



INTERNATIONAL COURT OF JUSTICE

**OBLIGATIONS OF STATES IN RESPECT OF CLIMATE CHANGE
(REQUEST FOR ADVISORY OPINION)**

**WRITTEN STATEMENT SUBMITTED BY
THE CENTER FOR INTERNATIONAL ENVIRONMENTAL LAW (CIEL)**

***MEMORANDUM ON THE LEGAL OBLIGATIONS OF STATES
IN RELATION TO FOSSIL FUELS
AS THE KEY DRIVER OF CLIMATE CHANGE***

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MEMO ON THE LEGAL OBLIGATIONS OF STATES IN RELATION TO FOSSIL FUELS AS THE KEY DRIVER OF CLIMATE CHANGE

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I. Introduction

1. This section of our submission examines one dimension of States' international obligations to protect the climate system—the duty to minimize production and use of fossil fuels: oil, gas, and coal. Rooted in longstanding customary and treaty-based obligations to prevent significant transboundary environmental harm and foreseeable human rights violations, that duty has both horizontal and vertical effect. A State's obligation to curtail fossil-fueled emissions runs to other States and the international community, as well as to peoples and individuals within States' jurisdiction or affected by conduct subject to their jurisdiction and control.
2. First, the Court cannot address States' duties with regard to climate change without addressing States' obligations with regard to the known *primary cause* of climate change: fossil fuels. The science is unequivocal that fossil fuels are the overwhelming source of the greenhouse gas (GHG) emissions driving climate change and resultant injuries to people, the environment, and the very existence of some States. The fact of the relationship between fossil fuels and climate change cannot be ignored or omitted; it is an indispensable part of the context for and analysis of the legal questions before the Court.
3. Second, States' obligations under multiple sources of international law require action to curtail the production and use of fossil fuels—given their actual and foreseeable harms to the atmosphere (a shared resource), to people and the environment in States around the world, and to some States themselves. These obligations include the duty under customary international law to prevent and minimize the risk of significant transboundary environmental harm (sometimes called the transboundary harm or preventive principle), which has been repeatedly upheld by the International Court of Justice and enshrined in numerous international legal instruments. States have a related obligation under international human rights law to protect against foreseeable violations of human rights or threats thereof resulting from conduct under their jurisdiction and control, including threats due to environmental degradation such as climate change. The preventive principle is also enshrined in the United Nations Convention on the Law of the Sea (UNCLOS), which obliges States to prevent, reduce, and control all forms of marine pollution—the definition of which encompasses GHG emissions, which have deleterious effects on the marine environment.
4. Those preventive duties under customary and conventional law formed the background to and foundation for the international climate agreements, the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, which do not limit or supplant those longstanding obligations, but build upon and complement them. The UNFCCC and Paris Agreement oblige States to prevent dangerous anthropogenic interference in the climate system, including through the adoption and implementation of progressively more ambitious national plans to reduce greenhouse gas emissions at a rate capable of limiting warming to 1.5°C, with developed countries “taking the lead in combating climate change and adverse effects thereof.” Such reduction of greenhouse gas emissions is not possible without the rapid and equitable phaseout of fossil fuel production and use.

5. Third, as part of States' due diligence pursuant to their prevention obligations, States must, at minimum, consider the foreseeable emissions resulting from fossil fuel activity under their jurisdiction or control regardless of where those emissions occur. GHGs do not respect borders. And certain activity, such as the production of fossil fuels, inevitably leads to GHG emissions when the fossil fuels produced are used as intended. Those emissions and their contribution to climate change and resultant harm are foreseeable regardless of where the GHGs are released. This entails an obligation to assess all the foreseeable emissions resulting from fossil fuel activity prior to engaging in, authorizing, or supporting it, through finance or otherwise. Only an accurate and comprehensive assessment of all foreseeable climate impacts of fossil fuel activity will permit States to conform their conduct to their legal obligations.
6. Fourth, State conduct that increases the risk of significant transboundary harm from fossil-fueled climate change is presumptively contrary to the above-mentioned legal duties to prevent such harm and foreseeable human rights violations, as well as applicable treaty-based obligations to reduce GHG emissions in line with long-term temperature targets. In the context of the mounting climate emergency, both State inaction and State action on fossil fuels can increase the risk of harm. That is, the failure of States with high, cumulative and current emissions to reduce fossil fueled emissions sufficiently steeply and quickly increases the risk of significant transboundary harm and human rights violations due to climate change. Because emissions are cumulative, inaction that perpetuates status quo levels of fossil fuel emissions only compounds climate impacts. Likewise, affirmative acts of States that increase the production and use of, or reliance on, fossil fuels—the driver of the climate crisis—by engaging in, authorizing, or financing fossil fuel activity, increases the risk of significant transboundary harm and human rights violations, and are presumptively contrary to State obligations. The burden is on the State that would pursue or continue pursuing an activity, the consequences of which are unequivocally harmful to the global atmosphere and environment, States, and populations, present and future, to justify such activity.
7. Fifth, in accordance with the precautionary principle, States cannot claim scientific uncertainty as a reason to delay effective climate action and must prioritize measures proven to reduce GHG emissions from fossil fuels—namely, by curtailing their production and use—over speculative ones.
8. These State duties to curb the primary cause of climate change and prevent its foreseeable consequences are not new. They date at least as far back as a State's knowledge and foresight of the causes and consequences of climate change, and extend as far as the State's jurisdiction over fossil fuel production and use. The present climate emergency is a result of past and continuing failures of States to adhere to those duties over time—chiefly, industrialized States whose conduct led directly or indirectly to the majority of cumulative fossil fuel emissions. Those breaches trigger legal consequences under both the law of State responsibility and human rights law. Accordingly, in addition to preventing and minimizing further risk of fossil-fueled climate harm today, those States' whose direct or indirect production and use of fossil fuels contributed materially to cumulative emissions over time also have legal responsibility to cease their violations and provide reparation for resultant injuries, as discussed in the second memorandum of this submission [*See* CIEL, Memo on the Legal Consequences for States of Internationally Wrongful Acts Causing

Harm to the Climate System, in Written Statement submitted to the ICJ in the climate advisory proceedings. March 2024].

II. The Court cannot address States’ duties with regard to climate change without addressing States’ obligations with regard to the primary cause of climate change: fossil fuels

9. Climate change is unequivocally a form of transboundary harm causing significant injury around the world. 2023 was the hottest year on record.¹ Across the globe, in addition to extreme temperatures, there have been catastrophic wildfires, increased hurricanes and typhoons, and droughts—along with ongoing impacts like melting ice sheets, sea level rise, increasing ocean temperatures, and ocean acidification.² In the most recent decade (2011-2020), global temperature rise reached 1.1°C above pre-industrial levels.³ “Global greenhouse gas emissions have continued to increase, with unequal historical and ongoing contributions”⁴ and the current levels of warming, approximately 1.2-1.3°C,⁵ are already adversely impacting the environment and human rights, including, *inter alia*, the rights to life, to a clean, healthy, and sustainable environment, to food, and to water. Those impacts will only worsen with every additional fraction of a degree. Warming of 1.5°C is not safe for most people and ecosystems.⁶ Scientists have issued increasingly dire warnings about the impacts of continued temperature rise, cautioning that any increase above 1.5°C, even if

¹ National Oceanic and Atmospheric Administration (NOAA), U.S. Dept. of Commerce, “2023 was the world’s warmest year on record, by far” (Jan. 12, 2024), <https://www.noaa.gov/news/2023-was-worlds-warmest-year-on-record-by-far>; NASA, “NASA analysis confirms 2023 as Warmest Year on Record (Jan. 12, 2024), <https://www.nasa.gov/news-release/nasa-analysis-confirms-2023-as-warmest-year-on-record/>; Raymond Zhong & Keith Collins, “See How 2023 Shattered Records to Become the Hottest Year,” *The New York Times* (Jan. 9, 2024), <https://www.nytimes.com/2024/01/09/climate/2023-warmest-year-record.html>.

² Intergovernmental Panel on Climate Change (IPCC), 2023: Summary for Policymakers, in, *Climate Change 2023: Synthesis Report. A Report of the Intergovernmental Panel on Climate Change. 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.)], paras. A.2-A.2.7, B.1.1, B.1.3-B.1.4, B.2, figs. SPM.1, SPM.4 (2023) [hereinafter IPCC, AR6, Synthesis Report: Summary for Policymakers].

³ *Ibid.* at para. A.1.

⁴ *Ibid.*

⁵ NASA, Global Climate Change: Vital Signs of the Planet: <https://climate.nasa.gov/vital-signs/global-temperature> (noting that the Earth was about 1.36 degrees Celsius warmer in 2023 than in the late 19th century pre-industrial average; Rebecca Lindsey & Luann Dahlman, Climate Change: Global Temperature (Jan. 18, 2024), <https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature>; Raymond Zhong, “Have We Crossed a Dangerous Warming Threshold? Here’s What to Know.,” *The New York Times* (Feb. 8, 2024), <https://www.nytimes.com/2024/02/08/climate/global-warming-dangerous-threshold.html> (stating that while 2023 was approximately 1.5°C warmer, most estimates put average warming between 1.2°C and 1.3°C warmer than pre-industrial levels).

⁶ 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*, Technical Summary, p. 44 (V. Masson-Delmotte et al, eds., Cambridge University Press, 2018) [hereinafter IPCC, 2018 Special Report, Global Warming of 1.5°C] (The IPCC’s Special Report on Warming of 1.5°C explicitly states that “warming of 1.5°C is not considered ‘safe’ for most nations, communities, ecosystems and sectors and poses significant risks to natural and human systems as compared to the current warming of 1°C (high confidence),” especially for “disadvantaged and vulnerable populations.”); IPCC, 2018 Special Report, Global Warming of 1.5°C, Ch. 5 (“Sustainable Development, Poverty Eradication and Reducing Inequalities”), at 447.

temporary, will cause further irreversible harm and catastrophic consequences for people and ecosystems.⁷ It will also increase the frequency, likelihood, and intensity of extreme weather events, as well as the associated harm.⁸ Human rights experts⁹ and domestic courts¹⁰ have similarly

⁷ IPCC, *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, et. al eds., Cambridge University Press, 2022), Summary for Policymakers [hereinafter IPCC, AR6, WGII: Summary for Policymakers], at para. B.3; *see also* IPCC, AR6, WGII, at vii (“The assessment underscores the importance of limiting global warming to 1.5°C if we are to achieve a fair, equitable and sustainable world.”); IPCC, AR6, WGII, Technical Summary, at para. C.1.2.

⁸ IPCC, AR6, WGII: Summary for Policymakers, at para. B.1.

⁹ *See, e.g.*, UN General Assembly (UNGA), Resolution adopted by the General Assembly on the human right to a clean, healthy and sustainable environment, 28 July 2022, U.N. Doc. A/RES/76/300, at 2 (acknowledging that climate impacts interfere with the enjoyment of the right to a clean, healthy, and sustainable environment and that environmental damage “has negative implications, both direct and indirect, for the effective enjoyment of all human rights”); Human Rights Committee, General Comment No. 36, U.N. Doc. CCPR/C/CG/36 (Sept. 19, 2019), at para. 62 (recognizing that “[e]nvironmental 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”); Committee on Economic, Social and Cultural Rights (CESCR), Statement on Climate and the Covenant (Oct. 8, 2018), <https://www.ohchr.org/en/statements/2018/10/committee-releases-statement-climate-change-and-covenant>; Committee on the Rights of the Child, *General Comment No. 26 (2023) on children’s rights and the environment*, U.N. Doc. CRC/C/GC/26, (Aug. 22, 2023), at para. 8 (stating that a “clean, healthy and sustainable environment (...) is necessary for the full enjoyment of a broad range of children’s rights. Conversely, environmental degradation, including the consequences of the climate crisis, adversely affects the enjoyment of these rights, in particular for children in disadvantaged situations or children living in regions that are highly exposed to climate change.”); Inter-American Court of Human Rights (IACtHR), *Advisory Opinion OC-23/2017 on the Environment and Human Rights* (2017), at para. 47 [hereinafter IACtHR, *Advisory Opinion OC-23/2017*]; Inter-American Commission on Human Rights, *Resolution No. 3/2021, Climate Emergency: Scope of Inter-American Human Rights Obligations*, (2021), at 8 (“Emphasizing that climate change is one of the greatest threats to the full enjoyment and exercise of human rights of present and future generations, to the health of ecosystems and all species that inhabit the planet.”); 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,” U.N. Doc. HRI/2019/1 (May 14, 2020, originally released Sept. 16, 2019) [hereinafter UN Human Rights Treaty Bodies’ joint statement on human rights and climate change], at para. 5; Joint Statement of the United Nations Special Procedures Mandate Holders on the occasion of the 24th Conference of the Parties, “Climate Change and Human Rights” (Dec. 6, 2018), <https://www.ohchr.org/en/statements/2018/12/joint-statement-united-nations-special-procedures-mandate-holders-occasion-24th>; Human Rights Council, *Resolution 53/6: Human Rights and Climate Change*, U.N. Doc. A/HRC/RES/53/6 (July 19, 2023) (“Emphasizing that the adverse effects of climate change have a range of implications, both direct and indirect, that increase with greater global warming, for the effective enjoyment of human rights,” and stressing the importance of addressing climate change and its adverse consequences). Since 2008, the Human Rights Council has adopted more than ten resolutions on Human Rights and Climate Change highlighting the impacts of climate change on the realization of human rights. *See* U.N. Human Rights Office of the High Commissioner, Human Rights Council resolutions on human rights and climate change, <https://www.ohchr.org/en/climate-change/human-rights-council-resolutions-human-rights-and-climate-change>.

¹⁰ *See, e.g.*, *Neubauer et al v. Germany*, Bundesverfassungsgerichtshof (BverfG) (Federal Constitutional Court), 1 BvR 2656/18, 1 BvR 96/20, 1 BvR 78/20, 1 BvR 288/20, 1 BvR 96/20, 1 BvR 78/20 (Apr. 29, 2021) (Ger.), at paras. 20-28, 148 (recognizing that the dangers of climate change are impacting present and future generations and that there are tipping points beyond which consequences for people are even greater); Supreme Court of the Netherlands, *The State of the Netherlands v. Urgenda*, Case. No. 19/00135 (Engels) (Dec. 20, 2019) (English translation) [hereinafter *Urgenda*], at paras. 4.2-4.8, 5.6.2 (acknowledging that climate change is a “real and immediate risk”); *Shrestha v. Office of the Prime Minister et al.*, Nepal Supreme Court, Decision no. 10210, NKP Part 61, Vol. 3, p. 11 (2018) (Nepal) (unofficial translation) (noting the impacts that climate change has caused, including irreversible harms to nature, and the imminent threat to future generations); *Generaciones Futuras v. Minambiente*, Supreme Court of

recognized the harm associated with increasing temperature rise. Climate change induces not only material and moral injuries to people and the planet, but also to the sovereignty and territorial integrity of States.

10. The primary cause of climate change is known. Climate change is the result of the cumulative emission of GHGs—heat-trapping gases such as carbon dioxide (CO₂) and methane—over time, which has increased their concentration in the atmosphere.¹¹ That alteration of the atmosphere, a form of atmospheric degradation,¹² has led to increased average global temperatures, increased absorption of CO₂ in the oceans, and myriad other adverse impacts on the global climate system as described above. The primary source of the GHG emissions over time is human activity—and overwhelmingly the production and use of fossil fuels: oil, gas, and coal.¹³
11. Without effectively preventing, reducing, and controlling its primary cause, climate change will only worsen, increasing harm and the risk thereof to States, peoples, and individuals. Absent effective measures to rapidly reduce the production and use of fossil fuels, the world will experience even more drastic, and further irreparable transboundary harm. Effective mitigation requires steep

Colombia, STC. 4360-2018 (Apr. 5, 2018) (Col.) (unofficial translation by Dejusticia who supported the plaintiffs), at 34-37 (recognizing the dangers of climate change, including the irreversibility of the damage); *Ashgar Leghari v. Federation of Pakistan*, (2015) W.P. No. 25501/2015 (Lahore High Court) (Pak.) (stating “Climate Change is a defining challenge of our time and has led to dramatic alterations in our planet’s climate system.”).

¹¹ IPCC, AR6, Synthesis Report: Summary for Policymakers, at para. A.1.

¹² International Law Commission (ILC), *Draft Guidelines on the Protection of the Atmosphere, with commentaries*, U.N. Doc. A/76/10 (2021), at Guideline 1(c) cmt, paras. 6, 12, 13 [hereinafter ILC, *Draft Guidelines on the Protection of the Atmosphere*] (explaining that “‘atmospheric degradation’ means the alteration by humans, directly or indirectly, of atmospheric conditions having significant deleterious effects of such a nature as to endanger human life and health and the Earth’s natural environment.”).

¹³ IPCC, AR6, Synthesis Report: Summary for Policymakers, at paras. A.1, A.1.4; 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, p. 676 (V. Masson-Delmotte et al (eds.), 2021) [hereinafter IPCC, AR6, WGI]; UN Env’t Programme et al, *Emissions Gap Report 2021: The Heat Is On – A World of Climate Promises Not Yet Delivered* (UNEP eds. 2021) [hereinafter UNEP, *Emissions Gap Report 2021*]; IPCC, 2014: *Climate Change 2014: Synthesis Report*. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Summary for Policymakers, p. 5 (R.K. Pachauri & L.A. Meyer, eds. 2014) [hereinafter IPCC, AR5, Synthesis Report]; Richard Heede, *Tracing Anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854-2010*, 122 *Climatic Change* 229 (2014); U.S. Environmental Protection Agency, *Causes of Climate Change*, <https://www.epa.gov/climatechange-science/causes-climate-change> (“Burning fossil fuels changes the climate more than any other human activity.”); David Boyd, Pedro Arrojo Agudo, Marcos A. Orellana, Livingstone Sewanyana, Surya Deva & Olivier De Schutter, “Fossil Fuels at the heart of the planetary environmental crisis: UN experts (Nov. 30, 2023), <https://www.ohchr.org/en/press-releases/2023/11/fossils-fuels-heart-planetary-environmental-crisis-un-experts> (UN Special Procedures mandate holders stating that “Fossil fuels are the largest source of greenhouse gas emissions, which have unequivocally caused the climate crisis”); *Juliana v. United States*, 947 F.3d 1159, 1167 (9th Cir. 2020) (noting that the US government has not challenged the factual claims of the youth plaintiffs, which were based on the government’s permitting, authorizing, and subsidizing fossil fuels violated their rights due to climate change); *Juliana v. United States*, Civ. No. 6:15-cv-01517-AA (D. Or., 2023), at 2-3 (acknowledging that the climate crisis threatens lives and that burning fossil fuels are the driving force and reiterating the 9th Circuit’s holding that the government did not dispute the plaintiffs’ factual claims); *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007) (acknowledging that the EPA had the authority to regulate greenhouse gases in new vehicles even if the Congresses that drafted the relevant section of the Clean Air Act “might not have appreciated the possibility that burning fossil fuels could lead to global warming” at the time of drafting, but that future scientific developments might impact the regulation); *Urgenda*, at paras. 2.1, 4.2; *Neubauer*, at para. 18 (acknowledging that “Atmospheric concentrations of CO₂ have increased by 40% relative to pre-industrial times due primarily to fossil fuel emissions”).

reductions of GHG emissions, which in turn requires rapid phase out of all fossil fuels.¹⁴ Continuing business-as-usual will result in global greenhouse gas emissions significantly higher than levels consistent with keeping temperature rise below 1.5°C, the level at which States agreed to aim to limit warming under the Paris Agreement.¹⁵ According to the Intergovernmental Panel on Climate Change (IPCC), “Projected CO₂ emissions from existing fossil fuel infrastructure without additional abatement would exceed the remaining carbon budget for 1.5°C (50%) (*high confidence*).”¹⁶ Even limiting global warming to 2°C “will leave a substantial amount of fossil fuels unburned and could strand considerable fossil fuel infrastructure.”¹⁷ That means that effective mitigation requires not only a halt to the development of new oil, gas, and coal, but closure of existing fossil fuel facilities and their replacement with renewable energy, energy efficiency measures, and in some cases, energy demand reduction.¹⁸ This is a critical decade for mitigation action; taking near-term (pre-2030) action to decrease greenhouse gases is essential to keep global temperature rise to below 1.5°C and avoid the associated adverse impacts.¹⁹ “All global modelled pathways that limit warming to 1.5°C (>50%) with no or limited overshoot, and those that limit warming to 2°C (>67%), involve rapid and deep and, in most cases, immediate greenhouse gas emissions reductions in all sectors this decade.”²⁰

12. Increasing reliance on fossil fuels—the root cause of climate change—by expanding their production and use will, as is self-evident, worsen the crisis, increasing adverse impacts and the risk thereof. Yet government plans and projections would boost production of coal through 2030 and of oil and gas through mid-century.²¹ Such actions would generate more than twice the amount of fossil fuels in 2030 than would be consistent with a 1.5°C pathway this decade.²²
13. As elaborated further below, States have long-standing obligations under international law to prevent significant transboundary environmental harm and minimize the risk of such harm, and to refrain from causing or contributing to and to protect against foreseeable violations of human rights. Those obligations and principles also underpin and are enshrined in international climate agreements. In the face of the actual and foreseeable consequences of climate change for the environment and human rights, these legal obligations require States to take action to curtail its known chief cause: fossil fuels.

¹⁴ International Energy Agency (IEA), *Net Zero Roadmap: A Global Pathway to Keep the 1.5C Goal in Reach, 2023 Update*, pp. 13, 16, 75-76 (2023); IEA, *Net Zero by 2050: A Roadmap for the Global Energy Sector* (Oct. 2021), at 18-21, 100-05; IPCC, AR6, Summary for Policymakers, at para. B.6, Fig. SPM.5.

¹⁵ Paris Agreement to the United Nations Framework Convention on Climate Change, art. 2(1)(a), Dec. 12, 2015, 3156 U.N.T.S. (entered into force Nov. 4, 2016) [hereinafter Paris Agreement].

¹⁶ IPCC, AR6, Synthesis Report: Summary for Policymakers, at para. B.5.

¹⁷ IPCC, AR6, WGIII, Summary for Policymakers, at para. C.4.4.

¹⁸ UNEP Emissions Gap Report, pp. xxi-xxiii; IEA, *Net Zero Roadmap: A Global Pathway to Keep the 1.5C Goal in Reach, 2023 Update*, pp. 13, 16, 75-76.

¹⁹ IPCC, AR6, Synthesis Report: Summary for Policymakers, at paras. C-1-C.3, fig. SPM.7.

²⁰ *Ibid.* at para. B.6.

²¹ Stockholm Environment Institute, Climate Analytics, E3G, IISD & UNEP, *The Production Gap: Phasing down or phasing up? Top fossil fuel producers plan even more extraction despite climate promises* (2023), at 2, https://productiongap.org/wp-content/uploads/2023/11/PGR2023_web_rev.pdf.

²² *Ibid.*

14. As with any other matter that the Court is asked to address, certain incontrovertible facts pertaining to the question before the Court are indispensable to its legal analysis. Just as this Court could not address the legality of the threat or use of nuclear weapons without considering known facts about their radioactivity,²³ it cannot address States' duties with regard to climate change without addressing the known facts about the causes and consequences of climate change. In the *Nuclear Weapons* Advisory Opinion, this Court considered the unique characteristics of nuclear weapons and the foreseeable consequences of their use, including the release of radiation that “would affect health, agriculture, natural resources, and demography over a very wide area” as well as future generations and environment and food and marine ecosystems.²⁴ That fossil fuels are the primary cause of climate change, and that their continued production and use is driving and will foreseeably exacerbate global warming and its adverse impacts on the environment and human rights, is likewise an indispensable fact for the Court’s analysis here.

III. The preventive principle requires States to take climate mitigation action including action to curtail fossil fuels

15. Pursuant to the duties to prevent significant transboundary environmental harm and foreseeable violations of human rights, States have an obligation to consider the foreseeable impacts of the greenhouse gas emissions generated by fossil fuel activities that they undertake, support, or authorize, regardless of where those emissions occur, and to take measures to prevent or minimize them.

A. States must take action to prevent and minimize the risk of foreseeable harm to the environment and human rights from fossil fueled climate change

i. The duty to prevent and minimize the risk of significant transboundary environmental harm obliges States to constrain fossil fuel activity within their jurisdiction or control

16. The duty to prevent significant transboundary harm and minimize the risk thereof is a long-standing principle of customary international law. Starting with the *Trail Smelter* arbitration,²⁵ the duty to prevent significant transboundary environmental harm has been reiterated time and again, including

²³ The request for the Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons did not mention radiation or other incontrovertible facts about nuclear weapons and their consequences, yet the Court relied on and named such facts in its Advisory Opinion. *See* UN General Assembly, Resolution 49/75K, Request for an Advisory Opinion from the International Court of Justice on the Legality of the Threat or Use of Nuclear Weapons (Dec. 15, 1994); *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 1996 I.C.J. 226 (July 8) [hereinafter *Nuclear Weapons Advisory Opinion*], at paras. 35-36 (referencing the dangers of radiation and noting that “it is imperative for the Court to take account of the unique characteristics of nuclear weapons, and in particular their destructive capacity, their capacity to cause untold human suffering, and their ability to cause damage to generations to come.”). The fact that the request for an advisory opinion on climate change does not mention fossil fuels, similarly should not prevent the Court from doing so.

²⁴ *Nuclear Weapons Advisory Opinion*, 1996 I.C.J. at paras. 35-36.

²⁵ *Trail Smelter Arbitration* (U.S. v. Can.), 3 R.I.A.A. 1905 (1941), at 1905-82.

in the 1972 Stockholm Declaration²⁶ and 1992 Rio Declaration,²⁷ in numerous multilateral environmental agreements, including the UNFCCC,²⁸ and by international courts.²⁹ As this Court has stated, it is “part of the corpus of international law relating to the environment.”³⁰ Every State has a duty “not to allow knowingly its territory to be used for acts contrary to the rights of other States,”³¹ and must do what it can to avoid engaging in or allowing activities in its territory or an area it controls that will cause significant transboundary harm or harm to a shared resource.³² So while States have a right to exploit their own resources, that right is checked and limited by their duty not to knowingly cause “damage to the environment of other States or of areas beyond the limits of national jurisdiction.”³³

17. The transboundary harm principle encompasses not just cross-border damage between neighboring States but harm to the global commons. While the transboundary harm principle originated in relation to activities that caused harm to a neighboring State, it has evolved to apply to harm that is caused by activities in a State of origin to another State or any area beyond national control—regardless of whether there is a shared border between the State of origin and the area of harm.³⁴

²⁶ Stockholm Declaration on the Human Environment, 11 I.L.M. 1416 (1972), at principle 21 (“States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility 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”) [hereinafter Stockholm Declaration].

²⁷ Rio Declaration on Environment and Development, 31 I.L.M. 874 (1992), at principle 2 (“States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility 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”) [hereinafter Rio Declaration].

²⁸ United Nations Framework Convention on Climate Change, pmbl., May 9, 1992, 1771 U.N.T.S. 107 (entered into force Mar. 21, 1994) [hereinafter UNFCCC]; see also Stockholm Convention on Persistent Organic Pollutants, pmbl., May 22, 2001, 2256 U.N.T.S. 119 (entered into force May 17, 2004); United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, pmbl., June 17, 1994, 1954 U.N.T.S. 3 (entered into force Dec. 26, 1996); United Nations Convention on the Law of the Sea, art. 194(2), Dec. 10, 1982, 1833 U.N.T.S. 3 (entered into force Nov. 16, 1994) [hereinafter UNCLOS].

²⁹ *Dispute over the Status and Use of the Waters of the Silala (Chile v. Bol.)*, Judgment, 2002 I.C.J. Rep. 614 (Dec. 1), at para. 99; *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, Judgment, 2015 I.C.J. Rep. 665 (Dec. 16), at paras. 104, 118 [hereinafter *Costa Rica v. Nicar.*]; *Pulp Mills on the River Uruguay (Arg. v. Uru.)*, Judgment, 2010 I.C.J. 14 (Apr. 20), at para. 101 [hereinafter *Pulp Mills*]; *Case Concerning the Gabčíkovo-Nagymaros Project (Hung. v. Slov.)*, Judgment, 1997 I.C.J. 7 (Sept. 25), at para. 53 [hereinafter *Gabčíkovo-Nagymaros Project*]; *Nuclear Weapons Advisory Opinion*, at para. 29; IACtHR, *Advisory Opinion OC-23/17*, paras. 95-103; Award in the Arbitration regarding the Iron Rhine (“Ijzeren Rijn”) Railway between the Kingdom of Belgium and the Kingdom of the Netherlands, decision of 24 May 2005, 27 R.I.A.A. 35, at para. 222.

³⁰ *Nuclear Weapons Advisory Opinion*, 1996 I.C.J. at para. 29.

³¹ *The Corfu Channel Case (U.K. v. Albania)*, Judgment of April 9th, 1949, I.C.J. Rep. at. 22; see also *Dispute over the Status and Use of the Waters of the Silala*, 2022 I.C.J. at para. 99.

³² See *Dispute over the Status and Use of the Waters of the Silala*, 2022 I.C.J. at para. 99; *Costa Rica v. Nicar.*, 2015 I.C.J. at paras. 104, 118; *Pulp Mills*, 2010 I.C.J. at para. 101; *Gabčíkovo-Nagymaros Project*, 1997 I.C.J. at para. 53; *Nuclear Weapons Advisory Opinion*, 1996 I.C.J. at para. 29.

³³ Stockholm Declaration, at principle 21; Rio Declaration, at principle 2.

³⁴ See *Dispute over the Status and Use of the Waters of the Silala*, 2022 I.C.J. at para. 99 (citing *Corfu Channel*, 1949 I.C.J. at p. 22; *Pulp Mills*, 2010 I.C.J. Reports, at para. 101 (citing *Nuclear Weapons Advisory Opinion*, 1996 I.C.J. at para. 29); *Costa Rica v. Nicar.*, 2015 I.C.J. at para. 104) for the proposition that “every State’s obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States”); *Nuclear Tests, Request of an*

Areas beyond national jurisdiction necessarily include the climate, atmosphere, high seas, and other global commons.³⁵

18. This obligation applies to a broad range of conduct. The International Law Commission (ILC) has not defined what activities may fall under this obligation given that it would be non-exhaustive and may change.³⁶ The duty to prevent and minimize the risk of transboundary harm applies not only to unlawful activities, but also to activities that are not otherwise prohibited under international law and that may cause significant transboundary harm.³⁷ Such activities could include the States' own conduct—acts and omissions directly attributable to the State, such as permitting, financing,³⁸ or enacting (or failing to enact) regulations and legislation—as well as the conduct of non-State actors (private entities) that the State has jurisdiction and authority to regulate.³⁹ Thus, the State of origin, understood to be the State in which the conduct or activities that cause or contribute to the harm are undertaken or planned or the State that has jurisdiction or control over the conduct, has the responsibility to prevent and minimize the risk of harm.⁴⁰

Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v. France) case, 1995 I.C.J. 288, dissenting opinion by Judge Weeramantry, at 346-47 (noting in his assessment of principle to not cause harm that “no nation is entitled by its own activities to cause damage to the environment of any other nation”) [hereinafter *1995 Nuclear Tests case*]; International Law Commission, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries*, Article 2(c) & corresponding commentary (2001) [hereinafter ILC, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities*]; see also IACtHR, *Advisory Opinion OC-23/17*, at para. 96 (identifying climate change as transboundary harm: “Many environmental problems involve transboundary damage or harm. ‘One country’s pollution can become another country’s human and environmental rights problem, particularly where the polluting media, like air and water, are capable of easily crossing boundaries.’ The prevention and regulation of transboundary environmental pollution has resulted in much of international environmental law, through bilateral, regional or multilateral agreements that deal with global environmental problems such as ozone depletion and climate change.”).

³⁵ See, e.g., UNEP Division of Environmental Law and Conventions, IEG of the Global Commons, <https://cil.nus.edu.sg/wp-content/uploads/2015/12/Ses4-7.-UNEP-Division-of-Environmental-Law-and-Conventions-Global-Commons.pdf> (“The ‘Global Commons’ refers to resource domains or areas that lie outside of the political reach of any one nation State. Thus international law identifies four global commons namely: the High Seas; the Atmosphere; Antarctica; and, Outer Space.”); IUCN, *World Conservation Strategy* (1980), at 58 <https://portals.iucn.org/library/efiles/documents/WCS-004.pdf>; Oxford Reference, Global Commons, <https://www.oxfordreference.com/display/10.1093/oi/authority.20110803095855190>.

³⁶ ILC, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities* (2001) at art. 1 cmt. paras. 2-4.

³⁷ *Ibid.*; see also IACtHR, *Advisory Opinion OC-23/17*, at para. 103.

³⁸ See André Nollkamper et al, *Guiding Principles on Shared Responsibility in International Law*, 31 *European Journal of International Law* 1 (2020), at principle 2, cmt. para. 8 (noting that, in a case concerning the planned construction of a tourist resort in breach of the Berne Convention on European Wildlife and Natural Habitats, the Convention Secretariat took the position that “the funding provided by France for the tourist resort would engage the international responsibility of the latter state”).

³⁹ See *Corfu Channel*, 1949 I.C.J. at 22 (iterating that it is “every State’s obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States”); see also Stockholm Declaration, at principle 21; Rio Declaration, at principle 2 (noting that States have “the responsibility 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”); IACtHR, *Advisory Opinion OC-23/17*, at paras. 102-104; Human Rights Committee, *General Comment No. 36 - Article 6: Right to life*, U.N. Doc. CCPR/C/GC/36, para. 22 (Sept. 3, 2019) [hereinafter HRC, General Comment No. 36].

⁴⁰ See Stockholm Declaration, at principle 21; Rio Declaration, at principle 2; ILC, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities*, art. 1, cmt. paras. 7-12, art. 2(d); see also *Costa Rica v. Nicar.*, 2015

19. The preventive obligation applies to “significant transboundary harm.”⁴¹ There is not a single, universal definition of what “significant” means in the context of transboundary harm; it requires a case-by-case analysis.⁴² However, courts and international scholars have considered what level of harm reaches that threshold. For example, the tribunal in *Trail Smelter* determined that States do not have the right to engage in activities that have “serious consequence” in another State.⁴³ As the ILC has explained, “‘significant’ is something more than ‘detectable’ but need not be at the level of ‘serious’ or ‘substantial.’” The harm must lead to a real detrimental effect on matters such as, for example, human health, industry, property, environment or agriculture in other States.⁴⁴ What constitutes “significant” transboundary harm may change over time with new information or changed circumstances; harm that was not initially considered significant due to lack of “scientific knowledge or human appreciation for a particular resource,” at a later time, could be considered “significant.”⁴⁵
20. The action required of States to satisfy their preventive obligations and adhere to the transboundary harm principle—the requisite “due diligence”—will vary depending on the nature of the risk and the means at the State’s disposal. Fundamentally, measures undertaken must be capable of averting harm. States “shall take *all appropriate measures* to prevent significant transboundary harm or at any event to minimize the risk thereof.”⁴⁶ This Court has noted that “in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage”⁴⁷ and riskier activities require a higher standard of due diligence.⁴⁸ In this regard, “the concept of due diligence would be the standard of care to evaluate the conduct required of a state.”⁴⁹ States must take measures, in line with due diligence, as discussed further in section IV below, to prevent and minimize the risk of significant harm to the environment of other States and the global commons.
21. Climate change, driven by cumulative GHG emissions principally from fossil fuel production and use, is transboundary harm. The transboundary harm involves the degradation of a shared resource common to humankind—the global atmosphere—and ensuing alteration of the global climate, with

I.C.J. at para. 104; *Pulp Mills*, 2010 I.C.J. at para. 101; *Chiara Saachi et al. v. Argentina*, Decision Comm. on Rights of the Child, No. 104/2019, U.N. Doc. CRC/C/88/D/104/2019, para. 10.5 (decision adopted Sept. 22, 2021).

⁴¹ ILC, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities*, art. 1, art. 2 cmt. paras. 4-7.

⁴² *Ibid.*, at art. 2, cmt. para. 4.

⁴³ *Trail Smelter Arbitration*, at 1965.

⁴⁴ ILC, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities*, art. 2, cmt. para. 4.

⁴⁵ *Ibid.*, at art. 2, cmt. para. 7.

⁴⁶ *Ibid.*, at art. 3 (emphasis added); see also *Costa Rica v. Nicar.*, 2015 I.C.J. at para. 104; *Pulp Mills*, 2010 I.C.J. at para. 101 (stating that a State “is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State.”).

⁴⁷ *Gabčíkovo-Nagymaros Project*, 1997 I.C.J. at para. 140.

⁴⁸ *Pulp Mills*, 2010 I.C.J. at paras. 185–87; *Responsibilities and obligations of States with respect to activities in the Area, Case no. 17, Advisory Opinion of February 1st, 2011*, ITLOS Rep. 2011 [hereinafter ITLOS, *Seabed Chamber Advisory Opinion*], at para. 117.

⁴⁹ Christina Voigt, “State responsibility for damages associated with climate change,” in *Research Handbook on Climate Change Law and Loss & Damage* (Meinhard Doelle & Sara L. Seck eds. 2021), at p. 178 .

resultant injuries in all States, albeit to varying degrees and intensities, as well as adverse impacts on other shared resources beyond national jurisdiction, such as the ocean.⁵⁰ The climate impacts of fossil fuels are not limited to where they are produced or used, but are global in scope due to the inherently transboundary nature of emissions in the atmosphere.⁵¹ Much like the fallout from the use of nuclear weapons, the climate consequences of fossil fuel emissions “affect health, agriculture, natural resources and demography over a wide area” and cannot “be contained in either space or time.”⁵² When asked to assess the threat of nuclear weapons to the global environment and humanity, this Court considered international environmental law and, primarily, the principle to prevent transboundary harm, in interpreting the law of armed conflict.⁵³ In its discussion of applicable law, the Court reiterated that there is “a general obligation to protect the natural environment against widespread, long-term and severe environmental damage,”⁵⁴ and States have to consider environmental factors, including the obligation to prevent transboundary harm, in taking action in armed conflict.⁵⁵

22. This global transboundary harm is the result of cumulative human activities (a series of acts and omissions over time) that have taken place and are occurring in a number of different States of origin (principally the most industrialized nations), with impacts on all States and shared global resources. State action, such as undertaking, supporting, and authorizing fossil fuel production and use, combined with omissions, such as failing to regulate emissions by curtailing fossil fuel production and use, have, over time, altered the climate and created the crisis. The greenhouse gases emitted accumulate in the atmosphere and affect its composition in a way that leads to atmospheric degradation and ensuing climate change.⁵⁶ Evidence clearly indicates that the vast majority of those cumulative emissions have come from industrialized countries.⁵⁷ The impacts of

⁵⁰ See *Dispute over the Status and Use of the Waters of the Silala*, 2022 I.C.J. at para. 99; International Law Association (ILA), *Legal Principles Relating to Climate Change*, Draft Art. 7, cmt. para. 5 (2014), https://www.ila-hq.org/en_GB/documents/conference-report-washington-2014-5 (“While it might be argued that Principle 2 [of the Rio Declaration] does not apply to climate change as it falls outside the traditional concept of transboundary pollution, ‘neither the decades of ILC debates on the issue of prevention of environmental harm nor international jurisprudence provide evidence that complex instances of environmental change are not to be covered by the general duty to prevent harm and minimise the risk thereof’. Principle 2 itself deals not just with transboundary harm to other States but also with harm to ‘areas beyond national jurisdiction’, which would extend to the marine environment and the atmosphere.”) (quoting Roda Verheyen, *Climate Change Damage and International Law: Prevention Duties and State Responsibility* (Martinus Nijhoff, 2005)), at 167.

⁵¹ See, e.g., *Chiara Saachi et al v. Argentina*, at para. 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 over the enjoyment of rights by individuals both within as well as beyond the territory of the State party. The Committee considers that, through its ability to regulate activities that are the source of these emissions and to enforce such regulations, the State party has effective control over the emissions.”).

⁵² *Nuclear Weapons Advisory Opinion*, 1996 I.C.J. at paras. 34-35.

⁵³ *Ibid.* at paras. 27-29.

⁵⁴ *Ibid.*, at paras 30-31.

⁵⁵ *Ibid.*, at para. 33.

⁵⁶ 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*, para. A.1.1 (V. Masson-Delmotte et al eds., Cambridge University Press, 2021) [hereinafter IPCC, AR6, WGI]; see also ILC, *Draft Guidelines on the Protection of the Atmosphere*, at principle 1.

⁵⁷ See, e.g., Matthew W. Jones, et al., “National contributions to climate change due to historical emissions of carbon dioxide, methane, and nitrous oxide since 1850”, *Scientific Data* | (2023) 10:155, <https://doi.org/10.1038/s41597-023->

climate change compound local impacts resulting from the production and use of fossil fuels, such as air, water, and soil pollution.⁵⁸ Many of these adverse effects fall disproportionately on countries that have contributed the least to greenhouse gas emissions and are among the most marginalized.

ii. The duty to avoid and protect against foreseeable violations of human rights requires States to curtail fossil fuel activity

23. States have a preventive obligation under international human rights law to refrain from causing or contributing to, and to protect against, foreseeable violations of human rights.⁵⁹ States must take “all appropriate measures”⁶⁰ to avert foreseeable threats to the realization of human rights, including by putting in place legislative and administrative frameworks to minimize threats to the right to life.⁶¹ These measures must aim to effectively prevent harm not only to the environment, but also to human health.⁶² Measures must be those capable of protecting individuals from

[02041-1](#) (presenting a “dataset of changes in GMST during 1851–2021 resulting from historical emissions of CO₂, CH₄ and N₂O at the global scale and for individual countries”). *Ibid.* at p. 2: “National contributions to climate change are closely tied to cumulative emissions of CO₂ in the industrial era because a substantial fraction of emitted CO₂ remains in the Earth’s atmosphere for centuries. Consequently, emissions from developed nations have contributed significantly to warming since the industrial revolution.” See also Jason Hickel, *Quantifying national responsibility for climate breakdown: an equality-based attribution approach for carbon dioxide emissions in excess of the planetary boundary*, 4(9) *The Lancet* E-399-E404, at pp. 400-401 (Sept. 2020) (analyzing cumulative emissions data by country or group of countries), <https://www.thelancet.com/action/showPdf?pii=S2542-5196%2820%2930196-0>; Climate Action Tracker; <https://www.climatewatchdata.org/>.

⁵⁸ See, e.g., Karn Vohra et al, *Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem*, 195 *Environmental Research* (Apr. 2021); Frederica Perera, *Pollution from Fossil-Fuel Combustion is the Leading Environmental Threat to Global Pediatric Health and Equity: Solutions Exist*, 15(1) *Int. J. Environ. Res. Public Health* (2018); Savannah Bertrand, Environmental and Energy Study Institute, *Fact Sheet: Climate, Environmental and Health Impacts of Fossil Fuels* (2021), <https://www.eesi.org/papers/view/fact-sheet-climate-environmental-and-health-impacts-of-fossil-fuels-2021>.

⁵⁹ Human Rights Committee, General Comment No. 36, paras. 7, 18, 21-22, 62 (in para. 62 stating “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”); UN Human Rights Treaty Bodies’ joint statement on human rights and climate change, para. 5 (stating “[f]ailure to take measures to prevent foreseeable human rights harm caused by climate change, or to regulate activities contributing to such harm, could constitute a violation of States’ human rights obligations”); African Commission on Human and Peoples’ Rights, General Comment No. 3 on The African Charter on Human and Peoples’ Rights: The Right to Life (Article 4), para. 3 (2015) (the Charter “envisages the protection of not only a life in a narrow sense, but of dignified life. This requires a broad interpretation of States’ responsibilities to protect life.”); David R. Boyd (Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable 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, U.N. Doc. A/74/161, paras. 28, 62 (July 15, 2019) [hereinafter Special Rapporteur on Human Rights and the Environment, *Safe Climate Report*].

⁶⁰ Human Rights Committee, *Daniel Billy v. Australia*, CCPR/C/135/D/3624/2019, para. 8.3 (“The Committee recalls that States parties should take all appropriate measures to address the general conditions in society that may give rise to direct threats to the right to life or prevent individuals from enjoying their right to life with dignity.”); Human Rights Committee, General Comment No. 36, paras. 18, 62; see also ECtHR, *Kolyadenko and Others, v. Russia*, no. 17423/05, para. 216 (2012); ECtHR, *Öneryıldız v. Turkey* [GC], no. 48939/99 (2004), at para. 135.

⁶¹ Human Rights Committee, General Comment No. 36, para. 62; *Kolyadenko and Others*, at para. 157 (citing *Öneryıldız*, at para. 89 and ECtHR, *Budayeva and Others v. Russia*, nos. 15339/02, 21166/02, 20058/02, 11673/02, 15343/02 (2008), at para. 129).

⁶² See, e.g., Human Rights Committee, General Comment No. 36, para. 26, 62; see also ECtHR, *Tătar v. Romania*, no. 67021/01 (2009), para. 88 [hereinafter *Tătar v. Romania*].

foreseeable threats.⁶³ The duty to protect is also not limited to instances in which a State is the sole cause of the harm or the sole entity capable of mitigating the risk to human rights.⁶⁴

24. Like the duty to prevent transboundary harm, States' duties to respect and protect human rights have extraterritorial application. The duty to respect "requires States parties to refrain from interfering directly or indirectly with the enjoyment of the [] rights by persons outside their territories."⁶⁵ The duty to protect requires States to regulate any actor subject to their jurisdiction to prevent them from violating rights when operating abroad,⁶⁶ or undertaking conduct that has the foreseeable effect of infringing rights, regardless of where those infringements occur.⁶⁷
25. This duty applies to human rights violations caused by environmental degradation or harm, such as climate change. As has been widely recognized by international human rights treaty bodies and experts, as well as regional human rights systems,⁶⁸ States are obliged to take measures to protect against conduct that causes climate change, pollution, and other forms of transboundary environmental harm, because of its actual and foreseeable consequences for human rights.

⁶³ See Human Rights Committee, General Comment No. 36, paras. 18, 21, 26; see also Önerıldız, at para. 101 (pointing out that measures must be "necessary and sufficient"); ECtHR, *Kılıç v. Turkey*, no. 22492/93, paras. 76-77 (2000); ECtHR, *Fadeyeva v. Russia*, no. 55723/00 (2005), at paras. 124, 133-34; ECtHR, *Budayeva and Others*, at para. 175 (explaining that margin of appreciation is constrained when facing threat to life); *Urgenda* at para. 5.3.2.

⁶⁴ Human Rights Committee, *General Comment No. 31: The Nature of the General Legal Obligation Imposed on States Parties to the Covenant*, U.N. Doc. CCPR/C/21/Rev.1/Add.13(Mar. 29, 2004), at para. 8; Human Rights Committee, General Comment No. 36, para. 7 ("States parties must also ensure the right to life and exercise due diligence to protect the lives of individuals against deprivations caused by persons or entities, whose conduct is not attributable to the State.").

⁶⁵ See Committee on Economic, Social and Cultural Rights (CESCR), *General Comment No. 24 (2017) on State Obligations Under the International Covenant on Economic, Social and Cultural Rights in the Context of Business Activities*, U.N. Doc. E/C.12/GC/24, para. 29 (Aug. 10, 2017) [hereinafter CESCR, *General Comment No. 24*]; see also Human Rights Committee, General Comment No. 36, paras. 22, 63; Committee on the Elimination of Discrimination Against Women (CEDAW), *General Recommendation No. 34 (2016) on the Rights of Rural Women*, U.N. Doc. CEDAW/C/GC/34 (Mar. 7, 2016) [hereinafter CEDAW, *General Recommendation No. 34*], at para. 13; IACtHR, *Advisory Opinion OC-23/17*, at para. 101.

⁶⁶ CEDAW, *General Recommendation No. 34*, para. 13; CESCR, *General Comment No. 24*, at paras. 30-32.

⁶⁷ Human Rights Committee, General Comment No. 36, para. 22 (iterating that "[States] must also take appropriate legislative and other measures to ensure that all activities taking place in whole or in part within their territory and in other places subject to their jurisdiction, but having a direct and reasonably foreseeable impact on the right to life of individuals outside their territory, including activities undertaken by corporate entities based in their territory or subject to their jurisdiction, are consistent with article 6, taking due account of related international standards of corporate responsibility and of the right of victims to obtain an effective remedy."); CESCR, *General Comment No. 24*, paras. 25-37 (laying out extraterritorial obligations and stating in para. 26 that "States parties' obligations under the Covenant did not stop at their territorial borders. States parties were required to take the steps necessary to prevent human rights violations abroad by corporations domiciled in their territory and/or jurisdiction" and in para. 29 that "[t]he extraterritorial obligation to respect requires States parties to refrain from interfering directly with the enjoyment of Covenant rights by persons outside their territories").

⁶⁸ See, e.g., IACtHR, *Advisory Opinion OC-23/17*, at paras. 141-142, 152; *Case of Indigenous Communities of the Lhaka Honhat Association v. Argentina*, Judgement, Inter-Am. Ct. H.R. (ser. C), 6 February 2020, at paras. 207, 208; *Marcelino Díaz Sánchez and others v. Mexico*, Precautionary Measures, Resolution, Inter-Am. Comm'n. H.R. No. 1498-18, 23 April 2019, at paras. 24, 26, 27; Human Rights Committee, General Comment No. 36, at para. 62; UN Human Rights Treaty Bodies' joint statement on human rights and climate change, at para. 10; see also UN Special Rapporteurs on Human Rights and Climate Change (Ian Fry), *Toxics and Human Rights* (Marcos Orellana) and *Human Rights and the Environment* (David Boyd), amicus brief submitted to ITLOS in Case n.3, 2023.

26. As the primary driver of the cumulative greenhouse gas emissions causing climate change, and the source of other direct adverse impacts on people and the environment, fossil fuel production and use is conduct that threatens human rights and therefore that States have an obligation to prevent and minimize. The release of greenhouse gas emissions, ensuing degradation of the atmosphere, and continued climate change are the foreseeable—and indeed inevitable—consequences of the production and use of fossil fuels.⁶⁹ Additionally, fossil fuels have significant impacts on human health due to air pollution, contamination of water and soil, and release of other toxics.⁷⁰ Given these consequences, both within and outside of source States’ boundaries, States are obligated to take all measures necessary to protect individuals from the threat of fossil fuel production and use.⁷¹

iii. These preventive obligations under environmental and human rights law apply with particular force in the context of disasters

27. State obligations to prevent transboundary environmental harm and minimize the risk thereof, and protect against foreseeable violations of human rights, require States to act to prevent the risk of disasters, the causes or effects of which are induced or exacerbated by climate change. As discussed above, climate change—driven primarily by anthropogenic GHG emissions—has initiated and will continue to unleash a cascade of impacts, from sea-level rise, flooding, and ocean acidification to extended drought, extreme heatwaves, and severe wildfires.⁷² There is no question that such events—individually and collectively—have and will continue to result in not just large-scale environmental damage but also untold levels of human suffering,⁷³ loss of life,⁷⁴ and displacement⁷⁵

⁶⁹ Richard Heede, *Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010*, *Climatic Change* 122 (2014), at 231-32 (noting that the vast majority of fossil fuels release emissions when used as intended, namely combusted as fuels, and even non-combustion uses can result in emissions due to processing); Paul Griffin, *The Carbon Majors Database: CDP Carbon Majors Report 2017* (2017), at pp. 6-8, <https://cdn.cdp.net/cdp-production/cms/reports/documents/000/002/327/original/Carbon-Majors-Report-2017.pdf> (highlighting that only a small fraction of fossil fuel production is not ultimately combusted); Simon Evans, *Analysis: Which countries are historically responsible for climate change?*, *Carbon Brief* (Oct. 5, 2021), <https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/> (explaining the cumulative emissions from fossil fuels).

⁷⁰ Bertrand, *Fact Sheet: Climate, Environmental and Health Impacts of Fossil Fuels*.

⁷¹ Human Rights Committee, *General Comment No. 36*, paras. 18, 21, 26, 62; *Billy v. Australia*, at para. 8.3.

⁷² IPCC, AR6, WGII: Summary for Policymakers, at para. B.1.1.

⁷³ See IPCC, AR6, Synthesis Report: Summary for Policymakers, at para. A.2.5 (finding that in, all regions of the world, “extreme heat events have resulted in human mortality and morbidity (very high confidence)” and that “the occurrence of climate-related food-borne and water-borne diseases (very high confidence) and the incidence of vector-borne diseases (high confidence) have increased.”). The report also identifies the association of mental health challenges with increasing temperatures, such as “trauma from extreme events (very high confidence), and loss of livelihoods and culture (high confidence).” *Ibid.*

⁷⁴ See, e.g., Rodrigo Pérez Ortega, *Extreme Temperatures in Major Latin American Cities Could Be Linked to Nearly 1 Million Deaths*, *Science* (June 28, 2022), <https://www.science.org/content/article/extreme-temperatures-major-latin-american-cities-could-be-linked-nearly-1-million> (finding that almost 900,000 deaths between 2002 and 2015 in major Latin American cities could be attributable solely to extreme temperatures); US Environmental Protection Agency, *Climate Change Indicators: Heat-Related Deaths*, <https://www.epa.gov/climate-indicators/climate-change-indicators-heat-related-deaths>; Joan Ballester et al., *Heat-related mortality in Europe during the Summer of 2022*, 29 *Nature Medicine* 1857-66 (2023) (estimating that over 61,000 people died in Europe in the summer of 2022 from heat-related causes).

⁷⁵ See, e.g., IPCC, AR6, Synthesis Report: Summary for Policymakers, at A.2.5 (finding that climate and weather extremes are increasingly driving human displacement in the Americas region, Africa, and Asia).

associated with “disasters.” Not all disasters are transboundary in effect or origin, but all climate-induced or climate-intensified disasters are at least transboundary in origin. Beyond causing or contributing to disasters, climate change exacerbates the risk of harm from, and compounds the impacts of, disasters that have other origins. That climate change is a driver of disaster risk and actual disasters around the world underscores the transboundary nature of the harm it represents, and the obligation of States to take all measures at their disposal to prevent and minimize it.

28. The ILC has elaborated on the duty of States to reduce the risk of disasters and mitigate the consequences thereof, including by preventing the drivers of disaster risk. The ILC’s Draft articles on the protection of persons in the event of disasters define a disaster as “a calamitous event or series of events resulting in widespread loss of life, great human suffering and distress, mass displacement, or large-scale material or environmental damage, thereby seriously disrupting the functioning of society.”⁷⁶ Disasters can be both “natural and human-made.”⁷⁷ The Draft Articles apply to categories of environmental harms associated with GHGs-driven temperature rise: “sudden-onset events” like the above-described hurricanes and typhoons, “slow-onset events (such as drought or sea-level rise), and frequent small-scale events (floods or landslides).”⁷⁸
29. Rooted in both international environmental and human rights law,⁷⁹ and “the widespread practice of States”—reflected in numerous multilateral, regional and bilateral instruments⁸⁰—the Draft Articles set forth State obligations to reduce the risk of disaster by, *inter alia*, “taking appropriate measures, including through legislation and regulations, to prevent, mitigate, and prepare for disasters.”⁸¹ The duty to prevent disaster obliges States to ensure that their actions and inaction do not increase the risk of disaster in other States.⁸² Given that climate change both causes disasters of the type contemplated in the Draft Articles and increases the risk of harm from disasters of any origin, it follows that, as the Sixth Committee’s representative from Tonga, Dr. T. Suka Mangisi, pointed out, States have a duty to address its drivers by “tak[ing] measures to reduce greenhouse gas emissions and support other climate change mitigation and adaptation measures that would reduce the risk of disaster.”⁸³

⁷⁶ ILC, *Draft Articles on the Protection of Persons in the Event of Disasters, with commentaries*, (2016) at art. 3(A).

⁷⁷ *Ibid.*, at pmb.

⁷⁸ *Ibid.*, at art. 3 cmt. para. 4.

⁷⁹ *Ibid.*, at art. 9 cmt. para. 4.

⁸⁰ *Ibid.*, at art. 9 cmt. paras. 5, 6.

⁸¹ *Ibid.*, at art. 9 cmt. para. 5. According to the ILC, this article “draws inspiration from” the international environmental law principle of due diligence and the duty of States under human rights law to take “positive” measures to prevent harm to the right to life and other rights, including in the context of impending disasters. *Ibid.*

⁸² UNGA, Summary record of 68th Sess., 25th mtg., UN Doc. A/C.6/68/SR.25 (Dec. 2, 2013), at para. 86 (statement of representative from Tonga).

⁸³ *Ibid.*; see also the Sendai Framework for Disaster Risk Reduction 2015-2030, para. 13 (2015) (“Addressing climate change as one of the drivers of disaster risk, while respecting the mandate of the United Nations Framework Convention on Climate Change, represents an opportunity to reduce disaster risk in a meaningful and coherent manner throughout the interrelated intergovernmental processes.”).

B. The preventive principle is also enshrined in UNCLOS, which obliges States to prevent, reduce, and control all forms of marine pollution, including GHG emissions from fossil fuels

30. The preventive principle is reflected in the United Nations Convention on the Law of the Sea (UNCLOS), which requires States to “protect and preserve the marine environment.”⁸⁴ Pursuant to that duty, States are required to take all measures necessary to “prevent, reduce, and control pollution of the marine environment from *any* source,”⁸⁵ including “the use of technologies,”⁸⁶ land-based sources,⁸⁷ activities in and on the oceans such as seabed activities,⁸⁸ dumping,⁸⁹ and from or through the atmosphere.⁹⁰ Importantly, the duty applies to forms of pollution that have extraterritorial or transboundary impact. States are required to “take all measures necessary to ensure that activities under their jurisdiction or control” do not cause damage by pollution to other States and that pollution arising within their jurisdiction or control does not spread beyond areas over which they exercise sovereignty.⁹¹ UNCLOS therefore imposes limitations on States’ “sovereign right to exploit their natural resources,” which must be exercised “in accordance with” their obligation to protect and preserve the marine environment.⁹²
31. Anthropogenic GHG emissions unequivocally fall within UNCLOS’s definition of “pollution of the marine environment,” and are thus subject to States’ prevention obligations. Indeed, GHG emissions satisfy the two elements laid out in Article 1(1)(4) of UNCLOS. *First*, they entail “the introduction by man, directly or indirectly, of substances or energy into the marine environment.”⁹³ Specifically, GHG-emitting human activity results in both CO₂ (a “substance”) being deposited directly in the oceans, and oceans absorbing heat (an “energy”) resulting from increased atmospheric concentrations of GHGs. *Second*, the introduction of GHGs into the atmosphere “results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, [and] hindrance to marine activities,”⁹⁴ among other harms. These deleterious effects include, but are not limited to, marine heatwaves,⁹⁵ absorption of CO₂ by oceans,

⁸⁴ United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 3 (entered into force on 16 November 1994) [hereinafter UNCLOS], at art. 192.

⁸⁵ *Ibid.*, at art. 194(1) (emphasis added).

⁸⁶ *Ibid.*, at art. 196(1).

⁸⁷ *Ibid.*, at art. 207(1)(2).

⁸⁸ *Ibid.*, at art. 208(1)(2).

⁸⁹ *Ibid.*, at art. 210(1)(2).

⁹⁰ *Ibid.*, at art. 212(1)(2).

⁹¹ *Ibid.*, at art. 194(2); *see also* Case Concerning Land Reclamation by Singapore in and Around the Straits of Johor (*Malaysia v. Singapore*), Case no. 12, Order of October 8, 2003, Joint Declaration of Judges Ad Hoc Hossain and Oxman, ITLOS Rep. 2003, at 10.

⁹² UNCLOS, at art. 193.

⁹³ *Ibid.*, at art. 1(1)(4).

⁹⁴ *Ibid.*, at art. 1(1)(4).

⁹⁵ IPCC, 2019, Special Report on the Ocean and Cryosphere in a Changing Climate [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)], Cambridge University Press, Cambridge, UK and New York, NY, USA [hereinafter IPCC SR Ocean and Cryosphere], Summary for Policymakers, at para. A.2 (finding that marine heatwaves have “very likely doubled in frequency since 1982 and are increasing in intensity”).

forming carbonic acid and altering ocean chemistry in a process known as ocean acidification,⁹⁶ coral death,⁹⁷ and sea level rise,⁹⁸ and the adverse implications of these ecological changes on food security, coastal infrastructure, and oceans-based economies.⁹⁹

32. Thus, because anthropogenic GHG emissions constitute a form of marine pollution, States are required under UNCLOS to take all necessary measures to prevent, reduce, and control the activities that generate them—chief among them, fossil fuel production and use.

C. Even in the absence of express requirements regarding fossil fuels, the obligations of States under the UNFCCC and Paris Agreement to mitigate climate change require action on fossil fuels

33. The preventive principle is reflected in the international climate agreements, the UNFCCC and Paris Agreement, which do not supplant, curtail, or abrogate preventive duties under customary international environmental law and human rights law, but build on and complement them. The UNFCCC explicitly recalls the duty to prevent transboundary harm¹⁰⁰ and calls on Parties to “take precautionary measures to anticipate, *prevent* or minimize the causes of climate change and mitigate its adverse effects.”¹⁰¹ Moreover, in adopting the UNFCCC, States committed to “prevent dangerous anthropogenic interference with the climate system,”¹⁰² which the UNFCCC defines as “the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions.”¹⁰³ Subsequently, States elaborated on what constituted dangerous anthropogenic interference with the climate system and, in adopting the Paris Agreement, agreed to pursue 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.”¹⁰⁴
34. To realize the objectives of the UNFCCC and Paris Agreement, Parties are obligated to take action to mitigate climate change through the reduction of anthropogenic greenhouse gases, and to do so in line with best available science and with progressively increasing ambition. The UNFCCC established that when it comes to climate action “the developed country Parties should take the lead in combating climate change and the adverse effects thereof.”¹⁰⁵ Building on the duty of the the

⁹⁶ Scott C. Doney et al., *Ocean Acidification: The Other CO₂ Problem?* 6 Wash. J. Envtl. L. & Pol’y 212 (2016), 217; Ellycia R. Harrould-Kolieb and Ove Hoegh-Guldberg, *A governing framework for international ocean acidification policy*, 102 Marine Policy 10 (2019), at p. 1 (finding that the increased acidity of oceans is already causing and is expected to cause increased “substantial disruptions to socio-economic systems over the coming decades and centuries, including via reduced access to protein, economic losses from fisheries and tourism, decreased coastal protection and impacts to human health and cultural identity”).

⁹⁷ IPCC SR Ocean and Cryosphere, Summary for Policymakers, at para. B.6.4, Ch. 4.3.3.5.2, p. 379; IPCC AR6, Synthesis Report, Longer Report, Section 3.1.2, at p. 36.

⁹⁸ IPCC SR Ocean and Cryosphere, Summary for Policymakers, at para. A.3.

⁹⁹ IPCC, AR6, WGII, Ch. 3, at p. 382.

¹⁰⁰ UNFCCC, at pmbi.

¹⁰¹ *Ibid.*, at art. 3(3).

¹⁰² *Ibid.*, at art. 2.

¹⁰³ *Ibid.*, at art. 1(3).

¹⁰⁴ Paris Agreement, art. 2(1)(a).

¹⁰⁵ UNFCCC, at art. 3(1); *see also* Paris Agreement, at pmbi., arts. 2(2), 4(4), 9(1), 9(3).

largest historical emitters pursuant to the UNFCCC to adopt national policies and take measures to mitigate climate change,¹⁰⁶ the Paris Agreement requires all Parties to “prepare, communicate and maintain successive nationally determined contributions [NDCs] that it intends to achieve,”¹⁰⁷ with NDCs representing one component of the “ambitious efforts” Parties are committed to taking to achieve the Paris Agreement.¹⁰⁸ It further specifies that “Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives” of their NDCs,¹⁰⁹ and that these efforts “will represent a progression over time.”¹¹⁰ The Paris Agreement further specifies that these measures should align with best available science¹¹¹ especially in light of the “need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge.”¹¹²

35. As noted above, scientific consensus concludes that production and use of fossil fuels—coal, oil, and gas—are the primary causes of cumulative greenhouse gas emissions and the ensuing transboundary harm of atmospheric degradation and climate change. And as outlined above (see para. 3), the most recent scientific reports have made clear that it is not possible to pursue the objective agreed to in Paris, of limiting warming to 1.5°C, let alone the ultimate objective of the UNFCCC, without rapid reductions in fossil fuel emissions. And such reductions necessitate not only a halt to new investments in fossil fuels, but also the early retirement of existing fossil fuel infrastructure.

IV. The duty to prevent harm requires States to use all the means at its disposal to halt cumulative GHG emissions and ensuing climate change, which entails curtailing fossil fuel production and use

36. The measures required to satisfy the State’s preventive obligations will be all those that are necessary and appropriate to avert the foreseeable harm, and within the means at the State’s disposal. In *Pulp Mills*, this Court recognized that “the principle of prevention ... has its origins in the due diligence that is required of a State in its territory” and therefore a State is “obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State.”¹¹³ Article 3 of the ILC’s Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities specifies that “[t]he State of origin shall take all appropriate measures to prevent

¹⁰⁶ UNFCCC, at art. 4(2)(a).

¹⁰⁷ Paris Agreement, at art. 4(2).

¹⁰⁸ *Ibid.*, at art. 3.

¹⁰⁹ *Ibid.*, at art. 4(2).

¹¹⁰ *Ibid.*, at art. 3; *see also Ibid.*, at art. 4.3.

¹¹¹ *Ibid.*, at art. 4.1 (specifying that Parties should take mitigation actions “in accordance with best available science”). Recently reaffirmed in the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, 26th session, 31 October-13 November 2021, Glasgow Climate Pact, 1/CMA.3, U.N. Doc. No. FCCC/PA/CMA/2021/10/Add.1, at art. 1.

¹¹² Paris Agreement, at pmbl.

¹¹³ *Pulp Mills*, 2010 I.C.J. at para. 101; *see also Costa Rica v. Nicar.*, 2015 I.C.J. at paras. 104, 118; *Pulp Mills*, 2010 I.C.J. at para. 204; IACtHR, *Advisory Opinion OC-23/2017*, at para. 97.

significant transboundary harm or at any event to minimize the risk thereof.”¹¹⁴ This necessarily includes regulating its own activities and the activities of private actors in its territory or area under its jurisdiction, as well as supervising and monitoring potentially harmful activities, such as fossil fuel production.¹¹⁵ As the Human Rights Committee has declared, States must take measures that enable all individuals to realize the enjoyment of the right to life and that are “necessary to give effect to the right to life.”¹¹⁶ Moreover, States’ due diligence obligations encompass “not only the adoption of appropriate rules and measures, but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators.”¹¹⁷

37. What constitutes requisite due diligence will vary with understanding of the severity of the risk. While the specific measures required to comply with due diligence and the principle of prevention are variable and will depend on circumstances,¹¹⁸ they must be “agreeable to reason and not arbitrary,” and have a reasonable likelihood of averting the risk of harm.¹¹⁹ Additionally, what measures suffice to satisfy this duty may change over time, in light of new scientific or technological knowledge,¹²⁰ as may the assessment of the risk posed by a certain activity or the significance of the harm caused.¹²¹ Moreover, the riskier a given activity, the more stringent the standard of due diligence required.¹²² Calibrating the preventive measures required to the degree of risk posed is consistent with the precautionary approach, which the International Tribunal for the Law of the Sea (ITLOS) has described as “an integral part of the general obligation of due diligence.”¹²³
38. Applying these due diligence principles in the climate context requires States to take measures that effectively reduce greenhouse gas emissions, and therefore, they must curtail the fossil fuel activity driving them. As discussed above, it is well known that the production and use of fossil fuels will lead to a range of impacts on land, air, water, and people as well as climate change with its

¹¹⁴ ILC, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities*, at art. 3; ITLOS, *Seabed Chamber Advisory Opinion*, at para. 116 (quoting ILC’s Draft Articles).

¹¹⁵ See *Pulp Mills*, 2010 I.C.J. at para. 197; see also ITLOS, *Seabed Chamber Advisory Opinion*, at paras. 115, 239; Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC), Case no. 21, Advisory Opinion of April 2, 2015, ITLOS Rep. 2015, para 131; The South China Sea Arbitration (The Republic of Philippines v. the People’s Republic of China), PCA Case no. 2013-19, Arbitral Award, ICGJ 495 (Arbitral Tribunal constituted under Annex VII of UNCLOS, 2016), para. 944; ILC, *Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities*, art. 3 cmt. para. 10.

¹¹⁶ Human Rights Committee, *General Comment No. 36*, para. 18.

¹¹⁷ *Pulp Mills*, 2010 I.C.J. at para. 197; see also ITLOS, *Seabed Chamber Advisory Opinion*, at paras. 115, 239; ILC, *Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities*, at art. 3, cmt. para. 10.

¹¹⁸ ITLOS, *Seabed Chamber Advisory Opinion*, at para. 117.

¹¹⁹ Measures can only be deemed “appropriate” if they are “agreeable to reason and not arbitrary,” and thus have a reasonable likelihood of success. ITLOS, *Seabed Chamber Advisory Opinion*, at para. 228.

¹²⁰ *Ibid.*, at para. 117 (stating “measures considered sufficiently diligent at a certain moment may become not diligent enough in light ... of new scientific or technological knowledge”).

¹²¹ ILC, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities*, art. 1, cmt. para. 15; art. 2, cmt. para. 7.

¹²² ITLOS, *Seabed Chamber Advisory Opinion*, at para. 117; *Pulp Mills*, 2010 I.C.J. at paras. 185–187.

¹²³ ITLOS, *Seabed Chamber Advisory Opinion*, at para. 131.

accompanying harms, and some of these harms are already, and will increasingly be, irreversible.¹²⁴ In line with customary and conventional international law, a State has to take steps to prevent or mitigate this harm by implementing measures that can rapidly halt the emissions driving climate change and help increase resilience to the changing climate. This necessarily requires curtailing the activities responsible for the overwhelming majority of those emissions: the production and use of fossil fuels. As the world has continued to warm, the science is ever more clear—keeping global temperature rise below 1.5°C requires the immediate halt to fossil fuel expansion and accelerating the shut-down of existing fossil fuel production and use.

39. That means that States must refrain from or halt action that contributes to, and rectify the failure to regulate, fossil fuel emissions. A range of State action and inaction contributes to the fossil fuel activities driving climate change. That conduct includes directly engaging in the extraction and production of coal, oil, and gas, such as through a state-owned (public) enterprise; licensing, permitting, or otherwise authorizing fossil fuel production and use by non-State actors; and financing fossil fuel production and use, including through public subsidies. It also includes failing to adequately regulate fossil fuel production and use, so as to reduce the generation of fossil fuel emissions by non-State actors.
40. Due diligence requires States to prevent or at least minimize the risk of foreseeable harm due to activities within their jurisdiction and control, whether that harm manifests domestically or extraterritoriality.¹²⁵ As the Committee on the Rights of the Child stated, where a State has the ability to regulate activities that are the source of emissions, it has effective control over those emissions.¹²⁶ The production of oil, gas, and coal is the source of emissions; emissions are not just a foreseeable but an inevitable consequence of extracting fossil fuels, when they are used as intended, regardless of where that use and resulting emissions occur, be it in the same or a different State. And the climate impact of those emissions do not depend on where they are released. Accordingly, the State that has the ability to regulate the production of fossil fuels has effective control over those emissions. Because those emissions foreseeably cause or contribute to transboundary harm and violations of human rights, a State that can exert control over them has an obligation to do so, by regulating fossil fuel production in a manner that prevents and minimizes the risk of harm.

¹²⁴ See, e.g., IPCC, AR6, WGII: Summary for Policymakers, at paras. B.5.2, B.6; IPCC, 2018 Special Report, Global Warming of 1.5°C, Ch. 3, at para. 3.5.5.

¹²⁵ ILC, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities*, art. 3, cmt. para. 10 (explaining that “due diligence is manifested in reasonable efforts by a State to inform itself of factual and legal components that relate foreseeably to a contemplated procedure and to take appropriate measures in a timely fashion to address them. Thus States are under an obligation to take unilateral measures to prevent significant transboundary harm, or at any event to minimize the risk thereof...” and this includes developing and implementing policies to prevent harm).

¹²⁶ See, e.g., *Chiara Saachi et al v. Argentina*, at para. 10.9 (“The Committee considers that, through its ability to regulate activities that are the source of these emissions and to enforce such regulations, the State party has effective control over the emissions.”).

V. At a minimum, due diligence requires States to consider the foreseeable emissions resulting from fossil fuel activity under their jurisdiction or control regardless of where those emissions occur

A. The obligation of States to prevent and minimize transboundary harm requires that States assess the risk of significant environmental impacts before undertaking, authorizing, or otherwise supporting an activity

41. From the transboundary harm principle flows the obligation of States to ensure that environmental impact assessments (EIAs) are carried out for “proposed activities which may have a significant adverse impact in a transboundary context, in particular, on a shared resource.”¹²⁷ This Court has held that “a State must, *before* embarking on an activity having the potential to adversely affect the environment of another State, ascertain if there is a risk of significant transboundary harm.”¹²⁸ Embarking on an activity, as elaborated in Section III, encompasses a wide range of conduct, including directly undertaking the activity, approving legal permits, or financing the activity.¹²⁹ As this Court explained, a finding of a potential risk associated with the proposed activity would then “trigger the requirement to carry out an environmental impact assessment.”¹³⁰ If the EIA subsequently confirms the existence of that risk, in accordance with its due diligence obligations, the State planning to undertake the activity at issue must “notify and consult in good faith with the potentially affected State” so that appropriate measures can be taken “to prevent or mitigate that risk.”¹³¹

42. The duty to carry out EIAs prior to advancing a proposed activity is widely regarded as essential to informed environmental decision-making. The duty has been reaffirmed, elaborated, and operationalized by a wide range of legal instruments and foundational sources of international environmental law, including the Rio Declaration.¹³² In the transboundary context, as this Court concluded, EIAs “may now be considered a requirement under general international law,”¹³³ or—

¹²⁷ *Pulp Mills*, 2010 I.C.J. at para. 204.

¹²⁸ *Costa Rica v. Nicar.*, 2015 I.C.J. at para. 104 (emphasis added).

¹²⁹ Indeed, numerous public and private financial institutions around the world require EIAs prior to making decisions on whether to fund an activity that poses a risk of transboundary impacts, such as the generation of GHGs. *See, e.g.*, International Finance Corporation (IFC), IFC, IFC Performance Standards on Environmental and Social Sustainability, Performance Standard 1 (“Assessment and Management of Environmental and Social Risks and Impacts”) (2012), <https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standards-en.pdf>; World Bank, “Environmental and Social Framework,” Safeguard 1, <http://pubdocs.worldbank.org/en/837721522762050108/Environmental-and-Social-Framework.pdf>; Equator Principles, *Equator principles: EP4 July 2020* (2020), https://equator-principles.com/app/uploads/TheEquator-Principles_EP4_July2020.pdf (Principle 2 of the Equator Principles, which are voluntary guidelines that have been adopted by a range of financial institutions, requires the commissioning of environmental and social assessments, including climate change risk assessments).

¹³⁰ *Costa Rica v. Nicar.*, 2015 I.C.J. at para. 104.

¹³¹ *Ibid.*

¹³² *See, e.g.*, Rio Declaration at principle 17; UNCLOS, at art. 206; Convention on Environmental Impact Assessment in a Transboundary Context, adopted 25 February 1991, entered into force 10 September 1997, 1989 UNTS 309 [hereinafter “Espoo Convention”], at art. 2; Convention on Biological Diversity, 5 June 1992, 1760 U.N.T.S. 79 (entered into force on 29 December 1993) at art. 14.

¹³³ *Pulp Mills*, 2010 I.C.J. at para. 204.

according to ITLOS—even rise to the level of a “general obligation under customary international law.”¹³⁴ In the words of Judge Hisashi Owada, EIAs play “an important and even crucial role in ensuring that the State in question is acting with due diligence under general international environmental law.”¹³⁵ According to the ILC, the obligation of States to conduct EIAs for proposed activities under their jurisdiction or control requires States to “put in place the necessary legislative, regulatory and other measures” for an EIA to be conducted when it is “likely” proposed activities will cause “significant adverse impact.”¹³⁶ Consistent with this Court’s interpretation, “[p]rocedural safeguards such as notification and consultations are also key to such an assessment,” as evident in regional agreements like the Aarhus Convention and the Escazú Agreement.¹³⁷

43. GHG-intensive fossil fuel activities require EIAs. Fossil fuel activities are among the “proposed activities” that necessitate EIAs given the inherently uncontainable, transboundary nature of the GHG emissions they produce, which degrade shared resources and drive climate change with resultant harm. Like rivers and other waterways, the atmosphere—on which all life on Earth depends—constitutes a “shared resource”¹³⁸ subject to a “community of interest.”¹³⁹ While the atmosphere is not exploitable, the ILC observes that a polluter can exploit its “physical and functional components” by—for instance—“reducing its quality.”¹⁴⁰ And because the degradation of the atmosphere is “a common concern of humankind,” according to the ILC’s *Draft guidelines on the protection of the atmosphere*, States should ensure that EIAs are undertaken for “proposed activities under their jurisdiction or control which are likely to cause significant adverse impact on the atmosphere.”¹⁴¹ These include activities that entail the “the introduction of harmful substances or energy”—like GHGs—that result in “changes in the atmospheric conditions leading to climate change.”¹⁴² Indeed, the Kiev Protocol to the Convention on Environmental Impact Assessment in a Transboundary Context (“Espoo Convention”) likewise calls on States to ensure that “strategic environmental assessments” are conducted for activities that have an effect on the climate.¹⁴³ These necessarily include fossil fuel activity given its outsized role in driving anthropogenic GHG emissions and, as a consequence, global temperature rise.¹⁴⁴

¹³⁴ ITLOS, *Seabed Chamber Advisory Opinion* at 10, para. 145.

¹³⁵ *Costa Rica v. Nicar.*, Separate Opinion of Judge Hisashi Owada, I.C.J. Reports 2015, para. 18.

¹³⁶ *Draft Guidelines on the Protection of the Atmosphere, with commentaries*, Guideline 4, cmt (1).

¹³⁷ Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, Mar. 4, 2018; UNECE, Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters, art. 7, June 1998, 2161 U.N.T.S. 447 [hereinafter Aarhus Convention], at art. 7(3).

¹³⁸ *Pulp Mills*, 2010 I.C.J. at para. 204.

¹³⁹ Territorial Jurisdiction of the International Commission of the River Oder, Judgment No. 16, 1929, P. C. I. J., Series A, No. 23, at p. 27.

¹⁴⁰ *Draft Guidelines on the Protection of the Atmosphere, with commentaries* at Guideline 4, cmt. 1.

¹⁴¹ *Ibid.*, at Guideline 5, cmt. 1.

¹⁴² *Ibid.*, at General Commentary, at para. 2.

¹⁴³ Espoo Convention at art. 1 (vii).

¹⁴⁴ See IPCC, AR6, Synthesis Report: Summary for Policymakers, at paras. A.1, A.1.4; IPCC, AR5, Summary for Policymakers, at p. 5; Heede, *Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010*, at pp. 229–241 (concluding that nearly two-thirds of global industrial CO₂ and methane emissions since 1751 can be traced to just 90 ‘Carbon Majors’).

B. EIAs for fossil fuel activity must consider downstream emissions, regardless of where they occur

44. Because the vast majority of GHG emissions from fossil fuel activity stem from the eventual combustion and use of the extracted oil, gas, or coal, it is critical that EIAs for proposed fossil fuel activity adequately assess these downstream emissions regardless of where they ultimately materialize. Such downstream emissions are part of what’s called “Scope 3” emissions, which can include emissions from the entire value chain, such as supply chain, transportation, use and disposal of products.¹⁴⁵ In the context of the fossil fuel industry, GHGs produced when extracted oil, gas, or coal is burned, as intended, can account for more than 90% of a fossil fuel company’s overall emissions.¹⁴⁶ Those emissions are thus the foreseeable, and indeed ineluctable, consequence of extracting and producing fossil fuels, and must factor into the decision-making process concerning the proposed activity.
45. State practice and domestic case law reinforce the understanding that for an EIA to adequately assess the climate change impacts of fossil fuel activity, it should include all foreseeable emissions, including those generated downstream. Courts around the world have held that impact assessments undertaken to inform decision-making around fossil fuel activities must consider indirect emissions resulting from downstream combustion and use. Australian courts, for instance, have held that EIAs undertaken for coal mines should factor in Scope 3 emissions as an indirect impact, including emissions generated through the transportation and combustion of coal from the mines.¹⁴⁷ In the United States, a federal court recognized that because the “[d]ownstream use of oil and gas, and the resulting GHG emissions” are the “reasonably foreseeable effects of oil and gas leasing,”¹⁴⁸ EIAs undertaken prior to the approval of lease sales should thus include “robust analyses” of these emissions.¹⁴⁹ After all, the sale of oil and gas leases—which opens the door to future oil and gas exploitation and production, and ultimate consumption—are the “legally relevant cause” of downstream emissions; the requisite EIAs are therefore “required to consider those emissions as

¹⁴⁵ See WBCSD & WRI, *The Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard* (2011), available at https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf, at 25 (providing guidance on the categories of Scope 3 emissions).

¹⁴⁶ Press Release, Client Earth, *ClientEarth files climate risk lawsuit against Shell’s Board with support from institutional investors* (Feb. 9, 2023), <https://www.clientearth.org/latest/press-office/press/clientearth-files-climate-risk-lawsuit-against-shell-s-board-with-support-from-institutional-investors/>; UKEF, *Climate Change Strategy 2021 to 2024* (Sept. 22, 2021), <https://www.gov.uk/government/publications/uk-export-finance-climate-change-strategy-2021-to-2024/uk-export-finance-climate-change-strategy-2021-to-2024> (acknowledging that the “biggest greenhouse gas emissions impact is from [its] scope 3 emissions”).

¹⁴⁷ See *Gray v. Minister for Planning* (2006) 152 LGERA 258 (Australia) (citing intergenerational equity considerations); *Gloucester Resources Limited v. Minister for Planning*, NSWLEC 7 (2019) (Australia), para. 490.

¹⁴⁸ *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41 (D.D.C. 2019), at p. 73.

¹⁴⁹ *Ibid.* at 83. See also *Sierra Club v. Fed. Energy Regulatory Comm’n*, 827 F.3d 36 (D.C. Cir. 2016), at p. 47 (finding that a pipeline authorization was a “legally relevant cause” of downstream GHG emissions from gas transported by the pipeline, and that the government’s environmental assessment was therefore required to consider those emissions).

indirect effects of oil and gas leasing.”¹⁵⁰ Courts in Kenya,¹⁵¹ South Africa,¹⁵² and Canada¹⁵³—among other countries—have likewise held that the impact assessments around fossil fuel projects should consider downstream emissions.

46. Some such cases explicitly address the obligation to consider extraterritorial downstream emissions. National courts have held that EIAs must consider not only downstream emissions that are released within the territory of the State authorizing fossil fuel activity, but also those generated when activity within the territory leads to emissions abroad. For instance, recently, a U.S. court found that a government agency had acted “arbitrarily in excluding [GHG emissions generated from] foreign consumption from its emissions analysis” for an offshore oil and gas lease sale.¹⁵⁴ Similarly, in a decision from January 2024, a Norwegian court invalidated the permits for three new oil and gas fields in the North Sea, citing Norway’s failure to assess the global climate impacts that would stem from downstream use of the oil and gas produced from the fields and exported for consumption abroad.¹⁵⁵ As the court observed in its ruling, an EIA is a crucial element in the decision-making so as to ensure an informed and correct basis for the decisions.¹⁵⁶ In this case, Norway’s failure to conduct an adequate environmental impact assessment of combustion emissions and climate effects in spite of the harmful impacts of global GHG emissions led the court to invalidate the decision-making process around the fields.¹⁵⁷
47. It is therefore imperative that prior to approving, undertaking, financing, or otherwise supporting fossil fuel production, a State must ensure that the requisite EIA processes account for and analyze the full scope of GHG emissions generated by the inevitable and intended use of the fossil fuels. These emissions must be considered even if the actual combustion of the oil and gas occurs—and the resulting emissions materialize—extraterritorially, as they are foreseeable and causally linked to the State’s authorization of production. Absent consideration of downstream emissions, the EIA would lack complete information on how the proposed project would degrade the atmosphere and global climate, thereby precluding the State considering undertaking, authorizing or financing the activity from ascertaining its compatibility with its legal obligations or taking appropriate preventive measures—and at-risk States from anticipating and preparing measures to avert or mitigate the potential transboundary harm that would follow.

¹⁵⁰ *WildEarth Guardians v. Zinke*, 368 F. Supp. at p. 73 (citing *Wilderness Workshop*, 342 F.Supp.3d at 1155 (“[C]ombustion emissions are an indirect effect of an agency’s decision to extract ... natural resources.”)).

¹⁵¹ *Save Lamu v. National Environmental Management Authority* (2016), case No. NEMA/ESIA /PSL/3798 (Kenya).

¹⁵² *Sustaining the Wild Coast NPC and Others v Minister of Mineral Resources and Energy and Others* (3491/2021) [2022] ZAECMKHC 55.

¹⁵³ *Pembina Institute for Appropriate Development v. Canada* (2008), 2008 FC 302, 323 F.T.R. 297 (Canada).

¹⁵⁴ *Friends of Earth v. Haaland*, 583 F. Supp. 3d 113 (D.D.C. 2022) at p. 139.

¹⁵⁵ Nerijus Adomaitis & Gwladys Fouche, “Three Norwegian oil and gas field permits invalidated on environmental grounds,” *Reuters*, January 18, 2024, <https://www.reuters.com/business/energy/development-permits-3-norway-oil-gas-fields-are-invalid-court-rules-2024-01-18/>.

¹⁵⁶ *Greenpeace Nordic and Nature & Youth v. Energy Ministry* (The North Sea Fields Case), Case No. 23-099330TVI-TOSL/05 (Oslo District Court, 18 Jan. 2024) (Norway).

¹⁵⁷ *Ibid.*

VI. Conduct by States that increases the risk of further climate change-driven harm is presumptively contrary to their preventive obligations and treaty-based duties to reduce GHG emissions in line with long-term temperature goals

48. It is only logical that States' duty to prevent transboundary harm to the environment and human rights and minimize the risk thereof prohibits States from increasing the risk of such harm and the chance that it will materialize. States therefore have an obligation to refrain from conduct that can contribute to or create conditions that would heighten the likelihood or severity of environmental damage to other States, as has been addressed before this Court. For instance, reviewing a dispute between Costa Rica and Nicaragua relating to the construction of a road along the San Juan River, the Court observed that it was important to "tak[e] into consideration" the ways in which impacts from the construction could interplay with the effects of hurricanes and other natural events common to the area, amplifying the risk of transboundary damage from sedimentation.¹⁵⁸ In *Nuclear Tests*, Australia instituted proceedings against France relating to the latter's plans to carry out nuclear weapons tests in the atmosphere in the South Pacific, giving little weight to France's assurances of safety in light of the fact that even small increases in "the general level of radioactivity" could increase the risk of radiation-related harm.¹⁵⁹ While the Court did not decide on the merits of Australia's application as the claim was mooted, as noted above, it has since found that States have a general obligation to protect the environment against widespread, long-term and severe environmental damage.¹⁶⁰ It follows that States' conduct that contributes to or increases the likelihood of large-scale environmental harm—like that which would result from dangerous levels of anthropogenic GHG emissions—would be contrary to this obligation.
49. Both action and inaction can breach a State's international obligations.¹⁶¹ This Court has recognized that an omission may be contrary to a State's obligations when it increases the likelihood of a harm materializing. For instance, In *Corfu Channel*, the Court found Albania responsible for harm incurred by the U.K. and nationals when Albania failed to warn of the presence of mines in its waters—which subsequently exploded, causing property damage and human casualties—notwithstanding a third-party State's role in actually placing the mines.¹⁶²
50. In the context of the mounting climate emergency, both State inaction and State action on fossil fuels—the key driver of anthropogenic GHG emissions—increase the risk of harm from climate change. As discussed in Section II, there is indisputable evidence that fossil fuel activity is responsible for the vast majority of anthropogenic GHG emissions and that the accumulation of these emissions in the atmosphere is causing and accelerating climate change. Moreover, the

¹⁵⁸ *Costa Rica v. Nicar.*, 2015 I.C.J. at para. 154.

¹⁵⁹ Case concerning *Nuclear Tests (Australia v. France)*, Application Instituting Proceedings, General List No 58, 9 May 1973, at 34.

¹⁶⁰ *Nuclear Weapons Advisory Opinion*, at para. 31.

¹⁶¹ International Law Commission, *Draft Articles on Responsibility of States for Internationally Wrongful Acts*, U.N. Doc A/56/10 (2001), at art. 1, cmt. para. 1 ("An internationally wrongful act of a State may consist in one or more actions or omissions or a combination of both" that breach an international obligation of the State); art. 2.

¹⁶² *Corfu Channel*, 1949 I.C.J. at pp. 22-23, 36.

science makes clear that such atmospheric degradation is increasing the frequency, likelihood, and intensity of extreme weather events and ensuing disasters.¹⁶³ Unless emissions decline rapidly, climate change will continue to mount, with ever more devastating and irreversible consequences. In that context, maintaining the status quo and failing to take available measures to rapidly reduce GHG emissions—chief among them, phasing out fossil fuel production and use—will only compound climate impacts and heighten the likelihood that—and the speed at which—irreversible climate change harm will materialize. Thus, States that fail to take the necessary measures within their respective capabilities to reduce GHG emissions sufficiently steeply presumptively violate their prevention obligations, as such inaction increases the risk of further significant transboundary harm and human rights violations due to climate change.

51. Likewise, affirmative acts of States that increase the production and use of, or reliance on, fossil fuels in the context of the present crisis increase the risk of significant transboundary harm and human rights violations, and are *presumptively* contrary to State obligations. As elaborated in Section III, such acts include engaging in, authorizing, or financing fossil fuel activity, whether that involves extraction, processing and sale of oil, gas, and coal, or installation of fossil fuel-based infrastructure. States have responsibility to use the means at their disposal to prevent harm and the risk thereof, which requires them to refrain from increasing the risk of harm through conduct subject to their jurisdiction and control. This applies to activities anywhere along the lifecycle or “value chain” of fossil fuel production and use—upstream, mid-stream, or downstream—all of which entrench reliance on fossil fuels and foreseeably contribute to planet-warming emissions.
52. The word “presumptively” is important, because the legal responsibility that attaches to a State act or omission that increases the risk of harm from fossil-fueled climate change will differ depending on the State’s role in and responsibility for the cumulative emissions that have, over time, degraded the atmosphere and created the situation in which any additional emissions increase harm and the risk thereof. Acts that contribute to increased dependence on fossil fuels, through expanded production or use, axiomatically lead to increased fossil fuel emissions, contributing to the significant transboundary harm that the accumulation of such emissions cause. The physical emissions impacts may be the same regardless of who burns the fuels and for what purposes, but the legal responsibility for the resultant harm or risk of harm differs depending on the State’s role in cumulative emissions that have made those acts risky. The measures States are required to take to prevent and minimize the risk of harm from fossil fuel activities are those that use all means at the State’s disposal and are consistent with its concurrent obligations, including its obligations to fulfill human rights. The burden is on the State “that would undertake or persist” in fossil fuel activity—the consequences of which are unequivocally harmful to the global atmosphere and environment, States, and populations, present and future—to justify such conduct.¹⁶⁴

¹⁶³ IPCC, AR6, WGII: Summary for Policymakers, at B.1.

¹⁶⁴ See Maastricht Principles on the Human Rights of Future Generations, Principle 9(c), <https://www.rightsoffuturegenerations.org/the-principles/english>.

VII. In taking measures to prevent climate harm and minimize the risk thereof, States must take a precautionary approach by prioritizing proven actions capable of significantly reducing fossil fuel emissions.

A. A lack of scientific or technological certainty about the full extent or scope of a risk is no excuse for delaying action or relying on speculative preventive or remedial measures in lieu of proven ones

53. The precautionary principle is well-established in both international environmental and human rights law.¹⁶⁵ It requires States to act with caution in the face of uncertain and potentially harmful consequences of an activity and is applied earlier in States' consideration of activities than the closely linked principle of prevention. As stated in the Rio Declaration, the precautionary principle provides that "[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."¹⁶⁶ The UNFCCC explicitly incorporates the precautionary principle in Article 3(3). International human rights bodies similarly have adopted the precautionary principle in recognition of its relevance to preventing violations of the right to life and other human rights.¹⁶⁷
54. Before this Court, States have relied on the precautionary principle in their pleadings related to environmental matters.¹⁶⁸ In *Pulp Mills*, this Court acknowledged that "a precautionary approach may be relevant in the interpretation and application" of the agreement at the heart of the dispute, though ultimately did not rely on it in its decision.¹⁶⁹ The ICJ's order in the 1995 *Nuclear Tests* case indicated that it was not going to be decided on the merits, but the dissenting opinions of two judges discussed the status of the precautionary principle. Judge Weeramantry acknowledged that the precautionary principle was gaining support, in numerous treaties, and extolled the importance of the principle in preventing atmospheric degradation,¹⁷⁰ while Judge Palmer's dissenting opinion stated that "the norm involved in the precautionary principle has developed rapidly and may now be a principle of customary international law relating to the environment."¹⁷¹
55. It is generally interpreted to mean that when there is no conclusive evidence of a particular risk or lack of scientific certainty, then a State should take precautionary actions to avoid the risk until it

¹⁶⁵ Rio Declaration, principle 15; Convention on Biological Diversity, June 5, 1992, 1769 U.N.T.S. 79 (entered into force on Dec. 29, 1993), at arts. 8, 14; *Tătar v. Romania*, paras. 108-109; IACtHR, *Advisory Opinion OC-23/17*, at paras. 175-180.

¹⁶⁶ Rio Declaration, principle 15.

¹⁶⁷ See Human Rights Committee, General Comment No. 36, at para. 62 (noting that States should "pay due regard to the precautionary approach."); IACtHR, *Advisory Opinion OC-23/2017*, at para. 180 (finding States must "act diligently to prevent harm" to human rights and "act with due caution to prevent possible damage").

¹⁶⁸ See, e.g., *Pulp Mills*, 2010 I.C.J. at paras. 55, 160; *Gabčíkovo-Nagymaros Project*, paras. 97, 113; *Costa Rica v. Nicar.*, paras. 218-220; *1995 Nuclear Tests case*, paras. 5, 34-35.

¹⁶⁹ See *Pulp Mills*, 2010 I.C.J. at para. 164 (acknowledging that a precautionary approach may be relevant, but not that it leads to a reversal of burden of proof).

¹⁷⁰ *1995 Nuclear Tests case*, Dissenting opinion, Judge Weeramantry, at pp. 342-44.

¹⁷¹ *1995 Nuclear Tests case*, Dissenting opinion, Judge Palmer, at p. 412.

is disproved.¹⁷² Moreover, States cannot justify a delay in adopting effective and proportionate measures to prevent serious and irreversible damage to the environment.

B. In responding to a reasonably foreseeable or known risk, the precautionary principle obliges States to prioritize measures that present a lower potential to cause harm

56. Applying the precautionary principle in the context of climate change means that States should not forego measures that are proven and known to be capable of preventing harm and the risk of harm from cumulative GHG emissions—namely, curtailing fossil fuel production and use—because of uncertainty either about the scope, extent and timing of the harm or about whether reducing production and use of fossil fuels is necessary to avert climate risk. Given the incontrovertible evidence that climate change is already causing significant harm and is driven primarily by fossil fuels, no uncertainty can justify delaying measures that would reduce fossil fueled emissions or forgoing such measures in pursuit of unproven or risky alternatives.
57. Calibrating the preventive measures required to the degree of risk posed is consistent with the precautionary approach, which ITLOS has described as “an integral part of the general obligation of due diligence.”¹⁷³ The precautionary approach requires States to take urgent and known measures that pose less risk of human rights violations to effectively avert the risk of further climate change-induced harm rather than delayed action or reliance on speculative measures.¹⁷⁴ Effective measures are those that are reasonably seen as capable of averting or mitigating the risks of harm.¹⁷⁵ What the appropriate measures are may change if or when new scientific or technological knowledge becomes available.¹⁷⁶ Given the status of the climate crisis, any uncertainty about where or how climate change-related harms will manifest or precisely when they will cannot justify States delaying the adoption of available measures that have a reasonable likelihood of reducing greenhouse gas emissions and thereby helping to avert environmental harm or human rights violations.¹⁷⁷

¹⁷² Patricia Birmlie, Alan Boyle & Catherine Redgwell (eds), *International Law and the Environment*, pp. 604-07 (Oxford University Press, 2009).

¹⁷³ ITLOS, *Seabed Chamber Advisory Opinion*, at para. 131.

¹⁷⁴ See, e.g., Committee on the Rights of the Child, General Comment No. 26 (2023) on children’s rights and the environment, with a special focus on climate change, U.N. Doc CRC/C/GC/26, (Aug. 22, 2023), at para. 98(e) <https://www.ohchr.org/en/documents/general-comments-and-recommendations/general-comment-no-26-2023-childrens-rights-and> (stating “When determining the appropriateness of their mitigation measures in accordance with the Convention, and also mindful of the need to prevent and address any potential adverse effects of those measures, States should take into account the following criteria ... (e) Mitigation measures cannot rely on removing greenhouse gases from the atmosphere in the future through unproven technologies. 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.”); Advisory Committee to the Human Rights Council, Impact of new technologies intended for climate protection on the enjoyment of human rights, U.N. Doc. A/HRC/54/47 (July 12, 2023) (advanced unedited version), at paras. 4, 29, <https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/advisorycommittee/A-HRC-54-47-AUV.docx>.

¹⁷⁵ *Tătar v. România*, at para. 108.

¹⁷⁶ IACtHR, *Advisory Opinion OC-23/2017*, at para. 142.

¹⁷⁷ *Urgenda*, at paras. 5.3.2, 5.6.2 (holding that the State had a duty to act to address the risk of climate-induced harm even if it was uncertain whether the harm will occur); *Neubauer*, at paras. 229, 247 (reiterating that protecting the

58. When there is a known or reasonably foreseeable risk, the precautionary principle requires States to prioritize measures that present a lower potential to cause harm. Reliance on speculative mitigation measures that pose serious environmental and human rights risks is not in line with the precautionary principle. Speculative approaches to mitigation include, among others, measures that have repeatedly proven ineffective at delivering claimed emissions reductions, such as carbon capture and storage (CCS), which purports to trap carbon dioxide from an emitting source before it enters the atmosphere,¹⁷⁸ and carbon offset credits, which studies indicate are often unverifiable,¹⁷⁹ impermanent,¹⁸⁰ and/or harmful¹⁸¹—as well as other technologies that have yet to be proven at scale and could introduce new risks, such as direct air capture (DAC), a form of carbon dioxide removal (CDR) that proposes to capture CO₂ already in the atmosphere.¹⁸² These

rights of future generations includes not delaying action especially given the irreversibility of climate change, and that precautionary measures must be taken to manage the anticipated future reduction burdens in accordance with respect for fundamental rights).

¹⁷⁸ IEA, Carbon Capture, Utilisation and Storage, <https://www.iea.org/energy-system/carbon-capture-utilisation-and-storage>; Bruce Robertson and Milad Mousavian, *The carbon capture crux: Lesson Learned* (Sept. 1, 2022), <https://ieefa.org/resources/carbon-capture-crux-lessons-learned> (highlighting the decades long failure of CCS); IPCC, AR6, Synthesis Report: Summary for Policymakers, at fig. SPM.7 (demonstrating that CCS is among the highest cost and least effective in reducing emissions this decade).

¹⁷⁹ See, e.g., Dr. Martin Cames et al, *How additional is the Clean Development Mechanism? Analysis of the application of current tools and proposed alternatives*, Directorate-General for Climate Action, CLIMA.B.3/SER12013/0026 (March 2016), p. 11 (“Overall, our results suggest that 85% of the projects covered in this analysis and 73% of the potential 2013- 2020 Certified Emissions Reduction (CER) supply have a low likelihood that emissions reductions are additional and are not over-estimated.”). See also Carbon Market Watch, *Carbon Markets 101: The Ultimate Guide to Global Offsetting Mechanisms* (2020), p. 4; Micah Macfarlane, *Assessing the State of the Voluntary Carbon Market in 2022*, Carbon Direct, Blog (May 6, 2022); Heidi Blake, *The Great Cash-for-Carbon Hustle*, The New Yorker (Oct. 16, 2023), <https://www.newyorker.com/magazine/2023/10/23/the-great-cash-for-carbon-hustle>; Benedict Probst et al, ETH Zurich, *Systematic review of the actual emissions reductions of carbon offset projects across all major sectors* [Working Paper] (2023), p. 12, https://www.research-collection.ethz.ch/bitstream/handle/20.500.11850/620307/230706_WP_full_vf.pdf?sequence=9&isAllowed=y. See also Josh Gabbatis et al, *In-depth Q&A: Can ‘carbon offsets’ help to tackle climate change?*, Carbon Brief (Sept. 24, 2023), <https://interactive.carbonbrief.org/carbon-offsets-2023>.

¹⁸⁰ Lisa Song, *An Even More Inconvenient Truth: Why Carbon Credits For Forest Preservation May Be Worse than Nothing*, ProPublica (May 22, 2019), <https://features.propublica.org/brazil-carbon-offsets/inconvenient-truth-carbon-credits-dont-work-deforestation-redd-acre-cambodia/>; Jutta Kill et al, FERN, *Trading carbon: How it works and why it is controversial* (Aug. 2010), p. 59; M. Carnes et al., ‘How additional is the Clean Development Mechanism?: Analysis of the application of current tools and proposed alternatives’ (March 2016); M. Castagné et al., Carbon Market Watch, Secours Catholique, CCFD-Terre Solidaire & IATP, *Carbon Markets and Agriculture: Why offsetting is putting us on the wrong track* (2020), p. 6; Winston ChoiSchagrín, *Wildfires are ravaging forests set aside to soak up greenhouse gases*, N.Y. Times (Aug. 23, 2021). <https://www.nytimes.com/2021/08/23/us/wildfires-carbon-offsets.html>.

¹⁸¹ Daisy Dunne and Yanine Quiroz, *Mapped: The impacts of carbon-offset projects around the world*, Carbon Brief (Nov. 8, 2023), <https://interactive.carbonbrief.org/carbon-offsets-2023/mapped.html>; Daniel Grossman, *Dam Lies: Despite Promises, an Indigenous Community’s Land Is Flooded*, Pulitzer Center (Mar. 6, 2018), <https://pulitzercenter.org/stories/dam-lies-despite-promises-indigenous-communities-land-flooded#:~:text=The%20Ng%C3%A4be%20Bugl%C3%A9%20people%20in,banks%20of%20the%20Tabasar%C3%A1%20River>; Interim Report of the Special Rapporteur on the Right to Food, U.N. Doc. A/70/287 (2015), para. 68-69; J.P. Sarmiento Barletti and A. Larson, CIFOR, *Rights Abuse Allegations in the Context of REDD+ Readiness and Implementation: A Preliminary Review and Proposal for Moving Forward* (2017).

¹⁸² See Center for International Environmental Law & Heinrich Boell Foundation, *IPCC Unsummarized: Unmasking Clear Warnings on Overshoot, Techno-fixes, and the Urgency of Climate Justice*, pp. 26-30 (Apr. 21, 2022) (citing IPCC statements regarding the infeasibility of DAC and concerns about adverse impacts); IPCC AR6 WGIII, pp. 346-

speculative measures pose not only a direct risk to the environment and human rights, but also an indirect risk as they allow or are employed as an excuse for the continued production and use of fossil fuels, and failure to take the necessary measures to reduce GHG emissions in the near-term. Both the IPCC¹⁸³ and human rights experts¹⁸⁴ have recognized that some measures taken in response to climate change pose risks to the environment and human rights. These risks underscore States' duties to "respect, promote and consider their respective obligations on human rights" when taking climate action.¹⁸⁵ National courts have also named the precautionary principle as one reason for striking down States' reliance on future measures that the courts deemed too speculative to justify delayed reliable near-term action¹⁸⁶ and have recognized the uncertainty that surrounds the feasibility or impact of certain technologies such as large-scale carbon dioxide removal.¹⁸⁷ To satisfy their legal obligations under customary and treaty-based international law, States must take measures capable of averting harm and the risk of harm from climate change, and that requires tackling fossil fuels.

348, Ch. 12 ("Cross sectoral perspectives"), 12.3.1.1, pp. 1263, 1265-68 (discussing concerns that deployment of large-scale CDR could obstruct near-term emissions reduction efforts), Ch. 3 ("Mitigation Pathways Compatible with Long-term Goals"), p. 348, Ch. 4 ("Water"), 4.7.6, p. 654.

¹⁸³ IPCC, AR6, WGII: Summary for Policymakers, at para. B.5.4 ("Risks arise from some responses that are intended to reduce the risks of climate change, including risks from maladaptation and adverse side effects of some emission reduction and carbon dioxide removal measures (high confidence).").

¹⁸⁴ Special Rapporteur on the promotion and protection of human rights in the context of climate change (Ian Fry), Report on the promotion and protection of human rights in the context of climate change, U.N. Doc. A/78/255, (July 28, 2023), at para. 16 (asserting that "[n]ew mitigation technologies associated with atmospheric changes and geoengineering also have the potential for significant human rights impacts"); Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes (Marcos Orellana), The toxic impacts of some proposed climate change solutions, UN Doc. A/HRC/54/25, (July 13, 2023), at para. 71 ("Climate engineering is "large-scale, deliberate intervention in the Earth system to counteract climate change". Such interventions are primarily considered as options to compensate for lagging international efforts to mitigate climate change. There is a lack of scientific certainty about the efficiency of climate-altering engineering technologies, such as solar radiation modification, and they can have a wide range of potential impacts on the effective enjoyment of human rights. Pinning humanity's hopes on future technologies should not be used to justify insufficient action to reduce greenhouse gas emissions and phase out fossil fuels"); Special Rapporteur on Human Rights and the Environment, Safe Climate Report, at para. 83 ("Some proposed geoengineering strategies to mitigate climate change involve the large-scale manipulation of natural systems through measures such as fertilizing the oceans with iron, installing mirrors in outer space to reflect solar radiation, or shooting aerosols into the atmosphere (imitating the effects of large volcanic eruptions"). These untested technological approaches could have massive impacts on human rights, severely disrupting ocean and terrestrial ecosystems, interfering with food production and harming biodiversity. These types of geoengineering strategies should not be used until their implications are much better understood"); *see also* Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance (E. Tendayi Achiume), Report of the Special Rapporteur on Ecological crisis, climate justice and racial justice, UN Doc. No. A/77/549, October 25, 2022, para. 65 (noting that climate response measures potentially pose significant risks to human rights).

¹⁸⁵ Paris Agreement, at pmbl.

¹⁸⁶ *Urgenda*, at para. 7.2.5.

¹⁸⁷ *Neubauer*, at paras. 222, 227; Supreme Court of Ireland, *Friends of the Irish Environment CLG v. the Government of Ireland*, Appeal No. 205/19, July 31, 2020, paras. 3.4, 6.46-6.47; *see also* England and Wales High Court of Justice - Administrative Court, *Friends of the Earth Limited et al. v. Secretary of State for Business, Energy and Industrial Strategy*, Case no. CO/126/2022, CO/163/2022, CO/199/2022, July 18, 2022, at para. 250.

VIII. Conclusion

59. It is not possible to define the full scope and content of State obligations to protect the climate system under international law without addressing State obligations with respect to the fossil fuels driving climate change. Global climate change caused primarily by the production and use of fossil fuels is wreaking havoc and devastating the environment, livelihoods, and lives of millions of people. States' duties under customary and conventional international law to take measures necessary to prevent foreseeable harm to the environment and to human rights require action to curtail fossil fuel production and use. Consistent with the principles of prevention, precaution, and associated due diligence, and in view of the inherent transboundary nature of climate change, States must at minimum, assess all foreseeable emissions from fossil fuel activity, regardless of where they occur, and take measures necessary to prevent further catastrophic harm from fossil-fueled climate change.