

EUROPEAN COURT OF HUMAN RIGHTS

Application No 53600/20

Verein KlimaSeniorinnen Schweiz and Others

v.

Switzerland

INTERVENERS BRIEF FILED BY THE CENTER FOR INTERNATIONAL
ENVIRONMENTAL LAW and MARGARETHA WEWERINKE-SINGH

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I. Introduction

1. Climate change is not just a future menace but a present human rights emergency. The risks it poses to human life and health trigger a State's obligations under the European Convention of Human Rights ("the Convention") to take all necessary and appropriate measures to mitigate the threat. Interpreted in light of relevant rules of international law, including the principles of precaution and intergenerational equity, and the best available science, Articles 2 and 8 of the Convention require Contracting States to do everything within their power to avoid contributing to further climate change, and to avert and minimize the threat it poses to Convention-protected rights, including the rights to life and private and family life.

2. The best available science on climate change makes clear that the most effective means of preventing further warming, and thereby protecting human rights from its foreseeable adverse consequences, is to rapidly and steeply reduce greenhouse gas (GHG) emissions in line with a 1.5°C pathway. Carbon offset credits derived from activities undertaken outside a State's jurisdiction ("offsets") and speculative technologies such as engineered carbon dioxide removal (CDR) do not deliver, but instead deter necessary emissions reduction measures, increasing the likelihood of catastrophic warming. They also pose independent risks to human rights. Accordingly, a Contracting State's reliance on such approaches in lieu of emissions reduction measures within its jurisdiction contravenes its Convention obligations.

3. The arguments that follow address the Grand Chamber's questions 4(a) and (b), 5.1, 5.2, 5.3.2, and 5.3.3 to the Parties. This brief first sets out the scope of the State's obligations to prevent environmental damage and protect human rights from the threat of climate change, applying principles of harmonious interpretation and common ground to elucidate the content of Convention obligations and the measures adequate to fulfill them. It then outlines the politically endorsed scientific consensus regarding the need to keep warming under 1.5°C, the urgent necessity of dramatically reducing emissions to limit temperature rise, and the infeasibility and risks of relying on offsets and CDR to achieve those aims. The brief concludes with an analysis of why climate policies that rely on offsets and CDR, in lieu of robust domestic emissions reduction measures, are inconsistent with Convention obligations.

II. The adequacy of the State's climate action must be evaluated against its human rights duties as informed by international law and science

4. It is beyond debate that climate change poses a current and growing threat to all human rights, including the rights to life and to respect for private and family life.¹ In the face of this real and imminent risk, States must "do everything in their power"² to avert the foreseeable threat of even more 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."³ That framework must aim at the effective prevention of harm to the environment and human health.⁴ While States have some margin of appreciation in determining which measures to pursue, those measures must have a reliable prospect of mitigating the risk of harm to the right to life and other rights, as "necessary and sufficient to protect" individuals from the threat.⁵

¹ See, e.g., G.A. Res. 76/300 (July 28, 2022); Un Doc. A/HRC/RES/47/24 (July 26, 2021); *accord* 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 *Kolyadenko and Others, v. Russia*, no. 17423/05, para. 216 (2012); see also *Öneryıldız v. Turkey [GC]*, no. 48939/99, para. 135 (2004) (*Öneryıldız*).

³ *Kolyadenko and Others*, at para. 157 (citing *Öneryıldız*, para. 89 and *Budayeva and Others v. Russia*, nos. 15339/02, 21166/02, 20058/02, 11673/02, 15343/02, para. 129 (2008)).

⁴ *Tătar v. Romania*, no. 67021/01, para. 88 (2009).

⁵ *Öneryıldız*, para. 101; *Kılıç v. Turkey*, no. 22492/93, paras. 76-77 (2000); *Fadeyeva v. Russia*, no. 55723/00, paras. 124, 133-34 (2005); see also *Budayeva and Others*, para. 175 (explaining that margin of appreciation is constrained when facing

5. When interpreting the scope and content of a State's obligations under Articles 2 and 8 of the Convention with regard to mitigation of climate change and assessing whether the State's action is adequate to satisfy its preventive duties, the Court should take into account relevant rules of international law,⁶ including the precautionary principle and the principle of intergenerational equity, and the "common ground" among Contracting State Parties on climate change. In view of the "living" nature of the Convention,⁷ this Court has recognized that such harmonious interpretation requires consideration of the "common international or domestic law standards of European States."⁸ The recognition by the UN General Assembly (UNGA) and Human Rights Council of the right to a clean, healthy, and sustainable environment is part of that corpus of international law that should inform the Court's interpretation of Convention obligations. Reiterating its relationship to other rights and existing international law, the GA Resolution affirms that the promotion of the right to a healthy environment "requires the full implementation of the multilateral environmental agreements under the principles of international environmental law."⁹

6. With respect to the State's duties to avert the threat of climate change, "common ground" can be found in "the consensus emerging from specialised international instruments"¹⁰ such as the United Nations Framework Convention on Climate Change (UNFCCC),¹¹ the Paris Agreement,¹² and best available science,¹³ in particular the findings of the Intergovernmental Panel on Climate Change (IPCC), endorsed by the IPCC's 195 Member States.¹⁴

7. The precautionary principle is generally interpreted as pressing for precautionary regulation or action when there is no conclusive evidence of a particular risk scenario, when the risk is uncertain, or until the risk is disproved.¹⁵ It is widely considered part of customary international law in the environmental field based on "the importance of preventive action in environmental governance."¹⁶ This customary law status of the precautionary principle has since been confirmed by numerous findings of international courts and tribunals which unequivocally found the

threat to life); *The State of the Netherlands v Urgenda Foundation*, ECLI:NL:HR:2019:2007, Judgment (Sup. Ct. Neth. Dec. 20, 2019) (Neth.) [*Urgenda*], para. 5.3.2.

⁶ Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January 1980) 1155 U.N.T.S. 33, art. 31(3)(c).

⁷ *Tyrer v. The United Kingdom*, no. 5856/72, para. 31 (1978).

⁸ *Demir and Baykara v. Turkey* [GC], no. 34503/97, paras. 67-68, 76 (2008).

⁹ U.N. General Assembly 76/300 The human right to a clean, healthy and sustainable environment. U.N. Doc. A/RES/76/300 (July 28, 2022). Forty-five States members of the Council of Europe (including Switzerland) voted in favor of the adoption of this resolution initially sponsored by Switzerland and four other UN Member States.

¹⁰ *Demir and Baykara*, para. 85.

¹¹ United Nations Framework Convention on Climate Change (adopted 9 May 1992, entered into force May 9, 1992) 1771 U.N.T.S. 107 [UNFCCC].

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

¹³ See, e.g., *Goodwin v. The United Kingdom*, no. 28957/95, para. 92 (2002); *Cossey v. The United Kingdom*, no. 10843/84, para. 40 (1990); *Rees v. The United Kingdom*, no. 9532/81, para. 47 (1986); *Fretté v. France*, no. 36515/97, para. 42 (2002); cf. *Oluic v. Croatia*, no. 61260/08, paras. 29-31 (2010). See also *Urgenda*, para. 5.4.3 ("According to ECtHR case law, an interpretation and application of the ECHR must also take scientific insights and generally accepted standards into account.").

¹⁴ 'Appendix A to the Principles Governing IPCC Work: Procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of IPCC Reports' (IPCC, 2013), p. 9; see also 'IPCC Factsheet: How does the IPCC approve reports?' (IPCC, 2013).

¹⁵ Patricia Birnlie, Alan Boyle & Catherine Redgwell (eds), *International Law and the Environment* (Oxford, Oxford University Press, 2009) pp. 604-07.

¹⁶ A. Lindroos & M. Mehling, 'From Autonomy to Integration? International Law, Free Trade and the Environment' (2008) 77 *Nordic Journal of International Law* 253, 265 (with further references). Already decades ago, scholars argued that the precautionary principle 'ha[d] evolved into a general principle of environmental protection at the international level'. J. Cameron, "The Status of the Precautionary Principle in International Law," in T. O'Riordan & J. Cameron (eds), *Interpreting the Precautionary Principle* (London, Earthscan Publications, 1994) 262 (with further references).

principle to be part of international law.¹⁷ In the context of climate change, the UNFCCC expressly incorporates the principle, stating in Article 3(3) that “Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures.”

8. Applying the precautionary principle, this Court has recognized that the absence of scientific or technical certainty cannot justify delaying the adoption of effective and proportionate measures aimed at preventing the risk of serious and irreversible damage to the environment.¹⁸ This reasoning also applies to a new technology where the effects are not fully understood, but which poses real environmental risks. The precautionary principle requires a State to address the root causes of climate change and cease the conduct that causes and exacerbates it, through reasonable and adequate measures capable of protecting the relevant rights.¹⁹ Speculative technologies that create a range of new risks must be avoided.

9. Intergenerational equity is also a central tenet of international environmental law, expressly incorporated in the UNFCCC.²⁰ International and domestic courts and tribunals, including the International Court of Justice, have also widely recognized this principle.²¹ Broadly speaking, intergenerational equity encapsulates the idea that “[t]he present residents of the earth hold the earth in trust for future generations and at the same time the present generation is entitled to reap benefits from it.”²² Thus, the principle demands a just balance between the needs of present and future generations, and in the context of climate change, consideration of climate justice: decision-makers must pay attention to the distributive consequences of climate harms, government policies, and lack of action.²³ The fundamental insight is that continuing rapid emissions of GHGs constitutes an injustice to future generations perpetrated by the present. Accordingly, only maximally ambitious and reliable climate mitigation policies can be consistent with intergenerational equity.

10. A growing number of court decisions recognize that insight. In Europe, a prominent example is the Federal Constitutional Court of Germany’s judgment in *Neubauer v Germany*. The Court found that Article 20A of the German Federal Basic Law (*Grundgesetz*) set a baseline obligation on the State to mitigate climate change, and that the deferral of significant domestic emission reductions to later periods would create “advance interference-like effects” (*Eingriffsähnliche Vorwirkung*) that would prevent young people from enjoying their fundamental rights in the future, in violation of intertemporal guarantees of freedom. Thus, “[t]he duty to afford protection against risks to life and health can also establish a duty to protect future generations”²⁴ from burdens “being unilaterally offloaded onto the future.”²⁵ The Court considered it necessary

¹⁷ *Gabčíkovo-Nagymaros Project (Hungary v Slovakia)* (Judgment) [1997] ICJ Reports 7 (*Gabčíkovo-Nagymaros Project*); *Southern Bluefin Tuna Cases (New Zealand v Japan and Australia v Japan)* International Tribunal of the Law of the Sea [ITLOS], Order (27 Aug. 1999). See also: *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area (Advisory Opinion)*, Seabed Disputes Chamber of the ITLOS (1 Feb. 2011) Case No. 17, 125–130.

¹⁸ *Tatar*, para. 109.

¹⁹ *Tatar*, para. 108.

²⁰ UNFCCC, art. 3: “The Parties should perfect the climate system for the benefit of present and future generations, on the basis of equity and in accordance with their common but differentiated responsibilities and capabilities.”

²¹ *Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion)*, International Court of Justice (8 July 1996) ICGJ 205 (ICJ 1996), para. 29.

²² W. Scholtz, *Equity*, 339, in L. Rajamani & J. Peel (eds.), *The Oxford Handbook of International Environmental Law* (Oxford University Press, 2021).

²³ E. Brown Weiss, ‘In Fairness to Future Generations and Sustainable Development’ (1992) *American University International Law Review* 8(1) 19-26.

²⁴ Bundesverfassungsgericht [BVerfG] [Federal Constitutional Court], Mar. 24, 2021, Case No. BvR 2656/18/1, BvR 78/20/1, BvR 96/20/1, BvR 288/20 (*Neubauer*), para. 142-146.

²⁵ *Neubauer*, para. 183.

to look not just at the State’s climate targets, but also at how the measures implemented would distribute the burden of reaching those targets.

11. Together, the human rights and environmental law principles of prevention, precaution, and intergenerational equity preclude a State from relying on measures that are unavailable, uncertain, or risky to address a threat to human rights, in lieu of taking proven, available mitigation measures. States are obliged to prioritize measures known to be effective at averting or minimizing foreseeable risk, and that pose a lower risk of causing harm.²⁶ Given its duty to take action to avert “a real and immediate threat” like climate change,²⁷ a State may not forgo available and proven measures to reduce GHG emissions in reliance on speculative technologies that increase the likelihood of overshooting 1.5°C.²⁸ As the Supreme Court of the Netherlands observed, “[t]aking such risks would run counter to the precautionary principle that must be observed when applying Articles 2 and 8 ECHR and Article 3(3) UNFCCC.”²⁹

12. As elaborated below, the politically endorsed scientific consensus on climate change is that warming must be kept to below 1.5°C,³⁰ which requires immediate, steep reductions in emissions. To the extent that the State’s climate mitigation plans rely on the purchase of carbon offset credits from conduct outside its territory, or CDR technologies, in lieu of such near-term emissions cuts, they fail to satisfy the State’s duties to respect and ensure the rights to life and private and family life under Articles 2 and 8 of the Convention.

III. Reliance on CDR and Offsets Fails to Deliver Urgently Needed Emissions Reductions and Poses Risks to Rights

13. The politically endorsed scientific consensus reflected in the reports of the IPCC, including the 2018 IPCC Special Report on the impacts of global warming of 1.5°C (SR1.5) requested by Member States and recent contributions of Working Groups I, II, and III of the Sixth Assessment Report, recognizes that: current levels of warming are already causing harm and infringing on human rights;³¹ warming of 1.5°C or higher is not safe for most countries and communities,³² and exceeding 1.5°C, even temporarily, could unleash further irreversible harm,³³ such as excess deaths from heatwaves, glacier melt, sea level rise, and loss of coral reefs, small islands, and cultural heritage.³⁴ Overshoot also thwarts adaptation and resilience,³⁵ and increases the chance of triggering climate “tipping points” and self-reinforcing feedback loops, which magnify harms and make “return to a given global warming level or below [...] more challenging.”³⁶ Science therefore

²⁶ Advisory Opinion OC-23/18, Inter-Am. Ct. H.R. (ser. A) No. 23, at paras. 130, 133, 142, 180; *see also* *Tatar*, paras. 108-09.

²⁷ *Öneriyıldız*, para. 89; *see also* *Urgenda*, para. 2.3.2.

²⁸ M. Bindi et al. ‘Impacts of 1.5°C of Global Warming on Natural and Human Systems’ in V. Masson-Delmotte et. al. (eds.), *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C* (Ch. 3, IPCC, 2018) [IPCC, SR1.5], pp. 274-81, Cross-Chapter Box 8.

²⁹ *Urgenda*, para. 7.2.5.

³⁰ *See* *Paris Agreement*, art. 2(1)(a); *see also* UNFCCC, ‘Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010, Decision 1/CP.16’, U.N. Doc. FCCC/CP/2010/7/Add.1 (2011) para. 4 [Cancun Agreement]; UNFCCC, art. 2; IPCC, SR1.5, SPM, A.3, B.1-B.5, TS, p. 44, Ch. 5, p. 447.

³¹ *See* H.-O. Pörtner et. al., *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, SPM, B.1.1-B.1.7 (IPCC, 2022) [IPCC, AR6 WGII]; IPCC, SR1.5, SPM A.3.1.

³² IPCC, SR1.5, Technical Summary (TS), p. 44, Ch. 5, p. 447.

³³ IPCC, AR6 WGII, SPM.B.6, B.6.1; TS.C.2.5, TS.C.4.2, TS.C.13 & C.13.1; Ch. 16, at p. 16-8; *see also* IPCC SR1.5, *Chapter 3*, at pp. 274-81, Cross-Chapter Box 8.

³⁴ IPCC, AR6 WGII, TS.C.12.3, TS.C.13, & TS.C.13.1.

³⁵ IPCC, AR6 WGII, SPM.B.6.2.

³⁶ IPCC, AR6 WGII, TS.C.13.2; *see also* V. Masson-Delmotte et. al. (eds.), *Climate Change 2021: The Physical Science Basis - Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC, 2021) [IPCC, AR5 WGI], SPM C.3.2.

demonstrates that protecting human rights from further foreseeable climate harm requires keeping warming below 1.5°C.

14. The IPCC has shown that the most effective mitigation measures for reducing GHG emissions by 2030 – the period most important for avoiding overshoot of 1.5°C – are replacing fossil fuels with renewable energy and energy efficiency.³⁷ “Negative emissions technologies” (NETs), such as large-scale CDR, and carbon offset credits derived from extraterritorial activities do not deliver those urgently needed reductions, but instead face feasibility constraints, present significant uncertainties, and pose additional human rights risks.

15. Even if no unexpected, harmful effects on the planet or human rights materialize from their deployment, offsets and CDR contribute to an unsafe and uninhabitable climate when they are used by States as an alternative to measures and policies effectively reducing sources of emissions of GHGs under their jurisdiction or control, thereby incentivizing the continuation of the practices that cause climate change, such as reliance on fossil fuels. Thus State climate policies that rely on offsets or CDR to meet mitigation targets fail to reflect the requisite urgency or deliver the emissions reductions needed to safeguard rights. The following sections explain the principal risks of offsets and CDR.

A. Relying on extraterritorial offsets in lieu of undertaking required domestic emissions reductions is fundamentally flawed.

16. The premise of offsets, that emission reductions or increases in carbon sequestration (e.g., reforestation) in one location “compensate”³⁸ or substitute for emissions reductions or increased sequestration in another location, rests on a false notion that there is spare atmospheric capacity. Carbon dioxide and other GHGs accumulate in the atmosphere and stay for decades, if not millennia.³⁹ Consistent increases in GHG concentrations,⁴⁰ which have reached their highest level in at least 800,000 years,⁴¹ have put the world on course to reach 1.5°C warming above pre-industrial levels by 2040 or sooner.⁴² States’ current climate commitments, reflected in Nationally Determined Contributions submitted under the Paris Agreement prior to COP27, and planned fossil fuel production are inconsistent with 1.5°C-aligned pathways.⁴³ Even if States fully implemented their currently pledged reductions, the average global temperature would rise to 2.5-2.8°C above pre-industrial levels by 2100.⁴⁴ Thus there are no “surplus” reductions or removals, as all are needed. Avoiding catastrophic warming that further jeopardizes human rights requires a “both and,” not an “either or,” approach to emissions reductions and scientifically and ecologically sound removals.

17. Offsets do not deliver overall emissions reductions. At best, they provide a direct netting out of ongoing emissions (i.e. 1 tonne of CO₂ emitted is offset by 1 tonne of CO₂ reduced elsewhere); at worst they do not provide the intended reduction and the underlying credit-generating activities also harm local communities and/or their environment.

³⁷ See P.R. Shukla et. al. (eds.), *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC, 2022) [IPCC, AR6 WGIII], SPM C.12.1, fig. SPM.7; SPM C.2-C.4, fig. SPM.5; Ch. 3, 3.2 & fig. 3.7.

³⁸ D. Broekhoff et al., ‘Securing Climate Benefit: A Guide to Using Carbon Offsets’ (Nov. 13, 2019), p. 6.

³⁹ IPCC, AR6 WGI, Ch. 5, para. 5.2.4.

⁴⁰ IPCC, AR6 WGI, Summary for Policymakers, para. A.1.1; see also H. Damon Matthews & S. Wynes, ‘Current global efforts are insufficient to limit warming to 1.5°C’ (2022) 376 *Science* 1404.

⁴¹ IPCC, AR6 WGI, para. A.2.1; see also IPCC, SR1.5, Ch. 1, Box 1.1 (2018).

⁴² IPCC, AR6 WGI, Summary for Policymakers, B.1.3, Table SPM.1.

⁴³ IPCC, AR6 WGIII, SPM, B.6; see also UNFCCC, ‘Nationally determined contributions under the Paris Agreement, Synthesis report by the secretariat’ U.N. Doc. FCCC/PA/CMA/2022/4 (Oct. 26, 2022) [*NDC Synthesis Report*]; UNEP, ‘Production Gap Report 2021’ (2021), pp. 16-24.

⁴⁴ See UNEP, ‘Emissions Gap Report 2022: The Closing Window — Climate crisis calls for rapid transformation of societies’ (2022), p. XXI; see also *NDC Synthesis Report*.

18. The notion of tradable “carbon credits” is premised on a false equivalency of carbon. Fossil carbon and terrestrial (ecosystem) carbon are not fungible.⁴⁵ In particular, there are differences in the stability, longevity, and resilience of carbon stocks depending on the source.⁴⁶ These differences mean that one type of carbon emission cannot be readily “offset” with another type of carbon removal or sink. Yet carbon market offset schemes treat them as such, often allowing land-based offset credits to be used against fossil fuel-based emissions.⁴⁷

19. Offsets are often not “additional” or “permanent.” Additionality refers to credit-generating activity that would not have occurred in absence of the credit being purchased. Without this additionality, emissions are merely increasing without removals taking place,⁴⁸ yet it has proven difficult to guarantee and in many instances simply does not exist.⁴⁹ Likewise, for a carbon credit to “offset” other emissions, it must be permanent. But many offsets, especially land-based offsets, lack permanence, especially as climate change-fuelled wildfires, timber harvest, or shifts in agricultural practices release emissions, threatening long-term sequestration.⁵⁰ Relying on such offsets places a burden on future generations who will have to manage not only the changing climate, but this sequestered carbon to prevent its release.

20. Leaving aside these fundamental flaws, offsets, including through voluntary markets, have failed to deliver promised climate benefits.⁵¹ Their environmental integrity suffers not only from a lack of additionality and permanence, as discussed above, but also double-counting, which is when more than one State or entity counts a single credit towards its mitigation pledge.⁵² Studies have also found overestimation of the claimed reductions achieved.⁵³ Absent robust monitoring, reporting, and verification, which have proven elusive thus far, offsets fail to deliver real climate benefits, instead only enabling emissions to continue to rise.

21. Additionally, carbon credit projects have caused human rights and environmental harm.⁵⁴ Carbon market projects, for example under the Kyoto Protocol’s Clean Development Mechanism, and similar market schemes, such as those under the Reducing Emissions from Deforestation and Forest Degradation (REDD+) framework, have led to eviction of Indigenous Peoples and local communities, violation of their right to Free, Prior and Informed Consent, and threats to their

⁴⁵ K. Dooley et al., ‘The Land Gap Report: 2022’ (2022), p. 32; see W. Carton, JF Lund & K. Dooley, ‘Undoing Equivalence: Rethinking Carbon Accounting for Just Carbon Removal’, (2021) 3 *Front. Clim.*, 1-7; 41 Scientists, ‘10 myths about net zero targets and carbon offsetting, busted’, (*Climate Home News*, Dec. 11, 2020).

⁴⁶ Dooley et al., *The Land Gap Report*, p. 32.

⁴⁷ Dooley et al., *The Land Gap Report*, p. 10.

⁴⁸ Lisa Song, ‘An Even More Inconvenient Truth: Why Carbon Credits For Forest Preservation May Be Worse than Nothing’, (*ProPublica*, May 22, 2019); J. Kill et al., ‘Trading Carbon: How it works and why it is controversial’ (*FERN*, 2010), p. 59.

⁴⁹ Lisa Song (2019); M. Carnes et al., ‘How additional is the Clean Development Mechanism?: Analysis of the application of current tools and proposed alternatives’ (March 2016).

⁵⁰ Lisa Song (2019); M. Castagné et al., ‘Carbon Markets and Agriculture: Why offsetting is putting us on the wrong track’ (Carbon Market Watch, Secours Catholique, CCFD-Terre Solidaire & IATP, 2020), p. 6; Winston Choi-Schagrin, ‘Wildfires are ravaging forests set aside to soak up greenhouse gases’, (*The New York Times*, Aug. 23, 2021).

⁵¹ See, e.g., Carnes et al., ‘How Additional is the Clean Development Mechanism?’, 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.”); Carbon Market Watch, ‘Carbon Markets 101: The Ultimate Guide to Global Offsetting Mechanisms’ (2020); Carbon Direct, ‘Assessing the State of the Voluntary Carbon Market in 2022’ (2022).

⁵² See L. Schneider, A. Kollmuss & M. Lazarus, ‘Addressing the risk of double counting emission reductions under the UNFCCC’ (2014) SEI Working Paper 2014-02, p. 6; ClientEarth, ‘Briefing: Legal risks of carbon offsets’ (2022), <<https://www.clientearth.org/media/lcvhm5uw/carbon-offsets-legal-risk-briefing.pdf>>; see also ‘Expert Report-Derik Broekhoff’ (July 4, 2022).

⁵³ G. Badgley et al., ‘Systematic over-crediting in California’s forest carbon offsets program’, (2021) 28(4) *Global Change Biology* 1433.

⁵⁴ See e.g., Carbon Market Watch, ‘The Clean Development Mechanism: Local Impacts of a Global System’ (2018); W. Obergassel et al., ‘Human Rights and the Clean Development Mechanism: Lessons learned from three case studies’ (*Wuppertal Institute for Climate, Environment, Energy* 2017) (detailing harms from CDM projects).

rights to food, water, cultural heritage, and life.⁵⁵ To the extent that offsets are derived from CDR, they involve additional risks, discussed below.

B. CDR cannot compensate for rapid emissions reductions

22. Technological CDR involves capturing CO₂ from the atmosphere and storing it in the biosphere (land, plants, or forests) or geosphere (underground reservoirs) – beyond the natural carbon removal that “land and ocean sinks perform as part of the carbon cycle.”⁵⁶ CDR typically involves either “enhancing existing natural processes that remove carbon from the atmosphere (e.g., by increasing its uptake by trees, soil, or other ‘carbon sinks’) or using chemical processes to, for example, capture CO₂ directly from the ambient air and store it elsewhere (e.g., underground).”⁵⁷ BioEnergy with Carbon Capture and Storage (BECCS) and Direct Air Capture (DAC) are two of the more commonly promoted CDR technologies.

23. The infeasibility of implementing large-scale CDR, the collateral consequences of relying on removal measures, and their dubious efficacy from a climate perspective, make CDR an inadequate means of satisfying a State’s duty to protect human rights from the threat of climate change. As the IPCC acknowledges, research shows “that it is implausible that any CDR technique can be implemented at scale that is needed by 2050.”⁵⁸ “Most CDR options face multiple feasibility constraints,” the IPCC writes, “limiting the potential for any single option to sustainably achieve the large-scale deployment required in the 1.5°C-consistent pathways.”⁵⁹ Noting that CDR may be ineffective in reversing temperature rise following overshoot and that it is unproven at scale, the IPCC SR 1.5 found that it is risky to rely on such technology to limit warming to 1.5°C, rather than on energy efficiency and low-demand strategies that drastically reduce GHGs in the near term.⁶⁰ More recently, the IPCC reiterated that CDR technologies “are uncertain and entail clear risks,”⁶¹ and “cannot serve as a substitute for deep emissions reductions.”⁶² Removals are not emissions reductions, and cannot be treated as equivalents. The climate mitigation potential of removals can only be realized if they supplement, not replace, immediate, steep reductions in fossil fuel emissions.⁶³

24. Taken together, the climate pledges submitted by countries to the UNFCCC make unrealistic assumptions about the availability of land for land-based removal. The Land Gap Report, published in November 2022, assesses the discrepancy between governments’ reliance on land for climate mitigation purposes and the role that land can realistically play.⁶⁴ It finds that the land-based carbon removal plans in country pledges would require almost 1.2 billion hectares—close to the total current area used to grow crops globally. Those unrealistic commitments cannot be met “without significant negative impacts on livelihoods, land rights, food production and ecosystems.”⁶⁵

⁵⁵ See, e.g., Daniel Grossman, “Dam Lies: Despite Promises, an Indigenous Community’s Land Is Flooded” (Mar. 5, 2018); Interim Report of the Special Rapporteur on the Right to Food, U.N. Doc. A/70/287, para. 68-69 (2015); see also J.P. Sarmiento Barletti & A. Larson, ‘Rights Abuse Allegations in the Context of REDD+ Readiness and Implementation: A Preliminary Review and Proposal for Moving Forward’, (CIFOR, 2017).

⁵⁶ Dooley et al., The Land Gap Report, at 14.

⁵⁷ IPCC, SR1.5, FAQ Ch. 4.

⁵⁸ WGI Ch. 4, 4.6.3.2 at 4-80.

⁵⁹ IPCC, S.R.1.5°C, Ch. 4 p. 316.

⁶⁰ IPCC, SR 1.5, Ch. 2, ES; see also Dooley et al., The Land Gap Report, p. 15 (discussing risks of relying on CDR).

⁶¹ IPCC, SR1.5, Ch. 2, p. 95.; see also IPCC, AR6 WG II, SPM B.5.4, B.5.5, Technical Summary, TS.C.11.10; IPCC, AR6 WGIII, Ch. 3, 3.3.2.23-36; IPCC, AR6, WGIII, SPM C.11, C.11.1, C.11.2.

⁶² IPCC, AR6 WGIII, Ch.12, 12.3.

⁶³ H. Damon Matthews et al., ‘Temporary nature-based carbon removal can lower peak warming in a well-below 2°C scenario’, (2022) 3 Communications Earth & Environment 65.

⁶⁴ Dooley et al., The Land Gap Report, at 14.

⁶⁵ Dooley et al., The Land Gap Report, at 8.

25. Beyond feasibility constraints, CDR technologies, like BECCS and DAC could also pose significant, independent risks to the environment if deployed at scale, threatening basic human rights. According to the IPCC, deploying BECCS at any significant scale would require enormous quantities of biomass, water, and land, potentially displacing agricultural production, compounding global food and water insecurity driven by climate change and other environmental stressors, as well as biodiversity loss.⁶⁶ These impacts threaten the rights to food, water, and livelihood, particularly for subsistence farmers and the poor, with repercussions on the right to health.⁶⁷ The IPCC has likewise recognized that the huge energy demands of DAC, which purports to capture CO₂ from ambient air, could lead to environmental damage and undermine its sequestration potential,⁶⁸ and that its deployment could “significantly impact food prices via demand for land and water.”⁶⁹

C. In delaying domestic mitigation measures, externalized reductions and removals undermine the ability to deliver urgent emissions cuts needed to limit warming to 1.5°C

26. Reliance on offsets and CDR deters the adoption of proven, available mitigation measures, such as replacing fossil fuels with renewable energy sources and energy efficiency measures. Doing so increases the likelihood of overshooting 1.5°C and the ensuing irreversible impacts, and perpetuates the threats that climate change poses to the right to life and other human rights, including the right to a healthy environment.⁷⁰ The IPCC notes concerns that large-scale CDR could “obstruct near-term emission reduction efforts,” “lead to an overreliance on technologies that are still in their infancy,” and “overburden future generations.”⁷¹ In contrast, a climate pathway that increases short-term emissions reductions, lowers temperature overshoot, and favors currently available mitigation options “distributes mitigation effort more evenly between generations.”⁷²

IV. Reliance on offsets and CDR in lieu of demonstrated GHG emission reduction measures is inconsistent with applicable human rights obligations and international environmental law principles

27. The scientifically grounded legal duty of States to exhaust their domestic emissions reductions, by taking all preventive measures within their power, is not discharged or displaced by the pursuit of “outsourced” reductions realized extraterritorially as “offsets,” or by reliance on uncertain CDR technologies that pose independent risks to human rights. The internationally recognized principles of precaution and intergenerational equity limit States’ margin of appreciation in this context and inform the interpretation of what measures satisfy States’ Convention duties under Articles 2 and 8.

⁶⁶ See IPCC, AR6 WGII SPM B.5.4; WGI TS 3.3.2; WGI SPM D.1.4. See also M. Fajardy, ‘BECCS deployment: A reality check’, Grantham Institute, Briefing paper No. 28 (2019); ‘Fuel to the Fire: How Geoengineering Threatens to Entrench Fossil Fuels and Accelerate the Climate Crisis’, (CIEL, 2019), pp. 31-33.

⁶⁷ See W.C.G. Burns, ‘The Paris Agreement and Climate Geoengineering Governance: The Need for a Human Rights-Based Component’ (Centre for International Governance Innovation, 2016), 20-22; G. Choplin, & P. Claeys, ‘The Right to Decent Income and Livelihood in the United Nations Declarations on the Rights of Peasants and Other People Working in Rural Areas’ (FLAN *International*, 2017), 1; UNCESCR, ‘General Comment No. 14: The Right to the Highest Attainable Standard of Health’, U.N. Doc. E/C.12/2000/4 (11 August 2000), para. 11.

⁶⁸ IPCC AR6 WGIII, Ch. 3, at 3-68; Ch. 12, 12.3.1.1.

⁶⁹ IPCC AR 6 WGII, Ch. 4, 4.7.6; see also J. Sekera & A. Lichtenberger, ‘Assessing Carbon Capture: Public Policy, Science, and Societal Need’ (2020) 5(14) *Biophys. Econ. Sust.* (finding that using DAC to remove 1 gigaton of CO₂ may require a land area roughly 10 times the size of Delaware and could use prodigious amounts of water).

⁷⁰ ‘Submission to Special Rapporteur on Human Rights and the Environment’, (CIEL, July 2020); UNHRC, ‘The Human Right to a Clean, Healthy and Sustainable Environment’, UN Doc. A.HRC/RES/48/13 (18 October 2021).

⁷¹ IPCC, AR6 WGIII, Ch. 12, at p. 12-39.

⁷² IPCC, AR6 WGIII, Annex III, at I-10-11.

Reliance on uncertain and risky measures to address the threat of climate change contravenes the precautionary principle

28. Courts in Europe have recognized the uncertainty of CDR and carbon markets in holding that States must adopt stringent and specific emissions reduction measures. In its review of the adequacy of German climate policy, the Federal Constitutional Court of Germany acknowledged that the large-scale deployment of NETs is not yet foreseeable, underscoring how essential near-term emissions reductions are to protection of fundamental rights.⁷³ In holding that the State had an obligation to undertake more significant near-term emissions reductions, the Court recognized that “it has not yet been possible to establish a reliable crediting system for internationally tradable emission reductions,” and noted that the significant ambition gap in countries’ mitigation measures means “competition for transferable surplus reductions is likely to be intense.”⁷⁴ In an opinion quashing the country’s National Mitigation Plan, the Supreme Court of Ireland questioned the Irish government’s failure to specify how much it would rely on the deployment of CDR and other technologies that “are still in the development stages and...remain[] untested,”⁷⁵ and may ultimately prove “less useful than currently envisaged.”⁷⁶ Likewise, in finding that the Dutch government was not taking sufficient action to reduce GHG emissions, the Supreme Court of the Netherlands recognized that “at the moment there is no technology that allows [carbon removal] to take place on a sufficiently large scale.”⁷⁷ The court observed that climate pathways reliant on such technologies—based on unproven assumptions about such technologies—“cannot be taken as a starting point for policy at this time *without taking irresponsible risks by doing so.*”⁷⁸

Reliance on uncertain and risky measures to address the threat of climate change is inconsistent with intergenerational equity

29. Courts have found delaying immediate or near-term emissions reduction measures to be inconsistent with the principle of intergenerational equity. In reviewing the Federal Climate Protection Act, the German Constitutional Court noted that the legislature had not equitably distributed the available carbon budget between current and future generations. According to the court, “one generation must not be allowed to consume large parts of the CO2 budget under a comparatively mild reduction burden ... and expose their [future generations] lives to serious losses of freedom.”⁷⁹ Likewise, the decision by the Hague District Court in *Urgenda*, which was subsequently upheld, found that “the [Dutch] State, in choosing measures [to combat climate change], will also have to take account of the fact that the costs are to be distributed reasonably between the current and future generations.”⁸⁰ Courts in France have likewise held that planned future action could not excuse the failure to meet near-term targets, given the long-term effects of current emissions,⁸¹ and the risk that delayed action would require drastic cuts later.⁸²

Foregoing reliable emissions reductions in favor of offset credits and uncertain removals contravenes the State’s duty to take all measures within its power to prevent the harm.

30. States have a duty to curb conduct within their jurisdiction and control that foreseeably contributes to human rights harm, through practical, effective, and immediate measures capable

⁷³ *Neubauer*, paras. 182-97, 227.

⁷⁴ *Neubauer*, para. 226.

⁷⁵ *Friends of the Irish Environment v. The Government of Ireland & Ors.*, [2020] IESC 49, para. 3.4.

⁷⁶ *Id.* at para. 6.47; see also *The Queen on the application of Friends of the Earth et al v. Secretary of State for Business, Energy & Industrial Strategy*, [2022] EWHC 1841 (Admin), para. 250.

⁷⁷ *Urgenda*, para. 7.2.5.

⁷⁸ *Urgenda*, para. 7.2.5 (emphasis added).

⁷⁹ *Neubauer*, para. 192.

⁸⁰ *Urgenda*, para. 4.76.

⁸¹ *Notre Affaire à Tous et al. v. France, Association* (2021), Paris Administrative Court, para. 31.

⁸² *Commune de Grande-Synthe*, N° 427301 (Conseil d’Etat, République Française), para. 15 (2020).

of preventing foreseeable harms to Convention rights.⁸³ For the world to remain below 1.5°C warming, every State must meet its responsibility to reduce emissions domestically as far as possible and bring fossil fuel emissions to near zero. Opting for emissions reductions or removals abroad in lieu of known, reliable measures for reducing emissions domestically – replacing fossil fuels with renewable energy and reducing energy demand – abdicates that responsibility. Doing so not only leaves those contributions to climate change unchecked but also does nothing to address the non-climate hazards of fossil fuel emissions, such as air pollution, that fall disproportionately on vulnerable populations.⁸⁴

31. Given the duty of *all* States to reduce their respective emissions as much as possible to contribute to the collective goal of limiting global warming to 1.5°C, but at divergent paces according to common but differentiated responsibilities,⁸⁵ a State that purports to offset its ongoing, but avoidable emissions, by purchasing another State’s action may not only be infringing on the rights of persons in the other jurisdiction to development,⁸⁶ but also impeding the other State’s ability to satisfy its mitigation obligations.

32. Historically high-emitting nations must support emission reduction efforts in other countries, in addition to, not instead of reducing their own emissions.⁸⁷ Support for emission reductions in other countries through any mechanism or approaches should be considered as a matter of States’ duty to cooperate internationally,⁸⁸ but shall not displace the States’ responsibility to reduce its domestic emissions or otherwise “offset” shortcomings in domestic reductions.

33. To the extent that unchecked, ongoing emissions within a State’s jurisdiction and control contribute to cumulative global emissions and ensuing warming, they contribute to an ongoing human rights violation. The first duty of a State with respect to such a violation is to cease the harm. Merely paying another to undertake activity to “compensate” for that violative conduct does not address the harm: “The provision of compensation as a remedy for a human rights violation is not to be confused with the duty of States not to commit and to put an end to violations of the Convention.”⁸⁹

V. Conclusion

34. Climate change poses significant threats to human rights. These threats trigger States’ obligations under the Convention. Specifically, States have an obligation to do everything within their power to keep warming below 1.5°C in accordance with the principles of precaution and intergenerational equity, and best available science. Consequently, by virtue of their legal obligations under the Convention, States must set targets for domestic emission reductions in line with the best available science and fully comply with these objectives through policies and measures reducing sources of harmful emissions under their jurisdiction and control. The use of mechanisms and approaches such as offsets or speculative CDR must be excluded from the review of the adequacy of national climate policies.

⁸³ *Budayeva and others*, paras. 128, 130; *Öner Yardımcı*, para. 71; *see also Ilascu and Others v. Moldova and Russia*, no. 48787/99, para. 317 (2004); Advisory Opinion OC-23/18, para. 81; HRC, General Comment No. 36, para. 22; 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); *Tatar*, para. 87 (covering public and private conduct).

⁸⁴ *See* K. Vohra et al., ‘Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem’, (2021) 195 Environmental Research.

⁸⁵ Paris Agreement, arts. 2.2, 4.3, 4.4; UNFCCC, art. 4.

⁸⁶ U.N. General Assembly, 41/128 Declaration on the Right to Development, U.N. Doc. A/RES/41/128 (1986).

⁸⁷ UNFCCC, at arts. 3, 4; Paris Agreement, arts. 2.2, 9.

⁸⁸ Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment (1 February 2016), UN Doc. A/HRC/31/52, paras. 42-48.

⁸⁹ *Cyprus v. Turkey* [GC], No. 25781/94, para. 21 (2014).