; thus, it requires a global response, underpinned by international solidarity[.]"[469] This obligation to cooperate internationally with other States includes cooperation on mitigation measures.[470] The CRC has summarized the obligation, specifically with respect to children, as follows:

> States have an obligation to take action, separately and jointly, through international cooperation, to respect, protect and fulfil children's rights. . . . [T]he full realization of children's rights under the Convention is in part contingent upon how States interact. Climate change, pollution and biodiversity loss clearly represent urgent examples of global threats to children's rights that require States to work together, calling for the widest possible cooperation by all countries and their participation in an effective and appropriate international response.[471]

c. Obligations of Signatories

152. As a foundational rule of international law, all States who signed (but did not ratify) a treaty are bound to refrain from taking any actions that would "defeat the object and purpose of the treaty."[472] This obligation is highly relevant with respect to climate change, because one State's continued failure to properly mitigate climate change irreversibly depletes the carbon budget, threatens warming to exceed the 1.5°C guardrail, and risks severe tipping points from which the planet cannot recover.[473] Moreover, a State's contributions to climate change not only violate the human rights of its own citizens, but also those of other States. A State's failure to mitigate thus "defeat[s] the object and purpose of the [entire] treaty," not only for itself but for all States.[474] Therefore, even States who only signed – but did not ratify – the American Convention and its Protocols have obligations to limit GHG emissions, because acts resulting in such emissions, including acts allowing or enabling such emissions through, for example, permits or subsidies, "defeat the object and purpose of the treaty."[475]

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[467] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 185.
[468] A/HRC/31/52, ¶ 46.
[469] A/HRC/33/31, Annex II, ¶ 6.
[470] *See* A/74/161, ¶ 68 ("States have an obligation to cooperate to achieve a low-carbon, climate resilient and sustainable future . . . .").
[471] CRC/C/GC/26, ¶ 91.
[472] Vienna Convention, Article 18.
[473] *See* Curtis A. Bradley, *Treaty Signature The Oxford Guide to Treaties*, at 208-219 (Duncan B. Hollis ed., Oxford University Press, 2012) ("[T]he signing obligation appears to have been designed to ensure that one of the signatory parties . . . does not change the status quo in a way that substantially reduces either its ability to comply with its treaty obligations after ratification or the ability of the other treaty parties to obtain the benefit of the treaty.").
[474] *Id.*
[475] *See id.* (listing examples of actions violating the obligations of signatories as provided in a Harvard research project that was part of the legislative history, including "(4) A treaty concedes the right of the nationals of one signatory to navigate a river within the territory of the other, but the latter soon after the signature of the treaty takes some action which would render navigation of the river difficult or impossible[,] [and] (6) A treaty provides that one of the signatories

ii. Domestic Courts Have an Obligation to Enforce the Human Rights that Require Immediate Mitigation Measures

153. As discussed, human rights require States to take climate change mitigation measures consistent with the 1.5°C warming guardrail. As such, domestic courts are obligated to enforce these mitigation obligations. This directly follows from human rights provisions and principles.

154. **First**, State obligations under international human rights law apply to all branches of government.[476] In particular, this Court has stressed that "when a State is a party to international treaties such as the American Convention on Human Rights . . . these treaties are binding on all of its organs, including the Judiciary[.]"[477]

155. **Second**, under Article 2 of the American Convention, States are required to give domestic legal effect to all human rights through legislative or other measures.[478] The very purpose of providing domestic legal effect to human rights must in part be to ensure that these can be enforced by domestic courts. Indeed, this Court has held that this obligation also requires the judiciary to apply so-called "conventionality control," according to which "every judge must ensure the *effet utile* of international instruments so that they are not reduced or annulled by the application of domestic laws and practices contrary to the object and purpose of the international instrument or standard for the protection of human rights."[479] In this task, judges "must take into account not only the American Convention and other inter-American instruments, but also the Inter-American Court's interpretation of them."[480]

156. **Third**, the American Convention requires exhaustion of domestic remedies. Article 46(1)(a) of the American Convention requires that for a petition or communication lodged by a victim with the Commission to be admissible, "the remedies under domestic law [must] have been pursued and exhausted."[481] This demonstrates that domestic courts are seen as the primary avenue for victims seeking to enforce their human rights.[482]

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shall undertake to deliver to the other a certain quantity of the products of a forest or a mine, but while ratification is pending the signatory undertaking the engagement destroys the forest or the mine, or takes some action which results in such diminution of their output that performance of the obligation is no longer possible.").

[476] ¶ 101, *supra*.

[477] *Álvarez, et al. v. Guatemala*, ¶ 330; *see also Almonacid-Arellano, et al. v. Chile*, Inter-Am. Ct. H.R. (Sept. 26, 2006) (Series C No. 154), ¶ 124 (hereinafter "*Almonacid-Arellano, et al. v. Chile")* ("[W]hen a State has ratified an international treaty such as the American Convention, its judges, as part of the State, are also bound by such Convention.").

[478] ¶ 106, *supra*; American Convention, Article 2.

[479] *Heliodoro Portugal v. Panama*, Inter-Am. Ct. H.R. (Aug. 12, 2008) (Series C No. 186), ¶¶ 179-180; *see also Álvarez, et al. v. Guatemala*, ¶ 330; *Almonacid-Arellano, et al. v. Chile*, ¶ 124.

[480] *Álvarez, et al. v. Guatemala*, ¶ 330; *see also Almonacid-Arellano, et al. v. Chile*, ¶ 124; Advisory Opinion OC-24/17 Inter-Am. Ct. H.R., ¶ 26.

[481] American Convention, Article 46(1)(a).

[482] *See* International Justice Resource Center, *Exhaustion of Domestic Remedies in the United Nations System*, at 1 (Aug. 2017) ("The exhaustion of domestic remedies requirement rests on the principle that international bodies should supplement State institutions and should not get involved unless the human rights violation cannot be resolved at the national level."); *Selmouni v. France*, European Court of Human Rights (July 29,1999) (25803/94), ¶ 74 ("In this way, it is an important aspect of the principle [of exhaustion] that the machinery of protection established by the Convention is subsidiary to the national systems safeguarding human rights[.]").

157. **Fourth**, under Article 25 of the American Convention, States have an obligation to provide effective judicial remedies for acts that violate the human rights enshrined in the Convention and its Protocols.[483] As this Court has held, "States have the obligation to guarantee access to justice in relation to the State environmental protection obligations [under human rights law],"[484] and such access to justice must "provide[] a means of redressing any human rights violations that may result from failure to comply with environmental standards, and includes remedies and reparation."[485]

158. Thus, domestic courts must be available to enforce States' human rights obligations, which, within the context of the climate emergency, includes the obligation to take mitigation measures consistent with the 1.5°C warming guardrail. Accordingly, domestic courts must both scrutinize and enforce the mitigation targets of States as well as ensure that States takes the necessary mitigation measure to meet those targets. Indeed, the CESCR has explicitly welcomed courts and other human rights mechanisms taking "an active role in ensuring that States comply with their duties under existing human rights instruments to combat climate change," noting that such actions "have an essential role to play in protecting human rights by ensuring that States avoid taking measures that could accelerate climate change, and that they dedicate the maximum available resources to the adoption of measures that could mitigate climate change."[486]

B. States' Current Mitigation Actions and Judicial Responses Have Failed to Meet Their Human Rights Obligations

159. States' current mitigation measures have been inadequate to meet their human rights obligations, and domestic courts so far have failed to enforce States' human rights obligations to implement mitigation measures consistent with the 1.5°C guardrail.

160. First, with respect to States' mitigation measures, as discussed above, neither the NDCs pledged by States under the Paris Agreement, nor the policies currently in place are adequate to ensure that global warming stays below the 1.5°C guardrail.[487]

161. Various human rights authorities have criticized the lack of ambition reflected in the NDCs over the years, observing the resulting disastrous consequences for human rights, and the fact that meeting such inadequate NDCs will not discharge States' human rights obligations.[488] For example, in 2020, various human rights bodies noted the following "with great concern":

> [T]hat States' current commitments under the Paris Agreement are insufficient to limit global warming to 1.5°C above pre-industrial levels, and that many States are not on track to meet their

[483] American Convention, Article 25.
[484] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 237.
[485] *Id*., ¶ 234.
[486] E/C.12/2018/1*, ¶¶ 8-9.
[487] Section IV.A.6, *supra*.
[488] A/HRC/31/52, ¶ 76 ("[Therefore, even if they meet their current commitments, States will not satisfy their human rights obligations."); E/C.12/2018/1*, ¶ 6.

commitments. Consequently, States are exposing their populations and future generations to the significant threats to human rights associated with greater temperature increases.[489]

162. The Special Rapporteur on human rights and climate change also observed the "huge disparity in effort and a lack of commitment by States that have been the primary historical contributors of greenhouse gas emissions, leading to the negative impact on the enjoyment of human rights."[490] He concluded from this that "States are failing in their human rights obligation to mitigate climate change and prevent its negative human rights impacts."[491]

163. Second, domestic courts have either tolerated inadequate mitigation targets or they have even set inadequate mitigation targets themselves – thereby failing to fully enforce the human rights threatened by climate change. Within the Americas, domestic courts have not directly ruled on the adequacy of States' overall mitigation targets, but a couple domestic court decisions have required mitigation measures in line with States' NDCs. In *Future Generations v. Ministry of the Environment et al.*, the Colombian supreme court ordered the government to develop and implement plans to reduce the rate of deforestation in the Amazon in line with its NDC, reasoning that it is the duty of the State to abide by the Paris Agreement goals.[492] In *PSB, et al. v Brazil*, the Brazilian court held that acts or omissions that contradict the Paris Agreement, including Brazil's NDC, are in direct violation of the Brazilian constitution and human rights, and, accordingly, ordered the State to operationalize its climate fund.[493] These decisions established some positive domestic legal developments, but failed in a critical regard in that they required action in line with the State's NDC without scrutinizing that target and ensuring that it was sufficient for the State to meet its human rights obligations.

164. Outside the Americas, a few domestic courts have more directly confronted the question of the adequacy of States' mitigation targets, and some of their decisions are instructive. Some European domestic courts only enforced existing mitigation targets, including NDCs, but refused to assess the adequacy of these targets. In *Klimaticka v. Czech Republic*, the Czech court held that the State was obligated to implement mitigation measures to achieve the target in the European Union (EU) NDC to cut emissions by 55% by 2030 (compared to 1990 levels).[494] However, the Czech court did not consider whether this NDC was consistent with ensuring global warming is limited to 1.5°C, and refused to assess the adequacy of the State's mitigation measures against a calculation of its fair share of global emissions reductions.[495] In *Commune de Grande-Synthe v France*, the French court ordered the government to take

[489] HRI/2019/1, ¶ 9.
[490] A/77/226, ¶ 8; *see also id.*, ¶¶ 7, 11-14.
[491] *Id*., ¶ 10.
[492] *Future Generations v. Ministry of Environment, et al.*, Colombian Supreme Court (Apr. 5, 2018) (11001-22-03-000-2018-00319-01), ¶¶ 11.3-14.
[493] *PSB, et al. v. Brazil (on Climate Fund)*, Supreme Federal Tribunal of Brazil (July 4, 2022) (ADPF/708), ¶¶ 9-18, 36-37.
[494] *Klimaticka v. Czech Republic*, Municipal Court of Prague (June 15, 2022) (14A 101/2021), ¶¶ 250-259, 281, 328.
[495] *See id*., ¶¶ 227-242.

mitigation measures to achieve its national emissions reduction target of 40% by 2030 (compared to 1990 levels).[496] However, the French court did not consider the adequacy of this mitigation target.[497]

165. In contrast, in *Urgenda Foundation v. State of the Netherlands*, the Dutch supreme court *did* hold that the State's voluntary mitigation targets were inadequate.[498] However, the alternative targets set by the State were still inadequate. The Dutch court ordered the State to cut GHG emissions by 25% by 2020 (compared to 1990 levels), relying on the IPCC's Fourth Assessment Report, in which a target of cutting emissions by 25-40% by 2020 (compared to 1990 levels) was set for industrialized and emerging economies.[499] However, this IPCC target was based on an intention of limiting warming to 2°C, even though, at the time of the Dutch supreme court decision, it had already "been recognised for some years that global warming should not be limited to a maximum of 2°C to prevent dangerous climate change, but to a maximum of 1.5°C."[500] Moreover, the Dutch court was only willing to enforce the "absolute minimum" or the "lower limit of [the Netherlands'] share in the measures taken worldwide against dangerous climate change," *i.e.*, the 25% target.[501] As a result, if all States adopt similar minimum mitigation targets, this would not even limit warming to 2°C, let alone 1.5°C.[502]

C. The Excuses Proffered by States for Their Failure to Meet Their Human Rights Obligations Cannot Withstand Scientific or Legal Scrutiny

166. States have proffered various factual and legal excuses for their failure to implement mitigation measures consistent with the 1.5°C warming guardrail. Similarly, domestic courts in particular have fallen woefully short by failing to place binding and enforceable obligations on States to take mitigation measures consistent with the 1.5°C guardrail. These excuses and failures disregard scientific consensus, economic reality, and international human rights law. Below, representative excuses and failures are discussed, demonstrating that none of them can withstand scientific or legal scrutiny.

1. The Multi-Causal Nature / Smaller State Excuse

167. States have in various ways invoked the multi-causal nature of climate change and the inherent lack of perfect certainty as to whether certain mitigation measures would in fact alleviate particular

[496] *Commune de Grande-Synthe v France*, French Counsel of State (July 11, 2021) (No. 427301), Article 1; *Commune de Grande-Synthe v France*, French Counsel of State (Nov. 19, 2020) (No. 427301), ¶ 11.
[497] *See Commune de Grande-Synthe v France*, Opinion of Stephanie Hoynck, Consultant Judge (Rapporteur Public) (Nov. 19, 2020) (No. 427301), § 2.2 (opining that the French court should not follow the Dutch court in the *Urgenda* case, where an alternative target was set).
[498] *Netherlands v. Urgenda Foundation*, ¶¶ 7.5.1, 8.1, 8.3.5.
[499] *Id*., ¶¶ 7.1, 7.2.11, 7.5.1, 8.1, 8.3.5.
[500] *Id*., ¶¶ 7.2.1, 7.2.8.
[501] *Id*., ¶¶ 6.3, 7.5.1.
[502] Gerry Liston, *Enhancing the efficacy of climate change litigation: how to resolve the 'fair share question' in the context of international human rights law*, 9(2) Cambridge Int'l J. 241, at 248 (2020).

human rights consequences.[503] This argument is often posited by smaller States, which argue that their mitigation measures would be but a drop in a bucket.[504] This excuse fails for several reasons.

168. **First**, it is well-established that all mitigation measures combat climate change, and, to the extent there is any lingering uncertainty about whether specific measures cause or alleviate specific human rights violations, the precautionary principle prevents States from invoking that as an excuse for inaction.[505] The causes of climate change are well-established, and the science shows both that each ton of GHG emitted anywhere in the world contributes to climate change as well as that each additional ton worsens the human rights effects of climate change.[506] In fact, as warming continues, there is a significant risk of feedback loops and tipping points that risk accelerated warming and abrupt and irreversible effects.[507] Thus, even accepting the notion of uncertainty, there is still only one reasonable conclusion: mitigation measures will improve human rights. As explained by the Dutch court in the *Urgenda* case, "each reduction of greenhouse gas emissions has a positive effect on combating dangerous climate change, as every reduction means that more room remains in the carbon budget. The defence that a duty to reduce greenhouse gas emissions on the part of the individual states does not help because other countries will continue their emissions cannot be accepted for this reason either: no reduction is negligible."[508] And to the extent there is any lingering uncertainty as to the exact effects of specific mitigation measures, the Special Rapporteur on human rights and the environment explained, "[t]he lack of full scientific certainty should never be used to justify postponing effective and proportionate measures to prevent environmental harm to children, especially when there are threats of serious or irreversible damage."[509]

169. **Second**, as explained by the CRC, "[i]n accordance with the principle of common but differentiated responsibilities, . . . the collective nature of the causation of climate change does not absolve the State party of its individual responsibility that may derive from the harm that the emissions originating within its territory may cause to children, whatever their location."[510] The Commission has similarly

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[503] *See e.g.*, Argentina submission in *Sacchi, et al. v. Argentina, et al.*, at 34 ("[B]eyond the general assertions concerning the contribution of States to the phenomenon of climate change, there is no proof of the causal link between actions or omissions that could be attributable to the Argentine State and the damages that could have been caused by the extreme heat in France, a fire in Tunisia or rising sea levels in the Marshall Islands[.]"); Brazil submission in *Sacchi, et al. v. Argentina, et al.*, ¶ 37 ("Brazil cannot be held responsible for unlawful acts that might have been committed by other States, it would be inconceivable to hold Brazil responsible either for a State's decision to not be a part of an international commitment, or for the consequences of another State's actions, such as its emissions of carbon dioxide."); *id.*, ¶ 55 ("[T]he effects of climate change on the world cannot be attributed solely or specifically to the five countries that are part of the communication."); *Neubauer, et al. v. Germany*, ¶¶ 198-202.

[504] *E.g.*, *Netherlands v. Urgenda Foundation*, ¶ 5.6.3.

[505] Section V.A.2.ii, *supra*.

[506] ¶¶ 12, 21, 29, *supra*. This has also been recognized by human rights bodies and court. *E.g.*, HRI/2019/1, ¶ 5 ("[E]very additional increase in temperature will further undermine the realization of rights."); *Held v. Montana*, ¶ 92 ("Every ton of fossil fuel emissions contributes to global warming and impacts to the climate and thus increases the exposure of Youth Plaintiffs to harms now and additional harms in the future."); *id.*, ¶¶ 72, 91; *Gloucester Resources Limited v. Minister for Planning*, Australia Land and Environment Court of New South Wales (Feb. 8, 2019) (NSWLEC 7), ¶¶ 514, 516.

[507] Section IV.A.5, *supra*.

[508] *Netherlands v. Urgenda Foundation*, ¶ 5.7.8.

[509] A/HRC/37/58, ¶ 58.

[510] *Sacchi, et al. v. Argentina, et al.*, ¶ 10.10.

cautioned that States' human rights obligations to mitigate GHGs "should not be neglected because of the multi-causal nature of the climate crisis, as all States have common but differentiated obligations in the context of climate action."[511]

170. **Third**, all States are bound by their human rights obligations, no matter how small the State is (in land mass or population). As the Special Rapporteur on human rights and the environment explained, the fact that "no single State can, by itself, do more than delay [the climate change] effects as long as the emissions of other States continue to increase[,] . . . does not mean that States have no obligations under human rights law to mitigate their own emissions[.]"[512]

171. Indeed, based on these facts and principles, various domestic courts ordering States to take mitigation measures have come to the same conclusion. In the Dutch *Urgenda* case, the court opined that under human rights law, "the Netherlands is obliged to do 'its part' in order to prevent dangerous climate change, even if it is a global problem."[513] The court explained that "partial responsibility is in line with what is adopted in national and international practice in the event of unlawful acts that give rise to only part of the cause of the damage."[514] The Dutch court then dismissed the related defenses:

> [T]he defence that a state does not have to take responsibility because other countries do not comply with their partial responsibility, cannot be accepted. Nor can the assertion that a country's own share in global greenhouse gas emissions is very small and that reducing emissions from one's own territory makes little difference on a global scale, be accepted as a defence. Indeed, acceptance of these defences would mean that a country could easily evade its partial responsibility by pointing out other countries or its own small share. If, on the other hand, this defence is ruled out, each country can be effectively called to account for its share of emissions and the chance of all countries actually making their contribution will be greatest, in accordance with the principles laid down in the preamble to the UNFCCC[.][515]

172. Similarly, in *Neubauer* – where a German Court ordered the State to amend its mitigation targets to cover the period from 2031 onwards – the court opined that "[t]he state may not evade its responsibility here by pointing to greenhouse gas emissions in other states[.]"[516] The court continued:

> On the contrary, the particular reliance on the international community gives rise to a constitutional necessity to actually implement one's own climate action measures at the national level – in international agreement wherever possible. It is precisely because the state is dependent on international cooperation in order to effectively carry out its obligation to take climate action . . . that

[511] IACHR, Res. 3/2021, ¶ 15.
[512] A/HRC/31/52, ¶ 71; *see also* E/C.12/GC/24, ¶ 32 ("The responsibility of the State can be engaged . . . even if other causes have also contributed to the occurrence of the violation, and even if the State had not foreseen that a violation would occur, provided such a violation was reasonably foreseeable.").
[513] *Netherlands v. Urgenda Foundation*, ¶ 5.7.1.
[514] *Id*., ¶ 5.7.6.
[515] *Id*., ¶ 5.7.7.
[516] *Neubauer, et al. v. Germany*, ¶ 202.

it must avoid creating incentives for other states to undermine this cooperation. Its own activities should serve to strengthen international confidence in the fact that climate action – particularly the pursuit of treaty-based climate targets – can be successful while safeguarding decent living conditions, including in terms of fundamental freedoms. In practice, resolving the global climate problem is thus largely dependent on the existence of mutual trust that others will also strive to achieve the targets.[517]

173. In *Held v. Montana*, the US court observed that "[e]ach additional ton of GHGs emitted into the atmosphere exacerbates impacts to the climate[,] [and] [e]very ton of fossil fuel emissions contributes to global warming and impacts to the climate and thus increases the exposure of Youth Plaintiffs to harms now and additional harms in the future."[518] Accordingly, it held that "Montana's GHG contributions are not *de minimis* but are nationally and globally significant. Montana's GHG emissions cause and contribute to climate change and Plaintiffs' injuries and reduce the opportunity to alleviate Plaintiffs' injuries."[519]

2. The Costs Excuse

174. At other times, States have expressed concerns about the costs of mitigation.[520] Apart from the fact that such economic costs pale in comparison to the devastating harm to human lives that inadequately mitigated climate change will cause, such concerns also ignore economic reality. Economic analysis indicates that from a purely costs perspective, it is financially beneficial to mitigate now, rather than face the high adaptation costs and economic losses related to the impacts of climate change later.[521] With respect to these losses, the Special Rapporteur on human rights and climate change explained that "[b]y 2030, the unavoidable economic losses due to climate change are projected to reach $290 billion to $580 billion."[522] And as to the consequences already incurred, the Special Rapporteur noted that, "[a] report on 55 economies hit hard by climate change found they had lost about $525 billion in the past two decades owing to the impacts of global warming."[523]

175. Failing to invest in adequate mitigation now and pushing the financial burden of adaptation, more costly mitigation, and economic losses into the future and to locations harmed most by climate change, also raises serious equity concerns. It raises intergenerational justice concerns by shifting the financial burden onto future generations, which will bear the brunt of the devastating impacts of climate change.[524] In addition, richer States generally have the bulk of the responsibility for global GHG emissions,

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[517] *Id*., ¶ 202.
[518] *Held v. Montana*, ¶¶ 91-92.
[519] *Id*., ¶ 16.
[520] States' collective concerns about the costs of climate change mitigation are expressed in Article 3 of the UNFCCC, which requires "that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost." These concerns are also apparent in the government-approved outlines of IPCC reports requesting that the macroeconomic costs of mitigation should be assessed. *E.g.*, IPCC, *Chapter Outline of the Working Group III Contribution to the IPCC Sixth Assessment Report (AR6)*, at 3 (Sept. 6-10, 2017).
[521] Section IV.B.3, *supra*.
[522] A/77/226, ¶ 53 (internal citations omitted).
[523] *Id*. (internal citations omitted).
[524] *See* Section V.A.2.iv, *supra*.

but the poorer States are bearing the brunt of the harm from climate change[525] – a failure to mitigate shifts the burden further to those poorer States which not only have contributed less to climate change, but also have less capacity to fight it. This is contrary to the equity considerations behind the common but differentiated responsibilities principle.[526] As the Special Rapporteur on human rights and climate change observed, richer States' failure to mitigate climate change represents "an enormous injustice being manifested by developed economies against the poorest and least able to cope."[527] The Special Rapporteur reported that, already, "[i]t has been estimated that the United States alone has inflicted more than $1.9 trillion in damage to other countries from the effects of its greenhouse gas emissions."[528]

3. The Carbon Leakage Excuse

176. States have also cited concerns about "carbon leakage," a phenomenon where GHG emitting activities relocate from a State with stricter climate policies to a State with less strict policies, thereby undercutting the effectiveness of the mitigation measures.[529] Such carbon leakage would occur in the context of asymmetric climate policies or situations where one State implements ambitious climate regulations ahead of others.[530] States citing this excuse, thus, express concerns that their mitigation measures will be (partly or entirely) offset by increased emissions elsewhere where not all States take the same or similar measures.

177. Assuming the legitimacy of such concerns, they would largely be alleviated where all States cooperate and act on climate mitigation.[531] And as the German court in *Neubauer* explained, it is "precisely because the state is dependent on international cooperation in order to effectively carry out its obligation to take climate action," that it must "actually implement one's own climate action measures at the national level."[532] The court further explained that the State's "own activities should serve to strengthen international

[525] IPCC, 2022: Impacts, Adaptation and Vulnerability Report at 54 ("Adverse impacts on economic growth have been identified from extreme weather events (high confidence) with large effects in developing countries (high confidence)."); 67 ("Regional estimates of GDP damage vary (high confidence). Severe risks are more likely in (typically hotter) developing countries (medium confidence). . . . The high sensitivity of developing economies to climate impacts will pose increasing challenges to economic growth and performance[.]"); A/77/226, ¶ 2 ("Some have suggested the term "atmospheric colonization" to explain the global imbalance between the impacts of climate change and the emitters of greenhouse gases. When ranked by income, the economically most privileged 50 per cent of countries are responsible for 86 per cent of the cumulative global carbon dioxide emissions, while the economically vulnerable half are responsible for only 14 per cent.").
[526] *See* Section V.A.2.iii, *supra*.
[527] A/77/226, ¶ 2.
[528] *Id*., ¶ 58.
[529] Mexican Ministry for the Environment and Natural Resources *et al*., *Emissions Trading in Mexico: Analysis of Carbon Leakage Risks*, at 20 ("Carbon leakage is particular concern for Mexico as the economy depends substantially on the industrial sector and international trade."); Misato Sato and Josh Burke, *What is carbon leakage? Clarifying misconceptions for a better mitigation effort*, London School of Economics & Political Science (Dec. 8, 2021) (hereinafter "Sato, What is carbon leakage?").
[530] Sato, What is carbon leakage?
[531] International Monetary Fund, *Climate Change Challenges in Latin America and the Caribbean*, at 12 (hereinafter "IMF, Climate Change Challenges in Latin America and the Caribbean") ("Importantly, cooperation among countries for a synchronous move would not only yield high global climate dividends but also reduce the political cost of climate policies at the individual country level, in addition to limiting the risk of carbon leakage.").
[532] *Neubauer, et al. v. Germany*, ¶ 202.

confidence," and that "resolving the global climate problem is thus largely dependent on the existence of mutual trust that others will also strive to achieve the targets."[533] Thus, the German court explained that States unilaterally taking mitigation measures is in fact a way to foster international trust and cooperation, and incentivize other States to take the same or similar measures. Carbon leakage would mostly be eliminated if all States were to take mitigation measures as required by their human rights obligations.

4. The Paris Agreement Excuse

178. Various States have argued that their obligations with respect to climate change do not extend beyond those obligations included in international climate change treaties, in particular, the Paris Agreement.[534] And as we have seen, some courts have been unwilling to enforce anything beyond the States' NDCs under the Paris Agreement.[535]

179. These arguments ignore the fact that States have binding human rights obligations that require more on mitigation than what States voluntarily agreed to under the Paris Agreement. As the CESCR explained, "[q]uite apart from such voluntary commitments made under the climate change regime, however, all States have human rights obligations, which should guide them in the design and implementation of measures to address climate change."[536] And as this Court explained, "one cannot "invoke restrictions contained in . . . other international instruments, but which are not found in the [American] Convention, to limit the exercise of the rights and freedoms that the latter recognizes."[537] Rather, "the rule most favorable to the individual must prevail."[538] Similarly, the CRC explained that although States have some "discretion in arriving at a reasonable balance between determining the appropriate levels of environmental protection and achieving other social goals[,] . . . such leeway is limited by the obligations of States under the Convention" setting out the human rights of children.[539] Thus, any leeway provided by the Paris Agreement is constrained by States' *binding* human rights obligations, which, in the face of the climate emergency, require States to do more on mitigation than they have currently voluntarily agreed to under the Paris Agreement.[540]

180. It is thus obfuscation to assert that the Paris Agreement does not set binding obligations for States to take mitigation measures consistent with the 1.5°C warming guardrail and that therefore lesser

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[533] *Id*.
[534] *See e.g.,* country comments to the CRC Draft General Comment No. 26 from Canda at 6 ("While Canada agrees that the Convention should inform how States implement their climate change obligations and commitments and that States should not be breaching their obligations with respect to children's rights when implementing their climate change obligations and commitments, Canada would note that the UN Framework Convention on Climate Change and the Paris Agreement are the agreed upon international framework for States to implement their mitigation and adaptation strategies, cooperation and financial support when it comes to climate change."), and the Holy See, ¶ 2 ("State's concrete obligations regarding climate change are not enshrined in the CRC but are governed by other international legal instruments").
[535] Section V.B, *supra*.
[536] E/C.12/2018/1*, ¶ 3.
[537] Advisory Opinion OC-5/85, Inter-Am. Ct. H.R., ¶ 52; *see also* ¶ 68, *supra*.
[538] Advisory Opinion OC-5/85, Inter-Am. Ct. H.R., ¶ 52 (*citing* American Convention, Article 29).
[539] CRC/C/GC/26, ¶ 73.
[540] *See* Sections V.A.3, V.B, *supra*.

mitigation actions are condoned. For all the reasons discussed, States' binding human rights obligations require them to take mitigation measures to limit warming to 1.5°C.[541] Indeed, this Court has previously assessed human rights obligations on the basis of non-binding, international standards,[542] and the 1.5°C guardrail has been widely accepted by the scientific and international community.[543]

181. It is similarly obfuscation to assert that the Paris Agreement does not precisely determine the fair shares of States in accordance with which they must take mitigation measures, and that therefore inadequate NDCs are acceptable. The best available science offers fair share accounting models documented in the peer reviewed, published scientific literature, which provide a range of quantitative guidelines for States and their courts to utilize in ensuring their mitigation measures are consistent with the 1.5°C warming guardrail.[544] Moreover, as the German court in *Neubauer* explained, any disagreements over what a State's fair share is in mitigating climate change cannot invalidate basic obligations such as human rights or constitutional obligations: "Nor can a specific constitutional obligation to reduce CO_2 emissions be invalidated by simply arguing that Germany's share of the reduction burden and of the global CO_2 budget are impossible to determine."[545] Indeed, this Court has explained that States' human rights obligations must be interpreted "from the 'best perspective' for the protection of the individual,"[546] which requires that States, and not the victims of climate change, bear the consequences of these States' failure to reach a consensus on their respective fair shares of emissions reductions.

182. Finally, that the human rights treaties do not explicitly reference climate change, does not mean they cannot create State obligations relating to climate change that require protection not specifically set forth in the climate change treaties such as the Paris Agreement.[547] As explained by this Court, "human rights treaties are living instruments, the interpretation of which must evolve with the times and contemporary conditions."[548] Human rights obligations thus must be interpreted in the context of the climate emergency, which presents an imminent human rights crisis.

5. The Political Question Doctrine Excuse

183. To this date, domestic courts in the Americas have not yet been confronted directly with the question of the adequacy of a State's overall mitigation targets. Some domestic courts outside the

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[541] Section V.A.3, *supra*.
[542] *Xákmok Kásek v. Paraguay*, ¶ 195 (assessing whether Paraguay afforded the Indigenous community the right to life, by reference to, amongst others, whether the State supplied the water required under non-binding, international standards articulated by the World Health Organization).
[543] Section V.A.3.i.a.5, *supra*.
[544] Section V.A.3.i.a.6, *supra*.
[545] *Neubauer, et al. v. Germany*, ¶ 225.
[546] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 41; *see also* ¶ 70, *supra*.
[547] For arguments to the contrary, *see e.g.*, country comments to the CRC Draft General Comment No. 26 from Canada at 2 ("Canada is concerned that the Draft General Comment in some instances suggests obligations that go beyond what States Parties agreed to be bound to when adhering to the Convention. A General Comment should not endeavour to alter the plain and ordinary meaning of treaty provisions (pursuant to Article 31 of the Vienna Convention on the Law of Treaties), or to expand the obligations they contain beyond the scope of States' consent."), the Holy See, ¶ 2, and France at 2.
[548] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 43.

Americas have avoided the question of the State's mitigation obligations altogether, citing doctrines such as the political question or separation of powers doctrine. For example, a Belgian court held that Belgium's failure to achieve its mitigation target under EU law breached its duties under human rights law, but cited the doctrine of separation of powers as preventing it from deciding whether the State must achieve reductions greater than those set by the EU targets.[549]

184. However, domestic courts are bound by human rights obligations, which includes the obligation to enforce such rights.[550] In the context of the climate change emergency, this includes ensuring that mitigation targets are consistent with the 1.5°C guardrail. Indeed, a few courts have been willing to scrutinize States' mitigation targets.[551] Specifically, in *Urgenda*, the Dutch court opined on this very question that "[i]f the government is obliged to do something, it may be ordered to do so by the courts, as anyone may be, at the request of the entitled party[.]"[552] In the context of the State's attempted reliance on the political domain doctrine, the Dutch Court also emphasized that "[t]his case involves an exceptional situation. After all, there is the threat of dangerous climate change and it is clear that measures are urgently needed[.]"[553]

D. The *Amici* Respectfully Request This Court Advise States That Their Human Rights Obligations Require Immediate and Effective Mitigation Measures

185. As discussed, States' human rights obligations require (i) their executive and legislative branches to immediately implement the required mitigation measures consistent with ensuring global warming is limited to 1.5°C and (ii) their domestic courts to enforce the human rights that require these mitigation measures. For this, States must adopt binding and enforceable mitigation targets that are consistent with the 1.5°C guardrail and implement mitigation measures to meet these targets. States' domestic courts must both scrutinize and enforce these mitigation targets as well as ensure that the State takes mitigation measure to meet them.

186. With respect to the mitigation measures, these must include immediate measures to implement the following two key mitigation strategies aimed at keeping within the 1.5°C guardrail: (i) an urgent structural shift in energy, agricultural, and industrial policies that will allow society to live within a much tighter carbon budget and (ii) fast mitigation in the form of cutting emissions of SLCPs and preserving natural carbon sinks. To implement these two key mitigation strategies, the *Amici* respectfully ask this Court

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[549] *ASBL Klimaatzaak v. Kingdom of Belgium, et al.*, French-speaking Court of First Instance of Brussels (June 17, 2021) (2015/4585/A), at 79-82; *see also Plan B Earth et al. v. The Secretary of State for Business, Energy and Industrial Strategy*, High Court of Justice, Queens Bench Division, Administrative Court, London (July 20, 2018) (CO/16/2018), ¶ 49 ("[T]his is an area where the executive has a wide discretion to assess the advantages and disadvantages of any particular course of action, not only domestically but as part of an evolving international discussion. The Secretary of State has decided, having had regard to the advice of the Committee, that now is not the time to revise the 2050 carbon target. That decision is not arguably unlawful, and accordingly the human rights challenge is not sustainable.").
[550] Section V.A.3.ii, *supra*.
[551] *Netherlands v. Urgenda Foundation* (ordering the Netherlands to set stricter mitigation targets); *Neubauer, et al. v. Germany* (ordering Germany to amend its mitigation targets to cover the period from 2031 onwards).
[552] *Netherlands v. Urgenda Foundation*, ¶ 8.2.1.
[553] *Id.*, ¶ 8.3.4.

advise States they must immediately take the below substantive (Section IV.D.1) and procedural measures (Section IV.D.2).[554] Additionally, the *Amici* propose three administrative measures to assist this Court in ensuring States implement the Advisory Opinion (Section IV.D.3).

1. Substantive Measures

187. **Substantive Measure 1** States must take immediate measures to implement a structural shift in energy, agricultural, and industrial policies that will allow society to live within a much tighter carbon budget consistent with the 1.5°C guardrail. To do so, States must revise their internal legislation, regulations, and administrative procedures to reduce their CO_2 emissions by 48% by 2030 and by 80% by 2040 (relative to 2019 levels),[555] and reach net zero CO_2 emissions by 2050.[556] The following are some of the many measures that States must implement to achieve this key mitigation strategy.

Substantive Measure 1.1 States must implement financial and fiscal incentives to facilitate a transition to activities with a low carbon footprint.[557] This must include a shift in subsidies, away from fossil fuels to clean energy, and may also include, for example, the introduction of carbon taxes, and the establishment of emissions trading systems, and feebates.[558]

Substantive Measure 1.2 States must transition to renewable and clean energies.[559] This includes focusing public investment in low-emissions technologies and infrastructure as well as regulation that is supportive of those energy sources.[560] Although energy generation in the LAC region generates few GHG emissions compared to most other regions,[561] the IPCC has indicated that the adoption of these measures in the region is nonetheless crucial.[562] Existing and planned power plants in the LAC region, especially gas power plants, are set to emit twice as much GHGs as what scenarios reviewed by the IPCC suggest would be in line with the region taking measures consistent with the 1.5°C guardrail.[563]

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[554] This is not an exhaustive list of the mitigation measures States must take to keep within the 1.5°C guardrail, but sets forth the *Amici*'s view that these measures are essential and should be prioritized. The 2023 Global Youth Statement prepared for the 2023 Conference of the Parties of the UNFCCC (COP28) by youth from around the world and published by YOUNGO, the official youth and children constituency for the UNFCCC, aligns with these requests. *See generally* YOUNGO, *Global Youth Statement: Declaration for Climate Justice* (Nov. 2023) (hereinafter "YOUNGO, Global Youth Statement 2023").
[555] *See* IPCC, 2022: Mitigation of Climate Change Report at 17; *see also* YOUNGO, Global Youth Statement 2023 at 38.
[556] IPCC, 2023: Synthesis Report at 68, 86.
[557] IACHR, Res. 3/2021, ¶ 12.
[558] *See* IMF, Climate Change Challenges in Latin America and the Caribbean at 1; *see also* YOUNGO, Global Youth Statement 2023 at 38, 40.
[559] IACHR, Res. 3/2021, ¶ 12; *see also* YOUNGO, Global Youth Statement 2023 at 38, 40.
[560] *See* IMF, Climate Change Challenges in Latin America and the Caribbean at 1.
[561] There is limited use of fossil fuels in electricity generation in the LAC region, and, rather, extensive use of hydropower and other renewable sources. The energy sector accounts for 43% of GHG emissions in the LAC region, well below the world average of 74%. *See id*. at 4.
[562] See IPCC, 2022: Mitigation of Climate Change Report at 615-616.
[563] *See* Mahecha, Committed Emissions and the Risk of Stranded Assets at 5-9.

Substantive Measure 1.3 States must implement an immediate moratorium on all new fossil fuel projects, including expansions of existing projects.[564] **Appendix 2** includes a non-exhaustive list of fossil fuel projects to which the moratorium should apply.[565]

188. **Substantive Measure 2** States must take immediate measures to implement fast mitigation in the form of cutting emissions of SLCPs and preserving natural carbon sinks, including forests, oceans, and wetlands. The following are some of the many measures that States must implement to achieve this key mitigation strategy.

Substantive Measures 2.1 States must adopt immediate measures to cut emissions of SLCPs, by reducing the emissions of: (i) methane by 45% by 2030 (relative to 2030 levels);[566] (ii) HFCs by 85% by 2050 (relative to 2019 levels);[567] (iii) tropospheric ozone, and; (iv) black carbon by 70% by 2030 (relative to 2010 levels).[568] This requires creating the right incentives to shift production in key industries such as energy, agriculture, and waste away from SLCPs.[569]

Substantive Measure 2.2 States must initiate and lead efforts amongst States worldwide to agree upon, sign, and ratify a Global Methane Agreement that requires the reduction of methane emissions by 45% (or 180 Mt/yr) by 2030 (relative to 2030 levels) and sets concrete mitigation obligations by sector.[570] Such an agreement should use the Montreal Protocol as a template, and can build upon the voluntary Global Methane Pledge. States must act urgently with the aim of having the Global Methane Agreement in place by 2025 and should prioritize mitigation in the oil and gas sector in North America and in the livestock sector in Latin America.

Substantive Measure 2.3 States must adopt measures that enhance land-based natural carbon sinks, including measures focusing on ecosystem protection and restoration, improving agriculture practices, and the prudent use of degraded land.[571]

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[564] *See* IEA, Net Zero by 2050 at 21, 99, 101; *see also* YOUNGO, Global Youth Statement 2023 at 38.
[565] For a full list of fossil fuel projects in the Americas and the Caribbean, *see* Global Energy Monitor, *Global Coal Mine Tracker* (Oct. 2023); Global Energy Monitor, *Global Coal Plant Tracker* (Oct. 2023); Global Energy Monitor, *Global Oil and Gas Extraction Tracker* (July 2023); Global Energy Monitor, *Global Oil and Gas Plant Tracker* (Aug. 2023); Global Energy Monitor, *Global Methane Emitters Tracker* (Nov. 2023).
[566] IEA, Credible Pathways to 1.5°C at 11; UNEP, Global Methane Assessment 2021 at 8-9; *see also* YOUNGO, Global Youth Statement 2023 at 10.
[567] IPCC, 2022: Mitigation of Climate Change Report at 17, ¶ C.1.2.
[568] *See* UNEP, *The Emissions Gap Report 2017 – A UN Environment Synthesis Report*, at 51-52, Figure 6.1 (2017); Andreas Stohl, *et al*., *Evaluating the climate and air quality impacts of short-lived pollutants*, 15 Atmos. Chem. Phys. 10529, at 10558 (2015). For specific black carbon mitigation measures, *see* UNEP, Integrated Assessment of Black Carbon 2011 at 9 (Table 1).
[569] *See e.g.,* United States Climate Alliance, *From SLCP Challenge to Action – A roadmap for reducing short-lived climate pollutants to meet the goals of the Paris Agreement* (Sept. 2018) (identifying 81 cross-cutting policies for cutting emissions of SLCPs); Climate & Clean Air Coalition, *Short-lived climate pollutant control measures* (2020) (identifying measures for cutting emissions of SLCPs); Project Drawdown, *The Drawdown Review, Climate Solutions for a New Decade*, at 86-90 (2020) (identifying 76 mitigation strategies, including as to emissions of SLCPs) (hereinafter "The Drawdown Review"); *see also* YOUNGO, Global Youth Statement 2023 at 29, 54.
[570] *See* YOUNGO, Global Youth Statement 2023 at 55.
[571] *See e.g.,* The Drawdown Review at 52 (identifying 76 mitigation strategies, including as to the preservation of natural carbon sinks); *see also* YOUNGO, Global Youth Statement 2023 at 57.

The LAC region is the largest emitter of GHG emissions from land-use change; the region accounted for close to 40% of global emissions from land-use change in 2020 and Brazil alone accounted for 22%.[572] As compared to other sources of emissions in the LAC region, 45% of total GHG emissions come from agriculture, land-use change, and forestry combined, compared to the 14% average in other parts of the world.[573]

Substantive Measure 2.4 States must implement an immediate moratorium on projects that lead to deforestation.[574] In particular, States must take immediate action to stop the economic exploitation of the Amazon, which is a natural carbon sink the world cannot afford to lose and which is at a severe threat of reaching an irreversible tipping point.[575]

Substantive Measure 2.5 States must recognize and respect Indigenous land rights and incorporate Indigenous land management strategies, such as silvopasture and regenerative agriculture. This will restore and protect important natural carbon sinks.[576]

Substantive Measure 2.6 States must also implement proforestation policies, which allow existing forests to grow to their full ecological potential, thereby maximizing their function as a natural carbon sink.[577]

Substantive Measure 2.7 States must ban forest bioenergy and the categorization of forest bioenergy with carbon capture and storage as renewable.[578] Forest bioenergy, which involves cutting down forests for energy, is not a carbon-neutral option in the near-term.[579]

Substantive Measure 2.8 States must protect coastal and water sinks through (i) the protection and restoration of ecosystems (including mangroves, salt marshes, and seagrass meadows) to support ongoing photosynthesis and carbon absorption and storage; and (ii) shifting agriculture practices along coasts and in the open ocean, selecting regenerative practices that augment natural carbon absorption and storage by seaweed and kelp.[580]

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[572] *See* Julie Emmrich, *et al.*, *Non-state and subnational climate action in Latin America and the Caribbean An overview of the actor landscape with a focus on the land use sector*, at 7, 10 (2022) (*citing* Tubiello, F. (2020) 'FAOSTAT Forest Land Emissions (July 2020) [Data set]. Zenodo.' Food and Agriculture Organization (FAO). doi:10.5281/ZENODO.3941973).
[573] *See* IMF, Climate Change Challenges in Latin America and the Caribbean at 4.
[574] *See* YOUNGO, Global Youth Statement 2023 at 57. For example, the moratorium should apply to "Cop City" in the United States, which is a project to build the largest police training facility in the country. The project requires cutting down 85 acres in the Weelaunee Forest and many local grassroots organizations have actively opposed this project. *See* Stop Cop City, *No Police Military Base in Weelaunee Forest* [last accessed Nov. 27, 2023].
[575] ¶¶ 54-55, *supra*.
[576] ¶ 27, *supra*; IPCC, 2019: Climate Change and Land: Special Report at 50, 70, 106.
[577] William R. Moomaw, *et al.*, *Intact Forests in the Unites States: Proforestation Mitigates Climate Change and Serves the Greatest Good*, 2(27) Front. For. Glob. Change 1, at 1 (June 2019); *see also* YOUNGO, Global Youth Statement 2023 at 57.
[578] *See* YOUNGO, Global Youth Statement 2023 at 39, 58.
[579] Laura Bloomer *et al.*, *A Call to Stop Burning Trees in the Name of Climate Mitigation*, 23(2) Vt. J. Envt'l. Law 93, at 94 (2022); Mary S. Booth, *Not Carbon Neutral: Assessing the Net Emissions Impact of Residues Burned for Bioenergy*, 13(3) Environ. Res. Lett., at 8 (2018).
[580] The Drawdown Review at 61; *see also* YOUNGO, Global Youth Statement 2023 at 57.

2. Procedural Measures

189. **Procedural Measure 1** States must adopt binding and enforceable mitigation targets that are consistent with the 1.5°C guardrail.[581]

190. **Procedural Measure 2** States must implement the necessary mechanisms that allow for judicial scrutiny and enforcement of both the States' mitigation targets as well as specific mitigation measures, to ensure they are consistent with the 1.5°C guardrail. This includes providing effective judicial remedies to affected communities, including the youth.[582] This also includes vesting judges with the necessary authority and knowledge.

191. **Procedural Measure 3** States must establish monitoring and accounting mechanisms to measure, report, and verify (i) their emissions of CO_2, SLCPs and other GHGs, and (ii) the preservation of their natural carbon sinks – and assess consistency with the 1.5°C guardrail.[583] This must include the activities of private entities under the State's jurisdiction. Specifically, States must adopt a system that requires disclosure from companies about their oil, gas and coal reserves and activities, and set up a program that monitors these disclosures for consistency with the 1.5°C guardrail.

192. **Procedural Measure 4** States must implement a system for environmental impact assessments (EIAs) that considers whether the activities are in line with the 1.5°C guardrail.[584] The EIAs must specifically address the emissions of SLCPs and impacts on natural carbon sinks to ensure that the rate of warming is slowed in the near-term.

193. As the Court has highlighted, the general obligation to implement EIAs is broadly recognized in the laws of most Organization of American States (OAS) Member States.[585] This Court has outlined the following key requirements of EIAs: (i) the assessment must be made before the activity is carried out; (ii) it must be carried out by independent entities under the State's supervision; (iii) it must include the cumulative impact; (iv) it must allow for the participation of affected parties; (v) it must respect the traditions and culture of Indigenous people; and (vi) States must determine and define, by law or by the project authorization process, the specific content required of an EIA, taking into account the nature and size of the project and its potential impact on the environment.[586] These same requirements apply to the portions of the EIAs that need to assess whether the activities are in line with the 1.5°C guardrail and slowing the rate of warming in the near-term.

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[581] *See* YOUNGO, Global Youth Statement 2023 at 7.
[582] American Convention, Article 25; *see also* YOUNGO, Global Youth Statement 2023 at 28.
[583] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶¶ 152-55.
[584] *Id*., ¶¶ 156 *et. seq.*; *see also* UNFCCC, Article 4(1)(f); Rio Declaration, Principle 17.
[585] Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 157.
[586] *Id*., ¶¶ 156 *et. seq*.

194. **Procedural Measure 5** States must implement an administrative and judicial system that allows for the halting of activities that are not in line with the 1.5°C guardrail.[587] This includes administrative monitoring and interventions in the form of cease-and-desist orders, as well as access for affected groups to administrative and judicial recourses that allows them to request such cease-and-desist orders, including through "amparos" or "tutelas".[588]

195. **Procedural Measure 6** States must ratify the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement), which provides a common framework on procedural environmental matters and can be used to safeguard the human rights of vulnerable groups and individuals, including children and the youth.[589]

196. **Procedural Measure 7** States must take the necessary measures to ensure that the youth can participate in climate-related public affairs and decision-making processes, and can engage safely in climate activism.[590]

Procedural Measure 7.1 States must make information pertinent to climate change available free of cost and in an accessible manner.[591]

Procedural Measure 7.2 States must safeguard youth climate activists and environmental defenders, including their right to freedom of thought and expression, their right to

[587] Such processes should for example scrutinize the currently operating Cerrejón coal mine in Colombia. The Cerrejón mine is owned by the Swiss company Glencore and is the largest coal mine in Latin America and the 10th largest in the world. Its gigantic open-pit mine has caused forced displacement of Indigenous and Afro-descendant communities. The mine also contributes to local air and water pollution and large-scale deforestation and earth excavation. This coal mine is responsible for at least 38 metric tons of emissions of carbon dioxide equivalent per year (Mt CO_2e/yr) (excluding scope 3 emissions, which are 342 Mt CO_2e per year). The mine is also estimated to emit approximately 100,000 tons of methane per year. Glencore, *Energizing today, Advancing tomorrow - Climate report 2022*, at 2 (2022); Global Energy Monitor, *Colombian Coal Mining at the Crossroads - Briefing 2023*, at 7, Figure 5 (Apr. 2023).

[588] IACHR, Res. 3/2021, ¶¶ 20, 32 *et. seq.*; Juan Auz, *Human Rights-Based Climate Litigation: A Latin American Cartography*, 13(1) J. Hum. Rights Environ. 114, at 124 (2022) ("Constitutional reforms in the region have also created more expeditious constitutional mechanisms for preventing and redressing fundamental rights violations, such as amparos. The amparo proceeding or remedy is present in all Latin American constitutions. Depending on the jurisdiction, the amparo may take varying forms, but is essentially a writ to protect fundamental rights in an expedited manner, which can usually be filed against public or private actors at any time and without legal representation."); *see also Velásquez-Rodríguez v. Honduras*, Inter-Am. Ct. H.R. (Aug. 17, 1990) (Series C No. 9), ¶ 167.

[589] *See e.g.,* Advisory Opinion OC-21/14 Inter-Am. Ct. H.R., ¶ 30. ("[T]he Court finds that, not only is it not necessarily restricted to the literal terms of the requests submitted to it, but also, in exercise of its non-contentious or advisory jurisdiction and based on the provisions of Article 2 of the Convention and the purpose of advisory opinions 'to contribute to compliance with their international commitments' in the area of human rights . . ., it may suggest the adoption of treaties or other type of international norms on the issues that are the subject of those opinions, as measures of other nature that are necessary in order to ensure the effectiveness of human rights.").

[590] *See* American Convention, Article 23(1) ("Every citizen shall enjoy the following rights and opportunities: a. to take part in the conduct of public affairs, directly or through freely chosen representatives . . ."); IACHR, Res. 3/2021, ¶ 32 ("The effective implementation of the procedural rights of access to information, public participation and justice in environmental matters is an accelerator of climate action in the region and enhances the fulfillment of the substantial obligations of States. In this sense, it is a priority not only to advance in the consecration of these rights but also in the effective implementation of them.").

[591] *See* Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (2018), Article 5, 6 (hereinafter "Escazú Agreement"); IACHR, Res. 3/2021, ¶¶ 33-34.

assembly, and their right to association.[592] This means States must address the harassment, criminalization, and endangerment of youth climate activists and environmental defenders, including by holding companies and individuals accountable for attacks on them.[593]

Procedural Measure 7.3 States must ensure youth climate activists have access to decision-making processes.[594]

Procedural Measure 7.4 States must allow youth activists equal access to justice and judicial remedies for climate-related litigation.[595] This means, amongst others, that States must take measures to ensure access to justice in environmental and climate matters of judicial or administrative nature in accordance with the guarantees of due process, eliminate barriers to the exercise of the right of access to justice, and ensure free technical and legal assistance.[596]

3. Administrative Measures

197. The *Amici* respectfully propose three administrative measures at the Inter-American level that will assist this Court in ensuring States implement its Advisory Opinion. Advisory opinions are authoritative interpretations of the American Convention and "other treaties concerning the protection of human rights in the American states",[597] and, as such, they are enforceable within the Inter-American system,[598] and States must implement them through conventionality control.[599] Their implementation would benefit from measures that facilitate such implementation as well as harmonization at the national level.

198. **Administrative Measure 1** The *Amici* respectfully request the Court to adopt mechanisms that monitor States' implementation of their substantive and procedural mitigation obligations as interpreted in the Court's Advisory Opinion; akin to those already used in the context of contentious cases and precautionary measures.[600] As part of these monitoring efforts, the Court and the Commission would engage in outreach to States through on-site visits (*diligencias in situ*) and bilateral meetings. The Court's practice of supervising the enforcement of its decisions through on-site visits has proved to be a valuable

[592] American Convention, Articles 13, 15, 16; *see also* YOUNGO, Global Youth Statement 2023 at 30.
[593] *See* Escazú Agreement, Article 9.
[594] *See id*., Article 7; American Convention, Article 23 (Right to Participate in Government); IACHR, Res. 3/2021, ¶ 35.
[595] American Convention, Articles 24 (Right to Equal Protection), 25 (Right to Judicial Protection); *see also* Escazú Agreement, Article 8; IACHR, Res. 3/2021, ¶¶ 36-38.
[596] *See* Escazú Agreement, Article 8(1), (4)(a), (5); *see also* YOUNGO, Global Youth Statement 2023 at 28.
[597] American Convention, Article 64(1); *see also* Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶ 24.
[598] *See e.g., Raxcacó Reyes v. Guatemala*, Inter-Am. Ct. H.R. (Feb. 6, 2006) (Series C No. 143) (finding that the mere existence of an article of the Penal Code that provides the death penalty any form of kidnapping or kidnapping and expands the number of crimes punishable by said penalty was "per se violation" of Article 2 of the Convention because it contravenes Advisory Opinion OC-14/94 Inter-Am. Ct. H.R.).
[599] *Álvarez, et al. v. Guatemala*, ¶ 330; *Almonacid-Arellano, et al. v. Chile*, ¶ 124; Advisory Opinion OC-24/17 Inter-Am. Ct. H.R., ¶ 26. Some national courts exercised conventionality control by holding that the Court's advisory opinions have the force of a constitutional provision. *See* Constitutional Court of Ecuador (May 29, 2018) (1692-12-EP), ¶¶ 58-59; *Marriage between same-sex people*, Constitutional Court of Ecuador, (June 12, 2019) (10-18-CN/19), ¶ 81; *Equal Marriage*, Constitutional Court of Ecuador (June 12, 2019) (11-18-CN/19), ¶ 39; Supreme Electoral Tribunal of Costa Rica, Minutes No. 49-2018 (May 14, 2018), ¶ A1.
[600] Article 69 of the Rules of Procedure of the Court addresses the Court's monitoring of its judgements, and states that it applies to "other decisions."

tool for the Court to evaluate the degree of implementation of a decision, meet the affected parties, and evaluate the challenges and obstacles for implementation.[601] Visits may be requested by the State or determined *ex officio* by the Court in the absence of these requests, to ensure adequate oversight.[602]

199. **Administrative Measure 2** The *Amici* respectfully request the Court to order the creation of a new special rapporteur on climate change to oversee States' implementation of their obligations as interpreted in the Court's Advisory Opinion, including their mitigation obligations. Environmental obligations are currently overseen under the unit of Economic, Social, Cultural, and Environmental Rights (ESCERs) created in 2012.[603] The appointment of the Special Rapporteur on ESCERs (SRESCER) in 2014 was an important step towards building inter-American standards for these rights.[604] However, the gravity of the climate emergency, the impact it will have on American States, and the need to adopt a cross-sectoral and multifaced approach to address it, justifies the creation of a specialized climate change rapporteur.

Administrative Measure 2.1 The new climate change rapporteur would oversee the preparation of thematic, country, and annual reports addressing climate change. These reports would provide valuable quantitative and qualitative assessments of the implementation of obligations and related recommendations, including regarding States' mitigation obligations. Reports will facilitate States' implementation of the Advisory Opinion by increasing transparency and educating States and citizens on the causes of climate change and the need and methods for mitigation. The new rapporteur on climate change would receive yearly country reports from States that would describe their compliance with mitigation obligations.[605] The *Amici* recommend that the first thematic issue tackled by the special rapporteur be the issue of fast mitigation.

Administrative Measure 2.2 The new climate change rapporteur would adopt indicators to monitor the implementation of States' mitigation obligations. These indicators will allow for a more streamlined approach, increasing transparency, accountability, and consistency across States.

Administrative Measure 2.3 The new climate change rapporteur would make recommendations to the Commission regarding urgent situations that require the adoption of precautionary measures or a request for the adoption of provisional measures before this Court, to ensure mitigation is consistent with the 1.5°C guardrail.[606]

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[601] *See* Inter-Am. Ct. H.R, 2020 Annual Report, at 72 (stating that the Court considers it essential to conduct monitoring activities in the territory of the States found responsible); *see also* Inter-Am. Ct. H. R., 2015 Annual Report, at 77 (describing the Court's first on-site visit).
[602] *Gómez Murillo, et al. v. Costa Rica*, Inter-Am. Ct. H.R. (Nov. 22, 2019) (Compliance Monitoring Report), ¶ 27.
[603] OAS, *Special Rapporteurship on Economic, Social, Cultural, and Environmental Rights* [last accessed Nov. 27, 2023].
[604] *Id.*
[605] This is consistent with the procedures for the SRESCER. *See* AG/RES. 2262 (XXXVII-O/07) Composition and Operation of the Working Group (approved in the fourth plenary session, held on June 5, 2007).
[606] This is consistent with the procedures for the SRESCER. *See* OAS, *Special Rapporteurship on Economic, Social, Cultural, and Environmental Rights – Mandate* [last accessed Nov. 27, 2023] (hereinafter, "OAS, SRESCER Mandate").

Administrative Measure 2.4 The new climate change rapporteur would consult with threatened vulnerable populations, including youth climate activists and Indigenous people.[607]

Administrative Measure 2.5 The new climate change rapporteur would develop the necessary procedures to collect and manage cooperation funds that will finance the projects required to fulfil the rapporteur's assigned mandate.[608]

200. **Administrative Measure 3** The *Amici* respectfully request the Court to adopt a Reference for a Preliminary Ruling procedure akin to that used by the European Court of Human Rights,[609] the European Court of Justice,[610] and the Tribunal of Justice for the Andes Community.[611]

201. In line with the objective of advisory opinions to guide States in the implementation of their obligations to respect and ensure the human rights enshrined in the American Convention and its Protocols, the institution of a Reference for a Preliminary Ruling would allow domestic judges the opportunity to request a preliminary ruling from the Court on the interpretation of the human rights and obligations relevant to the case before the domestic judge. The interpretation given by the Court in such a reference procedure should follow the model from the European Court of Justice and have a binding nature, both for that particular domestic court as well as for all other domestic courts in the State.[612]

202. Key advantages of this system include: (i) increasing legal certainty by allowing the Court, which is especially vested with the powers to interpret the American Convention and its Protocols the avenue to do so at the national level; (ii) increasing the effectiveness of domestic courts' conventionality control; and (iii) allowing for immediate remediation, which is crucial given that contentious cases brought to this Court by victims may take over two decades to reach final resolution.[613]

V. CONCLUSION

203. The *Amici* respectfully request this Honorable Court to:

1. advise States that their human rights obligations require (i) their executive and legislative branches to immediately implement the required mitigation measures consistent with ensuring global warming is limited to 1.5°C and (ii) their domestic courts to enforce the human rights that require these mitigation measures;

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[607] *See* Advisory Opinion OC-23/17, Inter-Am. Ct. H.R., ¶¶ 226-232.
[608] This is consistent with the procedures for the SRESCER. *See* OAS, SRESCER Mandate.
[609] The reference for a preliminary ruling procedure of the European Court of Human Rights is governed by: Council of Europe, *Explanatory Report: Protocol No. 16 to the Convention for the Protection of Human Rights and Fundamental Freedoms*, ¶¶ 1, 15.
[610] The reference for a preliminary ruling procedure of the European Court of Justice is governed by Article 267 of the Treaty on the Functioning of the European Union.
[611] The reference for a preliminary ruling procedure of the Tribunal of Justice for the Andes Community is established in Articles 121, 122, and 123 of the Tribunal's statute.
[612] For the model of the European Court of Justice, *see* EUR-Lex, *Preliminary ruling proceedings – recommendations to national courts* (Apr. 26, 2022).
[613] For a discussion of this proposal and comparative examples, *see* Carlos J. Zelada, *Are the advisory opinions of the Inter-American Court of Human Rights binding?: A reform proposal for an age-old problem* (May 2020).

2. advise States they must take the specific substantive and procedural measures included in Sections IV.D.1-IV.D.2 to implement these obligations, and;

3. consider the three administrative measures proposed in Section IV.D.3 to assist this Court in ensuring States implement the Court's Advisory Opinion.

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Respectfully submitted,

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APPENDIX 1: YOUTH STORIES

Jovana Hoschtialek | 18 years old | Grenada

From a young age I have noticed the many issues surrounding climate change and global warming that have affected my country such as: to think that, back in my father's day, there used to be a cute little beach on the Carenage that is now completely submerged under 7 feet of water that is lapping into the streets on occasion at high tide; or the once beautifully colorful corals that tourists loved to snorkel to see are now bleached and dying with the population of marine life depleting; or perhaps the scarcity of water for the people living in the countryside due to the lack of rain fall. These are just a few challenges that my country faces due to the damage done to our climate, to imagine that my father is only 33 years older than me and the world has already changed so drastically.

I am a teacher at my old high school and the heat waves have been unbearable, a 30-minute assembly outside on the lawn leaves the students and teachers drenched in sweat and dizzy from the heat; I can't even fathom the thought of how much worse it is for African countries that experience heat waves far hotter than those on my tiny island home. It pains me to watch the young children of today suffer and know that the situation is only going to get more dire unless we change and take stronger action to fix our damaged planet. One thing I have noticed that hurts my heart: is that in climate governance, we are missing education for our youngest generation about climate change. Even with technology as it is, so many young children are completely oblivious to the damage that climate change has caused to their world; this is because they think that it is normal and have naturally adapted to their situation without realizing the underlying issue.

Grenada has done very little to contribute to the cause of this global climate crisis but yet we are one of the worst recipients of its effects. Industrialized nations are the major cause of pollution, but with their development, they are financially better poised to mitigate or adapt to these challenges; however, due to our geographic location, lack of natural resources, and economic exploitation, it is extremely difficult for small island states to have the financial resources to adapt or mitigate against these challenges. Despite this, Grenada has been finding ways to deal with our climate challenges; we have many organizations working hard to bring awareness and combat the damage done. For example: Aquanauts is a scuba diving agency that does many underwater clean ups; Grand Anse Artificial Reef Project, which is led by Dive Grenada, focuses on building coral nurseries and gardens; Solid Waste has started the Plastics Recycling program and are in the preliminary stages of a national composting program; and the Kido foundation focuses on Sea Turtle conservation and Mangrove restoration, with the overall aim to preserve the island's ecosystem and biodiversity with conservation activity, environmental research, youth education, and training.

We may be small island states, but we are big ocean countries, as our sea borders are scores times larger than our physical land space. The funding for protecting this important ecosystem should come primarily from developed countries that were the biggest culprits of this global crisis. This is what we are looking for in Climate Justice.

Sergio Richard Romero Nina | 29 years old | Suyu Charkas Native Nation, Bolivia

Resistance and Justice. Ancestry, respect, and the relationship with our ancestry is very valuable in the territory where I live. We want our grandparents to accompany us on our journey in our actions, generating relationships of respect and dialogue. As an inheritance, we the wawas (the children, the boys and girls) have received the historical struggles of our ancestors that have not yet materialized – those struggles that were marked in the resistance for Self-Determination, for Territory, Justice and Life, resisting to ensure our collective community models do not disappear and are preserved as models of LIFE, which are that very respect, care and reproduction of life; models of coexistence with those other beings that live together with us.

We feel that 500 years have not passed in vain; they have come to erode our territories, soils, water and LIFE itself and, therefore, our models of existence. Since the resistance was not only in the past but in the present, we still live the invasion, usurpation, and exploitation of the bodies and territories where we live. Extractivism, pollution, and other evils have already penetrated the little that has been cared for, raised, and protected; in a society where rights and global pacts exist, injustices and insecurities continue to be replicated in the territories.

The effects of these injustices and inequalities, such as extreme poverty, malnutrition, migration due to unproductive soils, and lack of development opportunities, are still being experienced. And the fact that we are one of the historically vulnerable sectors puts us at a disadvantage in the face of new crises; crises that were not caused by us, but by other individual interests of a small group of people and their models of existence based on the market and consumption.

The climate crisis is spoken of as something of the future or very distant; there are even people who deny this crisis. However, from the experience of our bodies, our communities and our territories, we are already living the crisis. Having as a main effect the water stress with the loss of lakes, rivers, wetlands, glaciers, affecting our food (thirst and hunger), health habits, the productive-economic systems, the life of sister plants or animal brothers, it not only affects our subsistence, but the loss of water bodies becomes a terrible pain, as these bodies of water are for us as our grandmothers, grandfathers, mothers, fathers. Other effects of the crisis are climatic phenomena that have increased in quantity and intensity, such as drought, frost, and hail.

Youth in general, but especially those that the western world calls Indigenous (each territory has a form of self-recognition) now find themselves with more tasks and fewer tools to face historical struggles and present/future crises, one of them being the climate and environmental crisis. The challenges are monumental, as we must live minimally in conditions of dignity and also face a crisis that neither we nor our ancestors provoked.

Indigenous youth are currently in resistance, because they are reluctant to leave their territories, even when they are suffering from inclement weather or environmental devastation or historical inequalities; they are reluctant to abandon their uses and customs that are the product of life models of respectful relationship with mother earth and the life that inhabits it. They refuse to lose hope.

It is up to us to do justice to the memory of our peoples, our ancestors, and to do justice to the life of our communities and our wawas (children and grandchildren).

Carolina Cuesta | 21 years old | Uruguay

Since I was little, my family has always encouraged me to study and connect with nature, emphasizing the importance of giving back to nature what we have received. I am from Uruguay, a country that has nearly four cows per inhabitant, a country that often finds itself excluded from international negotiations due to its limited influence and budget.

Uruguay's economy predominantly relies on agriculture, with nearly four cows per inhabitant, and it produces food for a population of 30 million, despite being a country of only 3.5 million. This makes our economy highly dependent on a sector that is extremely vulnerable to climate variability. Small-scale producers are selling their land to large corporations because they can no longer sustain the financial debt resulting from consecutive years of drought. Seventy percent of the population resides along the coastline, relying on it for their livelihoods. The country's capital city, where over half of the population resides, is also situated on the coast. Rising sea levels and inadequate land-use planning have already led to the destruction of homes and encroached upon coastal towns. Fishing resources are dwindling, and coastal tourism is being affected by climate-related changes.

Upon realizing my responsibility to take action, I began my activism with Fridays for Future Uruguay. The more I worked with other youth climate activists, the more I realized that when we talk about climate change, we talk about system change. In order to find real solutions to a problem that runs deep, we must go straight to the roots and not just aim at the fruit. The roots of this issue lie within the system itself, and therefore to generate intersectional solutions we need people who have not yet conformed to the system: the youth. We need innocent child eyes, rebellious teenagers and young adults who think outside the box. This participation cannot be reduced to an "advisory" role, but must rather be part of the generation of policies; the youth must lead the just transition needed. In a system where inequality is the currency, it is crucial to advocate for policies that ensures equity within the population.

As Paulo Freire, a Brazilian educator, once said:

'Only the oppressed liberating themselves will liberate the oppressors' (Paulo Freire, 1921-1997).

To create effective, inclusive, resilient, and just policies, we must include those who are most impacted by the consequences of climate change at the negotiation table: indigenous people, women, children, people with disabilities, among other groups. Holding fossil fuel companies accountable, securing funding for loss and damage, and prompting the global north to acknowledge its debt to the global south are critical steps. We need empathy.

Bautista Vivanco | 22 years old | Argentina

Our farm during the worst of the drought

Crunch, crunch, crunch…. Like the sound of chewing cereal or stepping on dry autumn leaves. But it is not autumn, it is August, and nobody is chewing anything. In fact, that is the problem, the animals have nothing to chew on. The crunch I hear is my dad's footsteps breaking the cracked soil of our farm, which has not received any water for months now. Ahead of us stands our family's livelihood: a group of frail and emaciated cows, a herd of bones.

The period between 2020 and early 2023 represents the worst drought on record for Argentina. Those years were very tough for everyone, but small family farms like ours experienced the worst of the crisis. The entire thing did not impress any of us at the time. It is normal and expected to get one year with very little rain once every decade or so, but three years with historically low rain in a row? How are you supposed to prepare for that? The large corporations that own huge swaths of land had the resources to endure the crisis: artificial irrigation, subsidies, and capital with which they could buy feed for their cattle. It was the small farmers who (as always) had to bear the burden with their hands and the help of their neighbors.

Our farm during a regular season

Politicians, economists, and news reporters all talked about how this climate crisis was terrible for the economy. They talked about lower exports and loss of revenue, abstract numbers that did not mean much for us. We were too busy counting other things. Too busy doing weekly headcounts to determine how many animals had died, most of which would simply collapse and would be too weak to stand up again. Or like my younger brother, who after helping us distribute some grain to the calves said: "They all have 13… 13 ribs". Indeed, you could see almost every single bone in their feeble bodies, and by the end of the season, many of them became just that, bones.

Eventually, the wait ended, the rain came and washed away the dust turning our farm into a lush green pearl, the pride and joy of my family. But what if that had not happened? If the rains simply did not return? What if next time is not a 3-year-long drought, but it is 5 or 6? In a medical emergency, you call the ambulance; if you are in danger, you call the police. Who do we have to call during this climate emergency? Who will aid my family and my community when their livelihoods are again endangered because of climate change? The issue of climate justice for me and so many others is not just about finding ways to merely be more resilient to unexpected weather, it is a matter of survival and of the preservation and continuity of our communities and way of life.

Modhupa Tsali | 16 years old | USA (New York) (previously Bangladesh & Malaysia)

Growing up in different countries, the one thing that's always been common wherever I've lived was the climate crisis. Over five years ago, my home in Malaysia saw skies turn red for weeks when wildfires from Indonesia polluted the air. Recently, I saw the same thing happening in New York. In Bangladesh, I saw floods displace people from their homes in a district that faced enough issues with poverty and lack of healthcare without the disasters of the climate crisis.

Being a citizen of a third world country who has had the privilege to receive the opportunities that I have in education and activism, I feel that it's my responsibility to speak up for environmental justice. I've found my voice so far through Fridays For Future alongside other passionate youth activists. I've been involved with them in organizing global rallies, leading my school to join strikes, lobbying in the state capital for the Climate Jobs and Justice Package, and wherever else I've felt that I could contribute something meaningful. I want a future where I'm free to pursue my passions, where I don't have to live in fear of when my family members might become victims of climate disasters, and where nobody has to suffer from lack of access to a liveable environment.

To me, intergenerational justice is making sure that the life of future generations is as rich and full of possibilities of advancement in science, arts, and culture as the ones before it. In a climate emergency, we are at risk of permanently losing our resources, which would cripple future generations by taking away the possibility of them being able to enrich their lives through these resources. Intergenerational justice requires that we keep our world's resources from permanent damage at all costs, and by doing so, transition into ways of life through which we can mitigate the harm we cause to our environment. This may involve ending the usage of fossil fuels, relying on more energy-efficient methods of transportation, improving upon our urban planning, and other methods.

Arturo Andrés Cuello | 18 years old | Tucumán, Argentina

I am a young man who was born and raised in a small town in the north of Argentina called Aguilares. This city, like so many others in the province of Tucumán, was founded around a sugar mill, where for 14 years I lived 300 meters from a factory where year after year, during the sugar cane harvesting and processing periods, it polluted a large area of the city, impacting mainly the air and water.

My family, like so many other families in the interior of our province, worked for more than 3 generations mainly as workers in the sugar industry. My maternal grandfather took early retirement at 54 years of age due to hearing impairment as a result of noise pollution and the lack of preventive safety measures when working in processing inside the factories, and on the other side, my paternal grandfather, as a result of working in the sugar cane harvest, suffered from pulmonary fibrosis.

Just as my great-grandfather and grandparents experienced in the 50s, the history of industrial development (in our case the sugar industry) presents us with the complex reality of the "growth" that Latin American countries experience, always putting at risk the life and sustainability of our territories. The only thing this growth does is exacerbate the extremes, making businessmen richer and workers live the consequences in their bodies and their environment.

My grandfather in 1978, in the midst of the military dictatorship and the disappearance of people, had the strength to assume the position of general secretary of the sugar workers' union. There, risking his life, he fought for the rights of workers seeking to hold companies accountable and get more rights for workers, under the banner of social justice.

In 2019, already as a university student, thanks to the sacrifice of my grandparents and my family, I was proud to take up again that history of struggle and resistance that my grandfather began, raising today the banner of environmentalism but with a deep responsibility and memory about the history of my province, understanding that "without environmental justice, there is no social justice."

Hailey Campbell | 25 years old | USA (Hawai'i)

As a Texan growing up in a community that plays a significant role promoting the oil industry, I was exposed to diverse perspectives on environmental issues from a young age. While this presented challenges, such as not being encouraged to engage in politics or talk about climate change, it inspired me to research climate science and find creative ways to communicate its urgency. My first successful lobby was close to home, as I persuaded my dad to believe in climate change by finding common ground on the importance of supporting houseless individuals during rising temperatures. However, it wasn't until I attended the 25th United Nations Climate Change Conference (COP25) that I finally felt empowered to join the climate movement.

At COP25, I didn't know the difference from a country negotiator or observer. I walked around observing United Nations negotiations with little idea of what was truly at stake. A fellow youth advocate encouraged me to join their team in handing out papers to support youth inclusion and climate education as part of Article 12 of the Paris Agreement (Action for Climate Empowerment). Being raised to always lend a helping hand, I obliged. I didn't know it at the time, but it was this moment of interaction with policymakers and peer mentorship that launched my career in the youth climate policy movement as a member of the UNFCCC Youth Constituency (YOUNGO) and, in 2022, as a leader of the non-profit Care About Climate.

From climate negotiators calling me for policy text updates to seeing policy text I've written make it into official UN decisions, I now find myself playing an integral role in upholding the rights of youth and future generations to a healthy planet. In addition, I am actively closing the gap on climate diplomacy knowledge that prevented my engagement before. At Care About Climate, I lead the design of a climate diplomacy training and community building space for youth, and I organize and run role play simulations to train young people how to talk to climate policymakers.

Unlike many of my peers, it wasn't climate impacts that drove me to enter the climate movement; it was climate education, access to information, and access to opportunities that drove me to get involved. My work in the international space listening to climate impact stories of my peers empowered me to lean into the climate space at the local level. Presently, I live in Honolulu, Hawai'i, where climate change is our lived reality. From sea-level rise to wildfires and growing concerns of heat, climate impacts affect every aspect of our lives from where we work to where we live, grow food, and play. Everyone knows someone who lost something in the Maui fires this year – everyone. Every day we continue to rely on fossil fuels is another day of fear that comes with increasing vulnerability to climate change – the fear of the next fires, floods, heat wave, hurricane, or sea-level rise impacts that will cause catastrophic losses in another community.

Now, when I enter the climate diplomacy space, I think about what my community would want me to advocate for and the impacts we are facing. As such, to me, intergenerational justice isn't just about the rights of future generations as I once thought it to be. It's a call to action to restore our relationship with the land and each other for present generations, for generations to come, and in honor of generations that stewarded the land before us. Ending our relationship with fossil fuels will end our relationship with daily fears and anxieties of avoidable losses to climate change, while restoring balance between nature and human relationships.

María Maldonado | 25 years old | Mexico

My name is Maria Maldonado, I'm 25 years old, I live in Mexico, and I work with a civil society organization called Nuestro Futuro, A.C. Since 2020, we have been a youth organization that promotes adaptation and mitigation actions to fight climate change.

As a young person, I am concerned and distressed by the indifference that exists on the part of many of the countries of the world, particularly my own, in the face of the climate crisis in which we are living. I do not need to repeat all the scientific data we have to know that we are already suffering the damages of climate change today, and each year that passes will be even worse if we do not do anything about it.

Mexico is one of the most mega-diverse countries in the world, and I am seeing more and more destruction. Floods in the south of the country, unprecedented droughts in the north where there is almost no water, loss of biodiversity due to high temperatures, and Mexican authorities who are dedicated to promoting the use of fossil fuels instead of carrying out a just energy transition.

I am concerned and distressed, because I have seen entire communities disappear under the sea because of climate change, and if that is happening today, what awaits us, the youth of the world, in five, fifteen, or twenty years?

That is why I ask the Inter-American Court of Human Rights, in issuing its Opinion, to listen to the science and protect my generation and all those to come, because we will suffer the effects of global warming, not today's decision makers. Listen to the science, and when making your decision, do not think about today's interests, think about how your decision will affect us in ten, twenty, or thirty years.

Letícia Carvalho Silva | 26 years old | Brazil

The climate emergency jeopardizes our very existence and promises to be humanity's greatest challenge. It is unfair that all the responsibility falls on children and youth without adults taking action. In Brazil, we have legislation that ensures everyone has the right to an ecologically balanced environment, and children and youth are an absolute priority in guaranteeing all their rights, including the right to a clean and balanced environment. Recently, the UN Committee on the Rights of the Child published a general comment on children's rights to a clean, healthy, and sustainable environment. In this document, the principle of intergenerational equity and the interests of future generations were also recognized. When it comes to intergenerational climate justice, we need to create spaces where children, youth, and future generations are considered. This should be done now.

The climate crisis disproportionately impacts vulnerable children and youth due to structural, racial, and gender inequalities. While children in the Global North have better survival rates and well-being, these countries contribute disproportionately to CO2 emissions that threaten the future of all children, with 75% of affected children residing in the Global South. Recognizing the voices of children and youth from the Global South in international governance debates on climate, pollution, and biodiversity loss is crucial. These children not only face the greatest impact of these issues, but also offer distinctive and innovative perspectives, including various nature-based solutions. They must be acknowledged as change-makers in addressing the climate crisis, and intergenerational climate justice means guaranteeing a future in their present.

Angela María Caita | 23 years old | Colombia

What happens when the waters meet?

For as long as I can remember, my time in the world has been permeated by the effects of climate change. The news, social networks, and chats with my friends at school and later at the university have a common theme: the climate emergency.

I have been environmentally aware since I was 7 years old. As a young Latina, I have come across academic and non-academic discourses about my role as a human being in this struggle, and the non-academic discourses are the ones that have touched me in a deeper way, they have touched my soul. These discourses range from children talking to me about their actions, to the historical, ignored, and revolted struggles of communities such as the Raizal Islanders of San Andres, Providencia, and Santa Catalina. The passage of hurricanes Eta and Iota continues to this day to be a call to the world to listen to the real problems in situ that cry out that the losses and damages are an issue that runs through the struggle and advocacy for climate action. We are not alien to the historical struggles we are part of and we are responsible not only from the social networks, we are responsible to see beyond the obvious and to listen deeply.

When waters come together they create oceans! It is a call to the youth to move towards a joint struggle and thus grow and grow.

APPENDIX 2: PROJECTS TO WHICH THE FOSSIL FUEL MORATORIUM SHOULD APPLY

Project	Country	Project Type/Status	Estimated Emissions (Mt CO_2e/yr)	Summary
Azulão II & IV **Manaus I**	Brazil	Oil & Gas *Construction*	2.4[614]	Proposed gas-fired power plants. Local environmental justice groups have opposed the construction of these plants, highlighting its emissions, risk to air and water quality, and cost to consumers.[615]
Coastal GasLink	Canada	Oil & Gas *Construction*	up to 3.5[616]	The construction of a 420-mile long pipeline through the traditional lands of Western Canada's Wet'suwet'en people is almost complete. The construction of the pipeline, although not yet in commission, has already caused mass environmental harm to land, water, and wildlife. TC Energy has claimed to have permission of use from the Yintah but have bulldozed ancient burial grounds, caused the arrest of hereditary chiefs and land defenders, and have raided Indigenous camps.
Driftwood LNG	United States	Oil & Gas *Construction*	8.7[617]	A liquefied natural gas (LNG) export facility being constructed on the Calcasieu River west bank in Louisiana. When fully operational, it is expected to have significant export capacity, making it one of the larger LNG export facilities in the United States.
Goldboro LNG	Canada	Oil & Gas *Construction*	3.8[618]	An LNG export facility being constructed on Nova Scotia's eastern shore. When fully operational, it will deliver natural gas sourced in Alberta across Canada and the eastern United States to Nova Scotia. However, the project's climate impacts have not yet been subject to federal oversight.
Trans Mountain Pipeline Expansion	Canada	Oil & Gas *Construction*	up to 143[619]	A proposed infrastructure project in Canada to expand the existing Trans Mountain Pipeline system. The project is designed to increase the capacity of the pipeline to transport crude oil from Alberta's oil sands to the coast of British Columbia for export to international markets. Canadians will lose an estimated Can$ 600 million on the project due to its ballooning costs and construction delays.

[614] Institute of Energy and Environment, *Thermoelectric plants contracted in the energy sector regarding the privatization of Eletrobras must generate an increase in emissions in the state of Amazonas* (Sept. 2022).
[615] *See* Arayara.org, Comunicação Arayara [last accessed Nov. 27, 2023] (local environmental justice group opposing the construction).
[616] British Columbia Environmental Assessment Office, *Coastal Gaslink Pipeline Project: Assessment Report*, at 1, 71, Table 5-3 (2014).
[617] Federal Energy Regulatory Commission, *Driftwood LNG Project: Final Environmental Impact Statement*, Table 4.12-4 (2019) (9,540,000 English tons CO_2e/yr is equivalent to 8,654,535 Mt CO_2e/yr).
[618] Goldboro LNG, *Section 10.0 Environmental Effects Assessment*, In: *Natural Gas Liquefaction Plant and Marine Terminal – Environmental Assessment Report (Class 2 Undertaking)*, Table 10.4-2 (2013).
[619] *See* Gov't of Canada, *Greenhouse gas emissions from the Trans Mountain project* (2019); Oil-Climate Index, *Oil Details: Canada Cold Lake CSS Dilbit* [last accessed Nov. 27, 2023].

Project	Country	Project Type/Status	Estimated Emissions (Mt CO_2e/yr)	Summary
Guyana Offshore	Guyana	Oil & Gas *Exploration*	2[620]	Deepwater oil drilling exploration in Guyana that began in 2019. ExxonMobil, one of the primary operators, began its first project in 2019, and in 2022, announced it would spend an additional $10 billion on its next project (*Yellowtail*).
Line 3 Pipeline	United States	Oil & Gas *Expansion*	116-274[621]	A proposed oil pipeline expansion expected to bring nearly a million barrels of tar sands a day from Alberta, Canada to Superior in Wisconsin.[622] There is a strong environmental justice movement advocating to stop the construction of this pipeline, which is expected to cut through wetlands and Indigenous lands.
Plaquemines LNG	United States	Oil & Gas *Proposed*	27.3[623]	A large LNG pipeline expected to emit GHGs equivalent to 31 coal plants or 26.3 million cars. There is a strong environmental justice movement advocating to stop the construction of this pipeline,[624] which is expected to cut through wetlands and Indigenous lands.
Yellowtail Development Project	Guyana	Oil & Gas *Proposed*	1-1.4[625]	This is the fourth Guyana offshore project ExxonMobil has invested in, and it is expected to be operational in 2025-2026, and operate for at least 20 years. This is an oil and gas drilling facility and is going to have a crude oil capacity of 250,000 barrels per day and crude oil storage capacity of 2 million barrels.
May River Project	Canada	Oil & Gas *Proposed*	4.8[626]	This is an oil and gas field owned and operated by MEG Energy Corp in Alberta, with production expected to begin in 2026 and peak in 2031 at the rate of 0.16 million barrels of oil equivalent per day of crude oil and natural gas.
Amigo LNG	Mexico	Oil & Gas *Construction*	Uncertain	This is an LNG facility/terminal being developed in Sonara which is expected to be finished at the end of 2025. It is to make use of existing pipeline infrastructure to import shale gas from the US and convert it into LNG for export.
Energia Costa Azul LNG Export Project	Mexico	Oil & Gas *Proposed*	Uncertain	A new LNG export facility. Operations are expected to start late 2024.

[620] Antonia Juhasz, *Exxon's oil drilling gamble off Guyana coast 'poses major environmental risk'*, The Guardian (Aug. 17, 2021).
[621] Minnesota Department of Commerce Energy Environmental Review and Analysis, *Final Environmental Impact Statement Line 3 Project*, Docket Nos. PPL-15-137/CN-14-916, at 5-466, Table 5.2.7-12 (Aug. 17, 2017).
[622] Stop Line 3, *Stop The Line 3 Pipeline: For Water, For Treaties*, *For Climate* [last accessed Nov. 27, 2023].
[623] Envt'l Integrity Project, *Playing with Fire: The Climate Impact of the Rapid Growth of LNG*, at 9, Table 2 (June 9, 2022).
[624] *See* Lisa M. Diaz, Counsel for Sierra Club, *Petition to Louisiana Dept. of Natural Resources for Declaratory Order and Ruling as to the Applicability of Statutory Provision and Rule Requiring a Coastal Use Permit for Venture Global Plaquemines LNG* (Aug. 29, 2022).
[625] Guyana Envt'l Protection Agency, *Environmental Impact Assessment: Yellowtail Development Project Vol 1*, at EIS-19 (Mar. 2022).
[626] MEG Energy Corp, *May Rivier Project: Introduction and Assessment Methodology*, Table 2.6-11 (Jan. 2017).

Project	Country	Project Type/Status	Estimated Emissions (Mt CO_2e/yr)	Summary
Willow Project	United States	Oil & Gas *Proposed*	9.2[627]	Proposed oil drilling project that could emit more climate pollution than 99.7% of all single point sources in the United States.
Vaca Muerta	Argentina	Oil & Gas *Construction*	205-240[628]	World's 2nd largest shale gas deposit of non-conventional hydrocarbons, also extracting oil & gas.
Papayal Coal Mine **San Juan Coal Mine** **Cañaverales Coal Mine**	Colombia	Coal Mine *Proposed*	1.6 (55 kt CH_4/yr)[629]	Coal projects under development by Turkish-owned Best Coal Company (BBC) in Colombia. San Juan would be the largest underground mine in Colombia upon completion.
Sempra Porth Arthur LNG Project	United States	Oil & Gas *Construction*	4.7[630]	A new natural gas liquefaction and export terminal. The Phase one project should include two natural gas liquefaction trains, two liquefied natural gas storage tanks, and other facilities.

[627] U.S. Dept. of the Interior, Bureau of Land Management, *Willow Master Development Plan: Supplemental Environmental Impact Statement – Vol. 1: Executive Summary (Final)*, at 49 (Jan. 2023) (Project duration 30–31 years).
[628] Daniela Keesler, Laura Orifici, & Gabriel Blanco, *Current situation and projection of greenhouse gas emissions in Argentina: Comparison with the National Contribution on climate change*, Greenpeace Argentina & Universidad Nacional del Centro de la Provincia de Buenos Aires (June 2019).
[629] Global Energy Monitor, *Colombian Coal Mining at the Crossroads*, at 7 (Apr. 2023).
[630] Federal Energy Regulatory Commission - Office of Energy Projects, *Final Environmental Impact Statement for Port Arthur Liquefaction Project, Texas Connector Project, and Louisiana Connector Project, FERC/FEIS-0285F*, FERC/FEIS-0285F, at 4-241-242, Table 4.11.1-7 (Jan. 2019).