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SUBJECT:	Third Party Intervention by the Center for International Environmental Law, Greenpeace International and the Union of Concerned Scientists in Duarte Agostinho and Others v 33 States (Application no. 39371/20)	DATE:	May 6, 2021
COMMENTS:	Pursuant to your letter of 25 March 2021 informing us of the authorisation by the president of the section of our joint third party intervention, please find enclosed the cover letter as well as the brief by interveners, the Center for International Environmental Law, Greenpeace International, and the Union of Concerned Scientists.		

Andrea Tamietti
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BY MAIL (copy by fax: +333 88 41 27 30)

Duarte Agostinho and Others v 33 States
Application no. 39371/20

Thursday, 6 May 2021

Re: Third Party Intervention by the Center for International Environmental Law, Greenpeace International and the Union of Concerned Scientists in Duarte Agostinho and Others v 33 States (Application no. 39371/20)

Dear Mr. Tamietti,

Pursuant to your letter of 25 March 2021 informing us of the authorisation by the president of the section of our joint third party intervention, please find attached the brief by interveners, the Center for International Environmental Law, Greenpeace International, and the Union of Concerned Scientists.

In order to respond as quickly as possible to any requests from the Court, we would be grateful if any correspondence could be addressed to Sébastien Duyck, Center for International Environmental Law, Rue des Savoises 15, 1205 Geneva (Switzerland), +41 78696 6362, or by email at sduyck@ciel.org.

Yours sincerely,

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Union of Concerned Scientists

EUROPEAN COURT OF HUMAN RIGHTS

Application No 39371/20

Duarte Agostinho et al
v

Portugal et al

INTERVENERS BRIEF FILED BY THE CENTER FOR INTERNATIONAL ENVIRONMENTAL LAW, GREENPEACE INTERNATIONAL AND THE UNION OF CONCERNED SCIENTISTS

(Filed pursuant to leave granted by the Court on 25 March 2021)

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I. Introduction

1. Climate change is one of "the most pressing and serious threats to the ability of present and future generations to enjoy the right to life".[1] Under the European Convention on Human Rights ("the Convention"), States must take all necessary and appropriate measures to protect individuals from such foreseeable threats.[2] The content of this Convention obligation and the measures States must take should be interpreted in light of public international law,[3] the best available science,[4] "the consensus emerging from specialised international instruments",[5] and "commonly accepted standards"[6] in the Contracting States, which constitute a "common ground in modern societies"[7] on climate change.

2. That common ground can be found in the United Nations Framework Convention on Climate Change (UNFCCC),[8] the Paris Agreement,[9] the reports of the Intergovernmental Panel on Climate Change (IPCC), key findings of which the IPCC's 195 Member States endorse by consensus,[10] and the judicial application of these texts in Europe. Together, these sources reflect a politically endorsed scientific consensus that warming of 1.5°C or higher above pre-industrial levels constitutes "dangerous anthropogenic interference with the climate system".[11] It follows that keeping warming below 1.5°C is the *floor*—or absolute minimum—for State action on climate change consistent with Convention duties.

3. We are in a state of crisis. Due largely to human activity—and chiefly the extraction and combustion of fossil fuels[12]—the concentration of greenhouse gases in the atmosphere has risen to its highest level in at least 800,000 years.[13] The resulting warming has increased the

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[1] U.N. Human Rights Comm., General Comment No. 36, U.N. Doc. CCPR/C/GC/36, para. 62 (2019) [HRC, General Comment No. 36].

[2] *Öneryildiz v. Turkey* [GC], no. 48939/99, para. 101 (2004); *Kolyadenko and Others v. Russia*, no. 17423/05, para. 212 (2012); *Taşkin and Others v. Turkey*, no. 46117/99, para. 113 (2004).

[3] United Nations, *Vienna Convention on the Law of Treaties* art. 31(3)(c), 23 May 1969, 1155 U.N.T.S. 33.

[4] The Court has referred to science in interpreting Convention obligations. *See, e.g., Rees v. The United Kingdom*, no. 9532/81, para. 47 (1986); *Cossey v. The United Kingdom*, no. 10843/84, para. 40 (1990); *Fretté v. France*, no. 36515/97, para. 42 (2002); *cf. Oluic v. Croatia*, no. 61260/08, paras. 29-31 (2010). The best available science includes, but is not limited to, the reports of the Intergovernmental Panel on Climate Change.

[5] *Demir and Baykara v. Turkey* [GC], no. 34503/97, para. 85 (2008).

[6] *Tyrer v. The United Kingdom*, no. 5856/72, para. 31 (1978).

[7] *Demir and Baykara*, *supra* note 5, at para. 86.

[8] *United Nations Framework Convention on Climate Change*, May 9, 1992, 1771 U.N.T.S. 107 [UNFCCC].

[9] *Paris Agreement to the United Nations Framework Convention on Climate Change*, Dec. 12, 2015, T.I.A.S. No. 16-1104 [Paris Agreement].

[10] Intergovernmental Panel on Climate Change [IPCC], *Appendix A to the Principles Governing IPCC Work: Procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of IPCC Reports*, p. 9 (2013); *see also* IPCC, *IPCC Factsheet: How does the IPCC approve reports?* (2013).

[11] UNFCCC, *supra* note 8, at art. 2.

[12] IPCC, *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 Policy Makers*, p. 5 (2014) [IPCC AR5] (stating "Emissions of CO2 from fossil fuel combustion and industrial processes contributed about 78% of the total GHG emissions increase from 1970 to 2010, with a similar percentage contribution for the increase during the period 2000 to 2010 (high confidence)"); Heede, R., *Tracing Anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers*, 122 Climatic Change 229 (2014).

[13] IPCC, 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

current average global temperature to 1.2°C above pre-industrial levels and has caused an unprecedented 44 consecutive years of above-average global temperatures.[14] Despite the presence of La Niña conditions—which have a cooling effect on global temperatures—2020 was one of the three warmest years on record.[15] Already at 1°C, the IPCC warned that the world was experiencing sea-level rise induced flooding, as well as heatwaves, droughts, hurricanes and other forms of extreme weather that claim lives and destroy property and homes.[16] As elaborated below, the best available science shows that continued warming, particularly above 1.5°C, would result in drastically more severe impacts—some potentially irreversible—and that near-term, comprehensive, and reliable emissions reductions are needed to keep warming below 1.5°C.[17]

4. This brief first sets out the present understanding of the impacts at current levels of warming, the increased grave risk posed by warming over 1.5°C, and the measures required to avert that risk. It then examines how this politically endorsed scientific consensus should inform the interpretation of States' obligations under the Convention to "do everything in their power to protect the applicants' rights".[18] In light of the Court's decisions and the imperative to keep warming below 1.5°C, the onus is on the State to explain how the measures it adopts and implements are consistent with this limit and comply with the Convention.

II. The politically endorsed scientific consensus on the impacts of climate change mandates keeping global warming below 1.5°C

5. **States have recognised that the actions required to avoid dangerous climate change must reflect the latest science.** The Parties to the UNFCCC agreed for the first time in 2010 that achieving the UNFCCC's ultimate objective of "prevent[ing] dangerous anthropogenic interference with the climate system"[19] requires keeping average warming to an agreed long-term temperature goal (LTTG). At the time, that goal was defined as "below 2°C above pre-industrial levels",[20] with the caveat that the Parties consider revising it "on the basis of the best available scientific knowledge…to a global average temperature rise of 1.5°C".[21] Following persistent advocacy by certain States,[22] drawing on human rights

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eradicate poverty, *Chapter 1*, p. 54, Box 1.1 (2018) [IPCC 1.5SR]; IPCC AR5, *Summary for Policymakers*, *supra* note 12, at p. 4, SPM 1.2.

[14] World Meteorological Organization (WMO), *State of the Global Climate 2020*, WMO-No. 1264, p. 6 (2021); *see also* NOAA, *2020 was Earth's Second Hottest year, just behind 2016* (Jan. 14, 2021), https://www.noaa.gov/news/2020-was-earth-s-2nd-hottest-year-just-behind-2016.

[15] WMO, *State of the Global Climate 2020*, *supra* note 14, at p. 6.

[16] *See* IPCC 1.5SR, *Summary for Policymakers*, *supra* note 12, at pp. 4-6, sec. A.

[17] *See* IPCC 1.5SR, *Summary for Policymakers*, *supra* note 12, at pp. 7-11, sec. B.

[18] *Kolyadenko and Others*, *supra* note 2, at para. 216.

[19] UNFCCC, *supra* note 8, at art. 2.

[20] UNFCCC, *Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010*, Decision, para. 4, FCCC/CP/2010/7/Add.1 (2011) [Cancun Agreement].

[21] *Ibid*.

[22] Countries in the Alliance of Small Island States, the Climate Vulnerable Forum (CVF), Small Island Developing States, the Least Developed Countries, the African Group of Negotiators, the High Ambition Coalition, and the Independent Association of Latin American and Caribbean countries had long championed a 1.5°C LTTG. Rajamani, L. & Guérin, E. "Chapter 4: Central Concepts in the Paris Agreement and How they Evolved," in Klein, D. et al. (eds.), *The Paris Agreement on Climate Change: Analysis and Commentary*, p. 75 (Oxford 2017).

arguments,[23] and extensive dialogues on the evolving science,[24] the Parties agreed to adopt a more stringent LTTG.

6. **The Paris Agreement lowered the LTTG.** In 2015, Parties replaced the previous LTTG with a commitment to limit warming to "well below 2°C" and to "pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change".[25] Reaffirming the need to base their climate action on the best available scientific knowledge,[26] the Parties invited the IPCC to provide a special report on the impacts of global warming of 1.5°C ("1.5SR").[27]

7. **The IPCC Special Report on 1.5°C affirms the imperative to keep warming *below* 1.5°C.** The 1.5SR, delivered in 2018, documents how observed changes in our climate are already endangering individuals and communities. The underlying research, based on thousands of scientific studies and comprehensive expert review,[28] makes clear that society at large will experience significantly greater "climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth" at 1.5°C warming,[29] with impacts becoming even more severe and potentially irreversible above 1.5°C.[30]

8. **States have demonstrated their political endorsement of the report's findings.** In 2018, all 195 IPCC Member States approved by consensus the Summary for Policy Makers of the 1.5SR.[31] In doing so, States gained actual and constructive knowledge of the impacts of global warming of 1.5°C on their populations and the need for swift, deep reductions in greenhouse gas (GHG) emissions worldwide to keep warming below 1.5°C. In addition to

[23] The Member States of the CVF commissioned a report from five independent human rights experts appointed by the U.N. Human Rights Council, on the human rights implications of exceeding 1.5°C warming. *See* Devandas Aguilar, C. et al., *The Effects of Climate Change on the Full Enjoyment of Human Rights* (Apr. 30, 2015).

[24] The official review of the LTTG led to the conclusion that "efforts should be made to push the defence line as low as possible" (message 10) and that "[s]ignificant climate impacts are already occurring at the current level of global warming and additional magnitudes of warming will only increase the risk of severe, pervasive and irreversible impacts" (message 4). *Report on the structured expert dialogue on the 2013–2015 review*, FCCC/SB/2015/INF.1, paras. 40, 106-15 (2015) [SED].

[25] Paris Agreement, *supra* note 9, at art. 2.1(a).

[26] *Ibid.* at preamble, art. 4.1 (preamble: "Recognizing the need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge").

[27] UNFCCC, *Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015*, Decision 1/CP.21 Adoption of the Paris Agreement, para. 21, FCCC/CP/2015/10/Add.1 (2016).

[28] IPCC, *Appendix A to the Principles Governing IPCC Work: Procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of IPCC Reports*, *supra* note 10, at pp. 4-8.

[29] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 9, para. B.5.

[30] *Ibid.* at pp. 5, 7, 8, paras. A.3.2, B.2.2, B.4.2.

[31] IPCC, Press release 2018/24/PR, "Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments" (Oct. 2018), https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/.

being recognised in Council of Europe Member States' domestic policies and at the EU level[32], the danger of exceeding 1.5ºC has been recognised by domestic courts in Europe.[33]

Science identifies the minimum State action needed to limit dangerous climate change.

9. **1.5°C is not safe.** The IPCC's 1.5SR 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".[34] This finding confirms that 1.5°C by no means "guarantees full protection from dangerous anthropogenic interference".[35]

10. **Current impacts of climate change are already threatening rights.** Across the globe, changes in Earth's climate are putting communities at risk and threatening basic human needs, such as health, food, water, and human security.[36] More frequent extreme heat, powerful Category 4 and 5 tropical cyclones, and heavy precipitation threaten lives.[37] Precipitation, snow and ice melt patterns have changed, affecting the quantity and quality of water resources available in many regions.[38] Climate change is also jeopardising human health. For example, in 2017, climate change-fuelled wildfires in Portugal burned a record area of land and led to more than 120 deaths.[39] Heat-related mortality in Europe has also broken records in recent years, claiming thousands of lives.[40] In Portugal, between 0.61% and 1.14% of all deaths are caused by extreme heatwaves.[41]

11. **Warming over 1.5°C magnifies existing harms.** Every tenth of a degree of warming above 1.5°C increases the risks to life, liberty, property, and essential human needs worldwide, with more substantial impacts at 2°C than 1.5°C. For example, warming of 1.5°C and above

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[32] *See* Commission Communication COM/2018/0773, "A Clean Planet for all – A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy", 28 Nov. 2018; Resolution 2019/2582/RSP of the European Parliament of 14 Mar. 2019; Resolution 2019/2956/RSP of the European Parliament of 15 Jan. 2020.

[33] *Urgenda v. The Netherlands* (2019), Supreme Court of the Netherlands, ECLI:NL:HR:2019:2007, para. 2.1; *Association Oxfam France et al. v. France, Association Notre Affaire à Tous et al.* (2021), Paris Administrative Court, para. 16 (recognizing that "each additional half degree of global warming [over 1.5°C] significantly increases the associated risks, particularly for the most vulnerable ecosystems and populations").

[34] IPCC 1.5SR, *Technical Summary* and *Chapter 5*, *supra* note 13, at pp. 44, 447.

[35] SED, *supra* note 24, at paras. 40, 46 (message 5), 115 (message 10), 117.

[36] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 9, para. B.5.

[37] IPCC, *Special Report on the Ocean and Cryosphere in a Changing Climate*, *Summary for Policymakers* (2019), pp.10-11, 16; IPCC 1.5SR, *Chapter 3*, *supra* note 13, at pp.189-95, paras. 3.3.2-3.3.3, pp. 236-38, para. 3.4.6.

[38] IPCC 1.5SR, *Chapter 3*, *supra* note 13, at pp. 213-16, sec. 3.4.2; Stagge, H. et al., *Observed drought indices show increasing divergence across Europe*, Sci. Rep. 7 (2017).

[39] Turco, M., Jerez, S., Augusto, S. et al., *Climate drivers of the 2017 devastating fires in Portugal*, Sci. Rep. 9 (2019).

[40] Stott, P., Stone, D. & Allen, M., *Human contribution to the European heatwave of 2003*, 432 Nature pp. 610–14 (2004); van Oldenborgh, G.J. et al., *Western Europe is warming much faster than expected*, 5 Clim. Past, pp. 1-12 (2009); Larson, J., *Record Heat Wave in Europe Takes 35,000 Lives: Far Greater Losses May Lie Ahead* (Oct. 9, 2003),), http://www.earth-policy.org/index.php/plan_b_updates/2003/update29; van Oldenborgh, G.J. et al., *Human contribution to the record-breaking June 2019 heat wave in France*, World Weather Attribution (2019).

[41] Merte, S., *Estimating heat wave-related mortality in Europe using singular spectrum analysis*, 142(3) Climatic Change 321 (2017).

increases the risks of heat-related illness and mortality.[42] At 2°C warming, 420 million more people risk exposure to extreme heat than at 1.5°C.[43] The risks resulting from some vector-borne diseases, including malaria and dengue fever, are also higher at 2°C than 1.5°C.[44] Likewise, food security is threatened, as climate change is projected to cause more frequent droughts that decrease crop yields and food availability, including in the Mediterranean region.[45]

12. **Warming above 1.5°C runs the risk of triggering irreversible, catastrophic impacts.**[46] Exceeding certain thresholds of global warming can result in abrupt and irreversible changes known as "tipping points".[47] Scientists have identified that tipping points could occur between 1°C and 2°C[48] and that even at 1.5°C, some impacts may be "long-lasting or irreversible".[49] The crossing of tipping points in one system can increase the risk of crossing them in others,[50] causing what is known as a "cascade effect". For instance, the current melting of Arctic sea-ice amplifies regional warming and alters ocean currents that play a key role in regulating global temperature. This could shift heat distribution around the planet, affecting multiple regions, and in turn accelerating Antarctic ice loss, leading to multiple meters of sea level rise over hundreds to thousands of years,[51] as well as more immediate impacts.

Science indicates which measures are most likely to keep warming below 1.5°C.

13. **Emissions reduction measures must be ambitious and reliable.** The 1.5SR determined that limiting warming to 1.5°C requires global CO_2 emissions to decrease by 45% (or nearly half) from 2010 levels by 2030 and reach net zero around 2050.[52] Among various scenarios for achieving those reductions, the 1.5SR finds that the emissions reduction pathway with the greatest probability of limiting warming to 1.5°C (the "P1" pathway) relies on near-term emissions reductions achieved through a rapid phase-out of fossil fuels,[53] coupled with some carbon removal by *natural sources* such as reforestation and enhanced soil carbon uptake, but *limited to no* use of engineered carbon dioxide removal (CDR) technologies ("negative emissions technologies").[54] CDR technologies "are uncertain and entail clear risks".[55]

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[42] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 9, para. B.5.2.
[43] IPCC 1.5SR, *Chapter 3*, *supra* note 13, at p.191, para. 3.3.2.2.
[44] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 9, para. B.5.2.
[45] *See* IPCC 1.5SR, *Chapter 3*, *supra* note 13, at pp. 236, 238, para. 3.4.6.1, Box 6.
[46] *Ibid*. at p. 257, para. 3.5.2.5; IPCC AR5, *Technical Summary*, *supra* note 12, at pp. 68-72, Box. TFE.5.
[47] IPCC 1.5SR, *Chapter 3*, *supra* note 13, at p. 262, para. 3.5.5.
[48] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at pp. 5, 7, 8, paras. A.3.2, B.2.2, B.4.2.
[49] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 5, para. A.3.2.
[50] Lenton, T. et al., "Climate tipping points — too risky to bet against", 575 Nature 592, 592, 594 (Nov. 28, 2019).
[51] *Ibid*. at 594.
[52] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 12, para. C.1.
[53] *See* IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 14, fig. SPM.3b, p. 15, para. C.2, p. 33; *see also* United Nations Environment Programme, *The Production Gap Report: 2020 Special Report*, p. 12 (2020).
[54] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 14, fig. SPM.3b (Pathway P1); IPCC 1.5SR, *Technical Summary*, *supra* note 13, at p. 34; *see also* IPCC 1.5SR, *Chapter 2*, *supra* note 13, at p. 115, para. 2.3.3, p. 121-24, para. 2.3.4.1; IPCC 1.5SR, *Chapter 2-Supplementary Materials*, at p. 2A-28, Table 2.SM.12.
[55] IPCC 1.5SR, *Chapter 2*, *supra* note 13, at p. 95.

14. **The timing of reductions matters; near-term reductions increase the chances of avoiding further risks of harm from dangerous levels of warming.** Emissions reductions pathways are not guaranteed to limit warming to the associated temperature targets but have different probabilities of doing so. Significant transformations must be made urgently *this decade* to increase the probability of keeping warming below 1.5°C. For example, a 45% reduction in emissions by 2025 would increase the likelihood of staying below 1.5°C. In contrast, if the current pace of emissions continues, the global average temperature will reach 1.5°C above pre-industrial levels by about 2035, with warming continuing beyond that point.[56] In addition to the grave harms associated with allowing warming to reach or exceed 1.5°C, failing to make near-term reductions requires more dramatic reductions later, with potentially severe social costs.[57]

15. **Delayed measures that presume the ability to overshoot 1.5°C and return risk irreversible harm.** Overshooting 1.5°C even temporarily could result in large risks to natural and human systems that are potentially irreversible, regardless of any increased carbon removal.[58] Reliance on technological CDR increases the risks of overshoot without any assurance that it can be reversed on a timeline that avoids significant impacts, if at all. The IPCC has cautioned that such technologies are unproven at scale and face multiple feasibility constraints.[59] Moreover, technological CDR may pose significant environmental and social risks, including impacts on "land, energy, water or nutrients",[60] which threaten human rights.

16. **Measures must be comprehensive and economy-wide.** The deep emissions reductions needed to keep the global temperature increase below 1.5°C will require action across all sectors that contribute emissions, including major transformations in energy production, food systems, land use, and consumption patterns.[61] Adhering to a 1.5°C pathway would involve fully transitioning the power sector to non-fossil fuel sources (i.e., from coal, oil, and gas to carbon-free energy sources such as solar and wind) by no later than mid-century.[62]

17. **States' current climate commitments are insufficient.** To date, governments' Nationally Determined Contributions (NDCs) to global GHG reductions are insufficiently

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[56] *See* Schleussner, C-F. et al., Climate Analytics, *Climate Impacts in Portugal*, p. 6 (2019) (updated July 31, 2020).

[57] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 18, para. D.1.3; IPCC 1.5SR, *Chapter 2*, *supra* note 13, at pp. 126-29, sec. 2.3.5; IPCC 1.5SR, *Chapter 5*, *supra* note 13, at pp. 463-66, sec. 5.4.2; *see also* IPCC 1.5SR, *Chapter 3*, *supra* note 13, at p. 276, Cross-Chapter Box 8 ("The chronology of emission pathways and their implied warming is also important for the more slowly evolving parts of the Earth system.").

[58] IPCC 1.5SR, *Chapter 3*, *supra* note 13, at pp. 274-81, Cross-Chapter Box 8.

[59] IPCC 1.5SR, *Chapter 2*, *supra* note 13, at p. 96, pp. 118-21, para. 2.3.4, pp. 134-36, para. 2.4.2.3; IPCC 1.5SR, *Chapter 4*, *supra* note 13, at p. 316 ("Most CDR options face multiple feasibility constraints, which differ between options, limiting the potential for any single option to sustainably achieve the large-scale deployment required in the 1.5°C-consistent pathways described in Chapter 2 (high confidence).").

[60] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 17, para. C.3.4; IPCC 1.5SR, *Chapter 2*, *supra* note 13, at pp. 121-25, sec. 2.3.4; IPCC 1.5SR, *Chapter 4*, *supra* note 13, at pp. 388-91, Table 4.13, p. 394, FAQ 4.2; IPCC, *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*, secs. 5.6, 6.2 (2019).

[61] IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at pp. 15-16, para. C.2.

[62] IPCC 1.5SR, *Chapter 2*, *supra* note 13, at p. 112, para. 2.3.2.1; *see also* IPCC 1.5SR, *Summary for Policymakers*, *supra* note 13, at p. 14, fig. SPM.3b.

ambitious to keep warming below 1.5°C. The United Nations Environment Programme (UNEP) determined in 2020 that, even if States fully implemented the pledges submitted at that time, the average global temperature would reach 3.2°C above pre-industrial levels this century.[63]

III. State action on climate change must be assessed against human rights law standards

18. **Fulfilment of a State's obligations under the UNFCCC or Paris Agreement is necessary but may not be sufficient to satisfy its Convention obligations.**[64] The references to existing public international law in the preamble to the UNFCCC and to human rights obligations in the preamble to the Paris Agreement reaffirm that the agreements were created to complement, not displace, existing principles of international law.[65]

19. **States must adopt measures necessary to safeguard life and other human rights.** In line with the Court's jurisprudence and given Respondent States' knowledge of the real and immediate risk that climate change poses to human rights, including the right to life, they must "do everything in their power"[66] to "safeguard life" from the foreseeable threat of dangerous levels of warming, including by "put[ting] in place a legislative and administrative framework designed to provide effective deterrence against threats to the right to life".[67] States must pursue preventive operational measures "necessary and sufficient to protect" individuals, which have a reliable prospect of mitigating the risk of harm to the right to life and other rights.[68] Other adjudicatory bodies have applied this standard when interpreting the scope of State human rights obligations in the context of climate change.[69] The requisite preventive measures must address all actors and conduct subject to the State's jurisdiction and control that contribute to the threat, both public and private, domestic and extraterritorial.[70]

20. **A State must do everything in its power to deter the threat of harm even if it cannot eliminate the threat on its own.**[71] This duty applies in the context of global climate change.

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[63] United Nations Environment Programme, *Emissions Gap Report 2020*, p. XXII (2020); UNEP, *Emissions Gap Report 2019*, para. 3.4.2 (2019); *see also* UNFCCC, *Nationally determined contributions under the Paris Agreement, Synthesis report by the secretariat*, FCCC/PA/CMA/2021/2 (Feb. 26, 2021).

[64] *See* Comm. on Econ., Soc. & Cultural Rights (CESCR), Climate Change and the International Covenant on Economic, Social and Cultural Rights, para. 3 (Oct. 8, 2018).

[65] UNFCCC, *supra* note 8, at preamble; Paris Agreement, *supra* note 9, at preamble.

[66] *Kolyadenko and Others*, *supra* note 2, at para. 216; *see also Öneryildiz*, *supra* note 2, at para 135.

[67] *Kolyadenko and Others*, *supra* note 2, at para. 157 (citing *Öneryildiz*, *supra* note 2, at para. 89 and *Budayeva and Others v. Russia*, nos. 15339/02, 21166/02, 20058/02, 11673/02, 15343/02, para. 129 (2008)).

[68] *Öneryildiz*, *supra* note 2, at para. 101; *Kiliç v. Turkey*, no. 22492/93, paras. 76-77 (2000).

[69] *See* Advisory Opinion OC-23/18, Inter-Am. Ct. H.R. (ser. A) No. 23, paras. 108-09, 118, 142, 149, 242(b) (Nov. 15, 2017); *Urgenda*, *supra* note 33, at paras. 5.2.2-5.2.4, 5.3.2; Bundesverfassungsgerichtshof (BverfG), 1 BvR 2656/18, 1 BvR 96/20, 1 BvR 78/20, 1 BvR 288/20, 1 BvR 96/20, 1 BvR 78/20, para. 144 (Apr. 29, 2021); *Generaciones Futuras v. Minambiente*, Supreme Court of Colombia, STC. 4360-2018, para. 11.3 (Apr. 5, 2018).

[70] *Budayeva and Others*, *supra* note 67, at paras. 128, 130; *Öneryildiz*, *supra* note 2, at para. 71; *Ilascu and Others v. Moldova and Russia*, no. 48787/99, para. 317 (2004); *see also* Advisory Opinion OC-23/18, *supra* note 69, at para. 81; 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, paras. 26-28 (2017) [CESCR, General Comment No. 24]; HRC, General Comment No. 36, *supra* note 1, at para. 22.

[71] *Opuz v. Turkey*, no. 33401/02, para. 136 (2009); *E. and Others v. The United Kingdom*, no. 33218/96, para. 99 (2003); *O'Keefe v. Ireland* [GC], no. 35810/09, para. 149 (2014).

A State is not relieved of its own responsibility because other States are also responsible for climate harms.[72]

21. **The Court has jurisdiction to review whether State measures are effective to safeguard rights.** While States enjoy a certain margin of appreciation in choosing particular measures to implement their obligations, the Court retains jurisdiction to review whether those measures are adequate to render Convention rights effective, not illusory.[73] In addition, in the climate context, the urgency of the situation, the risk of irreversible harm, and the impact on the right to life narrow States' margin of appreciation.[74]

22. **State discretion over which climate measures to implement is limited.** As the Inter-American Court of Human Rights emphasised, courts must look at international environmental law not only when defining the "meaning and scope of the obligations assumed" but also when "*specifying the measures* that the States must take" to fulfil those obligations.[75] Science provides the foundation for determining which measures have a real prospect of mitigating the risk that climate change poses to Convention rights.[76] States must continuously review whether stricter measures are required to achieve sufficient protection given new scientific developments.[77]

IV. To comply with their Convention obligations, States must demonstrate measures with the greatest likelihood of keeping warming below 1.5°C

23. Given the IPCC's finding that warming of 1.5°C would not be safe for most people,[78] it contravenes States' Convention duties to pursue measures that are designed to allow warming to reach 1.5°C or higher. States must pursue all measures within their power to keep warming *below* 1.5°C.

24. **Measures must address all sources of emissions, both public and private, subject to the State's jurisdiction or control.** State action must encompass those activities that have "a direct and reasonably foreseeable impact" on the risk of harm from climate change, including but not limited to the combustion of fossil fuels and destruction of natural carbon sinks, regardless of where the resultant emissions occur.[79] Production and export of fossil fuels

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[72] U.N. General Assembly, 56/83 Responsibility of States for internationally wrongful acts, annex, art. 47(1), U.N. Doc. A/RES/56/83 (Jan. 28, 2002); *M.S.S. v. Belgium and Greece* [GC], no. 30696/09, para. 338 (2011); *see also* BVerfG, *supra* note 69, at para. 149; *Urgenda*, *supra* note 33, at paras. 5.7.5-5.7.7.

[73] *See Fadeyeva v. Russia*, no. 55723/00, paras. 124, 133-34 (2005); *Christine Goodwin v. The United Kingdom*, no. 28957/95, para. 74 (2002).

[74] *Budayeva and Others*, *supra* note 67, at para. 175; *accord Urgenda*, *supra* note 33, at para. 5.3.2.

[75] Advisory Opinion OC-23/18, *supra* note 69, at para. 44; *cf. Case of the Xámok Kásek Indigenous Community v. Paraguay*, Inter-Am. Ct. H.R. (ser. C) No. 214, paras. 195-96 (Aug. 24, 2010).

[76] *See* Advisory Opinion OC-23/18, *supra* note 69, at paras. 172, 174(v).

[77] *See supra* paras. 5-6 of this brief, and the sources cited therein; *cf.* BVerfG, *supra* note 69, at para. 212.

[78] IPCC 1.5SR, *Technical Summary* and *Chapter 5*, supra note 13, at pp. 44, 447.

[79] HRC, General Comment No. 36, *supra* note 1, at paras. 22, 62; CESCR, General Comment No. 24, *supra* note 70, at paras. 26-28; Joint Statement by Comm. on the Elimination of Discrimination against Women, CESCR, Comm. on the Protection of the Rights of All Migrant Workers and Members of Their Families, Comm. on the Rights of the Child and Comm. on the Rights of Persons with Disabilities, Statement on Human Rights and Climate Change, U.N. Doc. HRI/2019/1, para. 10 (Sept. 16, 2019); Advisory Opinion OC-23/18, *supra* note 69, at paras. 81, 101-02.

must be included among such activities because GHG emissions are the inevitable, foreseeable result of using oil, gas, and coal products as intended.[80]

25. **Measures must ensure that the State's *domestic* emissions are on a path consistent with staying below 1.5°C.** Every Contracting State must meet its responsibility to reduce emissions domestically as far as possible and reach zero fossil fuel emissions for the world to remain below 1.5°C warming. That means they cannot forgo available preventive measures to reduce their domestic emissions in favour of reduction measures in other parts of the world. Particularly in the absence of a reliable crediting system for transferable emission reduction certificates between countries, States cannot use emissions reductions achieved in other jurisdictions to "offset" large-scale gaps in their required domestic emission reductions.[81] The need to address domestic emissions does not alleviate the responsibility of historically high emitting nations to support emission reduction efforts in other countries.[82] Specifically historically high-emitting nations must effectively address their own domestic emissions, including emissions from production and export of fossil fuels, while continuing to support emission reduction efforts in other countries.[83]

26. **Measures should prioritise near-term action over uncertain and unproven future fixes.** The emissions reduction pathway with the best chance of keeping below 1.5°C relies on near-term emissions reductions and limited carbon removal by natural sources instead of negative emissions technologies. Referring to IPCC science, recent domestic court decisions in Europe have concluded that the failure to adopt and implement reasonable plans and policies, including near-term targets and emissions reduction measures based on proven technologies, breaches State obligations to mitigate climate change adequately. Courts in France have rejected the notion that the government's pursuit of mid-term or long-term targets could excuse its failure to meet its near-term target, given the cumulative, lasting effects of current emissions,[84] and the risk that delayed action would require drastic cuts later, on an order never yet achieved.[85] The German Constitutional Tribunal ruled similarly, noting that the German State cannot transfer a disproportionate mitigation burden onto future generations, as this would impede their enjoyment of fundamental rights.[86]

27. **Foregoing known mitigation measures in the near-term in favour of deploying risky technologies in the future contravenes the duty to protect.** As stated above, negative emissions technologies are currently unproven at scale and present risks of harm to life and other human rights due to their deployment's immediate environmental and social impacts.[87] Moreover, the "reliance on such technology is a major risk in the ability to limit warming to 1.5°C".[88] The precautionary and preventive principles oblige States to prioritise measures known to be effective at averting or mitigating a foreseeable risk over uncertain ones and

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[80] *See Gray v. The Minister for Planning and Ors* [2006] NSWLEC 720, paras. 97-100 (recognizing that upstream fossil fuel extraction is linked to downstream GHG emissions); *Gloucester Resources Limited v. Minister for Planning* [2019] NSWLEC 7, para. 490 (discussing the requirement to consider indirect (scope 3) GHG emissions in assessing the impacts of a fossil fuel project).
[81] BverfG, *supra* note 69, at para. 226.
[82] Paris Agreement, *supra* note 9, at arts. 2.2, 9.
[83] UNFCCC, *supra* note 8, at arts. 3, 4; Paris Agreement, *supra* note 9, at arts. 2.2, 9.
[84] *Association Oxfam France*, *supra* note 33, at para. 31.
[85] *Commune de Grande-Synthe*, N° 427301 (Conseil d'Etat, République Française), para. 15 (2020).
[86] BverfG, *supra* note 69, at para. 182 *et seq*.
[87] *See supra* paras. 13 and 15 of this brief, and the sources cited therein.
[88] IPCC, 1.5SR, *Chapter 2*, *supra* note 13, at p. 96.

measures that pose a lower risk of causing harm over those with greater potential adverse impacts.[89] Failure to reduce emissions adequately in the near term constrains the remaining pathways available to stay below 1.5°C, requiring radical emission cuts after 2030 that may be achievable only at the cost of impairing fundamental rights.

28. **Domestic courts have struck down mitigation plans that rely on uncertain CDR instead of more stringent near-term reductions.** Referencing the IPCC 1.5SR, the German Constitutional Tribunal held that the German State cannot rely on negative emissions technologies to delay climate action as their large-scale deployment is not yet foreseeable.[90] In *Urgenda*, the Dutch Supreme Court rejected the Dutch State's reliance on drastic measures to remove GHGs from the atmosphere at a later stage, noting that "there is no technology that allows this [removal of emissions] to take place on a sufficiently large scale" and "taking such risks would be contrary to the precautionary principle that must be observed when applying Articles 2 and 8 ECHR and Article 3(3) UNFCCC".[91] The Supreme Court of Ireland similarly decided that the country's mitigation plan was too reliant on technologies that do not yet exist.[92]

29. **The State must disclose the risks associated with its climate measures.** Finally, a State's decisions regarding which measures to prioritise and implement must be made through a transparent and participatory process, which informs the public of the risks associated with the measures adopted to avert climate harm.[93] This disclosure obligation applies with equal force to the risks associated with the timing of emissions reductions and carbon removal technologies relied upon in a State's climate plan.[94]

V. Conclusion

30. The science is clear: humanity can and must keep warming below 1.5°C this century. But States must act now in accordance with their Convention obligations and the current best available science. Given that all Contracting States have endorsed the conclusions of the IPCC 1.5SR, and in view of mounting evidence of human rights harm due to climate change, States have an incontrovertible duty under human rights law to take effective climate action. The onus is on the State to explain how its climate measures are consistent with keeping warming below 1.5°C.[95]

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[89] Advisory Opinion OC-23/18, *supra* note 69, at paras. 130, 133, 142, 180; *see also Tătar v. Romania*, no. 67021/01, para. 107 (2009).

[90] BverfG, *supra* note 69, at paras. 182-97, 227.

[91] *Urgenda*, *supra* note 33, at para. 7.2.5.

[92] *Friends of the Irish Environment v. The Government of Ireland & Ors.*, [2020] IESC 49, paras. 6.18, 6.46, 6.47.

[93] *See, e.g., Taşkın and Others*, *supra* note 2, at para. 119; Advisory Opinion OC-23/18, *supra* note 69, at paras. 241, 242(f)-(g); BverfG, *supra* note 69, at para. 260; *Friends of the Irish Environment*, *supra* note 92, at para. 6.21.

[94] *See, e.g., Friends of the Irish Environment*, *supra* note 92, at paras. 6.46-6.47 (noting that carbon removal is "undoubtedly … uncertain on the basis of current knowledge" and quashing the State's National Mitigation Plan due in part to a failure to enable the public to know "what current thinking is and, indeed, form a judgment both on whether the Plan is realistic and whether the types of technology considered in the Plan are appropriate and likely to be effective").

[95] *See Fadeyeva v. Russia*, *supra* note 73, at para. 128; *Jugheli et al. v. Georgia*, no. 38342/05, para. 76 (2017); *see also Urgenda*, *supra* note 33, at para. 7.5.1; *Commune de Grande-Synthe*, *supra* note 85, at para. 16.