

**The Doctrine of Positive Obligations as a
Starting Point for Climate Litigation in
Strasbourg: The European Court of Human
Rights as a *Hilfssheriff* in Combating
Climate Change?**

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ABSTRACT

Climate change is a severe threat to the realization of several fundamental human rights, such as the right to life, the right to private life, and the right to health. In order to guarantee that the protection of the European Court of Human Rights (ECtHR) remains effective, we might have to acknowledge that climate change also poses a threat to the rights protected under the European Convention on Human Rights (ECHR). Although the ECtHR has not yet explicitly developed case law on climate change-related cases, this Article discusses the applicability

and suitability of the ECtHR in protecting the rights of individuals against the implications of climate change.

Climate change does not fall into the traditional logic of territoriality and the causal link between the act and the damage. Nevertheless, future claims will likely include elements of shared liability and extraterritoriality, legal doctrines well established and recognized in the ECtHR jurisprudence. This Article's discussion serves as a starting point for the legal analysis of the doctrine of positive obligations in the field of the environment, including climate change.

INTRODUCTION

The Office of the United Nations High Commissioner for Human Rights has underlined the urgency of climate change-related human rights violations for many years.¹ The environment has been in a crux condition for the enjoyment of a variety of human rights.² Climate change has an undeniable global impact on the enjoyment of human rights, such as the right to life and the right to private life.³ As these rights are enshrined in the European Convention on Human Rights (ECHR), we can assume that climate change can also have a negative impact on the scope of protection under the European human rights regime. Hence, the pending issue is to what extent can the European Court of Human Rights (ECtHR) play a role in protecting individuals against the negative impacts of climate change.

This Article attempts to address and assess the suitability of the doctrine of positive obligations, developed by the ECtHR, as a basis to evaluate claims related to the negative effects of climate change. The framework of the ECtHR was established primarily to process individual claims on a territorial basis. In theory, this framework does not prevent the ECtHR from affording in practice effective and practical safeguards to the victims of human rights infringements related to the environment. One purpose of this study is to demonstrate

¹ See U.N. High Comm'r for Human Rights, *Report of the Office of the United Nations High Commissioner for Human Rights on the Relationship Between Climate Change and Human Rights*, ¶ 20, U.N. Doc. A/HRC/10/61 (Jan. 15, 2009).

² See U.N. High Comm'r for Human Rights, *Analytical Study on the Relationship Between Human Rights and the Environment*, ¶ 7, U.N. Doc. A/HRC/19/34 (Dec. 16, 2011).

³ U.N. High Comm'r for Human Rights, *Understanding Human Rights and Climate Change* (Nov. 27, 2015), <https://www.ohchr.org/Documents/Issues/ClimateChange/COP21.pdf> [<https://perma.cc/9JAP-5WVG>].

to what extent it is possible to establish state responsibility through the doctrine of positive obligations under the ECHR, even though the phenomenon of climate change is inherently global in nature.

This Article analyzes the appropriateness of the ECtHR for climate change and human rights litigation and provides references on how the argumentation of the ECtHR could be formed in the climate change context. The ECtHR has established extraterritorial human rights obligations⁴ and shared responsibility,⁵ which provide guiding principles for climate change litigation, even though there is no explicit “green jurisprudence” on these doctrines. The current ECtHR environmental protection jurisprudence,⁶ and above all the *Hatton v. United Kingdom* case on pollution caused by Heathrow Airport,⁷ provides a foundation to develop discussion on the climate change-related liability.

⁴ Heta-Elena Heiskanen & Jukka Viljanen, *Reforming the Strasbourg Doctrine on Extraterritorial Jurisdiction in the Context of Environmental Protection*, 11 EUR. L. REP. 285, 286 (2014).

⁵ See Alan E. Boyle, *Making the Polluter Pay? Alternatives to State Responsibility in the Allocation of Transboundary Environmental Costs*, in INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM 378 (Francesco Francioni & Tullio Scovazzi eds., 1991).

⁶ Most of the more relevant cases were already decided by the ECtHR a few years ago. The more recent cases deal with the conflict between property and environmental protection. See, e.g., *Calancea v. Republic of Moldova*, App. No. 23225/05 (Eur. Ct. H.R. Feb. 6, 2018), <http://hudoc.echr.coe.int/eng?i=001-181419> [<https://perma.cc/UTL4-W22R>] (decision on the admissibility); *Kristiana Ltd. v. Lithuania*, App. No. 36184/13 (Eur. Ct. H.R. Feb. 6, 2018), <http://hudoc.echr.coe.int/eng?i=001-180555> [<https://perma.cc/R53Z-KSW8>]; *O’Sullivan McCarthy Mussel Dev. Ltd. v. Ireland*, App. No. 44460/16 (Eur. Ct. H.R. June 7, 2018), <http://hudoc.echr.coe.int/eng?i=001-183395> [<https://perma.cc/M93S-4HDR>]; *Beinarovič v. Lithuania*, App. Nos. 70520/10, 21920/10, 41876/11 (Eur. Ct. H.R. June 12, 2018), <http://hudoc.echr.coe.int/eng?i=001-183540> [<https://perma.cc/Q5ZN-XWL9>].

⁷ *Hatton v. United Kingdom*, 2003-VIII Eur. Ct. H.R. 189 (judgment of the Grand Chamber). In this case, in which the Grand Chamber came to a different conclusion than the Chamber, the applicants, who lived about 12 kilometers from Heathrow Airport, claimed that noise from night flights caused significant disturbance to their sleep. In 1993, the Secretary of State for Transport adopted a quota system of night flying restrictions (the “1993 Scheme”) aimed at striking a proper balance between the local residents’ needs and the economic interest of maintaining a 24-hour international airport. The Court ruled that there was no violation of Article 8 ECHR on the ground that the interests of the applicants were properly taken into consideration when deciding to implement the 1993 Scheme. The Court relied on statistical information to conclude that the noise disturbances to the applicants surrounding Heathrow Airport were “negligible,” and therefore did not outweigh the substantial economic community interest of maintaining this airport. The Court also noted that the applicants could have found new residences without a significant loss. Thus, in evaluating the competing interests of the individual and the community as a whole, the Court believed that the national authority should be given a wide margin of appreciation in taking measures to mitigate the noise from the airport.

Our study commences with an overview of environmental protection in the ECtHR jurisprudence. The emphasis of this Article is on the role of positive obligations under the ECHR regime in environmental cases. The analysis includes contentious legal issues such as access to information related to the risks of climate change and public participation in the decision-making process, access to judicial review in environmental cases, the duty to monitor and control environmental activities by state authorities, and the obligation to conduct Environmental Impact Assessments (EIA), among others. The crux of the Article is the application of these legal principles and procedures to climate change cases. Part III on challenges to the positive obligations under the Convention concerning climate change includes a calibrated analysis of the public interest balancing test, the burden of proof problems, the issues with meeting legal thresholds, and standards such as the insufficient impairment and extraterritoriality limitations. The Article concludes with an assessment of the current standing and future developments in the field of climate change litigation in the European context.

I

PROTECTION OF THE ENVIRONMENT IN THE ECHR SYSTEM AS A STARTING POINT FOR CLIMATE CHANGE-RELATED CASES

The ECtHR has dealt with a very diverse range of environmental issues to date: environmental risks and access to information;⁸ industrial pollution;⁹ mobile phone antennas;¹⁰ air traffic and aircraft noise;¹¹ neighboring noise;¹² road traffic noise;¹³ wind turbines and

⁸ See generally *Brincat v. Malta*, App. Nos. 60908/11, 62110/11, 62129/11, 62312/11, 62338/11 (Eur. Ct. H.R. July 24, 2014), <http://hudoc.echr.coe.int/eng?i=001-145790> [<https://perma.cc/HR8Y-Y275>].

⁹ See generally *Apanasewicz v. Poland*, App. No. 6854/07 (Eur. Ct. H.R. May 3, 2011), <http://hudoc.echr.coe.int/eng?i=001-104672> [<https://perma.cc/BG79-4ZCL>].

¹⁰ See generally *Luginbühl v. Switzerland*, App. No. 42756/02 (Eur. Ct. H.R. Jan. 17, 2006), <http://hudoc.echr.coe.int/eng?i=001-72459> [<https://perma.cc/R65M-ZPY4>] (decision on the admissibility).

¹¹ See generally *Flamenbaum v. France*, App. Nos. 3675/04, 23264/04 (Eur. Ct. H.R. Dec. 13, 2012), <http://hudoc.echr.coe.int/eng?i=001-115143> [<https://perma.cc/RK7Y-HLPD>].

¹² See generally *Zammit Maempel v. Malta*, App. No. 24202/10 (Eur. Ct. H.R. Nov. 22, 2011), <http://hudoc.echr.coe.int/eng?i=001-107514> [<https://perma.cc/EF4C-QVXH>].

¹³ See generally *Grimkovskaya v. Ukraine*, App. No. 38182/03 (Eur. Ct. H.R. July 21, 2011), <http://hudoc.echr.coe.int/eng?i=001-105746> [<https://perma.cc/5YTG-A89K>].

wind energy farms;¹⁴ industrial noise pollution;¹⁵ rail traffic;¹⁶ respirable dust emissions of diesel vehicles;¹⁷ urban development;¹⁸ waste collection, management, treatment, and disposal;¹⁹ and water supply contamination.²⁰ *López Ostra v. Spain*²¹ established that Article 8 ECHR (Right to Respect for Private and Family Life)²² provides for some environmental protections. Increasingly, other articles have been similarly interpreted.²³ Under Article 2 (Right to Life), for example,²⁴

¹⁴ See generally, e.g., *Fägerskiöld v. Sweden*, App. No. 37664/04 (Eur. Ct. H.R. Feb. 26, 2008), <http://hudoc.echr.coe.int/eng?i=001-85411> [<https://perma.cc/M6AB-KVJF>] (decision on the admissibility); *Vecbaštika v. Latvia*, App. No. 52499/11 (Eur. Ct. H.R. Aug. 18, 2011), <http://hudoc.echr.coe.int/eng?i=001-116293> [<https://perma.cc/32QC-PEDV>] (pending application).

¹⁵ See generally *Borysiewicz v. Poland*, App. No. 71146/01 (Eur. Ct. H.R. July 1, 2008), <http://hudoc.echr.coe.int/eng?i=001-87213> [<https://perma.cc/R66M-BNKP>].

¹⁶ See generally *Bor v. Hungary*, App. No. 50474/08 (Eur. Ct. H.R. June 18, 2013), <http://hudoc.echr.coe.int/eng?i=001-120959> [<https://perma.cc/FJ24-9WDV>].

¹⁷ See generally *Greenpeace e.V. v. Germany*, App. No. 18215/06 (Eur. Ct. H.R. May 12, 2009), <http://hudoc.echr.coe.int/eng?i=001-92809> [<https://perma.cc/9KRM-LM4L>] (decision on the admissibility).

¹⁸ See generally *Kyrtatos v. Greece*, 2003-VI Eur. Ct. H.R. 275.

¹⁹ See generally, e.g., *Brândușe v. Romania*, App. No. 6586/03 (Eur. Ct. H.R. Apr. 7, 2009), <http://hudoc.echr.coe.int/eng?i=001-92073> [<https://perma.cc/B59D-SCGR>]; *Locascia v. Italy*, App. No. 35648/10 (Eur. Ct. H.R. June 23, 2010), <http://hudoc.echr.coe.int/eng?i=001-118326> [<https://perma.cc/9WEQ-MRTE>] (pending case).

²⁰ See generally *Dzemyuk v. Ukraine*, App. No. 42488/02 (Eur. Ct. H.R. Sept. 4, 2014), <http://hudoc.echr.coe.int/eng?i=001-146357> [<https://perma.cc/C77T-ABHL>].

²¹ *López Ostra v. Spain*, App. No. 16798/90 (Eur. Ct. H.R. Dec. 9, 1994), <http://hudoc.echr.coe.int/eng?i=001-57905> [<https://perma.cc/UXH7-2NQD>] (which is often regarded as one of the seminal cases relating to the environmental interpretation of ECHR guarantees. It focused on the high concentration of leather industries in the town where the applicant lived. She complained in particular of the municipal authorities' inactivity regarding the nuisance caused by a waste treatment plant situated a few meters away from her home. She successfully held the Spanish authorities responsible, alleging that they had adopted too passive an attitude.).

²² European Convention on Human Rights art. 8, Nov. 4, 1950, E.T.S. No. 5 [hereinafter ECHR], <https://www.echr.coe.int/Documents/ConventionENG.pdf> [<https://perma.cc/8YKT-TLR8>] (amended 2010). Article 8 stipulates:

1. Everyone has the right to respect for his private and family life, his home and his correspondence.
2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.

Id.

²³ See Alan Boyle, *Human Rights or Environmental Rights? A Reassessment*, 18 FORDHAM ENVTL. L. REV. 471, 485 (2006).

²⁴ ECHR, *supra* note 22, at art. 2. Article 2 stipulates:

the Court has dealt with dangerous industrial activities,²⁵ exposure to nuclear radiation,²⁶ industrial emissions and health,²⁷ and natural disasters.²⁸ Under Article 6(1) ECHR (Right to a Fair Trial),²⁹ access to the Court,³⁰ lack of legal review,³¹ and the failure to enforce final judicial decisions³² have been raised in an environmental context.

1. Everyone's right to life shall be protected by law. No one shall be deprived of his life intentionally save in the execution of a sentence of a court following his conviction of a crime for which this penalty is provided by law.

2. Deprivation of life shall not be regarded as inflicted in contravention of this Article when it results from the use of force which is no more than absolutely necessary:

- (a) in defence of any person from unlawful violence;
- (b) in order to effect a lawful arrest or to prevent the escape of a person lawfully detained;
- (c) in action lawfully taken for the purpose of quelling a riot or insurrection.

Id.

²⁵ See generally *Öneryıldız v. Turkey*, 2004-XII Eur. Ct. H.R. 79115, 125 (judgment of the Grand Chamber).

²⁶ See generally *L.C.B. v. the United Kingdom*, 1998-III Eur. Ct. H.R.

²⁷ See generally *Smaltini v. Italy*, App. No. 43961/09 (Eur. Ct. H.R. Mar. 24, 2015), <http://hudoc.echr.coe.int/eng?i=001-153980> [<https://perma.cc/L3B5-V6TJ>] (decision on the admissibility); *Cordella v. Italy*, App. Nos. 54414/13 and 54264/15 (Eur. Ct. H.R. Jan. 24, 2019), <http://hudoc.echr.coe.int/eng?i=001-192164> [<https://perma.cc/PJ6A-A3Z2>].

²⁸ See generally *Özel v. Turkey*, App. Nos. 14350/05, 15245/05, and 16051/05 (Eur. Ct. H.R. Feb. 5, 2016), <http://hudoc.echr.coe.int/eng?i=001-158803> [<https://perma.cc/4ZB2-DS8D>].

²⁹ ECHR, *supra* note 22, at art. 6. Article 6 stipulates:

1. In the determination of his civil rights and obligations or of any criminal charge against him, everyone is entitled to a fair and public hearing within a reasonable time by an independent and impartial tribunal established by law. Judgment shall be pronounced publicly but the press and public may be excluded from all or part of the trial in the interests of morals, public order or national security in a democratic society, where the interests of juveniles or the protection of the private life of the parties so require, or to the extent strictly necessary in the opinion of the court in special circumstances where publicity would prejudice the interests of justice.

Id.

³⁰ See generally *Athanassoglou v. Switzerland*, 2000-IV Eur. Ct. H.R. (judgment of the Grand Chamber); *Ahunbay v. Turkey*, App. No. 6080/06 (Eur. Ct. H.R. Jan. 29, 2019), <http://hudoc.echr.coe.int/eng?i=001-191120> [<https://perma.cc/4US6-ZGVK>] (decision on the admissibility).

³¹ See generally *Andersson v. Sweden*, App. No. 29878/09 (Eur. Ct. H.R. Sept. 25, 2014), <http://hudoc.echr.coe.int/eng?i=001-146399> [<https://perma.cc/5UTA-B7AJ>]; *Steenbergen v. Netherlands*, App. No. 19732/17 (Eur. Ct. H.R. Nov. 22, 2017), <http://hudoc.echr.coe.int/eng?i=001-179526> [<https://perma.cc/UB9Y-82RU>] (pending application).

³² See generally *Apanasewicz v. Poland*, App. No. 6854/07 (Eur. Ct. H.R. Mar. 5, 2011), <http://hudoc.echr.coe.int/eng?i=001-104672> [<https://perma.cc/R6R6-ZGKK>]; *Başkanlığı v.*

Under Article 3 ECHR (Prohibition of Torture and Inhuman and Degrading Treatment),³³ the Court has discussed the issue of passive smoking in detention.³⁴ In addition, the protection of the environment has also been tackled under Article 10 ECHR (Freedom of Expression),³⁵ Article 11 ECHR (Freedom of Assembly and Association),³⁶ Article 13 ECHR (Right to an Effective Remedy),³⁷

Turkey, App. No. 25680/05 (Eur. Ct. H.R. June 19, 2018), <http://hudoc.echr.coe.int/eng?i=001-183860> [<https://perma.cc/ZR9D-5TJ7>].

³³ ECHR, *supra* note 22, at art. 3. Article 3 stipulates: “No one shall be subjected to torture or to inhuman or degrading treatment or punishment.” *Id.*

³⁴ See generally Elefteriadis v. Romania, App. No. 38427/05 (Eur. Ct. H.R. Jan. 25, 2011), <http://hudoc.echr.coe.int/eng?i=001-103007> [<https://perma.cc/LH6M-NA9K>].

³⁵ ECHR, *supra* note 22, at art. 10. Article 10 stipulates:

1. Everyone has the right to freedom of expression. This right shall include freedom to hold opinions and to receive and impart information and ideas without interference by public authority and regardless of frontiers. This article shall not prevent States from requiring the licensing of broadcasting, television or cinema enterprises.

2. The exercise of these freedoms, since it carries with it duties and responsibilities, may be subject to such formalities, conditions, restrictions or penalties as are prescribed by law and are necessary in a democratic society, in the interests of national security, territorial integrity or public safety, for the prevention of disorder or crime, for the protection of health or morals, for the protection of the reputation or rights of others, for preventing the disclosure of information received in confidence, or for maintaining the authority and impartiality of the judiciary.

Id.; see generally Steel v. United Kingdom, 2005-II Eur. Ct. H.R.; *Ahunbay*, App. No. 6080/06 (decision on the admissibility).

³⁶ ECHR, *supra* note 22, at art. 11. Article 11 stipulates:

1. Everyone has the right to freedom of peaceful assembly and to freedom of association with others, including the right to form and to join trade unions for the protection of his interests.

2. No restrictions shall be placed on the exercise of these rights other than such as are prescribed by law and are necessary in a democratic society in the interests of national security or public safety, for the prevention of disorder or crime, for the protection of health or morals or for the protection of the rights and freedoms of others. This article shall not prevent the imposition of lawful restrictions on the exercise of these rights by members of the armed forces, of the police or of the administration of the State.

Id.; see generally Popa v. Romania, App. No. 47558/10 (Eur. Ct. H.R. July 26, 2016), <http://hudoc.echr.coe.int/eng?i=001-162206> [<https://perma.cc/PD25-LJ7T>].

³⁷ ECHR, *supra* note 22, at art. 13 (stipulating that “[e]veryone whose rights and freedoms as set forth in this Convention are violated shall have an effective remedy before a national authority notwithstanding that the violation has been committed by persons acting in an official capacity”); see generally Kolyadenko v. Russia, App. Nos. 17423/05, 20534/05, 20678/05, 23263/05, 24283/05, and 35673/05 (Eur. Ct. H.R. Feb. 28, 2012), <http://hudoc.echr.coe.int/eng?i=001-109283> [<https://perma.cc/3T2E-66S6>].

Article 1 of Protocol No. 1 (Protection of Property),³⁸ and Article 5 ECHR (Right to Liberty and Security).³⁹

These enumerated rights suggest that the protection provided by the judicial system is founded on a causal link between environmental degradation and harm to human health and personal integrity. Even though not explicitly mentioned in the provisions of the ECHR, European case law recognizes the right to a healthy environment through broad application of other rights expressly provided for in the Convention.⁴⁰ However, not all infringements of the right to a healthy environment can be invoked before the ECtHR “[as] other international instruments and domestic legislation are more pertinent.”⁴¹ The ability of the ECHR to promote environmental protection has been questioned in the past.⁴² Indeed, the anthropocentrically focused environmental

³⁸ ECHR, *supra* note 22, at Protocol No. 1, art. 1. Article 1 reads:

Every natural or legal person is entitled to the peaceful enjoyment of his possessions. No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law.

The preceding provisions shall not, however, in any way impair the right of a State to enforce such laws as it deems necessary to control the use of property in accordance with the general interest or to secure the payment of taxes or other contributions or penalties.

Id.; see generally *Malfatto v. France*, App. No. 40886/06 (Eur. Ct. H.R. Oct. 6, 2016), <http://hudoc.echr.coe.int/eng?i=001-166949> [<https://perma.cc/Y2BD-CA8H>]; *Calancea v. Republic of Moldova*, App. No. 23225/05 (Eur. Ct. H.R. June 2, 2018), <http://hudoc.echr.coe.int/eng?i=001-181419> [<https://perma.cc/Z9MV-55H9>] (decision on the admissibility); *Kristiana Ltd. v. Lithuania*, App. No. 36184/13 (Eur. Ct. H.R. Feb. 6, 2018), <http://hudoc.echr.coe.int/eng?i=001-180555> [<https://perma.cc/9KSR-GWA3>]; *O’Sullivan McCarthy Mussel Dev. Ltd. v. Ireland*, App. No. 44460/16 (Eur. Ct. H.R. June 7, 2018), <http://hudoc.echr.coe.int/eng?i=001-183395> [<https://perma.cc/225G-Y7MY>]; *Beinarovič v. Lithuania*, App. Nos. 70520/10, 21920/10, and 41876/11 (Eur. Ct. H.R. June 6, 2018), <http://hudoc.echr.coe.int/eng?i=001-183540> [<https://perma.cc/RXR2-URL4>].

³⁹ See generally *Mangouras v. Spain*, 2010-IV Eur. Ct. H.R. (judgment of the Grand Chamber).

⁴⁰ See, e.g., Dinah Shelton, *Human Rights, Health and Environmental Protection: Linkages in Law and Practice*, 1 HUM. RTS. & INT’L LEGAL DISCOURSE 9 (2007).

⁴¹ *Kyrtatos v. Greece*, 2003-VI Eur. Ct. H.R. 256, ¶ 52. Even though today it is often argued that the ECtHR has recognized a right to a clean and healthy environment under the Convention, this contrasts sharply with some judgments in which the Court emphasized that the Convention does not guarantee such a right. See, e.g., *Kania v. Poland*, App. No. 12605/03 ¶ 98 (Eur. Ct. H.R. July 21, 2009), <http://hudoc.echr.coe.int/eng?i=001-93650> [<https://perma.cc/J9JP-65HJ>].

⁴² See Malgosia Fitzmaurice, *The European Convention on Human Rights and Fundamental Freedoms and the Human Right to a Clean Environment: The English Perspective*, in LAW OF THE SEA, ENVIRONMENTAL LAW AND SETTLEMENT OF DISPUTES:

protection afforded by the ECtHR is limited by the fact that only those who can claim to be personally affected by an incident causing environmental degradation can bring such a claim before the ECtHR. A direct link between the serious infringement of the protected right and the degradation shall be established.⁴³ Furthermore, the Strasbourg legal system has been designed to protect against concrete and imminent hazards rather than to avert only potential risks.⁴⁴

Against the background of these objections, it is easy to forget that the ECtHR has in the meantime recognized that an intact environment is a *conditio sine qua non* for the enjoyment of most human rights. The ECtHR has explicitly stated that according to Article 8 ECHR, which has become a residual right in relation to other relevant environmental norms of the Convention,⁴⁵ the individual has a right to live in a healthy environment.⁴⁶ In most cases, however, only the environment in the immediate vicinity of the individual fell within the scope of the Convention.⁴⁷

A. The IPCC Definition of Climate Change

As the Court has not explicitly dealt with the term “climate change” in its jurisprudence, it might be relevant to understand what the term connotes. Climate change is an issue interlinked with the use of fossil fuels and the emission of certain gases that affect the climate system of the Earth.⁴⁸ A higher concentration of gases such as carbon dioxide, methane, and CFC, among others, results in increased concentration of energy in the troposphere, which leads to an increase in the average

LIBER AMICORUM JUDGE THOMAS A. MENSAH 53 (Tafsir Malick Ndiaye, Rüdiger Wolfrum & Chie Kojima eds., 2007) (providing details on this debate).

⁴³ PIERRE-MARIE DUPUY & JORGE E. VINUALES, INTERNATIONAL ENVIRONMENTAL LAW 300 (2015).

⁴⁴ See *Balmer-Schafroth v. Switzerland*, 1997-IV Eur. H.R. Rep. ¶ 40 (judgment of the Grand Chamber); *Hardy v. United Kingdom*, App. No. 31965/07, ¶¶ 187–92 (Eur. Ct. H.R. Feb. 14, 2012), <http://hudoc.echr.coe.int/eng?i=001-109072> [<https://perma.cc/N9RL-D8TD>].

⁴⁵ See COUNCIL OF EUROPE, MANUAL ON HUMAN RIGHTS AND THE ENVIRONMENT (2nd ed., 2012) (providing a broad overview on the jurisprudence of the ECtHR in the field of the environment); Katharina Franziska Braig, *The European Court of Human Rights and the Right to Clean Water and Sanitation*, 20 WATER POL'Y 282 (2018) (addressing the more specific sphere of water).

⁴⁶ Karen Morrow, *After the Honeymoon: The Uneasy Marriage of Human Rights and the Environment Under the European Convention on Human Rights and in UK Law Under the Human Rights Act 1998*, 43 REVUE GÉNÉRALE DE DROIT 317, 328 (2013).

⁴⁷ See, e.g., *Kyrtatos v. Greece*, 2003-VI Eur. Ct. H.R. 257, ¶ 52.

⁴⁸ DUPUY & VINUALES, *supra* note 43, at 141–42.

global temperature.⁴⁹ Climate change includes not only the global warming process but also encompasses “greater climate variability . . . to a higher frequency of extreme weather events such as heat waves, heavy rains, violent storms, [and] droughts.”⁵⁰

The International Panel of Climate Change (IPCC) has established with high confidence in its latest report that “[h]uman activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels, with a *likely* range of 0.8°C to 1.2°C.”⁵¹ The human-caused (anthropogenic) emissions will likely persist for a long time, which will result in long-term changes in the climate system and affect the environment. The observable and high-confidence projected effects of climate change are an increase of “mean temperature[s] in most land and ocean regions,” heat extremes in various regions, and an increase of the sea level.⁵² Climate change affects the “risks to health, livelihoods, food security, water supply, human security, and economic growth.”⁵³ The IPCC opines with high confidence that “[p]opulations at disproportionately higher risk of adverse consequences with global warming of 1.5°C and beyond include disadvantaged and vulnerable populations, some indigenous peoples, and local communities dependent on agricultural or coastal livelihoods.”⁵⁴ Additionally, the report concludes that heat-related morbidity and mortality will be higher if the temperature increases to an average of 2°C instead of 1.5°C to pre-industrial levels.⁵⁵ Increased temperatures could lead to “risks across energy, food, and water sectors [that] could overlap spatially and temporally, creating new and exacerbating current hazards, exposures, and vulnerabilities that could affect increasing numbers of people and regions.”⁵⁶

⁴⁹ *Id.* at 141.

⁵⁰ *Id.* at 142.

⁵¹ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE [IPCC], GLOBAL WARMING OF 1.5°C: SUMMARY FOR POLICYMAKERS 4 (2018), https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_SPM_version_report_HR.pdf [<https://perma.cc/V5BR-FG8M>].

⁵² *Id.* at 7.

⁵³ *Id.* at 9.

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.* at 10.

II

RELEVANCE OF THE DOCTRINE OF POSITIVE OBLIGATIONS

A. The Role of Positive Obligations in the Field of the Environment

The regime of human rights protection and the environment follows the traditional three-tier structure of correlative obligations: (1) a duty to respect the content of the protected right, (2) a positive obligation to protect the right from infringements by third parties, and (3) a duty to progressively fulfill the conditions for the full scope enjoyment of the relevant right.⁵⁷ The “greening” of the ECHR is based, in particular, on an evolutionary-dynamic interpretation—that is, on the interpretation of the ECHR as a “living instrument”⁵⁸—and on the doctrine of positive obligations.⁵⁹ The interpretation methods are primarily based on progressive or teleological interpretations which necessitate certain adjustment to social needs or changes.⁶⁰ This is because the ECHR predates most environmentally related international or regional treaties.⁶¹ The ECtHR has elaborated on the doctrine of positive obligations by requiring States to *actively* protect human rights within their jurisdictions through an interpretive design of using the human health and integrity consideration as the prism through which the effects of environmental degradation are measured onto the realization of the full scope of the protected rights.⁶² In more recent cases, the ECtHR has also been more open to interpreting the effects of severe environmental pollution on the well-being and enjoyment of private

⁵⁷ DUPUY & VINUALES, *supra* note 43, at 304.

⁵⁸ See, e.g., Paul Mahoney, *Judicial Activism and Judicial Self-Restraint in the European Court of Human Rights: Two Sides of the Same Coin*, 11 HUM. RTS. L.J. 57 (1990); Stefan Theil, *Is the “Living Instrument” Approach of the European Court of Human Rights Compatible with the ECHR and International Law?*, 23 EUR. PUB. L. 587 (2017); see also *Selmouni v. France*, 1999-V Eur. Ct. H.R. 149.

⁵⁹ Usually, positive obligations comprise obligations under the ECHR which the state needs to fulfill “in determining the steps to be taken to ensure compliance with the Convention with due regard to the needs and resources of the community and of individuals.” *Lautsi v. Italy*, 2011-III Eur. Ct. H.R. 61, 91. Positive obligations may be defined in contrast to negative obligations, where the state is mainly obliged not to interfere with the personal sphere of an individual; see Alastair Mowbray, *The Creativity of the European Court of Human Rights*, 5 HUM. RTS. L. REV. 57, 75 (2005); Laurens Lavrysen, *Causation and Positive Obligations Under the European Convention on Human Rights: A Reply to Vladislava Stoyanova*, 4 HUM. RTS. L. REV. 705, 709 (2018).

⁶⁰ See *Loizidou v. Turkey*, App. No. 15318/89, ¶ 72 (Eur. Ct. H.R. Mar. 23, 1995), <http://hudoc.echr.coe.int/eng?i=001-57920> [<https://perma.cc/B7DZ-LN8F>] (judgment on preliminary objections).

⁶¹ DUPUY & VINUALES, *supra* note 43, at 305.

⁶² See *id.* at 301–09 (explaining cultural considerations in inter-American and African systems).

and family life without strictly linking it to endangerment to health.⁶³ This approach may include the adoption of preventive and repressive measures against the infringements of human rights perpetrated not only by the State's action but also by private individuals. The present Article will outline the positive obligations through which the ECtHR has contributed to the formation of environmental law in Europe.⁶⁴ Then it examines to what extent these obligations apply to a climate change context.

Today, the Strasbourg case law includes several positive obligations on the environmental field, including such procedural and substantive duties as (1) an obligation to grant access to environmental information;⁶⁵ (2) an obligation to guarantee public participation in environmental decision-making;⁶⁶ (3) an obligation to grant access to courts regarding environmental matters;⁶⁷ (4) an obligation to enact environmental legislation;⁶⁸ (5) a duty to conduct studies, research, and environmental impact assessments to ensure compliance with the precautionary principle;⁶⁹ (6) an obligation to meet adequate safety precautions;⁷⁰ (7) an obligation to prosecute and punish polluters causing environmental damage;⁷¹ and (8) an obligation to deal with omissions by the States and inefficient measures.⁷²

⁶³ See *López Ostra v. Spain*, 303-C Eur. Ct. H.R. (ser. A) ¶ 51 (1994).

⁶⁴ See, e.g., Alexios Antypas et al., *Linking Environmental Protection, Health, and Human Rights in the European Union, An Argument in Favour of Environmental Justice Policy*, 20 ENVTL. L. & MGMT. 8 (2008); see also *Locascia v. Italy*, App. No. 35648/10 (Eur. Ct. H.R. June 23, 2010), <http://hudoc.echr.coe.int/eng/?i=001-118326> [<https://perma.cc/MWE2-X5DA>] (pending case); *Cordella v. Italy*, App. Nos. 54414/13 and 54264/15 (Eur. Ct. H.R. Jan. 24, 2019), <http://hudoc.echr.coe.int/eng/?i=001-192164> [<https://perma.cc/G6SZ-BTD8>] (pending case).

⁶⁵ See generally *Guerra v. Italy*, 1998-I Eur. Ct. H.R., ¶ 60 (judgment of the Grand Chamber).

⁶⁶ See generally *Hatton v. United Kingdom*, 2003-VIII Eur. Ct. H.R. 189, 227 (judgment of the Grand Chamber).

⁶⁷ See generally *Moor v. Switzerland*, App. Nos. 52067/10 and 41072/11 (Eur. Ct. H.R. Mar. 11, 2014), <http://hudoc.echr.coe.int/eng/?i=001-141952> [<https://perma.cc/P3VT-CC2N>].

⁶⁸ See generally *Öneryildiz v. Turkey*, 2004-XII Eur. Ct. H.R. 79 (judgment of the Grand Chamber).

⁶⁹ See generally *Tătar v. Romania*, App. No. 67021/01, ¶ 114 (Eur. Ct. H.R. Jan. 27, 2009), <http://hudoc.echr.coe.int/eng/?i=001-90981> [<https://perma.cc/W5S5-ZYEH>].

⁷⁰ *Budayeva v. Russia*, 2008-II Eur. Ct. H.R. ¶ 156.

⁷¹ *Öneryildiz v. Turkey*, 2004-XII Eur. Ct. H.R., ¶ 91 (judgment of the Grand Chamber).

⁷² *Oluic v. Croatia*, App. No. 61260/08 ¶ 66 (Eur. Ct. H.R. May 20, 2010), <http://hudoc.echr.coe.int/eng/?i=001-98829> [<https://perma.cc/SKG6-9EXT>].

B. The Doctrine of Positive Obligations Developed in the Field of the Environment as a Ground to Tackle Threats Posed by Climate Change?

To what extent can the doctrine of positive obligations in the field of the environment serve as a basis for assessing climate change policies with regard to their potential implications for human rights? If applied to threats posed by climate change, the picture of positive environmental obligations—most of them procedural safeguards⁷³—presents itself as follows in the subsections below.⁷⁴

1. Access to Information Related to the Risks of Climate Change and Public Participation in Decision-Making in the Field of Climate Change

According to the current jurisprudence of the ECtHR, the public has a right to information concerning environmental risks that could potentially cause considerable damage to its health.⁷⁵ This approach generally follows the Aarhus Convention framework.⁷⁶ States are obliged to collect relevant environmental information and to guarantee an effective information system for their citizens.⁷⁷ Thus, States must ensure access to an independent body that allows the members of the public to obtain information relevant to their physical integrity.⁷⁸ The activities are qualified by their significant effect on the environment, especially when “proposed activities in locations where the characteristics of proposed development would be likely to have significant effects on the population” or “giving rise to serious effects on humans.”⁷⁹ According to the ECtHR in *Brândușe*, the public must have access “to the conclusions of the studies . . . and information to assess the risk to which [the population is] exposed.”⁸⁰ In this case, in

⁷³ See Jean-François Akandji-Kombe, *Positive Obligations Under the European Convention on Human Rights, A Guide to the Implementation of the European Convention on Human Rights*, in HUMAN RIGHTS HANDBOOKS 58–64 (2007) (distinguishing between procedural and substantive safeguards in the context of positive obligations).

⁷⁴ See generally ECHR, *supra* note 22, at art. 8 (setting out source of law for obligations imposed by the European Court of Human Rights).

⁷⁵ *L.C.B. v. United Kingdom*, 1998-III Eur. Ct. H.R., ¶ 38.

⁷⁶ See Aarhus Convention, arts. 2(3), 4–8, June 25, 1998, 2161 U.N.T.S. 447.

⁷⁷ *McGinley v. United Kingdom*, 2000-I Eur. Ct. H.R., ¶¶ 99, 102.

⁷⁸ *Roche v. United Kingdom*, 2005-X Eur. Ct. H.R., ¶ 169 (judgment of the Grand Chamber).

⁷⁹ *Espoo Convention on Environmental Impact Assessment in a Transboundary Context*, appendix III, ¶ 1, Feb. 25, 1991, 1989 U.N.T.S. 309.

⁸⁰ *Brândușe v. Romania*, App. No. 6586/03, ¶ 74 (Eur. Ct. H.R. Apr. 7, 2009), <http://hudoc.echr.coe.int/eng?i=001-92131> [<https://perma.cc/6LYQ-7AQL>].

which the ECtHR found a violation of Article 8 ECHR, the Court held that the public had been insufficiently informed of the risk before and even after the contested accident, which had polluted large quantities of river water with cyanide.⁸¹ According to the Court, the state inaction was because no precautionary measures had been taken regarding further potential incidents.⁸² According to the ECtHR, the government must also be able to demonstrate the efforts made to enable the applicant to have effective access to the results of EIAs and to information that would enable him to assess the health risk to which he was exposed.⁸³ The EIAs are clearly recognized under general international law as the practice

has gained so much acceptance among States that it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource.⁸⁴

Arguably, such an obligation to inform the public about the results of an EIA and to provide other relevant information includes risks posed by climate change. Access to information on general and specific aspects of climate change is essential for preventive measures. Such access to adequate and specific information could help an individual in a coastal area assess the risks related to housing, choose a place to live in a low-risk area, or—in a flood event—evacuate in due time.

Moreover, according to the established case law of the ECtHR, States must guarantee public participation in decision-making processes that may affect the environment.⁸⁵ Such public participation is required for the approval of projects with a significant environmental impact, such as industrial plants and new infrastructure projects.⁸⁶ According to the Court, the national decision-making process in environmental protection decisions must include two basic prerequisites. These prerequisites are expert opinions (which are

⁸¹ *Tătar v. Romania*, App. No. 67021/01, ¶ 98 (Eur. Ct. H.R. Jan. 27, 2009), <http://hudoc.echr.coe.int/eng?i=001-90981> [<https://perma.cc/KX34-NHPQ>].

⁸² *Id.* ¶ 124.

⁸³ *Id.* ¶ 115.

⁸⁴ *Pulp Mills on the River Uruguay (Arg. v. Uru.)*, Judgment, 2010 I.C.J. 135, ¶ 204 (Apr. 20, 2010).

⁸⁵ See *Giacomelli v. Italy*, 2006-XII Eur. Ct. H.R. 347, 363–64.

⁸⁶ *Tătar*, App. No. 67021/01, ¶ 124.

collected beforehand) and a right to information and participation.⁸⁷ Only when citizens have been adequately involved in the decision-making process leading to an alleged environmental degradation does the Court consider that a fair balance has been found between the conflicting interests.⁸⁸ If public participation in the authorization procedure is required by national law, it must be carried out in accordance with the case law on Article 8 ECHR.⁸⁹

Thus, one could argue that an inclusionary approach to tackling future climate risks would be a logical next step in the reasoning of the ECtHR. It is possible that in formulating responses to climate change risks, the ECtHR will call for public participation, for example, when it comes to coastal management, or other climate change adaptation actions, that are organized at a non-global scale.⁹⁰ Consequently, the ECtHR could argue that adaptive measures are often place- and context-specific, with implications for a relatively delimited set of stakeholders and required know-how tailored to local conditions.

2. Access to Courts Regarding Climate Change Matters

According to Article 6 ECHR, comprehensive access to justice in environmental matters must be granted.⁹¹ First, if individual interests have not been sufficiently taken into account, the persons concerned must be granted the possibility to take legal action against government acts and omissions.⁹² Even before carrying out potentially polluting activities, the public must have the possibility to open legal proceedings if it finds that its interests have not been adequately considered in the planning process.⁹³ Second, it must be guaranteed that the issue of state responsibility for alleged environmental degradation can be effectively investigated and adjudicated by a court or an administrative authority.⁹⁴ Third, there should be no unnecessary delays in the proceedings

⁸⁷ See generally *Hatton v. United Kingdom*, 2003-VIII Eur. Ct. H.R. 189, 223 (judgment of the Grand Chamber).

⁸⁸ *Id.* at 228.

⁸⁹ *Giacomelli*, 2006-XII Eur. Ct. H.R., at 366.

⁹⁰ See IPCC, *supra* note 51, at 12.

⁹¹ See *Moor v. Switzerland*, App. Nos. 52067/10 and 41072/11, ¶¶ 74–80 (Eur. Ct. H.R. Mar. 11, 2014), <http://hudoc.echr.coe.int/eng?i=001-141567> [<https://perma.cc/6RK5-9FL3>].

⁹² See *Taşkın v. Turkey*, 2004-X Eur. Ct. H.R. 179, 206 (providing an example of the ECtHR referring to Art. 8 ECHR in this context).

⁹³ *Tătar v. Romania*, App. No. 67021/01, ¶ 124 (Eur. Ct. H.R. Jan. 27, 2009), <http://hudoc.echr.coe.int/eng?i=001-90909> [<https://perma.cc/WFD4-KC2R>].

⁹⁴ See generally *Budayeva v. Russia*, 2008-II Eur. Ct. H.R. 267, 295–96.

brought before the Court, and where a rapid procedure is provided for in national law, it must be used.⁹⁵ Fourth, judicial decisions, in which business activities that pollute the environment are determined as unlawful, must be implemented.⁹⁶ Political decision makers should not be able to revise these decisions through a ministerial decision, for example.⁹⁷

Article 8 ECHR also triggers a right of access to a court.⁹⁸ Individuals, who should be involved in the decision-making process, considering that their interests have not been given sufficient weight, must have a recourse to appeal to a court. In this manner, their complaint may be not only about an improper decision-making process but also about individual scientific studies requested by the public authorities even in cases when the necessary documents have not been made publicly available.⁹⁹ In this respect, the right of access to a court based on Article 8 ECHR appears broader than that of Article 6 ECHR, since the former does not require the outcome of court proceedings to determine an applicant's rights.¹⁰⁰ Article 8 does not require a possibility of grave danger, which in contrast serves as the prerequisite for the recognition of the right to access a court under Article 6.¹⁰¹ Thus, climate-related claims might also be discussed under Article 8.

When applied to the context of climate change, the comprehensive access to justice could, for example, allow the public to initiate legal proceedings if its interests have not been adequately considered in the planning process. Legal proceedings should be permitted before industrial activities that considerably contribute to climate change (by emitting large quantities of greenhouse gases (GHG)) are carried out.

3. Obligation to Enact Legislation on Climate Change Issues

According to the established case law of the ECtHR, States are obliged to adopt environmental legislation. In particular, legislation

⁹⁵ *Mileva v. Bulgaria*, App. Nos. 43449/02 and 21475/04, ¶ 100 (Eur. Ct. H.R. Nov. 25, 2010), <http://hudoc.echr.coe.int/eng?i=001-101815> [<https://perma.cc/4Y4E-MZAC>].

⁹⁶ *Giacomelli v. Italy*, 2006-XII Eur. Ct. H.R. 345, 366.

⁹⁷ *Lemke v. Turkey*, App. No. 17381/02, ¶ 52 (Eur. Ct. H.R. June 5, 2007), <http://hudoc.echr.coe.int/eng?i=001-80859> [<https://perma.cc/P8BU-6HSW>].

⁹⁸ See generally *Mileva*, App. Nos. 43449/02 and 21475/04, ¶ 102.

⁹⁹ See generally *Grimkovskaya v. Ukraine*, App. No. 38182/03, ¶ 69 (Eur. Ct. H.R. July 21, 2011), <http://hudoc.echr.coe.int/eng?i=001-105746> [<https://perma.cc/5PH9-RHD4>].

¹⁰⁰ See generally *Taşkın v. Turkey*, 2004-X Eur. Ct. H.R. 179, 209–10; *Lemke*, App. No. 17381/02, ¶ 53.

¹⁰¹ *Taşkın*, 2004-X Eur. Ct. H.R., at 207.

must regulate dangerous activities and guarantee a decision-making process based on studies and evaluations of the possible existence of environmental and health risks.¹⁰² For example, States must have adequate procedures for the approval, operation, and monitoring of industrial plants.¹⁰³ In addition, States are obliged to implement and execute any existing environmental regulations in an appropriate manner.¹⁰⁴

When adapted to the more specific context of climate change, it is likely that the ECtHR would, in the light of its case law, come to the conclusion that a positive obligation exists for States to implement and execute adequate legislative provisions to evaluate and mitigate climate change.

4. *Duty to Monitor and Control*

According to the established case law of the ECtHR, the physical integrity of the individual can be impaired not only by lack of adequate environmental protection laws but also when existing requirements are not (adequately) applied. States are able to learn about dangerous situations in a timely manner, and inform the public if necessary, only if they have a functioning system to control and monitor environmental dangers at all levels of responsibility.¹⁰⁵ Therefore, the failure to rectify the ineffective enforcement of existing environmental law can also lead to a breach of Article 8 ECHR.¹⁰⁶

In the context of climate change, this could mean that there is an infringement of the Convention if a State fails to control highly polluting industries to ensure an adequate decrease of GHG emissions. In the case *Kolyadenko v. Russia*, the Court already concluded that an infringement of the Convention occurs if a State fails to closely monitor flood risks.¹⁰⁷ The reasoning of the Court in this case could also be

¹⁰² *Tătar v. Romania*, App. No. 67021/01, ¶ 88 (Eur. Ct. H.R. Jan. 27, 2009), <http://hudoc.echr.coe.int/eng?i=001-90909> [<https://perma.cc/5264-GQS7>].

¹⁰³ See generally *Öneryıldız v. Turkey*, 2004-XII Eur. Ct. H.R. 79, 115 (judgment of the Grand Chamber).

¹⁰⁴ Cf. *Mangouras v. Spain*, 2010-V Eur. Ct. H.R. 317, 334 (2009) (judgment of the Grand Chamber).

¹⁰⁵ See generally Dimitris Xenos, *Asserting the Right to Life (Article 2, ECHR) in the Context of Industry*, 8 GERMAN L.J. 231 (2007).

¹⁰⁶ *Brândușe v. Romania*, App. No. 6586/03, ¶ 71 (Eur. Ct. H.R. Apr. 7, 2009), <http://hudoc.echr.coe.int/eng?i=001-92073> [<https://perma.cc/5F5H-23FB>].

¹⁰⁷ *Kolyadenko v. Russia*, App. Nos. 17423/05, 20534/05, 20678/05, 23263/05, 24283/05, and 35673/05, ¶ 216 (Eur. Ct. H.R. Feb. 28, 2012), <http://hudoc.echr.coe.int/eng?i=001-109283> [<https://perma.cc/W7PU-N5DH>].

applied by analogy to scenarios involving a rising sea level, caused by climate change, which might come along with a considerable danger for the life and property of coastal residents if there is no effective monitoring.

5. Obligation to Conduct Studies, Research, and Environmental Impact Assessments to Ensure Compliance with the Precautionary Principle

In the past, the Court claimed that when it comes to complex environmental issues, “the decision-making process must . . . involve . . . appropriate investigations and studies, so as to prevent and evaluate in advance the effects of those activities that may be harmful to the environment and the rights of individuals. . . .”¹⁰⁸ According to the case law of the Court, the authorities are not allowed to fulfill this obligation *a posteriori*.¹⁰⁹ The ECtHR stated that the existence of a serious and material risk to the health and well-being of the applicant would, in any case, create a positive obligation for the State to evaluate and assess such a risk.¹¹⁰ The *Tătar* case lays down specific requirements for EIAs (e.g., the environmental impact report must be accessible to the public).¹¹¹ Moreover, the ECtHR expressly referred, for the first time, to the precautionary principle: the fact that the operating company *in casu* was allowed to continue the operation after a serious accident was incompatible with the precautionary principle. The precautionary principle requires authorities to take measure in foreseeable circumstances of more than hypothetical scientific uncertainty rather than waiting for the realization of the seriousness of the risks in reality that may cause significant, serious, or substantial harm.¹¹²

¹⁰⁸ *Öçkan v. Turkey*, App. No. 46771/99, ¶ 43 (Eur. Ct. H.R. Mar. 28, 2006), <http://hudoc.echr.coe.int/eng?i=001-72910> [<https://perma.cc/PGU2-P466>].

¹⁰⁹ *Giacomelli v. Italy*, 2006-XII Eur. Ct. H.R. 345, ¶ 82–83.

¹¹⁰ *Tătar v. Romania*, App. No. 67021/01, ¶ 114 (Eur. Ct. H.R. Jan. 27, 2009), <http://hudoc.echr.coe.int/eng?i=001-90909> [<https://perma.cc/4YPJ-HRB2>]; *see also* *Gaida v. Germany*, App. No. 32015/02 (Eur. Ct. H.R. July 3, 2007), <http://hudoc.echr.coe.int/app/conversion/pdf/?library=ECHR&id=001-81875&filename=001-81875.pdf&TID=lbdlqbchek> [<https://perma.cc/QM5W-R2QF>] (decision on the admissibility).

¹¹¹ *Tătar*, App. No. 67021/01, ¶¶ 114–15.

¹¹² *Id.* ¶ 70; *see also* Case T-74/00, *Artegoda GmbH v. Comm’n*, 2002 II-4948; 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, Nov. 7, 1996, 36 I.L.M. 1 (discussing marine pollution); Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S. 79 (discussing biodiversity and marine living resources); United Nations Framework Convention on Climate Change, art. 3(3), May 9, 1992, 1771 U.N.T.S. 107; Convention on the Protection and Use of Transboundary

It is fair to assume that the ECtHR would not considerably defer from this jurisprudence in serious and material climate change-related risks to the health and well-being of applicants. Thus, the precautionary principle could help deal with scientific uncertainties of the long-term effects of climate change.

6. *Fulfillment of Adequate Safety Precautions*

It can be deduced that the ECHR contains a duty to provide adequate safety precautions concerning potentially dangerous situations for the environment and *in fine* for humans.¹¹³ The State does not comply with this obligation if, for example, it fails to install a warning system or poorly maintains protective infrastructure, despite foreseeable dangers.¹¹⁴ In particular, the State must take appropriate safeguards to prevent any infringement of the Convention if national authorities have received complaints about a planned polluting activity,¹¹⁵ or if such an activity is illegal.¹¹⁶ If necessary, appropriate protective measures must be taken both in advance—for example, prior to the approval of a potentially dangerous enterprise,¹¹⁷—as well as *ex post*—after an accident or occurrence of environmental degradation.¹¹⁸ Here, risks to the environment, which may bear no direct influence on the health and well-being of people, are included.¹¹⁹

Thus, whenever there is a foreseeable danger emanating from climate change, it is likely that the ECtHR would apply the same threshold and require the State to meet adequate safety precautions. Similar to the ECtHR's argumentation in *Öneryildiz* (in which the

Watercourses and International Lakes, Mar. 17, 1992, 1936 U.N.T.S. 269 (discussing international watercourses); Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, Jan. 30, 1991, 2101 U.N.T.S. 177 (discussing transboundary trade in hazardous waste); Vienna Convention for the Protection of the Ozone Layer, Mar. 22, 1985, 1513 U.N.T.S. 293.

¹¹³ See generally *Vilnes v. Norway*, App. Nos. 52806/09 and 22703/10 (Eur. Ct. H.R. Dec. 5, 2013), <http://hudoc.echr.coe.int/eng?i=001-138597> [<https://perma.cc/YF9Z-7H2N>].

¹¹⁴ *Budayeva v. Russia*, 2008-II Eur. Ct. H.R. 267, 285–86, ¶ 116.

¹¹⁵ See, e.g., *Moreno Gómez v. Spain*, 2004-X Eur. Ct. H.R. 327, 342.

¹¹⁶ *Oluic v. Croatia*, App. No. 61260/08, ¶ 62 (Eur. Ct. H.R. May 20, 2010), <http://hudoc.echr.coe.int/eng?i=001-98829> [<https://perma.cc/7GGT-JZBT>].

¹¹⁷ *Fadeyeva v. Russia*, 2005-IV Eur. Ct. H.R. 255, 282, ¶ 89.

¹¹⁸ *Tătar v. Romania*, App. No. 67021/01, ¶ 114 (Eur. Ct. H.R. Jan. 27, 2009), <http://hudoc.echr.coe.int/eng?i=001-90909> [<https://perma.cc/4YPJ-HRB2>].

¹¹⁹ *Mileva v. Bulgaria*, App. Nos. 43449/02 and 21475/04, ¶¶ 97, 99 (Eur. Ct. H.R. Nov. 25, 2010), <http://hudoc.echr.coe.int/eng?i=001-101815> [<https://perma.cc/MF7K-PMKL>].

Court found a violation of Article 2 ECHR),¹²⁰ the District Court of the Hague argued in *Urgenda*, in the context of climate change policies, that if there is a high risk of dangerous climate change with severe and life-threatening consequences for humans and the environment, the State has the obligation to protect its citizens by taking appropriate and effective measures.¹²¹

7. Prosecution and Punishment of Polluters Causing Damage to the Climate

In the case of an environmental impairment, which is *a priori* not in line with the Convention, it is not sufficient if the concerned parties are being offered alternatives to genuine and effective investigation. The State not only must prohibit the disputed behavior but also is encouraged to initiate *effective* inquiries¹²² in order to identify the persons responsible for illegal environmental impacts at all levels of responsibility.¹²³ If necessary, the State must bring such persons to justice and punish them appropriately.¹²⁴ The sanctions applied must encourage the polluter of the environment to take necessary protective measures.¹²⁵

As the severe breach of laws on climate change mitigation can also entail a negative impact for the environment, it is likely that the same obligations will apply to the prosecution and punishment of private parties causing damage to the climate.

8. Omissions by the States and Inefficient Measures

The principle of effectiveness limits considerably the freedom of States to select from different measures in environmental matters.¹²⁶ Unsuitable means of protection against environmental pollution, as

¹²⁰ *Öneryıldız v. Turkey*, 2004-X Eur. Ct. H.R. 1, 37–38, 41–42, ¶¶ 89–90, 100–02 (judgment of the Grand Chamber).

¹²¹ *Urgenda Found. v. Netherlands*, Hague Ct. Rep., 2015 HAZA C/09/00456689 (June 24, 2015).

¹²² *Cf. Ergi v. Turkey*, App. No. 66/1997/850/1057, ¶ 82 (Eur. Ct. H.R. July 28, 1998), <http://hudoc.echr.coe.int/eng?i=001-58200> [<https://perma.cc/5FEC-FWDH>].

¹²³ *Budayeva v. Russia*, 2008-II Eur. Ct. H.R. 267, ¶ 123.

¹²⁴ *See, e.g., Mangouras v. Spain*, 2010-V Eur. Ct. H.R., 317, 335 (judgment of the Grand Chamber).

¹²⁵ *See, e.g., Fadeyeva v. Russia*, 2005-IV Eur. Ct. H.R., 255, 292.

¹²⁶ *Oluic v. Croatia*, App. No. 61260/08, ¶¶ 65–66 (Eur. Ct. H.R. May 20, 2010), <http://hudoc.echr.coe.int/eng?i=001-98829> [<https://perma.cc/Z4ZX-ZSBT>].

well as inactivity, infringe the State's positive obligations.¹²⁷ If, by virtue of passive conduct, a State fails to enforce prohibitions or fails to carry out necessary controls,¹²⁸ the government authorities bear a (co-)responsibility for the (continuing) existence of the negative impacts, which can lead to an infringement of the ECHR obligations.¹²⁹

Even if some environmental protection measures have been taken, there can be an infringement of the Convention if protection measures are not sufficient to create a fair balance between the conflicting interests.¹³⁰ The measures taken must also take effect within a foreseeable period.¹³¹

The ECtHR is thus not limited to pure "actionism" by national authorities in combating environmental pollution but the Court calls for protective measures that are indeed proven to be effective.¹³² This means that climate change mitigation measures, considered to be beneficial to the environment as a whole, have to be equally effective, adequate, and proven.

III

POSSIBLE CHALLENGES TO POSITIVE OBLIGATIONS IN THE FIELD OF CLIMATE CHANGE

After establishing the positive obligations under the ECHR, there is still leeway for the protection of newly emerging environmental hazards and risks related to climate change. The following section offers an overview of the main challenges to the application of the Court's jurisprudence to climate change-related cases.

¹²⁷ Cf. Plattform "Ärzte für das Leben" v. Austria, App. No. 10126/82, ¶¶ 30–31 (Eur. Ct. H.R. June 21, 1988), <https://hudoc.echr.coe.int/eng?i=001-57558> [<https://perma.cc/84ML-XDF6>].

¹²⁸ See, e.g., Mileva v. Bulgaria, App. Nos. 43449/02 and 21475/04, ¶ 99 (Eur. Ct. H.R. Nov. 25, 2010), <http://hudoc.echr.coe.int/eng?i=001-101815> [<https://perma.cc/DZ8B-Z44G>].

¹²⁹ See, e.g., Moreno Gómez v. Spain, 2004-X Eur. Ct. H.R., ¶¶ 61–62.

¹³⁰ See, e.g., Fadeyeva, 2005-IV Eur. Ct. H.R., ¶¶ 132–34.

¹³¹ See, e.g., Ledyayeva v. Russia, App. Nos. 53157/99, 53247/99, 53695/00, and 56850/00, ¶ 110 (Eur. Ct. H.R. Oct. 26, 2006), <http://hudoc.echr.coe.int/eng?i=001-77688> [<https://perma.cc/D3WL-REK7>].

¹³² See, e.g., Oluic v. Croatia, App. No. 61260/08, ¶¶ 48–66 (Eur. Ct. H.R. May 20, 2010), <http://hudoc.echr.coe.int/eng?i=001-98829> [<https://perma.cc/Z4ZX-ZSBT>].

A. Public Interest

The first challenge is related to the acceptance in society of a certain residual risk when environmental protection is assessed.¹³³ The Court considers that justification of the full scope of protection under Article 8(2) of the ECHR can be established if the public interest *inter alia* in the form of the overall economic interest of a country in accordance with the law and necessary in a democratic society is at stake.¹³⁴ This margin is particularly large in environmental matters.¹³⁵ This might lead the ECtHR to decide that Article 8(2) protections extend to climate-related issues.

Nonetheless, there are clearly established restrictions: “Financial imperatives and even certain fundamental rights, such as ownership, should not be afforded priority over environmental protection considerations[.]”¹³⁶ The ECtHR has also argued that environmental considerations can constitute a public interest.¹³⁷ As the ECtHR provides no legal definition of public interest, it is difficult to judge whether, and at what point in time, the ECtHR is ready to recognize the mitigation of climate change as a public interest. Before the recognition of the environment as a public interest, the ECtHR has taken into consideration growing tendencies to tackle environmental depletion on not only domestic but also European and international levels.¹³⁸

Such tendencies might be particularly relevant for rights linked to economic activities. Article 1 Protocol 1, in substance, guarantees the right to property and peaceful enjoyment of possessions. This right is

¹³³ See, e.g., *Fadeyeva*, 2005-IV Eur. Ct. H.R., ¶¶ 66–70; *Kania v. Poland*, App. No. 12605/03, ¶¶ 100–04 (Eur. Ct. H.R. July 21, 2009), <http://hudoc.echr.coe.int/eng?i=001-93650> [<https://perma.cc/FUQ3-6QHW>]; *Trouche v. France*, App. No.19867/92 (Eur. Ct. H.R. Sept. 1, 1993), <http://hudoc.echr.coe.int/eng?i=001-25439> [<https://perma.cc/D3BD-5L57>] (decision on the admissibility).

¹³⁴ See, e.g., *Zammit Maempel v. Malta*, App. No. 24202/10, ¶ 67 (Eur. Ct. H.R. Nov. 22, 2011), <http://hudoc.echr.coe.int/eng?i=001-107514> [<https://perma.cc/JE86-96GL>]; *G. v. Norway*, App. No. 12671/87 (Eur. Ct. H.R. Oct. 3, 1983), <http://echr.ketse.com/doc/9278.81-en-19831003/view/> [<https://perma.cc/BSA6-BGFB>] (decision on the admissibility); *Noack v. Germany*, 2000-VI Eur. Ct. H.R. (decision on the admissibility).

¹³⁵ See Hana Müllerová, *Environment Playing Short-Handed: Margin of Appreciation in Environmental Jurisprudence of the European Court of Human Rights*, 24 REV. EUR., COMP. & INT’L ENVTL. L., 83, 83–84 (2015).

¹³⁶ *Turgut v. Turkey*, App. No. 1411/03, ¶ 90 (Eur. Ct. H.R. July 8, 2009), <http://hudoc.echr.coe.int/eng?i=001-87441> [<https://perma.cc/D6UV-X6SM>].

¹³⁷ *Steel v. United Kingdom*, 2005-II Eur. Ct. H.R., ¶ 89.

¹³⁸ *Mangouras v. Spain*, 2010-V Eur. Ct. H.R. 317, ¶ 86 (judgment of the Grand Chamber).

subject to state interference to protect the public interest in line with conditions provided for by law, and the general principles of international law, including control of property use in accordance with the general interest, among others.¹³⁹ Consequently, in a scenario similar to the *Hatton* case (in which the ECtHR had to balance economic interests against environmental considerations),¹⁴⁰ the ECtHR could decide that a strict climate change policy serves a legitimate public interest to limit the rights under Article 1 Protocol 1 of the Convention. Environmental protection is considered to fall within the scope of public interest as “the environment is a cause whose defence arouses the constant and sustained interest of the public, and consequently the public authorities.”¹⁴¹ Thus, the ECtHR has established that “[f]inancial imperatives . . . should not be afforded priority over environmental protection considerations, in particular when the State has legislated in this regard.”¹⁴² The notion of the public interest is extensive and the States enjoy a wide margin of appreciation as to what constitutes public interest in their jurisdictions, unless the principle is applied “manifestly without reasonable foundation.”¹⁴³ If the ECtHR were to assess whether the mitigation of climate change can be assessed as a public interest, it presumably would come to the same conclusion, especially in light of the growing consensus on the harmful effects of climate change in the international community.¹⁴⁴ Such a pattern is clearly illustrated in several European States, which have passed domestic legal frameworks to combat climate change¹⁴⁵—a momentum that reflects ongoing societal change. Therefore, the adoption of measures contrary to the international commitments of a State to reduce its emissions would not be in line with the public interest test under Article 8(2) of the Convention.

¹³⁹ See generally, e.g., *Turgut*, App. No. 1411/03.

¹⁴⁰ See generally *Hatton v. United Kingdom*, App. No. 36022/97 (Eur. Ct. H.R. Oct. 2, 2001), <http://hudoc.echr.coe.int/eng?i=001-59686> [<https://perma.cc/7R6M-5XXE>] (judgment of the Grand Chamber).

¹⁴¹ *Hamer v. Belgium*, 2007-V Eur. Ct. H.R. 73, ¶ 79.

¹⁴² *Id.*

¹⁴³ *Vistin v. Latvia*, 2014-I Eur. Ct. H.R. 427, ¶ 106; see *Nagy v. Hungary*, App. No. 53080/13, ¶ 113 (Eur. Ct. H.R. Dec. 13, 2016), <http://hudoc.echr.coe.int/eng?i=001-169663> [<https://perma.cc/52XS-T9HA>] (judgment of the Grand Chamber).

¹⁴⁴ Naomi Oreskes, *The Scientific Consensus on Climate Change*, 306 SCI. 1686, 1686 (2004); see generally IPCC, *supra* note 51.

¹⁴⁵ See generally Diana Reckien et al., *Climate Change Response in Europe: What's the Reality? Analysis of Adaptation and Mitigation Plans from 200 Urban Areas in 11 Countries*, 122 CLIMATIC CHANGE 331 (2014).

Article 8(2) inherently engages the proportionality test, which is based on balancing the interests of the States against the rights of the applicant through the “necessary in a democratic society” test. A margin of appreciation is given to States when establishing the pressing social need for the interference at hand in order to consider whether the reasons for the justification are relevant and sufficient and whether the measures are proportionate to the pursued legitimate aim.¹⁴⁶

The principle of proportionality plays a crucial role in environmental litigation because many potentially polluting activities, including those that are detrimental to third parties, need to be balanced and assessed by their suitability, necessity, and restrictiveness to support the functioning of an industrial society.¹⁴⁷ Thus, it is likely that the ECtHR would also apply the proportionality principle in order to perform the balancing test in assessing activities that may pose, to some extent, a threat to the climate.

B. Burden of Proof, Insufficient Causal Link, or Insufficient Probability of Occurrence

In the climate context, it will undoubtedly be difficult to prove that a *specific* environmental hazard was caused by climate change, even though there exists scientific evidence that climate change increases extreme weather conditions. Such evidence is the cornerstone in a climate change regime. In the ECtHR, the burden of proof primarily rests with the applicant to establish whether “the authorities knew or ought to have known”¹⁴⁸ about risks to the protection of life, such as climate change. According to the jurisprudence of the ECtHR, States have an obligation to regulate risks for the environment and human health.¹⁴⁹

¹⁴⁶ *Z v. Finland*, 1997-I Eur. Ct. H.R., ¶ 94.

¹⁴⁷ See *López Ostra v. Spain*, A303-C Eur. Ct. H.R., ¶¶ 7, 49, 56 (1994); *L.C.B. v. United Kingdom*, 1998-III Eur. Ct. H.R., ¶ 36; *Băcilă v. Romania*, App. No. 19234/04, ¶ 69 (Eur. Ct. H.R. Mar. 30, 2010), <http://hudoc.echr.coe.int/eng-press?i=003-3082022-3410931> [<https://perma.cc/SUY7-FGVQ>]; see generally *Hatton v. United Kingdom*, App. No. 36022/97 (Eur. Ct. H.R. Oct. 2, 2001), <http://hudoc.echr.coe.int/eng?i=001-59686> [<https://perma.cc/7R6M-5XXE>] (opinion of Judge Greve); *Ward v. United Kingdom*, App. No. 31888/03 (Eur. Ct. H.R. Nov. 9, 2004), <http://hudoc.echr.coe.int/eng?i=001-67643> [<https://perma.cc/E78C-TR6Z>] (decision on the admissibility); *Chiş v. Romania*, App. No. 55396/07 (Eur. Ct. H.R. Sept. 9, 2014), <http://hudoc.echr.coe.int/eng?i=001-146998> [<https://perma.cc/K4Z4-RPHN>] (decision on the admissibility).

¹⁴⁸ *Osman v. United Kingdom*, App. No. 23452/94, ¶ 116 (Eur. Ct. H.R. Oct. 28, 1998), <http://hudoc.echr.coe.int/eng?i=001-58257> [<https://perma.cc/Q23J-2Q97>].

¹⁴⁹ See *López Ostra*, App. No. 16798/90, ¶¶ 50–51.

In *Tătar*, this obligation was emphasized by the explicit recognition by the ECtHR of the precautionary principle.¹⁵⁰ In this case, the applicant was exempt from the burden of proof and did not have to prove the existence and certainty of a risk.¹⁵¹ The line of argumentation followed in this case is particularly relevant for climate change scenarios. In cases such as *Tătar*, the opportunity to submit evidence of the point in time at which the State becomes aware of the risks related to climate change may be an unreasonable task for an applicant. The State may be in a better position than the individual applicant to provide evidence that it has not failed to fulfill its obligations. Thus, in principle, it is also possible for the burden of proof to shift to the State.¹⁵² The ECtHR has established that adjusting the burden of proof is affected by considerations such as the seriousness of the case,¹⁵³ the accessibility of the evidence; compelling reasons for different treatment known exclusively to the authorities,¹⁵⁴ and “the coexistence of sufficiently strong, clear, and concordant inferences or of similar un rebutted presumptions of fact.”¹⁵⁵ There has been criticism that the ECtHR may require an unnecessarily high threshold before transferring the burden of proof from an individual to the State.¹⁵⁶ It is likely that the threshold would likewise be demanding in the case of climate change claims.

¹⁵⁰ *Tătar v. Romania*, App. No. 67021/01, ¶ 109–20 (Eur. Ct. H.R. Jan. 27, 2009), <http://hudoc.echr.coe.int/eng?i=001-90981> [<https://perma.cc/59KB-KG4F>].

¹⁵¹ *Id.* ¶¶ 105, 124–25 (In this case, the applicants, father and son, alleged in particular that the technological process (involving the use of sodium cyanide in the open air) used by a company in their gold mining activity put their lives in danger. Part of the company’s activity was located in the vicinity of the applicants’ home. The Court further noted that, in the light of what was currently known about the subject, the applicants failed to prove the existence of a causal link between exposure to sodium cyanide and the asthma diagnosed with the son. It observed, however, that the company had been able to continue its industrial operations after a severe accident in breach of the precautionary principle.)

¹⁵² See *Aksoy v. Turkey*, App. No. 21987/93, ¶ 61 (Eur. Ct. H.R. Dec. 18, 1996), <http://hudoc.echr.coe.int/eng?i=001-58003> [<https://perma.cc/8BRV-U6Y>]; *Abdulaziz v. United Kingdom*, App. Nos. 9214/80, 9473/81, and 9474/81, ¶ 78 (Eur. Ct. H.R. May 28, 1985), <http://hudoc.echr.coe.int/eng?i=001-57416> [<https://perma.cc/8F4P-JNRV>]; *Creangă v. Romania*, App. No. 29226/03, ¶ 88 (Eur. Ct. H.R. Feb. 23, 2012), <http://hudoc.echr.coe.int/eng?i=001-109226> [<https://perma.cc/9RKM-8LWL>].

¹⁵³ See *Salman v. Turkey*, 2000-VII Eur. Ct. H.R. 365, ¶ 100.

¹⁵⁴ See *Abdulaziz*, App. Nos. 9214/80, 9473/81, and 9474/81, ¶ 78.

¹⁵⁵ *El-Masri v. Former Yugoslav Republic of Macedonia*, 2012-VI Eur. Ct. H.R. 263, ¶ 151.

¹⁵⁶ Armelle Gouritin, *Can International Environmental Law and Human Rights Law Fill the Gaps of EU Environmental Law? The Case of Environmental Responsibility*, 171–73 (2012) (unpublished Ph.D. dissertation, Vrije Universiteit Brussels).

C. The Causal Link Conundrum

In principle, States have positive obligations in the field of the environment if the causal link between environmental degradation and an infringement of the Convention is sufficiently well established.¹⁵⁷ The applicant is responsible for proving that existing exposure to environmental risk compounds to a concrete threat to the applicant's individual rights.¹⁵⁸ Whether a State needs to take positive action depends on various circumstances, such as the severity and length of the impairment¹⁵⁹ and its physical and psychological effects.¹⁶⁰ The intensity threshold for achieving an intervention must be determined by objective criteria because the protection afforded under the European human rights regime is based on establishing a direct link between environmental degradation and an encroachment of human rights.¹⁶¹

The characterization of the link between severity and directness is particularly important for climate change-related claims. Climate change effects may be characterized on some occasions as "slow onset events." This may cause some issues with incorporating climate change analysis under the link requirement that the applicant needs to establish to show that the State, through its acts or omissions, has interfered with the applicant's rights. An overview of the existing legal scholarship indicates that the causality link in climate change cases is interpreted as a three-step process: first, the State interferes with the climate system; second, such interference causes or results in an extreme

¹⁵⁷ Cf. Tobias Thienel, *The Burden and Standard of Proof in the European Court of Human Rights*, 50 GERMAN Y.B. INT'L L. 543, 563 (2007) (retracing the historic development of the burden of proof-jurisprudence in Strasbourg).

¹⁵⁸ See *Asselbourg v. Luxemburg*, 1999-VI Eur. Ct. H.R. 399, 410 (decision on the admissibility); *Gronus v. Poland*, App. No. 29695/96, ¶ 31 (Eur. Ct. H.R. May 28, 2002), <http://hudoc.echr.coe.int/eng?i=001-60483> [<https://perma.cc/4DRL-PHV7>]; *Taşkın v. Turkey*, 2004-X Eur. Ct. H.R. 179, ¶ 113; Christopher Hilson, *Risk and the European Convention on Human Rights: Towards a New Approach*, 11 J. MATERIAL CYCLES & WASTE MGMT. 353, 354 (2009); Francesco Francioni, *International Human Rights in an Environmental Horizon*, 21 EUR. J. INT'L L. 41, 41–50 (2010); Mathew Creven, *Human Rights and the Environment, The Case of Balmer-Schafroth and Others v. Switzerland*, 7 REV. EUR. COMP. & INT'L ENVTL. L. 93, 93 (1998); Malgosia Fitzmaurice, *The European Convention of Human Rights, Environmental Damage and the Applicability of Article 8 of the European Convention on Human Rights and Fundamental Freedoms*, 13 EDINBURGH L. REV. 107, 108 (2011).

¹⁵⁹ See *Moreno Gómez v. Spain*, 2004-X Eur. Ct. H.R. 327, ¶ 61–62.

¹⁶⁰ See *Mileva v. Bulgaria*, App. Nos. 43449/02 and 21475/04, ¶ 90 (Eur. Ct. H.R. Nov. 25, 2010), <http://hudoc.echr.coe.int/eng?i=001-101815> [<https://perma.cc/M92Z-T8HM>].

¹⁶¹ See *Fadeyeva v. Russia*, 2005-IV Eur. Ct. H.R. 255, ¶ 68.

weather phenomenon (heat wave, hurricane) or slow onset event (ice cap melting, sea level rise); and, third, the extreme or slow onset event affects the protected human right in a serious, significant, and specific manner.¹⁶² As shown above, GHG emissions are considered to be the main contributing factor to climate change, which may result in environmental degradation or threat, although the attribution of a specific weather-related event to climate change is scientifically measured in probability. Based on limited litigation efforts before regional human rights bodies, such as the Inter-American Commission on Human Rights, the problematic second causal link is more implicit because ascertaining how the specific event happens on a specific date or place resulting in specific impairment of a human right might be challenging.¹⁶³

One possible solution to the complex causal link conundrum is to apply a legal analogy from a field that deals with probabilities in a legal standard assessment manner, such as extradition proceedings. It is an established principle in environmental jurisprudence that the ECtHR must assess a certain minimum level of severity, which “is relative and depends on all the circumstances of the case, such as the intensity and duration of nuisance, and its physical or mental effects.” A minimum level of severity must be established for the infringement to fall under the scope of the ECHR.¹⁶⁴ Moreover, for an application of Article 2 ECHR, or even Article 3 ECHR, particularly serious interventions are necessary.¹⁶⁵ These criteria would also be applicable for cases relating to climate change because the ill-treatment standard must be attained for Article 3 ECHR to apply:

[T]he assessment of this minimum is, in the nature of things, relative; it depends on all the circumstances of the case, such as the nature and context of the treatment, the manner and method of its execution, its duration, its physical or mental effects and, in some instances, the sex, age and state of health of the victim.¹⁶⁶

In climate change cases, the first causal link follows a similar pattern of scientifically based assessment: the main contributing factors to

¹⁶² DUPUY & VINALES, *supra* note 43, at 328.

¹⁶³ *Id.* at 328–29; *see also* INUIT CIRCUMPOLAR CONFERENCE, PETITION TO THE INTER AMERICAN COMMISSION ON HUMAN RIGHTS SEEKING RELIEF FROM VIOLATIONS RESULTING FROM GLOBAL WARMING CAUSED BY ACTS AND OMISSIONS OF THE US (2005).

¹⁶⁴ *Fadeyeva*, 2005-IV Eur. Ct. H.R., ¶ 69.

¹⁶⁵ *See, e.g., Öneriyildiz v. Turkey*, 2004-XII Eur. Ct. H.R. 79 (judgment of the Grand Chamber).

¹⁶⁶ *Kudla v. Poland*, 2000-XI Eur. Ct. H.R. 197, ¶ 91.

climate change, which result in environmental degradation or threat, are scientifically ascertainable with a degree of probability and correlation.

The second causal link is more complex in climate change cases; namely, it is difficult to assess whether the specific event took place on a specific date or place, resulting in specific impairment of a human right. The solution may be found again in extradition-related cases where the requested State incurs prospective responsibility because it has reasonable grounds to anticipate that a violation of human rights would occur in the requesting State if it extradites the fugitive.¹⁶⁷ The established standard for engaging state responsibility on the ECHR extraditing State is whenever “substantial grounds have been shown for believing that the person concerned, if extradited, faces a real risk of being subjected to torture or to inhuman or degrading treatment or punishment in the requesting country.”¹⁶⁸ The establishment of such responsibility inevitably involves an assessment of conditions in the requesting country under the standards of Article 3 as “it is liability incurred by the extraditing Contracting State by reason of its having taken action which has as a direct consequence the exposure of an individual to proscribed ill-treatment.”¹⁶⁹

By analogy, whenever there are substantial scientific grounds to believe or ascertain that a person’s rights face a real risk of being affected or infringed by a specific climate change event at an ascertainable place and time, the obligation on the part of the State is engaged in climate change cases and assessment must be performed on the substantive grounds of the claim. Such an analogical application would offer a solution to the extraterritorial scope of the climate change litigation as established in Section D below.¹⁷⁰

The jurisprudence of the ECtHR demands that the States take preventive measures to protect human rights, if “the authorities knew or ought to have known . . . of the existence of a real and immediate

¹⁶⁷ See generally *Soering v. United Kingdom*, 161 Eur. Ct. H.R. (ser. A) (1989); see also Stoyan Panov, *The Obligation Aut Dedere Aut Judicare in International Law* (Jan. 2016) (Ph.D. dissertation, University of Birmingham) (on file with author).

¹⁶⁸ *Soering*, 161 Eur. Ct. H.R. (ser. A), ¶ 91; see also *Chahal v. United Kingdom*, 1996-V Eur. Ct. H.R., ¶¶ 80–81.

¹⁶⁹ See *Soering*, 161 Eur. Ct. H.R. (ser. A), ¶ 91.

¹⁷⁰ See, e.g., Stoyan Panov, *Harmonize, Recognize or Minimize: A Borderless European Judicial Space? The Application of the European Arrest Warrant and Its Effect on EU Integration*, 3 BIRMINGHAM J. FOR EUR. 7, 8 (2014).

risk to the life of an identified individual or individuals.”¹⁷¹ Thus, pursuing a successful human rights claim on the basis of an inadequate act or omission of the State to prevent climate change requires sufficient evidence that it was aware, or should have been aware, of the grave consequences of climate change. In the case of *Brincat v. Malta*, the ECtHR used a consensus assessment to determine whether Malta knew, or should have known, the health risks related to asbestos.¹⁷² The ECtHR assessed the state of scientific knowledge of asbestos at the time when the applicants were exposed.¹⁷³ The jurisprudence developed in the *Vilnes v. Norway* case,¹⁷⁴ according to which scientific uncertainty may create grounds for the State to take preventive measures,¹⁷⁵ might also become relevant for climate change scenarios.

D. Narrowness of the Doctrine of Extraterritoriality

Theoretically, the extraterritorial liability doctrine of the ECtHR can provide protection from threats in States that are not part of the ECtHR.¹⁷⁶ Therefore, in the future, victims of climate change-related threats (for example, in developing countries) could benefit from this protection. However, the current doctrine of extraterritoriality is fairly narrow. The following conditions must be satisfied: (a) The ECtHR must be convinced that exceptional circumstances exist for it to impose extraterritorial jurisdiction under Article 1 of the Convention,¹⁷⁷ (b) the acts take place inside or outside national boundaries,¹⁷⁸ (c) the act must

¹⁷¹ *Osman v. United Kingdom*, 1998-VIII Eur. Ct. H.R., ¶ 116.

¹⁷² *Brincat v. Malta*, 249 Eur. Ct. H.R. (ser. A), ¶ 105 (2014).

¹⁷³ *Id.* ¶ 106.

¹⁷⁴ *Vilnes v. Norway*, App. Nos. 52806/09 and 22703/10 (Eur. Ct. H.R. Dec. 5, 2013), <http://hudoc.echr.coe.int/eng?i=001-138597> [<https://perma.cc/9TCS-A4CQ>].

¹⁷⁵ *Id.*

¹⁷⁶ *See D. v. United Kingdom*, 1997-III Eur. Ct. H.R. (The Court applied Rule 39 of its Rules of Court, requesting the Government of the United Kingdom not to deport to St. Kitts the applicant, who was HIV-positive and at an advanced stage of illness, because he would not have been able to receive medical treatment if he had been sent there. In this case, the Court took account of the “very exceptional circumstances” and “compelling humanitarian considerations”: the applicant was critically ill and appeared to be close to death, could not be guaranteed any nursing or medical care in his country of origin and had no family there willing or able to care for him or provide him with even a basic level of food, shelter, or social support.).

¹⁷⁷ *See, e.g., Al-Skeini v. United Kingdom*, 2011-IV Eur. Ct. H.R., ¶¶ 134–36.

¹⁷⁸ *See Soering v. United Kingdom*, 2011-IV Eur. Ct. H.R., ¶ 88; *Vilvarajah v. United Kingdom*, App. Nos. 13163/87, 13164/87, 13165/87, 13447/87, and 13448/87, ¶¶ 107–27 (Eur. Ct. H.R. Oct. 30, 1991), <http://hudoc.echr.coe.int/eng?i=001-57713> [<https://perma.cc/SX9X-CRQF>].

have adverse effects outside the territory of the responsible State,¹⁷⁹ and (d) the State must have effective control or effective authority¹⁸⁰ over the person¹⁸¹ or territory (e.g., military actions).¹⁸²

The current doctrine of extraterritorial liability accepts only the acts of state actors.¹⁸³ However, this might change: the doctrine of positive obligations of the States has also been expanded over time to include the supervision of the acts of private parties.¹⁸⁴ Analogous to the *Ilascu* case,¹⁸⁵ the ECtHR might deal with the question of whether a corporation, holding a major impact on a specific area, can be compared to a state actor. International corporations may in fact have a *de facto* extraterritorial power in a specific area (e.g., exploitation of raw materials located outside the country of registration) and may cause significant emissions there.¹⁸⁶ The state in which a corporation is domiciled may control the activities of the latter, even when pursued abroad, either directly or through a subsidiary with a distinct legal personality.¹⁸⁷

International developments, such as the Maastricht Principles on Extraterritorial Obligations by the International Commission of Jurists,¹⁸⁸ could provide inspiration for an extension of the current

¹⁷⁹ *Loizidou v. Turkey*, App. No. 15318/89, ¶¶ 61–62 (Eur. Ct. H.R. Mar. 23, 1995) <http://hudoc.echr.coe.int/eng?i=001-57920> [<https://perma.cc/4SGF-VPLN>] (judgment on preliminary objections).

¹⁸⁰ *See Issa v. Turkey*, App. No. 31821/96, ¶¶ 69–71 (Eur. Ct. H.R. Nov. 16, 2004), <http://hudoc.echr.coe.int/eng?i=001-67460> [<https://perma.cc/NSY3-NMG4>].

¹⁸¹ *Hirsi Jamaa v. Italy*, 2012-II Eur. Ct. H.R.; *Öcalan v. Turkey* 205-IV Eur. Ct. H.R., ¶ 91.

¹⁸² *Loizidou*, App. No. 15318/89, ¶ 61 (ECHR preliminary objections Mar. 23, 1995).

¹⁸³ *See generally* EUROPEAN COURT OF HUMAN RIGHTS, FACTSHEET: EXTRATERRITORIAL JURISDICTION OF STATES PARTIES TO THE EUROPEAN CONVENTION ON HUMAN RIGHTS (July 2018).

¹⁸⁴ Heiskanen & Viljanen, *supra* note 4, at 288.

¹⁸⁵ *Ilascu v. Moldova*, 2004-VII Eur. Ct. H.R., ¶ 318.

¹⁸⁶ Francesco Francioni, *Exporting Environmental Hazard Through Multinational Enterprises: Can the State of Origin Be Held Responsible?*, in INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM 275, 275 (Francesco Francioni & Tullio Scovazzi eds., 1991) (discussing that the home state may be held responsible for the activities of the investor for pollution of the environment).

¹⁸⁷ Olivier De Schutter, *The Challenge of Imposing Human Rights Norms on Corporate Actors*, in TRANSNATIONAL CORPORATIONS AND HUMAN RIGHTS 1, 22–23 (Olivier De Schutter ed., 2006).

¹⁸⁸ *See* John H. Knox, *Diagonal Environmental Rights*, in UNIVERSAL HUMAN RIGHTS AND EXTRATERRITORIAL OBLIGATIONS 82 (Mark Gibney & Sigrun Skogly eds., 2010).

doctrine on extraterritoriality,¹⁸⁹ also keeping in mind the doctrines of cross-fertilization of rights and of the Convention as a living instrument.

E. Establishing Shared Liability in the Context of Climate Change

As climate change is caused by both state and private actors around the world, it can be difficult to establish the sole responsibility of a single state.¹⁹⁰ However, the *Urgenda* case¹⁹¹ affords a solution. The Hague District Court held that even though there are multiple parties causing global emissions, it is within the power of the State to control the collective emissions levels inside its country. The Dutch court took the Netherlands' voluntary commitment to international climate change agreements as acceptance of this responsibility.¹⁹²

The ECtHR has established a model of shared liability for two or more states, also known as the joint venture approach.¹⁹³ In *Hussein v. Albania*, the threshold used required active and direct involvement and a common act of joint enterprise instead of sole participation in a joint enterprise.¹⁹⁴ A strict reading of this case would imply that joint action and intent are not present in the context of climate change as the phenomenon has developed over the years without proper joint control. However, in specific circumstances, it might be possible to establish joint liability on the basis of joint venture. Under international law, a State that aids or assists another State in the commission of an internationally wrongful act is internationally responsible if the State does "so with knowledge of the circumstances of the internationally wrongful act" and "the act would be internationally wrongful if committed by the State."¹⁹⁵ If two or more States shared a significant energy project using sources of energy, which resulted in major climate

¹⁸⁹ Nicola Vennemann, *Application of International Human Rights Conventions to Transboundary State Acts*, in *TRANSBOUNDARY HARM IN INTERNATIONAL LAW* 295, 296 (Rebecca M. Bratspies & Russell A. Miller eds., 2006).

¹⁹⁰ Heiskanen & Viljanen, *supra* note 4, at 291.

¹⁹¹ *Urgenda Found. v. Netherlands*, Hague Ct. Rep., 2015 HAZA C/09/00456689 (June 24, 2015); *see also* Ingrid Leijten, *Human Rights v. Insufficient Climate Action: The Urgenda Case*, 37 *NETH. Q. HUM. RTS.* 112, 112–18 (2019).

¹⁹² *Urgenda*, Hague Ct. Rep., 2015 HAZA C/09/00456689.

¹⁹³ *See generally* *Hess v. United Kingdom*, App No. 6231/73, (Eur. Ct. H.R. May 28, 1975), <http://hudoc.echr.coe.int/app/conversion/pdf/?library=ECHR&id=001-73854&filename=001-73854.pdf> [<https://perma.cc/VH9E-8ZXQ>] (decision on the admissibility).

¹⁹⁴ *See Hussein v. Albania*, App No. 23276/04, at 3–4 (Eur. Ct. H.R. Mar. 14, 2006), <http://hudoc.echr.coe.int/eng?i=001-72789> [<https://perma.cc/ZM3A-Z28C>].

¹⁹⁵ Int'l Law Comm'n, *Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries*, U.N. Doc. A/56/10, at 65 (2001).

change emissions, threats to the realization of the rights of the affected population, and acts or omissions which constituted a wrongful act under international law attributable to the State(s), in theory, joint liability could be established. Although the joint venture approach is theoretically one feasible way to establish shared liability in climate change, the scope is extremely narrow and difficult to establish.¹⁹⁶

F. Necessity of Awareness of the Negative Impacts of Climate Change and Problems with Victim Status of Potential Victims and NGOs

Even though there seems to be a recent tendency to treat claims from NGOs in a more generous way, due to their lack of victim status, potential victims and NGOs can benefit from the positive obligations under the Convention only to a limited degree.¹⁹⁷ This can make it difficult for NGOs active in the fight against climate change to successfully bring cases to the ECtHR. Another discernible issue is that the ECHR is built on the personal injury paradigm in which indirect effects of environmental degradation are difficult to litigate under the scope of protected rights.¹⁹⁸

**IV
LESSONS FROM DOMESTIC ATTEMPTS TO ADJUDICATE CLIMATE
CHANGE-RELATED CASES**

As the challenges for climate change litigation before the ECtHR surmount, domestic courts have taken important steps to offer plausible solutions and frameworks for successful climate change claims. Several domestic courts in Europe have had the opportunity to discuss the nexus between the ECHR, the green jurisprudence of the ECtHR,

¹⁹⁶ See generally *Rantsev v. Cyprus*, 2010-I Eur. Ct. H.R.

¹⁹⁷ See generally *Gorraiz Lizarraga v. Spain*, 2004-III, Eur. Ct. H.R., ¶ 36; *Collectif national d'information et d'opposition à l'usine Melox – Collectif stop Melox et Mox v. France*, App No. 75218/01, ¶ 4 (Eur. Ct. H.R. Mar. 28, 2006), <http://hudoc.echr.coe.int/eng?i=001-81006> [<https://perma.cc/G89X-NDG3>] (decision on the admissibility); Tatiana Sainati, *Human Rights Class Actions: Rethinking the Pilot-Judgment Procedure at the European Court of Human Rights*, 56 HARV. INT'L L.J. 147 (2015); Christian Schall, *Public Interest Litigation Concerning Environmental Matters Before Human Rights Courts: A Promising Future Concept?*, 20 J. ENVTL. L., 417 (2008). But see generally *L'Erablière A.S.B.L. v. Belgium*, 2009-II Eur. Ct. H.R.; *Zakharov v. Russia*, 2015-VIII Eur. Ct. H.R. (judgment of the Grand Chamber) (finding that the applicant was entitled to claim to be a victim of a violation of the Convention, even though he was unable to allege that he had been the subject of a concrete measure of surveillance).

¹⁹⁸ DUPUY & VINALES, *supra* note 43, at 308–09.

and climate change. One case that has attracted the attention of environmental lawyers is the above-mentioned *Urgenda* case in the Netherlands.¹⁹⁹ *Urgenda* could serve as an inspiration for the ECtHR for climate change-related cases as the District Court of The Hague found that the participation of the Netherlands in international climate change agreements proved that the State was aware of the risks of climate change.

In particular, this case concerned a citizens' platform including 886 individuals suing the Netherlands at the District Court of The Hague due to the State's inaction to reduce its emissions. In June 2015, the District Court of The Hague ruled that the Dutch government must cut its greenhouse gas emissions by at least twenty-five percent by the end of 2020 (compared to 1990 levels). The ruling required the government to immediately take more effective action on climate change. In its judgment, the District Court of The Hague extensively referred to the green jurisprudence of the ECtHR. Despite not accepting the applicability of Articles 2 and 8 of the ECHR, due to failure to meet the victim criteria, the District Court of The Hague stated that the ECHR standards could be used in assessing the degree of discretionary power the State is entitled to in how it exercises the tasks and authorities given to it and in determining the minimum degree of care the State is expected to observe. The appeal by the Dutch government was heard at The Hague Court of Appeal on May 28, 2018. In October 2018, The Hague Court of Appeal issued a decision upholding the lower court's decision finding that the Netherlands is breaching its duty of care by "failing to pursue a more ambitious reduction"²⁰⁰ of GHG emissions and agreeing with the lower court's finding that the State should reduce its emissions by at least twenty-five percent by the end of 2020. The Court of Appeal stated that "it is appropriate to speak of a real threat of dangerous climate change, resulting in the serious risk that the current

¹⁹⁹ See *Urgenda Found. v. Netherlands*, Hague Ct. Rep., 2015 HAZA C/09/00456689 (June 24, 2015); see also *Appeal Lodged in Climate Case Ireland*, FRIENDS IRISH ENV'T (Sept. 23, 2019), <https://www.friendsoftheirishenvironment.org/climate-case> [<https://perma.cc/9SVW-YW64>].

²⁰⁰ Kingdom of the Netherlands v. *Urgenda Found.*, Case No 200.178.245/01 (Hague Ct. App. 2018) (unofficial translation <https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:GHDHA:2018:2610>) [<https://perma.cc/2EH9-6S5N>], ¶ 76. The Supreme Court of the Netherlands upheld the Court of Appeal judgment on Dec. 20, 2019. See de Rechtspraak, *Dutch State to Reduce Greenhouse Gas Emissions by 25% by the End of 2020*, HOGE RAAD DER NEDERLANDEN NIEUWS (Dec. 20, 2019), <https://www.rechtspraak.nl/Organisatie-en-contact/Organisatie/Hoge-Raad-der-Nederlanden/Nieuws/Paginas/Dutch-State-to-reduce-greenhouse-gas-emissions-by-25-by-the-end-of-2020.aspx> [<https://perma.cc/6AMK-M4LC>].

generation of citizens will be confronted with loss of life and/or a disruption of family life [T]he State has a duty to protect against this real threat.”²⁰¹

As the Dutch government has the option to appeal the decision to the Supreme Court, it is possible that the case will end up before the ECtHR. This Dutch case inspired other currently pending cases, such as the *People v. Arctic Oil* case in Norway,²⁰² the *Swiss Senior* case,²⁰³ the *Vienna Airport* case,²⁰⁴ or the *Klimaatzaak* case in Belgium.²⁰⁵ In Portugal, with the support of the NGO Global Legal Action Network and lawyers, children are currently planning to sue several States before the ECtHR after being affected by severe forest fires.²⁰⁶ This use of mass claims might be appropriate in environmentally related cases as the environmental degradation linked to climate change affects many

²⁰¹ *Id.* ¶ 45.

²⁰² *The Climate Lawsuit Against the Norwegian Government*, PEOPLE VS. ARCTIC OIL (Aug. 11, 2017), <https://www.peoplevsarcticoil.org/en/peoplevsarcticoil/background-documents/> [https://perma.cc/SN8X-FJBU]. In this case, Greenpeace and a citizens’ movement claimed that expanding oil production by issuing more permits for oil exploration in the Arctic is contrary to the constitutional right to a healthy environment and the international obligations on climate change. After the district court of Oslo ruled against the applicants, the case is currently under appeal by Greenpeace. See Megan Darby, *Greenpeace Appeals Norway Arctic Oil Drilling Case*, CLIMATE HOME NEWS (May 2, 2018, 1:09 PM), <http://www.climatechangenews.com/2018/02/05/greenpeace-appeal-norway-arctic-oil-drilling-case> [https://perma.cc/8H4H-LQDP]; see also *Föreningen Greenpeace Norden v. Staten ved Olje-og energidepartementet*, Case No. 16-166674TVI-OTIR/06 (Oslo District Court Apr. 1, 2018).

²⁰³ See *English Summary of Our Climate Case*, KLIMASENIORINNEN, <https://klimasenioren.ch/english> [https://perma.cc/GMC2-DLAU] (last visited Apr. 12, 2020). In this case, 770 women argued, with the support of Greenpeace Switzerland, that the failure of the Swiss Government to reduce emissions effectively constituted a violation of Articles 2 and 8 of the ECHR. They claim that elderly people are particularly vulnerable to heat waves caused by climate change. After the Swiss Federal Administrative Court ruled against the applicants in December 2018, the case is now under appeal. *Id.*

²⁰⁴ See Lisa Sturdee, *Austrian Court Opens Door for New Vienna Runway, Despite Climate Ramifications*, CLIMATE LIABILITY NEWS (Aug. 1, 2017), <https://www.climateliabilitynews.org/2017/08/01/in-austria-at-least-paris-climate-commitments-grow-some-legal-teeth> [https://perma.cc/LRP2-U4KG]. The case revolved around the proposed addition to a runway at the Vienna International Airport, which was first blocked by a federal administrative court that ruled the runway would increase carbon emissions and thus ran contrary to the country’s ambitious promises to the international climate accord. Subsequently, the decision was overturned.

²⁰⁵ *VZW Klimaatzaak v. Kingdom of Belgium*, Tribunal de Première Instance [Civ.] [Tribunal of First Instance] Brussels, 2015.

²⁰⁶ *Children -v- Governments of Europe & Climate Change*, CROWDJUSTICE, <https://www.crowdjustice.com/case/climate-change-echr/> [https://perma.cc/8ZL4-ZYBM] (last visited Feb. 1, 2020).

people, and victims usually differ in their positions regarding degree of exposure and vulnerability.²⁰⁷ The ECtHR might be reorienting its approach to mass claims or claims that affect particular groups, as illustrated in the *Di Sarno* case.²⁰⁸

CONCLUDING REMARKS AND OUTLOOK

The purpose of this Article is to establish if, and to what extent, the jurisprudence of the ECtHR can contribute to environmental protection and to individuals affected by the negative impacts of climate change. The analysis is structured to provide a platform for discussion of this topic with focus on some general issues that could illustrate or showcase some of the problems related to climate change-related claims before human rights courts. Hence, the situations dealt with are complex and encompassing because individual human rights violations caused by environmental pollution or climate change-induced hazards create threats to populations. Each of the cases analyzed touches upon diverse human rights infringements, aspects of attributability, and standards of proof. In the future, the ECtHR will have to address the particular problems of human rights litigation in cases concerning climate change, such as attributability, extraterritoriality, causal link, and issues relating to the burden of proof. Nonetheless, this Article has demonstrated that the current ECtHR doctrines are suitable for climate change litigation. ECtHR doctrines provide guiding principles for future climate change litigation through dynamic interpretation and legal analogy.

Future climate change cases may be based on the failure of the state to fulfill its positive obligations. In the climate change context, these positive obligations could include sufficient mitigation measures, such as policies to decrease the emissions, and the effective implementation and control of such policies. Climate change policy frequently involves balancing economic interests. At the time of the ruling in *Hatton*, the climate change discussion was not entirely incorporated into the arguments about the legitimacy of increasing air traffic. Domestic litigation processes already acknowledge that the increase in GHG emissions is not in compliance with climate change agreements.

There are a number of other potential challenges, which the Court might have to deal with in the upcoming years, including complex

²⁰⁷ DUPUY & VINUALES, *supra* note 43, at 324.

²⁰⁸ See *Di Sarno v. Italy*, App No. 30765/08 (Eur. Ct. H.R. Jan. 10, 2012), <http://hudoc.echr.coe.int/eng?i=001-108480> [<https://perma.cc/8QAA-A7TC>].

scenarios such as (a) traditional cross-border harm when the harm is primarily caused in State X, but also has harmful effects in State Y; (b) multinational corporations causing severe environmental problems entailing violations of human rights of local and/or indigenous communities; (c) environmental refugees who cannot be returned to their countries of origin due to the principle of non-refoulement; or (d) environmental pollution caused by collective global pollution, such as climate change.

In conclusion, it can be assumed that the number of individual applications, and particularly strategic litigation, before the ECtHR in the environmental field will continue to increase. This is especially true against the background of the *de facto* extended right for associations to bring legal actions before the courts. Shared liability would take into account the fact that climate change emissions cannot be attributed to one single polluter. However, the current doctrines impose strict conditions on the requirements for state involvement to fall under shared liability. Hence, developments, such as the entry into force of Protocol 16 of the ECHR,²⁰⁹ could also lead to further ECtHR jurisprudence in the field of climate change mitigation.

²⁰⁹ Protocol No. 16 to the European Convention on Human Rights, *opened for signature* Oct. 2, 2013, C.E.T.S. No. 214, <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=0900001680084832> [<https://perma.cc/5UA6-NYSF>] (providing for the Constitutional Courts or Courts of last instance to refer pending cases to the ECtHR for questions relating to the interpretation of the ECHR).

