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Master Thesis: Energy Transition and Climate Change Litigation

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I. Executive summary

Climate change is an existential threat that demands immediate action. This masters thesis intends to delve into the dynamic interplay between climate change litigation and the imperative shift towards sustainable energy sources, often referred to as the "energy transition." With increasing global awareness of the climate crisis and the inadequacy of traditional policy measures, litigation seems to emerge as a powerful tool to hold governments, corporations, and institutions accountable for their contributions to climate change.

This study begins by conducting an extensive literature review to establish a comprehensive understanding of the key concepts and terminologies associated with climate change litigation and energy transition. By elucidating the different aspects of these two critical subjects, this foundational knowledge provides a basis for subsequent analysis. The thesis then aspires to examine whether climate-related court cases act as catalysts, accelerating the transition to renewable energy sources and sustainable practices. Case studies from different jurisdictions are scrutinized to identify patterns, challenges, and success stories in climate change litigation.

Furthermore, this research assesses the legislative mechanisms available to legal practitioners in their efforts to combat climate-related infringements and promote a transition to cleaner energy sources. It explores the role of national and international legal frameworks in shaping the outcomes of climate litigation cases and influencing the broader energy transition agenda. In addition by examining the enforcement of court decisions and their impact on carbon emissions, the study intends to shed light on the effectiveness of litigation as a means to reduce greenhouse gas emissions and mitigate climate change.

Finally, the thesis synthesizes the findings to answer the overarching research question: What is the relationship between climate change litigation and the energy transition, and to what extent do they interact? By offering a multidimensional perspective, this thesis aspire to contribute to a deeper understanding of the intricate connections between legal action, reduction of greenhouse gases, and the global response to the climate crisis.

II. Introduction

In the introduction of *"Climate Change Litigation: Global Perspectives"* by I. Alogna, C. Bakker and JP Gauci, a smart analogue captures the attention of the reader. Climate change litigation is compared with an orchestra without a conductor. In this music experiment, each musician plays his/her part and as a corollary, the produced music is not harmonious. However, due to the practice and consistency of everyone, the ending result does not disappoint.¹ Similarly, the climate change litigation is a phenomenon constituted by many different elements and actors², i.e. legal practitioners, academics and NGO representatives, activists and market participants to result in a winning case. It is the understanding of a common goal and the communication between states, governmental bodies, and the private sector that ensures a sustainable future and a successful energy transition to renewable energy sources.

The climate crisis has become an increasingly important issue on the global political agenda since the release of the Intergovernmental Panel on Climate Change (IPCC) first assessment report in 1990³. After nearly thirty years, the IPCC's 2018 special report on "Global Warming of 1.5 Degrees" starkly highlighted the unprecedented extent of climate change. It emphasized that if global warming surpasses 1.5 degrees Celsius, it will have profoundly disruptive consequences for human systems, including the economy, society, and even the legal framework, as well as for ecosystems and species⁴. Despite significant political efforts and clear scientific warnings about the irreversible and potentially catastrophic effects of human-induced CO2 emissions and rising global temperatures, global climate action has been inadequate. As a result, the climate crisis continues to be the most critical challenge of our time, leading to drastic changes in our planet's climate system⁵.

The relationship presented herein among "climate change", "climate change litigation" and "energy transition" shall draw the attention of the author in the next chapters. Purpose of the first chapter is to familiarize with the relevant terms to be able to research the bibliography in a deeper level. It would be extremely difficult to answer the research question had one not clarified the above-mentioned definitions. The understanding of the relationship between energy transition and climate change litigation will be more clear. How do they interact? Do they? Does climate change litigation affect the energy transition? Is the latter accelerated due to climate change related court cases? Chapter two delves into the theoretical backbone of energy transition, the (legislative) means that legal practitioners have in their armory against climate-related infringements. Chapter three attempts to explain recurring issues that one may cross when examining several climate change related court cases in different jurisdictions. Three major climate change cases in three different jurisdictions were studied. Further, chapter four examines the enforcement approach, the national emissions of each State whose jurisdiction was studied, the relation between the decisions and the CO2 emissions. Finally, it is attempted to answer the research question. What is the relationship between energy transition and climate change litigation? Do they interact?

III. Chapter One: The basics

⁵ Lahore High Court, Ashgar v. Federation of Pakistan.

¹ Alogna, I., Bakker, C., & Gauci, J. P. (Eds.). (2021). Climate Change Litigation: Global Perspectives. BRILL. ² Ibid

² Ibid

³ Pouikli, K. Editorial: a short history of the climate change litigation boom across Europe. ERA Forum 22, 569–586 (2021).

⁴ Global warming of 1.5 °C: An IPCC Special Report on the impacts of global warming of 1.5 °C above pre-industrial levels and the related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (October 2018). Summary for Policymakers, p. 32 (IPCC, 2018).

The present chapter discusses the definitions of *climate change, climate change litigation* and that of *energy transition*. Defining those terms is of absolute importance to examine their interrelation, if any.

1.1 Understanding "climate change" and "climate change litigation"

Climate change constitutes a phenomenon that, indisputably, concerns humanity - and especially the social groups of scientists and activists - for the past decade or so. The prospective impacts of climate change on global stability surpass those of international terrorism.⁶ How one would define this phenomenon? There are multiple definitions from various institutes and organizations. To name but a few: "*Climate change is characterized by enduring alterations in temperatures and weather patterns over an extended period of time. These changes can occur naturally, for example, due to fluctuations in the solar cycle. Since the 19th century, human activities have emerged as the principal catalyst of climate change, predominantly attributable to the combustion of fossil fuels such as coal, oil, and gas.*⁷, *Climate change refers to the enduring alteration in the typical weather patterns that have established the distinctive local, regional, and global climates of the Earth. The alterations in question exhibit a wide array of observed consequences that are analogous to the designated phrase*"⁸.

As stated by the Intergovernmental Panel on Climate Change (IPCC)⁹: "climate change is defined as a discernible alteration in the condition of the climate, which can be determined by statistical analysis of changes in the average and/or the variability of its characteristics. This change endures over an extended duration, generally spanning several decades or more". Climate change can potentially arise from either natural internal processes or external forcings, including variations in solar cycles, volcanic eruptions, and ongoing human-induced alterations to the atmosphere's composition and land use patterns. According to the United Nations Framework Convention on Climate Change (UNFCCC), climate change refers to alterations in the climate system that can be ascribed to human activities, either directly or indirectly. These activities result in changes to the composition of the Earth's atmosphere, and are distinct from natural climatic variability observed over similar time spans¹⁰. The latter focuses on human-induced climate change, while the former encompasses any sort of climatic fluctuation, whether caused by natural or human factors, that can be determined by statistical analysis and continues for a significant duration, usually spanning decades or more.¹¹

Nonetheless, according to both interpretations, climate change encompasses more than just the occurrence of 'global warming^{12'} – which refers to the general rise in surface temperature. It also encompasses other observed consequences that contribute to the accumulation of greenhouse gases (GHGs) in the atmosphere, such as alterations in precipitation patterns and sea level. Although in theory, the IPCC definition is broader, it actually roughly resembles the one of UNFCCC. This is because human activities have a much greater impact on climate change than natural sources, such as solar irradiance, which accounts for a very small portion of the overall warming effects. Additionally, even though

⁶ David King, 'Climate Change Science: Adapt, Mitigate, or Ignore?' (9 January 2004) 303 (5655) Science 129, 176

 ⁷ United Nations. (n.d.). What Is Climate Change? https://www.un.org/en/climatechange/what-is-climate-change
 ⁸ Shaftel, H. (n.d.). Overview: Weather, Global Warming and Climate Change. Climate Change: Vital Signs of the Planet. https://climate.nasa.gov/global-warming-vs-climate-change/
 ⁹ Ibid

¹⁰ UNFCCC (1992), Art 1.

¹¹ Shaftel, H. (n.d.). Overview: Weather, Global Warming and Climate Change. Climate Change: Vital Signs of the Planet. https://climate.nasa.gov/global-warming-vs-climate-change/

¹² Erik Conway, What's in a Name? Global Warming vs. Climate Change (5 December 2008) NASA, www.nasa.gov/topics/earth/features/climate_by_any_other_name.html ('Global warming refers to surface temperature increases, while climate change includes global warming and everything else that increasing greenhouse gas amounts will affect.')

there are natural climate variations and climatic cycles, both the natural and human causes of climate change eventually have an impact on everyone.

A quite small part of international law addresses directly climate change. Across the last three decades one comes across with three pieces of legislation - treaties - that deal with the phenomenon of climate change and its potential remedies. Those are the "UNFCCC", its implementing mechanism, the "Kyoto Protocol" and the 2015 "Paris Agreement".¹³ Additionally to these principal sources of international law, customary international law and general principles of law are also involved to the governance of climate change-related acts and practices.¹⁴

The United Nations Framework Convention on Climate Change (UNFCCC) is the primary international agreement that governs human responses to climate change. It emphasizes the need to stabilize greenhouse gas concentrations in the atmosphere at a level that would effectively avoid harmful interference with the climate system caused by human activities¹⁵. The Convention entered into force in 1994 and until present-day serves as a framework and forum for international negotiations on actions addressing climate change. Today, the UNFCCC boasts universal membership, with nearly 200 parties (including the European Union). Its worldwide acceptance underlines the importance and severity of the phenomenon of climate change and its implications on several aspects of life such as human rights, health and security issues. This landmark Convention recognized the problem, even if there was not scientific certainty at the time, and obliged the developed (industrialized) countries, to lead the way on sustainable development.¹⁶

The precautionary principle was endorsed during the 1992 Rio Earth Summit, where prospective risks to future generations were highlighted.¹⁷ The aforementioned concept asserts that the presence of significant or permanent harm poses a fundamental threat to life on Earth, and the absence of comprehensive scientific assurance should not serve as a justification for postponing the implementation of proactive actions.¹⁸ Furthermore, Article 4(1) of the Convention outlines the shared responsibilities of all parties, with the understanding that these responsibilities may be influenced by specific national and regional development priorities, objectives, and circumstances. On the other hand, Article 4(2) imposes more demanding obligations exclusively on developed states and economies in transition in Eastern Europe, reflecting the principle of equity and the concept of Common But Differentiated Responsibilities (CBDR) advocated by the United Nations Framework Convention on Climate Change (UNFCCC)¹⁹. Finally, it is worth noting that the Convention also prominently includes the principle of the "no-harm rule". The statement underscores the need of nations, as stipulated in the United Nations Charter and international law, to implement measures aimed at averting the adverse impact of activities occurring within their jurisdiction and control on the environment of other states or places that fall beyond national boundaries.

Three years later, in 1997, the international community negotiated and adopted the Kyoto Protocol²⁰ to the Convention. The latter imposes legally enforceable commitments on the majority of affluent nations to reduce greenhouse gas (GHG) emissions. The Protocol came

¹³ Kalhofer, M. J. (2021). An alternative approach to climate change litigation: undamental climate rights & decentralized renewable programs. Journal of High Technology Law, 21(2), 477-518.

 ¹⁴ Achieving Justice and Human Rights in an Era of Climate Disruption. (n.d.). International Bar Association.
 ¹⁵ UNFCCC (1992), Art 2.

¹⁶ UNFCCC, 29 May 1992, A/AC.237/18 (Part II)/Add 1, reprinted in (1992) 31 ILM 849; the Kyoto Protocol to the UNFCCC, 10 December 1997, FCCC/CP/1997/L.7/add 1, reprinted in (1998) 37 ILM 22 (the 'Kyoto Protocol').

¹⁷ Achieving Justice and Human Rights in an Era of Climate Disruption. (n.d.). International Bar Association.

¹⁸ Ibid

¹⁹ UNFCCC (1992), Art 3(2) and (3) and 4

²⁰ United Nations. (n.d.) Kyoto Protocol. https://unfccc.int/kyoto_protocol

into effect in 2005 and presently boasts a total of 192 signatory states, which includes the European Union. According to the Protocol, parties from industrialized countries have committed to restricting and diminishing emissions throughout two distinct time-frames: the initial phase spanning from 2008 to 2012, and the subsequent term from 2013 to 2020. The Protocol underwent a revision in 2012, known as the Doha amendment, in order to accommodate the second commitment period. However, it is important to note that the amendment has not yet come into effect.

The Paris Agreement²¹, the first legally binding international treaty is the latest milestone against climate change. It was adopted by 196 Parties at COP 21 in 2015 and entered into force in 2016. It²² aims at limiting global warming to well below 2, if not 1.5 degrees Celsius, compared to pre-industrial levels. The objective of parties involved is to expedite the attainment of global peaking of greenhouse gas emissions in order to accomplish climate neutrality by the middle of the century. At the latest IPCC report, it was misunderstood that States should peak their emissions by 2025 and not before. It is not a negligible matter as the time of peaking delays the reduction of emissions and the fulfillment of the mitigation target. The Agreement shall be implemented through economic and social transformation founded on the most up to date and robust available science. Parties shall submit five year plans (Nationally Determined Contributions, NDCs) declaring their plans for climate action (i.e. the reductions of GHGs and adaptation mechanisms).

It is not the purpose of this Master Thesis to analyse the causes and impacts of the phenomenon of climate change, but this part of the paper would be incomplete without a reference to its factual repercussions and remedies. One should underline the fact that climate change is not a burden equally distributed across the land. Injustice is a perfect word to describe it. Natural disasters and extreme heat are not evenly split. There are some regions and populations more vulnerable than others are. The adverse effects of climate change on human security, food security, and the realization of the right to food may result in other challenging adaptation concerns that call for global solutions. The ability of some areas and populations to sustain themselves, as well as the supply of food, will be severely impacted by climate change.

Inter-generational injustice and gender equity are two dimensions of climate change that would take a separate master thesis to do them justice. Climate change has been found to have detrimental effects on several aspects of society, including poverty, land loss, erosion of cultural practices, and identity crisis. These impacts tend to disproportionately affect vulnerable populations, particularly women and children.²³ To make a quick reference, it is the cumulative human actions that have that terrible effect. Today, humans experience the choices of their progenitors. The observation made by the UN Secretary-General in his Report on Inter-generational Solidarity and the Needs of Future Generations regarding the political powerlessness of future generations and the limited representation of their concerns to the vicarious concern of existing generations was quite perceptive.²⁴ If action is not taken today, it would be much more difficult to mitigate emissions from exiting sources and to adapt to climate change destructive effects.

Mechanisms²⁵ or to put it another way, strategies, to address climate change take two forms: the first one is mitigation, which contains measures for the limitation of GHGs either by reducing their sources (burning of fossil fuels) or by enhancing the planet's natural "sinks"

²¹ Global Climate Litigation Report: 2020 Status Review. (n.d.). UNEP - UN Environment Programme. https://www.unep.org/resources/report/global-climate-litigation-report-2020-status-review

²² United Nations. (n.d.). The Paris Agreement. https://www.un.org/en/climatechange/paris-agreement

²³ Achieving Justice and Human Rights in an Era of Climate Disruption. (n.d.-b). International Bar Association.

²⁴ UN Secretary-General, Report on Intergenerational Solidarity and the Needs of Future Generations para 3, 68th Session, 5 August 2013, UN Doc A/68/x

²⁵ Achieving Justice and Human Rights in an Era of Climate Disruption. (n.d.-b). International Bar Association.

(for example, forests or oceans), that have the capacity to absorb them; the second one is adaptation, which pertains to the adjustment of natural or human systems to fit in a new or changing environment, to minimize harm or take advantage of beneficial opportunities. The interdependence between mitigation and adaptation mechanisms has gained recognition in the ILA Draft Articles on Climate Change, specifically in article 4.3.²⁶ This article emphasizes the imperative for states to urgently safeguard the climate system. It highlights that if states delay in implementing sufficiently ambitious mitigation measures to achieve the globally agreed-upon objective, the focus of action will inevitably shift towards adaptation. Consequently, the responsibility for addressing climate change impacts will disproportionately fall on the most vulnerable states, which are often the least responsible for causing the issue.

According to the IPCC, adaptation strategies can be "purely mechanical" (i.e. sea defense), "purely behavioral" (i.e. changing one's eating or recreational habits), "managerial" (i.e. changing farm operations), or "political" (i.e. changing regulations).²⁷ Although on a global scale, mitigation has traditionally received more attention than adaptation, adaptation problems can be just as difficult, dangerous, and expensive for emerging nations with already scarce financial and technological resources. Despite the lack of "*monocausal relationship*" between climate change and displacement, there is a recognized link between the two.²⁸

Nevertheless, in the initial years of the Convention, adaptation received less emphasis compared to mitigation as Parties aimed to acquire more comprehensive knowledge about the impacts of climate change and its vulnerability.²⁹ Following the release of the Third Assessment Report by the Intergovernmental Panel on Climate Change (IPCC), there was an increased recognition and acceptance of the need of adaptation measures. Consequently, the Parties involved in climate negotiations established a formal framework to address the adverse impacts of climate change and established funding mechanisms to support adaption efforts. At now, many Convention bodies are engaged in the job of adaptation. The formation of the Adaptation Committee, as agreed upon by Parties under the Cancun Adaptation Framework as part of the Cancun Agreements, marks a notable advancement in the development of a coordinated strategy for adaptation based on the Convention.³⁰

While the implementation of mitigation and adaptation strategies is crucial for attaining climate change justice, it is important to acknowledge that these actions might give rise to supplementary justice considerations. According to the Intergovernmental Panel on Climate Change (IPCC), the implementation of mitigation and adaptation strategies can have both positive and negative impacts on various societal objectives.³¹ The aforementioned aims span several domains including human health, food security, biodiversity, local environmental quality, energy availability, livelihoods, and equitable sustainable development. Furthermore, it is crucial to acknowledge that policies targeted towards the accomplishment of other societal objectives can also have an impact on the achievement of mitigation and adaptation goals, and vice versa. Achieving a harmonious equilibrium between the aforementioned strategies to achieve "justice" poses a unique challenge. However, it is crucial to acknowledge that the analysis of climate change problems in the context of justice falls outside the purview of this thesis.

²⁶ ILA, Legal Principles Relating to Climate Change: Draft Articles (ILA, April 2014).

²⁷ IPCC, Impacts, Adaptation and Vulnerability (2014), 14–21

²⁸ UNHCR, Forced Displacement in the Context of Climate Change: Challenges for States Under International Law (20 May 2009) 4, www.unhcr.org/4a1e4d8c2.html.

 ²⁹ Achieving Justice and Human Rights in an Era of Climate Disruption. (n.d.-b). International Bar Association.
 ³⁰ Ibid

³¹ IPCC, Climate Change 2014: Mitigation of Climate Change, Summary for Policymakers (13 April 2014): http://mitigation2014.org

At this part of the paper, it is of great importance for the purpose of this thesis to familiarize with the notion of "climate change litigation". It is only the last couple of decades that this phenomenon takes place due to the failure of policymakers to fight climate change.³² There have been three distinct waves of climate litigation: the first wave (pre-2007), which primarily involved administrative litigation against governmental entities intended to raise environmental standards and mostly occurred in the US and Australia; the second wave (2007–2015), which demonstrates the expansion of climate change litigation in the European continent; the third-wave cases (from 2015 till present time), which indicate a further expansion and variety in terms of the claim type, the volume of cases, the types of defendants, and the number of jurisdictions in which cases are being brought.³³ The present thesis discusses cases that took place the last decade and their interaction with energy transition.

It would be an understatement to say that the concentrations of carbon dioxide have more than doubled since pre-industrial levels and the last five years are increasing faster than a decade ago. The Covid-19 pandemic was just a brief break. The observed changes in climate patterns along with scientific consensus on the anthropogenic sources of climate change compelled plaintiffs and petitioners to seek more ambitious mitigation and adaptation mechanisms.

Therefore, governments and private parties are brought before tribunals throughout the world to (a) hasten their efforts for the implementation of emissions reduction goals, (b) illustrate the insufficiency of current emissions targets and strategies, (c) prove the correlation of potential harm and emitters etc.

Climate change litigation takes place across the globe either within international and regional fora or within national legal tribunals.³⁴ The Paris Agreement - among others - is the key treaty on climate change obligations.³⁵ The international framework on climate change is inherently constrained by political compromise and the lack of adequate mechanisms to assess state compliance, requiring litigation before international and regional courts and tribunals. Due to the lack of political unanimity on the development of an effective system, the reliance on courts and tribunals to guarantee the efficacy of national governments' efforts to mitigate climate change seems as an appropriate tool.³⁶

And the question is: "which legal framework would be the most fruitful? International or domestic courts and tribunals? Are there any opportunities or constraints in each choice? On the one hand, international climate change litigation increases public understanding on the effects of climate change and their affect on vulnerable communities. It may become a form of pressure on governments and commence legislative and policy change.³⁷ Even though international body rulings do not always result in enforceable requirements, litigants may nonetheless use them in other formal or not advocacy contexts. It goes without saying that international climate change litigation presents also several constraints (i.e. jurisdiction, technical difficulties).

On the other hand, plaintiffs in national and sub-national courts may not have access to some strategic alternatives accessible in international fora. National legislation and courts may be ineffectual or even unfriendly when attempting to hold governments accountable. It is less than a decade ago that domestic courts and tribunals commenced to issue decisions

³³ Setzer, J., & Higham, C. (2021). Global trends in climate change litigation: 2021 snapshot. Grantham Institute on Climate Change and the Environment (GRI).

³² Alogna, I., Bakker, C., & Gauci, J. P. (Eds.). (2021). Climate Change Litigation: Global Perspectives. BRILL

³⁴ Alogna, I., & Clifford, E. (2021). Climate Change Litigation: Comparative and International Perspectives.

³⁵ 'Climate Change Laws of the World' (Grantham Research Institute on Climate Change and the Environment, LSE) https://climate-laws.org/cclow accessed 5 March 2020.

³⁶ Alogna, I., & Clifford, E. (2021). Climate Change Litigation: Comparative and International Perspectives ³⁷ ibid

that held States accountable. Recent petitions allege that national governments' actions to climate change have fallen short and call for the application of these widely acknowledged rights before the Human Rights Committee, the Committee on the Rights of the Child, and U.N. Special Rapporteurs.

To comply with the Paris Agreement's requirement that signatories adopt nationally determined contributions that reflect their "highest feasible ambition", litigants might claim that governments who take actions that fall short of this standard are not honoring their obligation.³⁸ The consensus that climate rights are well recognized in international soft law is further strengthened by affirmative declarations from the Inter-American Court of Human Rights and the United Nations Human Rights Council.

As briefly stated above, the international judicial framework may come across various challenges and constraints. Initially, it is important to acknowledge the existence of several technical and procedural obstacles that impede the inclusion of climate change accusations within the purview of international courts and tribunals. One example of a potential challenge is the presence of jurisdictional considerations, which can provide obstacles for plaintiffs seeking to have their claims adjudicated. Moreover, the legitimacy of international courts and arbitral tribunals is sometimes confronted with issues arising from the consensual nature of their domains.³⁹

It is argued whether the international framework is sufficient means against climate change. International litigation can assist national courts and lawmakers change their minds about certain issues, even though it may not be the most suitable approach. Human rights remedies can also be used to effectively "*name and shame*"⁴⁰ states and businesses and put pressure on them to do more to combat climate change.

The 2017 Global Climate Litigation Report (of UN Environmental Program) identified 884 cases brought in 24 countries. Out of these, 654 instances were reported in the United States of America, while the remaining 230 cases were distributed among other countries. In the revised report of July 2020, it is seen that the number of climate change lawsuits has significantly increased, nearly double the previous figure. A minimum of 1,550 cases related to climate change have been filed in 38 nations (including the courts of the European Union, making it 39 in total). The aforementioned instances encompass an estimated total of 1,200 filings within the United States, along with an additional 350 filings across all other nations.⁴¹

Despite the fact that cases involving climate change are filed before numerous courts, tribunals, and other fora around the world, they frequently include similar fundamental legal issues (i.e. courts' power to resolve such disputes, enforcability, judicial remedies). One could classify, not in a restrictive manner, the climate change related cases into six thematic categories: (1) climate rights⁴², (2) domestic enforcement, (3) keeping fossil fuels in the ground, (4) corporate liability, (5) failure to adapt and the impacts of adaptation and (6) climate disclosures and green-washing.

According to this report "climate change litigation" includes cases that raise substantial issues of law or fact relating to "climate change mitigation, adaptation, or the science of climate change". This kind of cases are brought before the competent judicial or administrative, national or international bodies. Climate change litigation and conflict resolution procedures are seeing a gradual growth at many levels, namely national, regional, and worldwide, including both governmental and non-governmental entities. An instance of

³⁸ Achieving Justice and Human Rights in an Era of Climate Disruption. (n.d.-b). International Bar Association.

³⁹ Mary Robinson Foundation: Climate Justice, Principles of Climate Justice (10 June 2014), www.mrfcj.org/about/principles.html.

⁴⁰ Alogna, I., & Clifford, E. (2021). Climate Change Litigation: Comparative and International Perspectives

⁴¹ Global Climate Litigation Report, UN, 2020

⁴² Right to life, health, food, water, a healthy environment, family life and more

climate change litigation targeting a corporate legal entity within a domestic jurisdiction may be grounded in environmental regulations. Conversely, litigation at the regional or international level may be initiated against a state before the International Court of Justice (ICJ) or the United Nations Convention on the Law of the Sea (UNCLOS) due to alleged violations of a state's international obligations pertaining to climate change or carbon trading. In a following chapter, the author will examine domestic climate change cases (e.g. Urgenda) and attempt to evaluate their impact on the State's compliance and behavioral change relating to the fight against climate change.

Binding judicial orders may be the result for governments who are brought before justice for their non-compliance with the national or supranational climate targets (such as reduction of GHGs). Those require the renewal of climate goals, broader climate regulations, reforms to environmental impact assessments and other procedures as well. To the completion of this thesis, no court has issued a ruling mandating a defendant to provide compensation for climate harm resulting from their role to climate change. However, a significant number of ongoing cases are actively pursuing such a legal outcome. The results for private parties are quite different, i.e. the imminent projects may be possible. The existing deviating and inconsistent precedent with respect to proving a casual link between concrete hazard and GHG emissions by particular defendants makes the process even more difficult⁴³.

Governments appear as defendants and not plaintiffs more frequently in climate change judicial cases. Exemplary cases against governments claim the inconsistency of national climate policies with legislative or even constitutional commitments concerning the reduction of GHG emissions. These particular decisions and policies encompass the establishment of national emission objectives as well as the issuance of state licenses, permits, or subsidies pertaining to the production or utilization of fossil fuels. Two notable cases, Urgenda Foundation v. State of the Netherlands ("Urgenda") and Friends of the Irish Environment CLG v. Government of Ireland, exemplify a particular category of litigation. In these instances, the plaintiffs contend that the national strategies for greenhouse gas (GHG) reduction lack the necessary level of ambition to align with the respective countries' commitments to mitigate climate change.

Taking everything into consideration, it is clear that various definitions of climate change litigation exist. The broadest comprises any case whose object is *de facto* or *de jure* linked to climate change⁴⁴. In the present study, the author will retain a more narrow definition⁴⁵ in which the impact of climate change is directly argued for or cited as the main justification. This study will specifically focus on assertions pertaining to the public administration's obligation to address climate responsibilities and the need for enhanced climate change legislation and policies. It is important to note that climate litigation is a complex matter, as it allows for legal actions to be taken against the climate policies of both governmental entities and corporations. This thesis endeavors to shed light on the significance of courts and climate litigation in the deployment and promotion of a legally defined climate regime.

The year, 2021, was a turning point for global climate justice. With roughly 20 cases settled that year and more than 150 recent appeals, the numbers of climate litigation have exploded.

1.2 Understanding energy transition (EU overview)

What does the notion of "energy transition" mean? What is its connection to climate change? The global temperature of the Earth continues to exhibit an upward trend. According to

⁴³ Achieving Justice and Human Rights in an Era of Climate Disruption. (n.d.-b). International Bar Association.

⁴⁴ Torre-Schaub, M. (2021). Dynamics, Prospects, and Trends in Climate Change Litigation Making Climate Change Emergency a Priority in France. German Law Journal, 22(8), 1445-1458.

⁴⁵ Ibid

NASA, the global mean temperature in 2020 displayed an increase of 1.02°C compared to the baseline average spanning the years 1950 to 1980. Along with raising sea levels and causing the polar ice caps to melt, global warming is also altering the environment, leading to desertification and an increase in extreme weather events like storms, floods, and fires. This shift in the climate poses a risk of irreparable harm.

As stated above, the scientific community⁴⁶ has come to an agreement that this is caused mainly by human-made emissions of greenhouse gases into the atmosphere, particularly since the Industrial Revolution. Carbon dioxide, a gas of particular interest, is mostly emitted by the energy sector, including various activities such as power generation, among others.

The first legally binding international agreement was signed in December 2015 at COP 21 in Paris. This agreement established the objective of limiting the increase in global average temperature to below 2°C, with a preferable target of 1.5°C, by the conclusion of the current century. The commitment to achieve carbon neutrality by the year 2050 was officially ratified during the 26th Conference of the Parties (COP26), which took place in Glasgow in November of 2021. The signatory states are responsible for submitting ambitious NDCs with the sole target to reduce their emissions.

The energy transition, also known as the shift from a fossil fuel-dependent energy mix to one that has minimal or no carbon emissions, primarily relying on renewable energy sources. This transition serves as the key strategy for accomplishing this objective, i.e. the fight against climate change and the goal of keeping global warming at a certain threshold. The "electrification of the economy⁴⁷", which replaces electricity produced from fossil fuels with energy produced from renewable sources to any sector, like transportation, industrial use (production and consumption), heat and/ or cooking makes a significant contribution to decarbonization. The digitalization of networks, also, contributes by increasing energy efficiency.

Nevertheless, the imperative to decarbonize the energy sector necessitates immediate and widespread measures on a global level in order to expedite the worldwide shift towards cleaner energy sources and effectively achieve both national and regional obligations. Although switching to renewable energy sources is the ultimate goal of the energy transition, natural gas shall be the transitioning energy source⁴⁸ and shall have a crucial role in grid stability along the way. Electrification of consumption shall aid to achieve decarbonization. Abandoning fossil fuels overnight cannot be the answer, but it would be more of a shock with unimaginable impacts. To ensure grid stability, resilience, and efficiency, the elimination process needs to be managed gradually and carefully. The key concept under consideration is the electrification of production, which entails a progressive substitution of fossil fuel-dependent devices and processes with those that exclusively utilize energy generated from renewable sources throughout many sectors, encompassing but not limited to residential heating and transportation. Additionally, the electrification shall lessen city air pollution, and the digitalization of the networks would greatly increase energy efficiency⁴⁹.

The notion of energy transition is not a historic novelty. The switch from using wood to using coal in the 19th century or the switch from coal to oil in the 20th century are two examples

⁴⁶ Don C Smith, Catherine Banet & Beatriz Martinez Romera (2019) Teaching the law of energy transition in the era of internationalisation and digitalisation of legal university education: the Transatlantic University collaboration in Climate Change and Energy Law (TUCCCEL) programme, Journal of Energy & Natural Resources Law, 37:4, 443-464, DOI: 10.1080/02646811.2019.1663048

⁴⁷ Martins F, Moura P, de Almeida AT. The Role of Electrification in the Decarbonization of the Energy Sector in Portugal. Energies. 2022; 15(5):1759. https://doi.org/10.3390/en15051759

⁴⁸ Decarbonization – how to transition from fossil fuels to renewables. (2022, March 16). https://www.enelgreenpower.com/learning-hub/energy-transition/decarbonization

⁴⁹ Ibid

of significant era changes that have occurred in the past⁵⁰. However, the energy transition of the 21st century is quite different, taking into account the urgency to protect the Earth in a quick and effective way from the biggest threat menacing this generation. The energy industry has experienced a swift and significant change as a result of this economic stimulus, leading to a substantial decrease in costs for renewable technologies. Specifically, the cost of solar photovoltaics has declined by 80% and onshore wind power by 60% within a span of ten years (2010-2019).

On the one hand, the use of the renewable energy sources replace the fossil fuels and more fossil fuel power plants around the world approach their expiry dates. On the other hand, there are major developments in the field of technology and innovation, i.e. energy storage and hydrogen, digitization and electrification. The core of the energy transition is the development and use of renewable energy sources. Photovoltaic and wind energy have recently joined more sophisticated technology like hydroelectric and geothermal power, fast emerging as the standout players in the revolution that is currently taking place.

Additionally, the energy transition has a positive impact on the economy and on society. Electricity grid digitalization⁵¹ has the potential to pave the way for smart grids and brandnew consumer services. From an environmental point of view, coal-fired power plants can be repurposed in accordance with the circular economy's guiding principles, while renewable energy sources and electric mobility reduce pollution.⁵² In terms of social responsibility, persons who formerly worked in the fossil fuel industry can avail themselves of the new "green" and "sustainable" job openings. It is inherent that the energy transition becomes a "just transition"⁵³. However, the consideration of this term does not fall under the scope of this master thesis.

The success of the energy transition is contingent upon a comprehensive overhaul of the worldwide energy industry, shifting away from reliance on fossil fuels and towards the utilization of zero-carbon alternatives. This transformation is crucial in order to decrease the amount of carbon dioxide emissions stemming from energy production, thereby mitigating the adverse effects of climate change and constraining the rise in global temperature to a maximum of 1.5 degrees Celsius above pre-industrial levels.⁵⁴ In a next chapter, the author will examine the evolution of the energy policies and climate law under the European Union scope.

IV. Chapter Two: Theoretical background of energy transition

2.1 European dimension

On this chapter the author will present and evaluate the key energy related policies and legislation that take place during the third wave of climate change litigation (i.e. 2015 until present day). The theoretical background of energy transition is rooted in the concepts of sustainable development and the need to address the global challenge of climate change. It is driven by the understanding that the current energy system, which is heavily dependent on fossil fuels, is not sustainable in the long term due to environmental, social and economic reasons. Energy transition refers to the process of shifting from traditional sources of energy (fossil fuels) to renewable sources (solar, wind, hydro, geothermal, etc.) to fight climate change, emphasizing on decarbonisation and sustainability, diversification and energy access.

⁵⁰ The world's energy transitions: a history told in infographics. (2022, May 20). World Economic Forum. https://www.weforum.org/agenda/2022/04/visualizing-the-history-of-energy-transitions/

⁵¹ S&P Global. (n.d.). https://www.spglobal.com/en/research-insights/articles/what-is-energy-transition

⁵² Ibid

⁵³ Ibid

⁵⁴ Decarbonization – how to transition from fossil fuels to renewables. (2022, March 16). https://www.enelgreenpower.com/learning-hub/energy-transition/decarbonization

By dint of the latest developments, the plaintiffs having substantial claims and arguments against the defendants, usually governments and governmental bodies (see chapter 3) were able to make their cases and in some cases have an opportunity to be heard. To limit the volume of bibliography and not diverge from the subject of this thesis and research question, the author will focus on the EU jurisdiction. Therefore, one needs to discuss: What applies at a European level? How do the latest legislative developments pertain to climate change litigation?

(i) Shared Competences: Energy Sector⁵⁵

Since the 1950s, the notion of European integration walks the tightrope delicately between State sovereignty and economic integration, the primal goal of European integration. In this regard, the energy sector is not an exception. It is worth noting that, two of the three founding treaties addressed energy in an explicit way, namely the Treaty establishing the European Coal and Steel Community (ECSC, 1951)⁵⁶ and the Treaty establishing the European Atomic Energy Community (EURATOM, 1957⁵⁷). However, it was some decades later that the energy sector was treated systematically rather than incidentally. For long, it was considered a politically sensitive subject. The energy policies and legislation are mostly part of public law, so transnational rules were not to apply.

The Treaty of Lisbon⁵⁸ established an energy-specific competence and legal foundation in primary law for the first time in EU history.⁵⁹ It designated the energy sector as one in which shared competencies are in force, and it stipulated that the adoption of measures in this industry must abide by the principles of conferral, proportionality, and subsidiarity. In addition, the Treaty of Lisbon added a new legal foundation for energy in Article 194 of the Treaty on the Functioning of the European Union (*"TFEU"⁶⁰*), which serves three purposes. It lays out the goals of EU energy policy, the process to be used to enact secondary law to meet those goals, and it gives an explicit delineation of EU powers in pursuing those goals.⁶¹ As per the provisions outlined in Article 194, paragraph 2 of the Treaty on the Functioning of the European Union, any measures implemented to promote the objectives of EU energy policy will not interfere with a Member State's prerogative to establish the terms for the utilization of its energy resources, exercise discretion in selecting from various energy sources, and determine the overall configuration of its energy supply⁶².

According to Article 194, EU legislation has greatly broadened its support for energy efficiency⁶³ and renewable energy. Three goals were outlined in the 2007-2020 package, a series of legally enforceable regulations. A directive on renewable energy established precise goals for each member state in 2009 in this aspect⁶⁴. Further, local initiatives and bottom-up policies have become increasingly common, as well. The policy arena relies on intergovernmental collaboration in terms of formal institutions and competence, while

60 Art. 194 of the TFEU

⁵⁵ Art. 4 of the TFEU

⁵⁶ EUR-Lex - xy0022 - EN - EUR-Lex. (n.d.). https://eur-lex.europa.eu/EN/legal-content/summary/treaty-establishing-the-european-coal-and-steel-community-ecsc-treaty.html

⁵⁷ EUR-Lex - 12012A/TXT - EN - EUR-Lex. (n.d.). https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:12012A/TXT

⁵⁸ EUR-Lex - 12007L/TXT - EN - EUR-Lex. (n.d.). https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=celex:12007L/TXT

⁵⁹ Art 4 TFEU; A Biondi, 'Subsidiarity in the Courtroom' in A Biondi, P Eeckhout and S Ripley (eds), EU Law after Lisbon (Oxford University Press 2012); A von Bogdandy, 'Founding Principles' in A von Bogdandy and J Bast (eds), Principles of European Constitutional Law (rev 2nd edn, Hart Publishing 2011) 35–6; W Sauter, 'Proportionality in EU Law: A Balancing Act?' (2012) 15(2) CYELS 439–66.

⁶¹ Ibid

⁶² Ibid

⁶³ European Commission, 2013. Communication from the Commission to the European Parliamnet and the Council: Implementing the Energy Efficiency Directive -Commission Guidance.

national preferences continue to prevail. The Lisbon Treaty reaffirmed existing energy policy guidelines.

(ii) 2020 and 2030 energy and climate frameworks

The 2020 package refers to a collection of legislative measures that were enacted with the aim of ensuring the European Union achieves its climate and energy objectives by the year 2020⁶⁵. The package had three primary objectives: a reduction of 20% in greenhouse gas emissions (relative to 1990 levels), a generation of 20% of the Union's energy from renewable sources, and a 20% enhancement in energy efficiency. The aims were established by European Union leaders in the year 2007 and subsequently implemented through legislative measures in 2009⁶⁶. The European Union's greenhouse gas (GHG) emissions in 2014 shown a reduction of 23% compared to the levels observed in 1990. The reductions were acknowledged by Miguel Arias Cañete, the EU Commissioner for Climate Action and Energy, who emphasized that the European economy had a growth of 46% over the corresponding timeframe⁶⁷. It has been continuously demonstrated that a positive correlation between climate protection and economic growth exits⁶⁸.

Further, the Commission unveiled the 2030 climate and energy framework on January 22, 2014⁶⁹. This document presented a comprehensive framework for European Union climate and energy rules throughout the period of 2020-2030. The framework was designed with the purpose of initiating discussions regarding the future implementation of these policies with the conclusion of the existing 2020 framework. The objectives of these aims were to facilitate the European Union in attaining an energy system that was going to be more competitive, secure, and sustainable, while also enabling the fulfillment of its greenhouse gas reduction target for the year 2050⁷⁰.

The objectives for the year 2030 were as follows: a reduction of 40% in greenhouse gas emissions relative to the levels observed in 1990, a minimum of 27% of the total energy consumption derived from renewable sources and a minimum of 27% energy efficiency compared to the *business-as-usual scenario*⁷¹.

(iii) European Green Deal

The European Green Deal was a comprehensive initiative of the European Commission led by President Ursula von der Leyen, announced on December 11, 2019. Zero carbon by 2050 was - and still is - the goal. It aimed to achieve a fair, environmentally friendly, and inclusive transformation of the European economy and society through various strategies and laws⁷². The European Green Deal was a novel plan for growth in the EU that focused on creating a society with equal opportunities and a strong economy. The Green Deal prioritized the wellbeing of citizens, protecting them from environmental damage and promoting fairness and inclusivity. The central focus of economic policy was to prioritize well-being⁷³. The European Green Deal aimed to raise the EU's climate goals for 2030 and 2050, provide access to clean,

⁶⁵ 2020 climate & energy package. (n.d.). Climate Action. https://climate.ec.europa.eu/eu-action/climatestrategies-targets/2020-climate-energy-package_en

⁶⁶ Ibid

⁶⁷ This means that economic growth and greenhouse gas emissions are decoupled.

⁶⁸ European Environment Agency (2015), Trends and projections in Europe 2015, Tracking progress towards Europe's climate and energy targets. October 2015 http://www.eea.europa.eu/publications/trends-andprojections-ineurope-2015

⁶⁹ The 2030 climate and energy framework, (n.d.) https://www.consilium.europa.eu/en/policies/climate-change/2030-climate-and-energy-framework/

⁷⁰ 2030 Climate and Energy Framework – Policies - IEA. (n.d.). IEA. https://www.iea.org/policies/1494-2030-

climate-and-energy-framework

⁷¹ Ibid

⁷² Fetting, C. (2020). "The European Green Deal", ESDN Report, December 2020, ESDN Office, Vienna.

⁷³ European Commission, 2020.Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions - The European Green Deal

low-cost, and reliable energy, encourage the industrial sector to adopt sustainable and circular practices, and construct and refurbish buildings in a manner that was energy and resource-efficient, while ensuring that no man or place is left behind⁷⁴.

The Paris Agreement and the United Nations' Sustainable Development Goals served as the foundation for the European Green Deal and its implementation. It aspired to facilitate the EU transition to a climate-neutral economy in the interest of the welfare of its members and its people. The Green Deal's structure is multifaceted (with legal, political and economic instruments). It includes a set of enhanced targets for 2030, i.e. a minimum reduction of 40% in greenhouse gas emissions, relative to the levels seen in 1990, a minimum of 32% allocation for renewable energy sources and a minimum improvement of 32.5% in energy efficiency⁷⁵. The European Union (EU) has established many mechanisms to achieve its greenhouse gas reduction objective of 40%⁷⁶. These mechanisms include the EU Emissions Trading System, the Effort Sharing Regulation which sets emissions reduction targets for Member States, and the Land use, land use change and forestry Regulation. By adopting this approach, every sector will make a contribution towards attaining the 40% objective through a combination of emission reduction and enhanced removal efforts.

Among the objectives for energy recite the advancement of the transition to a low-carbon economy, the establishment of an energy system that ensures affordable energy for all consumers, the improvement of security of the EU's energy supplies, the decrease of reliance on energy imports, economic growth and job creation, improvement of the environment and public health (e.g., through reduced air pollution).

Clean energy for all Europeans package, in line with the European Green Deal was adopted in 2019 to aid with the EU's energy system decardonisation. In order to meet the EU's energy and climate objectives for 2030, member states were required to develop a 10-year comprehensive national energy and climate plan (*NECP*) covering the period from 2021 to 2030⁷⁷. This was introduced through the Regulation on the governance of the energy union and climate action (EU/2018/1999) and required that the final NECP be submitted to the Commission by the end of 2019 and every ten years⁷⁸. The NECPs cover the areas of energy efficiency, renewables, GHG emissions reductions and grid interconnections.

National long-term strategies of the Member States, including coordination and convergence efforts, are prerequisites for the implementation of the EU Green Deal. Under the Implementing Regulation, each country must submit a biennial progress report, following the established format, technical specifications, and procedure. The Commission will track the EU's overall progress towards its targets as part of the Energy Union report.

The Clean Energy Transition is a crucial aspect of the European Green Deal. The majority (75%) of greenhouse gas emissions in the all EU member states come from energy production and consumption. Therefore, the European Green Deal prioritized energy security, affordability, and the creation of a modern and integrated energy market.

(iv) European Climate Law and amended European directives

Fit for 55 package aspired to codify the climate aspirations outlined in the Green Deal. The EU Climate Law of 2021, which emerged as a significant legislative outcome of the EU Green Deal in 2019, has brought about a notable transformation. Since its implementation on 29th July 2021, the European Union has become obligated to adhere to the target of achieving

⁷⁴ Fetting, C. (2020). "The European Green Deal", ESDN Report, December 2020, ESDN Office, Vienna

⁷⁵ 2030 climate & energy framework. (n.d.). Climate Action. https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2030-climate-energy-framework_en

⁷⁶ Ibid

⁷⁷ National energy and climate plans (NECPs). (n.d.). Energy. https://energy.ec.europa.eu/topics/energystrategy/national-energy-and-climate-plans-necps_en

⁷⁸ Ibid

climate neutrality by the year 2050. The EU Climate Law further provided a legally enforceable obligation on the European Union and its constituent Member States to attain a 55% net reduction in greenhouse gas emissions by the year 2030, relative to the levels recorded in 1990⁷⁹. Furthermore, it encompassed a qualitative aim of enhancing resilience to climate change impacts.

The 2020 Impact Assessment conducted by the EU Commission indicated a substantial requirement for modifications in the existing European legislative instruments that form the framework of energy and climate policy inside the Union⁸⁰. This necessity arose due to the increased 2030 objective. The EU Commission has selected a range of options that were offered and analyzed in the Impact Assessment. After considering its original choice, the Commission has decided to propose modifications to existing legislative instruments and introduce new ones⁸¹.

The European Union (EU) Climate Law implemented the European Green Deal and constituting an "umbrella", under which a newly established 55% greenhouse gas reduction objective for 2030 and the ambitious goal of climate neutrality is set and the EU Commission suggested a package of reforms regarding the European energy and climate legislation⁸². Almost every single one of the energy and climate related pieces of legislation are planned to be amended, to strengthen their scopes and end goals so as to achieve the 55% GHG reduction till 2030. An insightful observation would be that the target is not divided among member - states, but remain a general one.

The present EU emission trading system, the effort sharing regulation among the Member -States, the market stability reserve decision⁸³, energy taxation and efficiency and RED are numbered among the suggested reforms. A second EU ETS including the building and transport sector, the Carbon Border Adjustment Mechanism and the Social Climate Fund were proposed. The architecture of the suggested package illustrated the general pursuit of the European Commission to implement its legislation a mix of price based and regulatory policies and mechanisms⁸⁴. The EU Climate Law aspired to improve mitigation and adaptation targets and to adjust the EU' s Governance Regulation to the up-to-date objectives. The latter is, as mentioned above, the legal instrument for the monitoring process of the progress in regard to RES, energy efficiency and overall GHG emissions reduction through National Energy and Climate Plans.⁸⁵

In particular the aforementioned amendments and addenda are concentrated in the following: it was proposed that the EU ETS enlarges its scope covering all intra-EU and, partially, extra-EU maritime transport⁸⁶. Following the four-year phase-in period 100% of intra-EU maritime emissions and 50% of extra-EU ones would be included to allowance trading⁸⁷. Voyages between member-states and emissions on a European dock represent the

⁷⁹ European Green Deal (n.d.) https://www.consilium.europa.eu/en/policies/green-deal/

⁸⁰ Sabine Schlacke, Helen Wentzien, Eva-Maria Thierjung, Miriam Köster, Implementing the EU Climate Law via the 'Fit for 55' package, Oxford Open Energy, Volume 1, 2022, https://doi.org/10.1093/ooenergy/oiab002
⁸¹ Ibid

⁸² Ibid

⁸³ Decision (EU) 2015/1814 of the European Parliament and of the Council of 6 October 2015 concerning the establishment and operation of a market stability reserve for the Union GHG emissions trading scheme and amending Directive 2003/87/EC, OJ 2015 L 264, 1 last amended by Directive (EU) 2018/410 of the European Parliament and of the Council of 14 March 2018, OJ 2018 L 76, 3
⁸⁴ Ibid

⁸⁵ EUR-Lex - 52021SC0084 - EN - EUR-Lex. (n.d.). https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=celex:52021SC0084

⁸⁶ Register of Commission Documents. (n.d.). https://ec.europa.eu/transparency/documents-register/detail?ref=COM(2021)551

⁸⁷ Sabine Schlacke, Helen Wentzien, Eva-Maria Thierjung, Miriam Köster, Implementing the EU Climate Law via the 'Fit for 55' package, Oxford Open Energy, Volume 1, 2022, oiab002, https://doi.org/10.1093/ooenergy/oiab002

intra-EU maritime emissions⁸⁸, while the extra-EU maritime emissions define the voyages between member-states and third countries⁸⁹.

In addition, a proposal for ETS 2 was quite an addition as it deems to regulate the buildings and transport sectors⁹⁰. However, this would be a "double regulation", as those are already covered by the effort sharing mechanism⁹¹. The two emission trading systems are interlinked (i.e. their monitoring, reporting obligations) and operate in parallel, but individually. They will not be able to trade allowances with one another⁹². The major difference one may recognize is the "upstream approach" of the EU ETS 2⁹³. The obligations instead of being directly imposed on emitters, are linked to the activity of emitting itself (in buildings and transport sectors). Not to mention that free allocation is not suggested.

Finally, a Carbon Border Adjustment Mechanism consistent with international trade law⁹⁴ was presented by EU Commission as a directly applicable to member-states regulation aiming at preventing the risk of "carbon leakage"⁹⁵. The latter occurs when businesses transfer the production line or import from other countries, which are more flexible with their economic costs related to climate policies. It is supplementary of EU ETS, replicating it to protect the internal market from carbon intensive third countries⁹⁶. Subsequently, it remains to be seen if these ambitious policies, mechanisms and time-slots set by the EU are feasible or not.

2.2 International dimension

(i) Kyoto Protocol

The Kyoto Protocol, a legally binding international agreement adopted in 1997 (COP3 Kyoto, Japan) under the United Nations Framework Convention on Climate Change (UNFCCC), laid out specific emission reduction targets for participating countries⁹⁷. Each government that ratified the Protocol was required to implement policies and measures to ensure compliance with their individual obligations to reduce greenhouse gas emissions. These policies and measures were to be implemented within the respective jurisdictions of each government and were subject to monitoring, reporting, and verification by the UNFCCC. The goal of the Protocol was to promote collective action among nations to address global climate change by reducing emissions of greenhouse gases, which are primarily responsible for global warming and its associated impacts⁹⁸.

⁸⁸ Art. 3 ETS Directive Proposal

⁸⁹ ibid

⁹⁰ Sabine Schlacke, Helen Wentzien, Eva-Maria Thierjung, Miriam Köster, Implementing the EU Climate Law via the 'Fit for 55' package, Oxford Open Energy, Volume 1, 2022, oiab002, https://doi.org/10.1093/ooenergy/oiab002

⁹¹ Art. 2 para. 1 ESR

⁹² Sabine Schlacke, Helen Wentzien, Eva-Maria Thierjung, Miriam Köster, Implementing the EU Climate Law via the 'Fit for 55' package, Oxford Open Energy, Volume 1, 2022, oiab002, https://doi.org/10.1093/ooenergy/oiab002

⁹³ Register of Commission Documents. (n.d.). https://ec.europa.eu/transparency/documents-register/detail?ref=COM(2021)551

⁹⁴ Mehling et al., Designing Carbon Border Adjustments for Enhanced Climate Action, American Journal of International Law 2019, 433–481

⁹⁵ Sabine Schlacke, Helen Wentzien, Eva-Maria Thierjung, Miriam Köster, Implementing the EU Climate Law via the 'Fit for 55' package, Oxford Open Energy, Volume 1, 2022, oiab002, https://doi.org/10.1093/ooenergy/oiab002

⁹⁶ Ibid

⁹⁷ The US has not ratified the Kyoto Protocol and Canada withdrew in 2011.

⁹⁸ Faure, M., & Peeters, M. Liability and Climate Change. Oxford Research Encyclopedia of Climate Science. Retrieved 5 Mar. 2023,

The European Union⁹⁹ (EU) demonstrated a strong commitment to meeting its obligations under the Kyoto Protocol by implementing a comprehensive package of regulations designed to reduce greenhouse gas emissions. These regulations were developed to ensure that the EU complied with its emissions reduction targets as set out in the Protocol¹⁰⁰. The package of rules introduced by the EU included a range of measures aimed at reducing emissions from various sectors of the economy, including energy production, transport, industry, and agriculture. These measures included the establishment of emissions trading schemes, the promotion of renewable energy sources, the implementation of energy efficiency measures, and the development of low-emission transport options.

The primary regulatory mechanisms encompassed (i) the implementation of an EU-wide Emissions Trading System (EU-ETS) and (ii) the adoption of an additional framework aimed at addressing activities that fall beyond the scope of the EU-ETS. The strategy adopted by the European Union exemplified ex-ante emissions control, when the government established standards. However, the European Union's approach was characterized by its adoption of a market-oriented strategy, as opposed to the imposition of particular technological requirements for entities emitting pollutants¹⁰¹.

The primary objective of the legislation was to mitigate the release of greenhouse gases. This objective was manifested through the establishment of an overall limit (cap) on emissions inside the EU Emissions Trading System (EU ETS), as well as the imposition of emission limits by member states for emissions that fall outside the scope of the EU ETS. The implementation of these caps is intended to produce the desired environmental impact, while also creating possibilities for emissions trading among regulated entities (including both EU ETS emitters and member states with individual emission restrictions). This approach attempted to enhance the feasibility of cost-effective solutions.¹⁰²

(ii) Paris Agreement

As briefly stated in the first chapter, the Paris Agreement constitutes a turning point regarding climate change mitigation and adaptation efforts and climate change litigation, as well. It was during COP 21 in Paris that the agreement was adopted despite the diametric opposite views and interests of each country¹⁰³. A massive success, comparing to Copenhagen, for all groups affected directly or indirectly from the destructive effects of climate change. The main objective of maintaining the temperature at certain levels (2° C or 1.5° C, preferably) is supplemented by various side objectives, support mechanisms and commitments.¹⁰⁴ One of the most crucial ones is the adaptation mechanisms for the fight against climate change. Not to mention that financial growth has to go hand in hand with low emissions policies. It is the balance between the human-generated emissions and GHG sinks that needs to be reached.¹⁰⁵ The agreement, also, provides both bottom-up and top-down approaches regarding the global climate governance.

The parties are requested to deliver nationally determined contributions (NDCs) while enforcing their national strategies. Some keywords for the successful fulfillment of the above are: transparency, clear reporting and compliance. A clear distinction is stated

105 Ibid

⁹⁹ The European Union is the only party to the UNFCCC, the Kyoto Protocol, and the Paris Agreement that is a regional organization. The Paris Agreement (article 4, paragraphs 16, 17, and 18) provides that the EU can act jointly with its member states in preparing, communicating, and maintaining successive nationally determined contributions.

¹⁰⁰ Ibid

¹⁰¹ Ibid

¹⁰² Ibid

¹⁰³ Radoslav S. Dimitrov; The Paris Agreement on Climate Change: Behind Closed Doors. Global Environmental Politics 2016; 16 (3): 1–11. doi: https://doi.org/10.1162/GLEP_a_00361

¹⁰⁴ Fawzy, S., Osman, A.I., Doran, J. et al. Strategies for mitigation of climate change: a review. Environ Chem Lett 18, 2069–2094 (2020).

between developed and developing countries. Financial and technical measures are to be undertaken for the second group of countries. In addition, the agreement introduced two *international market mechanisms*¹⁰⁶, pursuant art. 6, (i) cooperative approaches and (ii) the sustainable development mechanism, to meet their national goals, and eventually the sole international goal of limiting temperature levels at 2° C if not 1.5° C.

Despite its global success there are multiple drawbacks worth-mentioning. Some delegations opted for the lack of global transparency and others for non-binding commitments.¹⁰⁷ Treaties and agreements are an evident example of the quote: "words matter". On the one hand, it was the last minute that the US delegation insisted on the weakening of finance related binding commitments using "should" instead of "shall" for the developed countries. This "technical" amendment implied less legally binding activities. On the other hand, China aimed to meticulously avoid transparency of national policies at an international level.

Despite being a binding international agreement, the Parties involved in the Paris Agreement were careful in formulating the language pertaining to Nationally Determined Contributions (NDCs) and other mitigation commitments to ensure that these specific obligations would not be binding as a matter of international law¹⁰⁸. The Agreement does not provide for any legal mechanisms to enforce or compel Parties to implement their NDCs, nor does it explicitly establish or necessitate any legal basis for enforcing the NDCs under national law. The inclusion of non-binding provisions was a crucial factor in gaining support from the United States for the Agreement.

However, the non-binding nature of the NDCs may hold less significance than initially apparent. The Paris Agreement anticipated the development of a standardized "rulebook" that would outline a transparent system enabling the international community to monitor and assess the implementation of commitments¹⁰⁹. Moreover, national courts in several countries are invoking or enforcing the Paris Agreement in their evaluations of the adequacy of climate mitigation measures. While the Paris Agreement does not enforce NDCs through legal means, its emphasis on a transparent monitoring system and the growing recognition of its principles in domestic courts indicated that the non-binding nature of the NDCs may have a limited impact¹¹⁰.

Taking everything into account and to the extent that one can evaluate the Paris agreement so far the following remarks are highlighted. Climate justice, the rights of the indigenous people, gender and inter-generational equity stand out. Commitment to act, progression of NDC's, international accountability and transparency are some of the wins.¹¹¹ In a political point of view, the agreement gave an advantage to the countries of the North, the developed ones and not the developing energy-intensive countries. The least favored regions were the African countries and other less developed ones. Additionally, it presented weak adaptation strategies and excluded liability claims and compensation for loss and damage.¹¹² One could characterize the agreement as a controversial one and difficult to evaluate, as it presents a *multifaceted mix of mandatory and voluntary clauses*.

Examining the current NDCs it is notable that they are not as ambitious as the parties would prefer. To reach the desirable goal of 2° C or even better 1.5° C the governments should pick

¹⁰⁶ Ibid

¹⁰⁷ Radoslav S. Dimitrov; The Paris Agreement on Climate Change: Behind Closed Doors. Global Environmental Politics 2016; 16 (3): 1–11. doi: https://doi.org/10.1162/GLEP_a_00361

¹⁰⁸ David Hunter, Wenhui Ji, & Jenna Ruddock, The Paris Agreement and Global Climate Litigation after the Trump Withdrawal, 34 Md. J. Int'l L. 224 (2020).

¹⁰⁹ Ibid

¹¹⁰ Ibid

¹¹¹ Radoslav S. Dimitrov; The Paris Agreement on Climate Change: Behind Closed Doors. Global Environmental Politics 2016; 16 (3): 1–11. doi: https://doi.org/10.1162/GLEP_a_00361

¹¹² Ibid

up the pace.¹¹³ However, raising the expectations is not the answer, if the strategies set are not feasible. The up-to-date NDCs aim to diminish 2030 emissions by 5.5 gigatons of carbon dioxide equivalent (GtCO2e) more than the previous NDCs. This corresponds to the annual emissions of the US and illustrates a 7% reduction from 2019 standards. It may seems enough, but it is not even close to the 43% reduction that is required to reach the 1.5° C.

With regard to form and content, the mitigation mechanisms of the recent NDCs are more sturdy than the former ones¹¹⁴. The number of targets covering multiple sector and gases constitute an optimistic fact. Transparency and connection to long-term goals and implementation data (such as NAPs) are key elements of NDCs. On the contrary, slow improvement, periodic vagueness and inadequacy are some of the negative characteristics.¹¹⁵ Finance and national political economy should be taken under consideration as well. The trajectories demonstrate a quite pessimistic future, as continuing with the same pace would mean that the target is lost by a long shot.

(iii) Aarhus Convention

Forty-seven parties (including the EU) signed the Convention on "Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters" (the "Aarhus Convention¹¹⁶"), a multilateral environmental agreement¹¹⁷. The Aarhus Convention, as an international treaty, follows the interpretive guidelines of the Vienna Convention on the Law of Treaties and is to be interpreted in good faith based on the ordinary meaning of the terms used in the context of the treaty and its objectives.¹¹⁸ Additionally, being a treaty that combines environmental and human rights, a purposive approach is appropriate as human rights treaties are often interpreted in this way to ensure maximum protection of human rights. The three main purposes of the Convention, which are relevant to the issue of standing, are promoting environmental rights, ensuring government accountability in environmental decision-making, and promoting environmental stewardship¹¹⁹.

Therefore, since its ratification the EU has committed to grant broad access regarding environmental matters at both national and EU justice systems. It may not be invoked by domestic courts, but a quick mention is deemed necessary. The Convention recognizes that everyone has the right to live in an environment that is adequate for their health and wellbeing, and the preamble highlights the importance of government accountability in environmental decision-making, protecting and improving the environment, promoting sustainable and environmentally sound development, and recognizing the role individuals and NGOs can play in environmental protection.

The Aarhus Convention is considered to be a crucial part of the EU legal system and is enforceable by both EU member states and institutions according to Article 216 para 2 of the Treaty on the Functioning of the European Union.¹²⁰ In EU jurisdiction two directives, i.e. Directive 2003/4/EC and Directive 2003/35/EC, and one regulation, i.e. Regulation

¹¹³ Fransen, T. (n.d.). The State of Nationally Determined Contributions: 2022. World Resources Institute. https://www.wri.org/research/state-nationally-determined-contributions-2022

¹¹⁴ Ibid 115 ibid

¹¹⁶ Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, Aarhus, signed on 25 June 1998, entered into force on 30 October 2001 (Aarhus Convention)

¹¹⁷ Voigt, C. (2019). International Courts and the Environment: The Quest for Legitimacy. In C. Voigt (Ed.), International Judicial Practice on the Environment: Questions of Legitimacy (Studies on International Courts and Tribunals, pp. 1-22). Cambridge: Cambridge University Press. doi:10.1017/9781108684385.001

¹¹⁸ Orla Kelleher, Systemic Climate Change Litigation, Standing Rules and the Aarhus Convention: A Purposive Approach, Journal of Environmental Law, Volume 34, Issue 1, March 2022, Pages 107-134, https://doi.org/10.1093/jel/eqab037

¹¹⁹ Ibid

¹²⁰ Ibid

1367/2006/EC (the *Aarhus Regulation*), were adopted for the establishment of a legal framework.

There are three pillars governing the Aarhus Convention: (i) access to information, (ii) public participation and (iii) access to justice.¹²¹ The first focuses on the public's right to gain access to environmental data held by national or regional authorities, such as governmental policies and data regarding national safety and health that are affected by the state of the environment. The second focuses on the public's right to be a part of environmental decision making. And, the third focuses on the public's right to resort on courts or other independent bodies to safeguard the two above-mentioned rights and the States' compliance with environmental law, in general.

Following the ratification of the Aarhus Convention, environmental NGO's acquired better standing requirements for direct lawsuits is relevant cases. The concept of standing presented a significant obstacle in cases related to systemic climate mitigation, due to the complex nature of anthropogenic climate change and its effects. Climate change has multiple indirect and cumulative causes, and its impacts are indirect, occur at multiple levels, and vary for different groups. The widespread and far-reaching implications of climate change impact the interests and rights of a diverse cross-section of society¹²², making it difficult to establish a clear nexus between the actions of individual states and the harm experienced by specific individuals or groups. This makes it difficult for courts to determine whose interests or rights should be considered. Climate change affects everyone and therefore, everyone may be affected, to varying degrees, by a particular state's climate mitigation policies.¹²³

The Convention, seen as a mechanism for advancing legal accountability in the context of environmental decision-making, advocates for a comprehensive understanding of its provisions, therefore enabling people and non-governmental organizations to initiate legal proceedings pertaining to climate injustices.

Examining some key policies and legislative pieces regarding energy and climate change both in a European and International framework, it is evident that governments across the EU and the globe aspire to strengthen the relevant frameworks. The ultimate goal is climate neutrality by mid-century. Ambitious targets on the reduction of greenhouse gas emissions play the leading role in each scheme. However, there are stakeholders that the burning of fossil fuels is of their interest and the turn to RES threatens their capital-intensive investments. Grandfathering rights and transitional periods may ensure the feasibility of those investments for a period of time. Taking everything into account, it is apparent that the renewable energy sources will prevail in the long run. Individuals and several environmental organisations aspire to facilitate through litigation the energy transition as it will be discussed in the following chapters.

V. Chapter three: Legal Issues in Climate Change Litigation

In the present chapter the author will focus on key points of climate change litigation, arguments from the most notorious legal cases to examine whether they influenced energy transition. In accordance with climate specialists and activists the transition from fossil fuels

¹²¹ Ibid

¹²² There are certain segments of society, such as women, elderly individuals, children, people of color, disabled individuals, those living in poverty, citizens of developing countries, indigenous communities, future generations, and nature that are often marginalized and underrepresented (the "voiceless other") in Western legal systems due to the systemic exclusion of these groups from the notion of a legal person. ¹²³ Ibid

to sustainable and renewable energy [aka energy transition] would be intensified¹²⁴ provided that pro climate change decisions obliged states to mitigate their emissions. It is was the same year as the very public Urgenda case that the Conference of the Parties agreed on the Paris Agreement.

However, there is a percentage of experts and academics who argue that the involvement of the judiciary on governmental decisions conceals various dangers. The separation of powers and the "green tyranny of a minority" are a couple of their concerns¹²⁵. On the one hand the pro climate change litigation group views the judiciary as the savior that will put society back on a more sustainable living and will ensure the quality of life for future generations. On the contrary the governments, driven by their economic interests, are locked into a vicious cycle of "prisoners¹²⁶' dilemma" that leads to "the tragedy of the commons"¹²⁷. There are multiple theories on why activists shifted towards the judiciary instead of the legislative body (bodies) to realize their end goals, but their examination does not fall under the scope of this master thesis.

A brief summary of the three cases that will be discussed is deemed requisite for a better understanding.

(i) Urgenda Foundation v. State of the Netherlands ("Urgenda")

In 2015, a decision was issued on the Urgenda Foundation (i.e. an environmental group aiming to a rapid transition towards a sustainable society) v. State of the Netherlands (Ministry of Infrastructure and the Environment) (*Urgenda*) case, becoming the first judgement establishing the government's legal duty to prevent dangerous climate change¹²⁸ and the first time that a court designated in view of the *duty of care* a GHG emissions reduction target¹²⁹. The ECHR, the Dutch Constitution and an unwritten duty of care were the bases of the plaintiffs claim, obliging the government to safeguard its citizens' rights against the hazards of climate change.

In particular, the District Court of the Hague in its first instance decision ordered the Kingdom of Netherlands to diminish its greenhouse gas (GHG) emissions by at least 25% below the level of 1990 by the end of 2020. The parties appealed and the Court of Appeal of the Hague upheld the first degree judgement on a negligibly rational¹³⁰. The State filed a cassation, while announcing that it will adopt additional measures for the implementation of the decision. On December 2019, the Dutch Supreme Court upheld the decisions of first and second degree and held the government liable to reduce its GHG emissions urgently complying with its human rights obligations. It concluded that the State has a positive obligation taking climate action based on Articles 2 and 8 of ECHR. This is the world's first decision by a court forcing a State to reduce greenhouse gas emissions for reasons other than statutory mandates.

(ii) Friends of the Irish Environment CLG v. Government of Ireland

¹²⁴ Bergkamp, L., & Hanekamp, J. C. (2015). Climate change litigation against states: the perils of court-made climate policies. European Energy and Environmental Law Review, 24(5), 102-114.

¹²⁵ Ibid ¹²⁶ Ibid

¹²⁷ In the tragedy of the commons, nations that act rationally and strictly in their self-interest will make inefficient use of common resources, which, in the end, will harm their common interest.

¹²⁸ van Zeben, J. (2015). Establishing a Governmental Duty of Care for Climate Change Mitigation: willUrgendaTurn the Tide? Transnational Environmental Law, 4(2), 339–357. https://doi.org/10.1017/s2047102515000199

¹²⁹ Roger Cox (2016) A climate change litigation precedent: Urgenda Foundation V The State of the Netherlands, Journal of Energy & Natural Resources Law, 34:2, 143-163

¹³⁰ van Zeben, J. (2015). Establishing a Governmental Duty of Care for Climate Change Mitigation: willUrgendaTurn the Tide? Transnational Environmental Law, 4(2), 339–357. https://doi.org/10.1017/s2047102515000199

Friends of the Irish Environment CLG v. the Government of Ireland and the Attorney General (Supreme Court case), that was first filed at the High Court of Ireland in 2017, is also a known case whose applicant (FIE) claimed that Ireland's National Mitigation Plan of 2017 violated a number of legal obligations under Ireland's Climate Action and Low Carbon Development Act 46 of 2015, the Irish Constitution, and certain human rights under the European Convention on Human Rights¹³¹.

Ireland has the third highest per capita GHG emissions and is already dealing with a rise in average temperatures and ocean acidification due to climate change. Based on current and future climate change repercussions FIE asserted in the Supreme Court case that the State must reach the required 2020 and 2030 GHG emissions targets as long as further long-term ones underlying that its Mitigation Plan holds a high position in the country's climate related policies¹³². FIE pleaded with the court to vacate the government's decision to adopt the Mitigation Plan and to alter it so as to decrease greenhouse gas emissions effectively.

The court, however, rejected FIE' s suit and ruled in favor of the government, arguing that it would be inappropriate for a court of law to conduct a judicial review of a governmental policy (separation of powers). FIE appealed the court's decision on November 2019 to the Court of Appeal and at the same time submitted an application of leapfrog to go directly to the Supreme Court¹³³. The Supreme Court heard the case in February 2020, determining that extraordinary circumstances justified direct appeal and that remedial environmental measures should be implemented as soon as possible¹³⁴. The Supreme Court issued a decision annulling the Mitigation Plan, which in accordance to the Court vaguely described Ireland's 2050 climate change goals.¹³⁵

(iii) Notre affaire a tous and others v. France

After sending a letter of formal notice to the French Prime Minister four NGOs (namely *Fondation pour la Nature et l'Homme (FNH), Greenpeace France, Notre Affaire à Tous and Oxfam France*) filed a lawsuit with the Administrative Court of Paris against the State of France for its insufficient action on climate change policies¹³⁶. The plaintiffs asserted that the French government delayed or abstained from adopting the necessary mechanisms for the limitation, if not the elimination, of the climate change risks and hazards¹³⁷. The plaintiffs argued that the State's obligation to address the climate crisis stems from general legal duties under the French Charter for the Environment, the ECHR, and the general legal principle affirming everyone's right to live in a healthy and sustainable environment¹³⁸.

The recognition of the link between human rights and development was very much apparent and supported the plaintiffs argument of a fundamental right to a sustainable climate system¹³⁹. The Stockholm Declaration, the Rio Declaration, the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, the Paris Agreement, and decisions of the European Parliament were taken into account. In that way the domestic court gave international perspective and substance to the case. According to the NGOs the

133 Ibid

135 Ibid

¹³¹ Van Wyk, S. (2022). Climate Change Litigation: Determinations of the Supreme Court of Ireland on the National Mitigation Plan. Journal of Environmental Law and Litigation, 37, 101-122.

¹³² Friends of the Irish Environment v. Ireland. (2022, October 30). Climate Change Litigation. http://climatecasechart.com/non-us-case/friends-of-the-irish-environment-v-ireland/

¹³⁴ Ibid

¹³⁶ Notre Affaire à Tous and Others v. France. (2022b, November 22). Climate Change Litigation. http://climatecasechart.com/non-us-case/notre-affaire-a-tous-and-others-v-france/

¹³⁷ Gallant, J. B. (2023b, January 6). Notre Affaire à Tous v. France. CLX Toolkit. https://clxtoolkit.com/casebook/notre-affaire-a-tous-v-france/

¹³⁸ Ibid ¹³⁹ ibid

¹³⁹ IDIC

French State has a general and a specific duty to act on mitigating climate change impacts and safeguard the citizens' rights¹⁴⁰.

3.1 Duty of Care

State's liability regarding the implementation of ambitious mitigation policies has long been in the arsenal of plaintiffs. But it was not until 2015 with the Urgenda decision that a government was held responsible for not mitigating the State's greenhouse gas emissions, in accordance with the State's obligations, even though they are proven to be the primary cause of athropogenic climate change. All of the above-mentioned cases highlight the State's legal duty of care to implement its mitigation and adaptation strategies and mechanisms against climate change disastrous effects. However, the court meticulously managed to abstain from specifying how the government should meet the reduction pledge.

Moreover, the case of Notre Affaire a Tous v. France exemplified the ripple effect of the Urgenda v. the Netherlands ruling¹⁴¹. Plaintiffs pointed out that the French government had both general and legal duties to take measures against climate change. They result from the French Charter¹⁴² for the Environment, ECHR and the "general principle of law providing the right of every person to live in a preserved climate system"¹⁴³. Considering the aforementioned, it is incumbent upon the government to fulfill its obligation of ensuring the well-being of its citizens by doing all requisite actions to detect, mitigate, minimize, and provide recompense for the ramifications of climate change. ¹⁴⁴"

Liability due to greenhouse gas emission may occur public (i.e. international, administrative and criminal liability) and private law (tort law liability).¹⁴⁵ Depending on the specific part of the world and the relevant jurisdiction, individuals and legal entities (i.e. States and companies) may be sued by citizens and/ or legal entities such as (environmental) NGO's, authorities or companies and be held responsible for emitting GHG¹⁴⁶. The doctrine of law and economics - the theoretical approach to law ¹⁴⁷ - and the certain legal instruments such as regulation (including taxation and emissions trading) and tort law liability are being thoroughly discussed in the literature, but their examination does not fall under the scope of this master thesis.

On the one hand, the central idea in the environmental framework is that liability rules oblige the potential polluter to compensate for the harm they have caused¹⁴⁸. Knowledge of the probable liability and compensation would incentivize the potential polluter in investing

¹⁴⁰ Notre Affaire à Tous and Others v. France. (2022b, November 22). Climate Change Litigation. http://climatecasechart.com/non-us-case/notre-affaire-a-tous-and-others-v-france/

¹⁴¹ Gallant, J. B. (2023c, January 6). Notre Affaire à Tous v. France - CLX Toolkit. CLX Toolkit. https://clxtoolkit.com/casebook/notre-affaire-a-tous-v-france/

¹⁴² Citizens' constitutional rights to live in a healthy and ecologically balanced environmen.

¹⁴³ Gallant, J. B. (2023c, January 6). Notre Affaire à Tous v. France - CLX Toolkit. CLX Toolkit. https://clxtoolkit.com/casebook/notre-affaire-a-tous-v-france/
¹⁴⁴ Ihid

¹⁴⁵ Faure, M., & Peeters, M. Liability and Climate Change. Oxford Research Encyclopedia of Climate Science. Retrieved 25 Mar. 2023,

¹⁴⁶ Ibid

¹⁴⁷ In the realm of environmental law and economics, the conventional objective of (environmental) law has been characterized as the process of internalizing externalities. The process of internalizing externalities does not need the complete elimination of all environmental damage without considering any associated costs. The social desirability of preventing all damage is limited due to its high cost implications. The application of cost-benefit analysis is necessary in order to ascertain the most optimal or efficient levels of pollution. In theory, the locations of these entities may be identified at the point when the incremental costs associated with implementing pollution control measures are equivalent to the incremental benefits derived from enhanced environmental conditions. Within the framework of climate change, externalities refer to the adverse external impacts resulting from the production of greenhouse gases, which subsequently contribute to global warming and, consequently, climate change.

¹⁴⁸ Faure, M., & Peeters, M. Liability and Climate Change. Oxford Research Encyclopedia of Climate Science. Retrieved 25 Mar. 2023,

in economically feasible preventive measures¹⁴⁹. However, applying liability rules to climate change has proven to be extremely difficult due to the uncertain causal link between emissions and the potential harm¹⁵⁰. Further, it is highly improbable that the potential emitter will predict the exact level of GHG emissions he can emit.

On the other hand, in a regulatory framework the competent authorities will fix ex-ante in a standard and uniform way the rules the potential emitter shall follow¹⁵¹. However, regulation in most cases is static and cannot keep up with the technological advancements. As a result regulation quickly becomes outdated, while liability rules are more adaptable to current needs and circumstances¹⁵².

In most cases and jurisdictions regulation for mitigating GHG is preferred. It is worthmentioning that stakeholders (i.e. the industry) will try to influence the regulation to their advantage¹⁵³. For instance, the so-called "grandfather clauses" determine that certain provisions of the regulation will not apply to companies and their products, that are governed under different regulatory framework. Thus far, international treaties have not succeeded in regulating GHG emissions efficiently. The Kyoto Protocol, one of the most effective mechanisms, has positive results, only if and when the State consents and decides to comply¹⁵⁴.

A few notes regarding the Urgenda case would be of significant value to understand how duty of care is the basis of climate change litigation. Urgenda v. the Netherlands due to its specific circumstances and jurisdiction was based on tort law showing that tort law may have a complementary role to public regulation¹⁵⁵. The District Court ordered the Netherlands to adopt more ambitious GHG policies by intervening into decision-making in a way¹⁵⁶. EU, at the time of the case, had committed to reduce its emissions by 80-90 per cent, by 2050, with two interim targets by 2020 and 2030. In that context, the Netherlands was bound to reduce by 21 per cent under the EU ETS and by 16 per cent under the non-ETS sector. At the first-instance hearing it was disclosed that the Netherlands has failed to meet its short-term targets¹⁵⁷.

Section 6:162 of Dutch tort law, known as the "onrechtmatige daad", establishes the parameters of care that are deemed appropriate within this legal framework. ¹⁵⁸. The breadth of the duty of care has been delineated by the Supreme Court through the establishment of four inquiries. The District Court has identified five factors that pertain to the government's duty of care towards Urgenda, in light of the following inquiries: (i) The extent and magnitude of the harm caused by climate change, (ii) The predictability of such harm, (iii) The probability of dangerous climate change resulting from human activities, (iv) The nature of the government's actions (or lack thereof) and (v) The discretion granted to the government under public law.¹⁵⁹".

¹⁵¹ Ibid ¹⁵² Ibid

¹⁴⁹ Ibid

¹⁵⁰ Ibid

¹⁵³ Maloney, Michael T. and McCormick, Robert E. (1982) "A Positive Theory of Environmental Quality Regulation," *Journal of Law and Economics*: Vol. 25: No. 1, Article 7.

¹⁵⁴Faure, M., & Peeters, M. Liability and Climate Change. Oxford Research Encyclopedia of Climate Science. Retrieved 25 Mar. 2023,

¹⁵⁵ Ibid

¹⁵⁶ Ibid

¹⁵⁷ Petra Minnerop (2019) Integrating the 'duty of care' under the European Convention on Human Rights and the science and law of climate change: the decision of The Hague Court of Appeal in the Urgenda case, Journal of Energy & Natural Resources Law, 37:2, 149-179, DOI: 10.1080/02646811.2019.1584441

¹⁵⁸ van Zeben, J. (2015). Establishing a Governmental Duty of Care for Climate Change Mitigation: willUrgendaTurn the Tide? Transnational Environmental Law, 4(2), 339–357. https://doi.org/10.1017/s2047102515000199

The Court specifically considered current, the (technical) availability of mitigation methods, and the cost-effectiveness of these mitigation measures in answering these questions. Further, Urgenda presented numerous supplementary legal bases for the government's duty of care under Dutch constitutional and international law. With regard to both plaintiffs, the Court dismissed the existence of any immediately enforceable rights based on the above-mentioned articles. Alternatively, the Court emphasized on the significance of the interpretation of the duty of care under Section 6:162, as well as the five thoughts listed above¹⁶⁰.

The Hague Court of Appeal upheld the first instance decision using a different reasoning¹⁶¹. The former based its case on national law¹⁶² while the latter interpreted and directly enforced ECHR¹⁶³. Further, it based its standard of duty of care on climate scientific data, i.e. the IPCC reports and the Paris Agreement and the globally agreed goal to limit temperature to at least 2° C by the end of the century¹⁶⁴. The Hague Court of Appeal elaborated on the role energy consumption has played on global warming. It highlighted the linear relationship between anthropogenic emissions and global warming¹⁶⁵. Not to mention that warming¹⁶⁶ effect occurs decades after the emissions have taken place and there is a worldwide consensus that the global temperature should not be above 2° C, or better in accordance with newer climate science reports above 1,5° C. In response to that data national, regional and transnational treaties were drawn up.

Articles 2 and 8 of ECHR¹⁶⁷, as described below, formed the basis of the governmental duty of care¹⁶⁸, as they apply in environmental related situations threatening the right to life and family life. In accordance with the Court, the duty of care orders for preventive actions to be taken, provided a hazardous act, activity or natural event has taken place. However, in accordance with the Court, Dutch emissions fell by only 13% in 2017. Thus, for the Netherlands to meet the aim of 49% by 2030, a significantly higher effort would be required. The Court emphasized that GHG emissions remain in the atmosphere for an extended period of time, contributing to global warming.

Therefore, the State should strive for a higher emissions reduction by 2020. The Court verified this pursuant the 2013 UNEP Emissions Gap Report and the 2017 report of the Netherlands Environmental Assessment Agency (PBL) ¹⁶⁹. Consequently, the Court reached two conclusions: (i) Articles 2 and 8 of ECHR applied directly in national law and (ii) these

¹⁶⁰ Ibid

¹⁶¹ Petra Minnerop (2019) Integrating the 'duty of care' under the European Convention on Human Rights and the science and law of climate change: the decision of The Hague Court of Appeal in the Urgenda case, Journal of Energy & Natural Resources Law, 37:2, 149-179, DOI: 10.1080/02646811.2019.1584441

¹⁶² Section 162 of Book 6 of the Dutch Civil Code (Section 6:162)

¹⁶³ van Zeben, J. (2015). Establishing a Governmental Duty of Care for Climate Change Mitigation: willUrgendaTurn the Tide? Transnational Environmental Law, 4(2), 339–357. https://doi.org/10.1017/s2047102515000199

¹⁶⁴ Ibid

¹⁶⁵ Petra Minnerop (2019) Integrating the 'duty of care' under the European Convention on Human Rights and the science and law of climate change: the decision of The Hague Court of Appeal in the Urgenda case, Journal of Energy & Natural Resources Law, 37:2, 149-179, DOI: 10.1080/02646811.2019.1584441

¹⁶⁶ The phenomenon of global warming exacerbates the intensity of detrimental climatic consequences. Moreover, the Court clearly cited the Intergovernmental Panel on climatic Change's Fifth Assessment Report (IPCC AR5) in acknowledging the potential for a tipping point to be reached, leading to sudden and significant climatic change. Petra Minnerop (2019), 157

¹⁶⁷ The aforementioned clauses formed the foundation for the government's duty of care, covering responsibilities of both a positive and negative nature with regards to the interests protected by these articles. The positive responsibilities encompass the governmental duty to implement concrete actions with the goal of preventing future violations of these interests, also known as a duty of care., Petra Minnerop (2019), 157

¹⁶⁸Petra Minnerop (2019) Integrating the 'duty of care' under the European Convention on Human Rights and the science and law of climate change: the decision of The Hague Court of Appeal in the Urgenda case, Journal of Energy & Natural Resources Law, 37:2, 149-179, DOI: 10.1080/02646811.2019.1584441
¹⁶⁹ Ibid

provisions imposed a duty of care for the State. The Court established the concrete criteria for this duty of care based on the available scientific information and the Paris Agreement's internationally agreed-upon temperature goal¹⁷⁰.

In its conclusion, the Court of Appeal underlined that State failed to comply with its duty of care pursuant Articles 2 and 8 of ECHR by not be willing to reduce its GHG emissions at least 25% by end 2020¹⁷¹. Therefore, the then-current 19-27 percent was untenable when faced with such catastrophic repercussions as identified by the Court.

The Hague Court of Appeal defined the level of the State's human rights obligation using international environmental standards that are specified by scientific evidence and approved by international agreements. The human rights obligation became effective, and the environmental standard was enforced. Short-term and medium-term targets served as indicators that the long-term goal, and hence the temperature goal for the end of the century, can be attained¹⁷². Therefore, the government was held accountable pursuant its duty of care, provided it would likely not meet its long-term goal, for whatsoever reason. This reasoning implied that human rights would be helpful in resolving the issue of how to hold governments responsible for their lack of action or ambition relating to climate change.

Further, the Hague Court of Appeals took into account of the specified global reduction targets. However, it also acknowledged that up until 2011, the State had adopted a national target of 30 percent reduction, which was much higher than the EU one. Then, the State subsequently reduced its ambition to 20 percent following the EU-wide target¹⁷³. It should also be mentioned that, even though there was an international binding obligation for governments to submit ambitious NDCs, focusing on the efficient preparation, good communication and the pursuit of the appropriate mitigation measures, there is no legal obligation to achieve a certain result¹⁷⁴, but rather a good expectation to do so.

The Court of Appeal did not permitted the Netherlands to adopt a less ambitious (comparing to its 2011) climate target, due to its human rights obligations¹⁷⁵. This appears to be in accordance with international law pursuant the Paris Agreement expectations that a State's NDC shall be an improvement of its previous (before the issuance of the Agreement) one and display its highest ambition on reducing GHG emissions¹⁷⁶. Paris Agreement only allows for the adjustment of NDCs in order to increase the extent of ambition. It would be difficult to argue that, despite the wording of this provision, a scenario could occur in which a Party to the Agreement can legally replace an ambitious NDC with a less ambitious one.

The Contracting parties have agreed that only by meeting interim targets will their common goal of keeping temperature rise to far below 2°C, if not 1.5°C, be feasible. This implies twofold accountability: that targets are ambitious enough at each stage to attain the following target, and that states are on track to meet their short, medium, and long-term goals¹⁷⁷. The Hague Court of Appeal adopted the ECtHR's approach in defining the norm for the duty of care; it specified what the State must do to prevent a breach of its human rights duties and allows the State to decide how to comply with the decision.

Nevertheless, the application of human rights, as will be examined in detail in a following chapter, in climate change litigation seems to be instrumental in addressing the

¹⁷⁰ Ibid

¹⁷¹ Ibid

¹⁷² Ibid

¹⁷³ Ibid

 ¹⁷⁴ Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani (eds), International Climate Change Law (Oxford 2017),
 231

¹⁷⁵ Petra Minnerop (2019) Integrating the 'duty of care' under the European Convention on Human Rights and the science and law of climate change: the decision of The Hague Court of Appeal in the Urgenda case, Journal of Energy & Natural Resources Law, 37:2, 149-179, DOI: 10.1080/02646811.2019.1584441

¹⁷⁶ Ibid

¹⁷⁷ Ibid

"accountability issue of governments for outcome duties¹⁷⁸" such as the reduction of GHG emissions. Both ambition and achievement are requisite of the international temperature goal. Human rights prevent the adjustment to less ambitious goals. Further, the Paris Agreement underscores not only the likelihood of rising ambition over the period time, but also that Parties must maintain their NDCs and refrain from lowering targets.

The core disagreement between the parties focused on the the urgent mechanisms the government must follow to reduce the emissions¹⁷⁹. With the issuance of those decisions the Court confirmed that the national policies were insufficient. That failure triggered the government's duty of care towards the Dutch citizens and consequent liability for endangerment. The legal basis for this duty of care differs in first and second degree decisions, as above mentioned.

3.2 Standing Issues

Before delving more into the Court's interpretation of this provision, the initial challenge to plaintiffs' standing must be addressed briefly. Standing has long been an issue for parties involved in climate change litigation. In the United States, concerns of standing are intimately related to those of separation of powers, because the sort of challenge raised by the plaintiffs might be decisive for the court's capacity to hear the case¹⁸⁰. Further, in the Irish case, the Supreme Court, decided that FIE as a legal entity had no standing to challenge the Mitigation Plan based on the Constitution or the ECHR, but only on the grounds on the Climate Act¹⁸¹. Likewise, the Dutch government questioned Urgenda's status, as well as the action's ramifications for the separation of powers¹⁸².

The Court considered these questions separately, taking into account the "separation of powers" question as pertinent to its power to issue an order to act (but not to the solicited declaratory relief). Further concerning the question of standing, the Court accepted the stance of Urgenda, with reservation¹⁸³. The Court separated the issue of standing into two sections because Urgenda was acting both on its own behalf and on behalf of the 886 persons who had joined the claim. In accordance with the provisions outlined in the Dutch Civil Code, it is required that any legal body seeking to initiate a civil suit must demonstrate a direct and individual concern. Urgenda's commitment to direct and individualized attention is exemplified by its statutory provisions, which grant the organization the authority to start legal actions on behalf of the public or collective interest that it was specifically established to protect.

The Dutch government did not challenge the legal standing of Urgenda, since Urgenda asserted its representation of the Dutch population in addressing greenhouse gas emissions inside the boundaries of the Netherlands. However, there was skepticism over Urgenda's ability to represent the interests of future generations of Dutch people. Additionally, the notion of advocating for the well-being of present or future generations of individuals from countries other than the Netherlands was dismissed.¹⁸⁴. Moreover, the Court of Appeals refrained from delving into the matter of the rights of future generations. It emphasized that the present generation of Dutch citizens, specifically the younger individuals within this

¹⁷⁸ Ibid

¹⁷⁹ Ibid

¹⁸⁰ Van Zeben, J. (2015). Establishing a Governmental Duty of Care for Climate Change Mitigation: Will Urgenda Turn the Tide? Transnational Environmental Law, 4(2), 339-357.

¹⁸¹ Van Wyk, S. (2022). Climate Change Litigation: Determinations of the Supreme Court of Ireland on the National Mitigation Plan. Journal of Environmental Law and Litigation, 37, 101-122.

¹⁸² Van Zeben, J. (2015). Establishing a Governmental Duty of Care for Climate Change Mitigation: Will Urgenda Turn the Tide? Transnational Environmental Law, 4(2), 339-357.

¹⁸³ Ibid 184 Ibid

generation, will inevitably confront the detrimental consequences of climate change during their lifetimes if global emissions of greenhouse gases are not sufficiently mitigated.¹⁸⁵."

The Court stated that the Dutch Civil Code is intended to protect claims like Urgenda's. As a result, an environmental organization may file a claim aiming to improve environmental protection without having to identify or act on behalf of a specific group of people that are victims of hazardous climate change repercussions¹⁸⁶. To be more precise, the Court found Urgenda's statutory target of establishing a "more sustainable society, beginning in the Netherlands" to be intrinsically intergenerational and transboundary, giving Urgenda standing in all aspects of its claim. On the contrary, the Court did not address Urgenda's standing as the representative of the 886 individual claimants, underlying that taking their individual interests into account would not have changed the Court's decision¹⁸⁷.

The Irish Supreme Court had to decide on two standing issues in said case. Firstly, FIE argued that certain government decisions related to Ireland's plan for reducing greenhouse gas emissions, which FIE acknowledged as falling within governmental discretion, violated certain rights protected by the Constitution and the ECHR¹⁸⁸. The Supreme Court examined whether FIE had standing to raise these claims concerning individual rights under the Constitution and the ECHR¹⁸⁹. Secondly, the case also involved determining FIE's standing to challenge the validity of the Mitigation Plan under the Climate Act. The High Court initially ruled that FIE had the necessary standing for this claim, and the Supreme Court upheld that decision¹⁹⁰.

The Supreme Court had to determine whether FIE, as a corporate entity, had standing to assert constitutional rights. Irish law includes an exception that allows a corporate entity to bring a claim based on individual or personal rights, even if those rights do not belong to the entity itself¹⁹¹. However, the Supreme Court concluded that FIE, being a corporate entity, failed to provide a valid justification for being granted standing to bring these claims. The court stated that allowing FIE to have standing in relation to these particular claims would unreasonably relax the standing rules in Ireland, which was deemed unacceptable. Therefore, the Supreme Court ruled that FIE did not possess the standing to rely on constitutional rights in their claims before the court¹⁹².

Hence, the Supreme Court has determined that FIE is allowed to challenge the validity of the Mitigation Plan under the Climate Act, but it is crucial to note that this standing is granted based on the provisions of the Climate Act itself and not on any violation experienced by the corporate entity in relation to the Constitution or the ECHR¹⁹³.

3.3 Climate rights

Climate change litigation involves a human-rights dimension. Environmental degradation can have a huge impact on rights such as: right to a healthy environment, private life, proper housing, and so on, but it can also pose a major threat to the right to life. While the connection between the environment and human rights is indisputable, the precise humancentered obligations of States to mitigate climate change and prevent its negative

¹⁸⁵ Leijten, I. (2019). Human rights v. Insufficient climate action: The Urgenda case. Netherlands Quarterly of Human Rights, 37(2), 112–118.

¹⁸⁶ Van Zeben, J. (2015). Establishing a Governmental Duty of Care for Climate Change Mitigation: Will Urgenda Turn the Tide? Transnational Environmental Law, 4(2), 339-357.

¹⁸⁷ Ibid

¹⁸⁸ Van Wyk, S. (2022). Climate Change Litigation: Determinations of the Supreme Court of Ireland on the National Mitigation Plan. Journal of Environmental Law and Litigation, 37, 101-122.

¹⁸⁹ Ibid ¹⁹⁰ Ibid

¹⁹¹ Ibid

¹⁹² Ibid

¹⁹³ Ibid

repercussions are less explicit¹⁹⁴. Climate rights refer to individuals' and communities' rights to live in a safe and healthy environment, free of the detrimental effects of climate change. These rights are enshrined in international - and in some cases, national - human-rights legislation, as well as in many national constitutions and environmental laws. Among the most significant climate rights are¹⁹⁵:

The right to a healthy environment, which is the right to live in an environment that is not hazardous to one's health or well-being, as well as the right to be safe from environmental threats, especially those related to climate change. The right to information on the effects of climate change, as well as government and business responses to the crisis. The right to participate in environmental decision-making processes, particularly decisions on climate policy and action. The right to receive restitution for losses caused by climate change, such as property, livelihood, and cultural heritage.

These rights still continue to evolve, and not all countries have fully recognized or (successfully) defended them. But, through court cases, lobbying, and public pressure, there has been a growing push to identify and implement them. The goal is to ensure that, in the name of climate crisis, governments, corporations, and other stakeholders take the required steps to preserve the rights of individuals and communities. The ECtHR has characterised the ECHR as a "living instrument¹⁹⁶" that does not remain static to new standards, but evolves and leads to the harmonisation of human rights model across EU. In its jurisprudence, the ECtHR has accepted that existing ECHR rights, particularly Articles 2 and 8, may indirectly contribute to safeguard the environment. The concept of 'greening' the existing human rights framework inside the European Convention on Human Rights (ECHR) and evaluating the effectiveness of this approach may be compared to the explicit inclusion of environmental protection measures in other regional and national human rights treaties.

The Urgenda case exemplified the major importance of human rights as a basis for an obligation to address climate change, specifically through the lens of the European Convention on Human Rights (ECHR). This approach has the potential to be applied in similar fashion with other human rights treaties in different geographical areas and legal systems globally.¹⁹⁷. Due to the "severity of the consequences of climate change and the great risk of climate change occurring¹⁹⁸" the first instance court decided that the State of Netherlands had a duty to mitigate GHG emissions. The text references several legal sources, including Article 21 of the Dutch Constitution, EU emissions reduction targets, principles derived from the European Convention on Human Rights, the "no harm" principle of international law, the doctrine of hazardous negligence, the principle of fairness, and the precautionary principle.¹⁹⁹.

The courts dealt with the complicated issue of assessing a State's obligation concerning respect to a global problem to which it contributes only in a small percentage (the Netherlands' current GHG emissions are projected to constitute less than 0.5% of global GHG emissions). The two judgments (first and second degree) seeked to create techniques

¹⁹⁴ Leijten, I. (2019). Human rights v. Insufficient climate action: The Urgenda case. Netherlands Quarterly of Human Rights, 37(2), 112–118. https://doi.org/10.1177/0924051919844375

¹⁹⁵ E. (n.d.). European Convention on Human Rights - Official texts, Convention and Protocols. European Court of Human Rights. https://www.echr.coe.int/Pages/home.aspx?p=basictexts

¹⁹⁶ Petra Minnerop (2019) Integrating the 'duty of care' under the European Convention on Human Rights and the science and law of climate change: the decision of The Hague Court of Appeal in the Urgenda case, Journal of Energy & Natural Resources Law, 37:2, 149-179, DOI: 10.1080/02646811.2019.1584441

¹⁹⁷ Mayer, B. (2019). The State of the Netherlands v. Urgenda Foundation: Ruling of the Court of Appeal of The Hague (9 October 2018). Transnational Environmental Law, 8(1), 167-192. doi:10.1017/S2047102519000049

¹⁹⁸ Urgenda Foundation v. State of the Netherlands - Climate Change Litigation. (2020c, January 13). Climate Change Litigation. http://climatecasechart.com/non-us-case/urgenda-foundation-v-kingdom-of-the-netherlands/
¹⁹⁹ Ibid

for securing the State's commitment to reduce its GHG emissions within a specific time frame based on science, justice principles, and past statements made by the state²⁰⁰.

In 2015, the District Court of The Hague ordered the State of Netherlands to reduce greenhouse gas emissions by 25% by 2020 on the grounds of tort law²⁰¹ and the concept of hazardous negligence²⁰². The Court of Appeal of The Hague upheld this decision. In contrast to the District Court, it found that the government's existing climate change mitigation efforts are insufficient in light of the State's human rights obligations under art. 2 (*Right to Life*) and art. 8 (*Right to respect for private and family life*) of the ECHR²⁰³. The Court of Appeal in Hague concluded that by failing to reduce GHG emissions by at least 25% by end-2020, the government of Netherlands was acting in an unlawful way in contradiction with its duty of care under Articles 2 and 8²⁰⁴ of the ECHR²⁰⁵.

A similar suit was filed with the High Court of Ireland pointing that the Irish government violated ECHR, the Constitution and Ireland's Climate Action among other legislative pieces by approving the National Mitigation Plan in 2017²⁰⁶. The decision was overturned on appeal by the Supreme Court of Ireland on July 2020, and the National Mitigation Plan was annulled by the court²⁰⁷. This was the second Supreme Court decision, after the Urgenda Foundation v. The Kingdom of the Netherlands, that decided on the government's legal duty to prevent hazardous climate change²⁰⁸. However the Supreme Court ruled that FIE lacked standing to assert constitutional rights in their claims presented to the court²⁰⁹. In 2018, another suit²¹⁰ was filed in France by four NGOs arguing that the State's failure to take further action violated its duty of care under ECHR (among other pieces of legislation).

The success of the aforementioned cases highlighted the importance of increased climate action, as well as the role that courts and human rights might play in this direction. Linking the ECHR to complaints about environmental risks appears to be the right thing to do, not least because the European Court of Human Rights has explicitly recognized the Convention's protective role in this regard, albeit in cases involving individual complainants in which the harm had already occurred.

Based on case law developments, the European Court of Human Rights has established an interpretative approach to Articles 2 and 8²¹¹. According to this approach, states are

 ²⁰⁰ Mayer, B. (2019). The State of the Netherlands v. Urgenda Foundation: Ruling of the Court of Appeal of The Hague (9 October 2018). Transnational Environmental Law, 8(1), 167-192. doi:10.1017/S2047102519000049
 ²⁰¹ The violation of a 'duty of care' is a tortious act under Dutch law, and such duties can be derived from law or

of Appeal also rested on the underlying rationale that a breach of the duty of care would constitute a tortious act of the State under Dutch Civil law, Book 6 Article 162.

²⁰² Petra Minnerop (2019) Integrating the 'duty of care' under the European Convention on Human Rights and the science and law of climate change: the decision of The Hague Court of Appeal in the Urgenda case, Journal of Energy & Natural Resources Law, 37:2, 149-179, DOI: 10.1080/02646811.2019.1584441

²⁰³ Leijten, I. (2019). Human rights v. Insufficient climate action: The Urgenda case. Netherlands Quarterly of Human Rights, 37(2), 112–118. https://doi.org/10.1177/0924051919844375

²⁰⁴ The court recognized Urgenda's claim under Article 2 of the ECHR, which protects a right to life, and Article 8 of the ECHR, which protects the right to private life, family life, home, and correspondence.

 ²⁰⁵ Urgenda Foundation v. State of the Netherlands - Climate Change Litigation. (2020c, January 13). Climate Change Litigation. http://climatecasechart.com/non-us-case/urgenda-foundation-v-kingdom-of-the-netherlands/
 ²⁰⁶ Friends of the Irish Environment v. Ireland - Climate Change Litigation. (2022, October 30). Climate Change Litigation. http://climatecasechart.com/non-us-case/friends-of-the-irish-environment-v-ireland/

²⁰⁷ Van Wyk, S. (2022). Climate Change Litigation: Determinations of the Supreme Court of Ireland on the National Mitigation Plan. Journal of Environmental Law and Litigation, 37, 101-122.

²⁰⁸ Ibid ²⁰⁹ Ibid

²¹⁰ Leijten, I. (2019). Human rights v. Insufficient climate action: The Urgenda case. Netherlands Quarterly of Human Rights, 37(2), 112–118. https://doi.org/10.1177/0924051919844375

²¹¹ Torre-Schaub, M. (2022). The Future of European Climate Change Litigation: The Carême case before the European Court of Human Rights. Verfassungsblog. https://doi.org/10.17176/20220810-181614-0

required to implement preventive measures to ensure the effective protection of individuals whose lives may be endangered by the inherent risks associated with specific fields²¹². These measures encompass the authorization, establishment, operation, safety, and control of such activities. Additionally, the right to information and adherence to appropriate procedures play a crucial role in identifying failures and deficiencies on the part of the state.

The Oneryildiz v. Turkey case in 2004 enabled the European Court of Human Rights (ECtHR) to establish the affirmative duty of states to implement appropriate measures for safeguarding the lives of individuals within their jurisdiction, as stipulated in Article 2(1) of the Convention²¹³. This obligation extends to all activities, whether public or private, that have the potential to impact the fundamental right to life²¹⁴. In the context of environmental concerns, Article 2 can be invoked to address situations involving inherently hazardous industrial operations or the responsibilities of the state in relation to predictable natural calamities.

In relation to the first aspect, concerning industrial activities, the connection to climate change arose from the GHG emissions produced by France. The excess emissions were explicitly criticized by the Conseil d' Etat itself in its decisions in the Grande Synthe case of 2019 and 2021. The court condemned the administration's failure to adequately control the national emissions trajectory during certain periods, specifically from 2015 to 2018. These findings were echoed by the Paris Administrative Court in both rulings within the context of the "affaire du siècle" (case of the century)²¹⁵. The court considered that the surplus GHG emissions during the 2015-2018 period had resulted in ecological harm to the atmosphere.

Regarding the second aspect, which pertained to foreseeable natural risks, there was unequivocal evidence that the risk of coastal flooding faced by the municipality of Grande Synthe posed a threat to the lives of its inhabitants. That risk was foreseeable, as demonstrated by numerous expert opinions presented in the Grande Synthe case before Conseil d' Etat and in "affaire du siècle" before the Paris Court. Previous judgments have also addressed the issue of administrative authorities' failure to predict natural disasters associated with floods and other extreme events that have occurred in France in the past. These events can be linked to both climate change and the administration's lack of preventive action.

Nevertheless, one must consider certain limitations. Firstly, the issue of the imminent danger for nature arose, questioning whether the threat is immediate and impending. Secondly, the severity and genuineness of the danger came into play, assessing whether it was sufficiently grave and tangible²¹⁶. What happens when the risk is immense and imminent - but there are no particular instances of rights infringements against which the State's actions or omissions can be judged? In the context of climate change, a posteriori criticisms appear ineffective. Nonetheless, it must be acknowledged that the abuse of human rights that involve abstract, future occurrences present a difficult puzzle to solve²¹⁷.

In addition, since the landmark Lopez Ostra case in 1994, the European Court of Human Rights has interpreted Article 8 of ECHR, which guaranteed the right to respect for private and family life and the home, as encompassing the right to live in an environment of a certain quality²¹⁸. This environment is regarded as essential for human survival and dignity.

²¹² Ibid

²¹³ Ibid

²¹⁴ Ibid

²¹⁵ Ibid

²¹⁶ Ibid

²¹⁷ Leijten, I. (2019). Human rights v. Insufficient climate action: The Urgenda case. Netherlands Quarterly of Human Rights, 37(2), 112–118. https://doi.org/10.1177/0924051919844375

²¹⁸ Torre-Schaub, M. (2022). The Future of European Climate Change Litigation: The Carême case before the European Court of Human Rights. Verfassungsblog. https://doi.org/10.17176/20220810-181614-0

The Court recognized that this right entailed the absence of environmental nuisances that exceed an acceptable level²¹⁹. In many instances, interference with one's home has an impact on their private life. A similar approach was adopted in the Fadeyeva judgment of 2005, where the ECtHR addressed ambient air pollution resulting from a steel factory's activities, which indirectly led to the deterioration of the applicant's health and adversely affected their quality of life at home.

The second criterion for assessing compliance with Article 8 of the ECHR pertained to the type of harm that may be subject to legal redress under this Article²²⁰. The Court frequently encounterd diverse situations involving harm to health or well-being, whether it be "actual harm, the risk of harm, significant harm, or harm that falls short of a minimum threshold of seriousness". Nonetheless, the ECtHR consistently required a sufficiently direct link between the victim-applicant and the harm suffered. In some cases, the violation of environmental rights was indisputably established, while in others, the existence of a risk was at stake²²¹.

However, it should be noted that the European Court of Human Rights does not automatically recognized every infringement under Article 8. When assessing risks to health, the Court did not solely rely on the existence of a risk itself to establish the applicability of Article 8. The Court had made clear and unequivocal rulings on the existence of risks, emphasizing the requirement for the "victim-applicant" facing a risk to have a sufficiently probable occurrence of the risk²²². Furthermore, Article 8 cannot be violated if the nuisance or interference is not deemed significant enough to be taken into consideration. While the criterion for assessing seriousness is established, its scope is not specifically defined. The Court acknowledged that the determination of this threshold was relative and depended on the circumstances of each case, as well as the characteristics of the environment in question²²³. The Court accepted that reasonable and convincing indications regarding the threshold can be derived from an environmental impact assessment procedure that established a close connection between the hazardous effects of an activity and the protection of private and family life.

The majority of these cases, similar to Urgenda, are of an obscure character and difficult to determine²²⁴. Apart from addressing future and uncertain events, they do not deal with one specific plant or activity nor with a specific risk (i.e. flooding or incarnation of an area)²²⁵. Therefore, the questions raised are different from those usually judges deal with in human rights litigation.

3.4 Positive rights

As mentioned above, articles 2 and 8 of ECHR may be used in cases relating to environmental implications affecting rights of individuals (i.e. right to life, right to a safe environment and private life). Both of them establish the "positive obligation"²²⁶ to take tangible actions to prevent future and imminent violations of the said rights (*duty of care*). Precautionary measures to prevent infringements have to be taken provided there is a known, concrete and imminent danger to avoid violations in the greatest possible extent. However, the dutch Court of Appeal acknowledged that the duty of care should not impose

²¹⁹ Ibid

²²⁰ Ibid

²²¹ Ibid

²²² Ibid

²²³ Ibid

²²⁴ Leijten, I. (2019). Human rights v. Insufficient climate action: The Urgenda case. Netherlands Quarterly of Human Rights, 37(2), 112–118. https://doi.org/10.1177/0924051919844375

²²⁵ Ibid

²²⁶ Leijten, I. (2019). Human rights v. Insufficient climate action: The Urgenda case. Netherlands Quarterly of Human Rights, 37(2), 112–118. https://doi.org/10.1177/0924051919844375

an undue burden on the dutch government²²⁷. As to the ruling of the Court, it is the responsibility of the State to fulfill its duty under Article 2 by safeguarding the lives of individuals under its jurisdiction. Additionally, Article 8 imposes an obligation on the State to preserve the right to privacy and family life. This commitment encompasses all acts, both in the public and private spheres, that have the potential to compromise the rights safeguarded by these articles. Of particular concern are industrial operations, which necessarily entail a certain level of risk.²²⁸.

The Supreme Court sharpened the legal rational of the Court of Appeals ruling, but the provision to decrease anthropogenic GHG emissions was retained²²⁹. Based on ECHR case law, the Supreme Court concluded that ECHR contracting parties are required to take the requisite steps provided there is a real and immediate risk to people's lives or welfare and the state is aware of that risk. The Court highlighted that climate change poses such a risk since it threatens the lives and well-being of many people in the Netherlands. The Court determined that even though the emissions' causes are a global in their nature, the Dutch government should not avoid its obligation²³⁰.

After deciding that climate change hazards fell under the requirements of paragraphs 2 and 8 of the ECHR, the Supreme Court had to determine whether these obligations include a specific commitment to minimize GHG emissions. The Supreme Court used the common ground procedure to assess that specific requirement. The Court relied on the 2007 IPCC report to find such common ground. According to the research, the most developed countries (including the Netherlands) should reduce their GHG emissions by at least 25% by 2020 compared to 1990 levels. Further, the Supreme Court evaluated the Dutch government's own emission target, which aimed to reduce GHG emissions by 30% by 2020. Based on the foregoing, the Supreme Court determined that the Dutch government had a positive obligation to reduce its GHG emissions by at least 25% by 2020, compared to 1990 levels²³¹.

The link between ECHR and environmental protection is not blatant *per se*. Civil and political rights were traditionally deemed *negative* rights. However, the ECtHR²³² enlarged their scope including positive obligations²³³ that are of great importance when dealing with any kind of human rights (civil or political, socio-economic or environmental)²³⁴. Yet one could observe a vagueness on what positive obligations exactly discuss. Contrary to negative obligations, where it is clear that one has to refrain, positive obligations may be met in multiple ways²³⁵.

²²⁷ Petra Minnerop (2019) Integrating the 'duty of care' under the European Convention on Human Rights and the science and law of climate change: the decision of The Hague Court of Appeal in the Urgenda case, Journal of Energy & Natural Resources Law, 37:2, 149-179, DOI: 10.1080/02646811.2019.1584441

²²⁸ Ibid

 ²²⁹ Observers, S. (2021, December 28). The Second Anniversary of the Urgenda Climate Ruling: A Day to Celebrate?
 Strasbourg Observers. Strasbourg Observers. https://strasbourgobservers.com/2021/12/28/the-second-anniversary-of-the-urgenda-climate-ruling-a-day-to-celebrate/

²³⁰ Ibid

²³¹ Ibid

²³² "Unsurprisingly, the cases dealt with by the ECtHR all concern individuals or groups of individuals that claim that there has been an interference with their rights. This is in line with the 'interpretative hurdles' the ECtHR has identified in the case of Fadeyeva, where it held that 'complaints relating to environmental nuisances have to show, firstly, that there was an actual interference with the applicant's private sphere, and secondly, that a level of severity was attained'. These requirements direct the efforts of the Strasbourg Court to cases involving severe, specific situations." Leijten, I. (2019), 117

 ²³³ Leijten, I. (2019). Human rights v. Insufficient climate action: The Urgenda case. Netherlands Quarterly of Human Rights, 37(2), 112–118. https://doi.org/10.1177/0924051919844375
 ²³⁴ Ibid

²³⁵ Vladislava Stayanova, 'The Disjunctive Structure of Positive Obligations under the European Convention on Human Rights' (2018) 87 Nordic Journal of International Law 344

In climate change litigation positive obligations may raise certain issues. For instance, when it comes to the proportionality test between the action and the specific violation, in this kind of cases it is less concrete. As a result, the judges concluded on whether the governmental actions were acceptable²³⁶. Even if it is generally agreed what must be done from a scientific point of view, the compliance mechanisms are for the State to determine. "Positive obligations" allow the courts and judges to regulate in a great extent resulting in concerns with the doctrine of "separation of powers".

3.5 Judge as a Legislator - Separation of powers

Positive obligations that demand time and (human and financial) resources correlate to the role of the courts and judges²³⁷. That link is a tricky one as not only national courts will be more conscious not to upset the *balance of powers* but also supranational courts will avoid to impose meticulous and demanding obligations in fear of intervening with national policies²³⁸. Western societies have generally formed their democracies based on the doctrine of separation *of powers or trias politica²³⁹*, the backbone of the constitutional system. Their rational is to prevent the "concentration and abuse of power"²⁴⁰ providing a distinctive allocation of power to the competent bodies²⁴¹.

In Urgenda Foundation v. the State of Netherlands "trias politica" constituted a major issue as an environmental group aiming to a rapid energy transition sued the gonvernment on the grounds that its environmental policy was not ambitious enough. As explained above, the court accepted the claim, recognised the Netherlands' "duty of care"²⁴² and called the State to take action. This case had an ambiguous understanding as it was as if the court requested the legislator to legislate. But what about the separation of powers? In a 2003 case the Supreme Court decided that it was not among its powers to order the legislative body to commence legislation²⁴³.

In addition, the doctrine of separation of powers was discussed briefly by the Supreme Court in Friends of the Irish Environment v. Ireland, when determining the legality of the Mitigation Plan, being an issue that distressed the climate change litigation globally²⁴⁴. Upon hearing the parties the court stated that it has no role in formulating policy or even the direction of it and that the Mitigation Plan is a governmental act²⁴⁵. Following the leapfrog appeal, the Supreme Court, based on the Climate Act²⁴⁶, decided differently from the first degree court on FIE's standing when challenging the validity of the Mitigation Plan.

The increasing trend of global climate litigation raised the crucial question of how the judiciary should respond to these claims without undermining their democratically assigned role within the framework of the separation of powers²⁴⁷. In other words, in this evolving

²³⁶ Leijten, I. (2019). Human rights v. Insufficient climate action: The Urgenda case. Netherlands Quarterly of Human Rights, 37(2), 112–118. https://doi.org/10.1177/0924051919844375

²³⁷ Ibid

²³⁸ Ibid

²³⁹ Bergkamp, L., & Hanekamp, J. C. (2015). Climate change litigation against states: the perils of court-made climate policies. European Energy and Environmental Law Review, 24(5), 102-114

²⁴⁰ Ibid

²⁴¹ Van Wyk, S. (2022). Climate Change Litigation: Determinations of the Supreme Court of Ireland on the National Mitigation Plan. Journal of Environmental Law and Litigation, 37, 101-122

 ²⁴² Bergkamp, L., & Hanekamp, J. C. (2015). Climate change litigation against states: the perils of court-made climate policies. European Energy and Environmental Law Review, 24(5), 102-114
 ²⁴³ Ibid

 ²⁴⁴ Bergkamp, L., & Hanekamp, J. C. (2015). Climate change litigation against states: the perils of court-made climate policies. European Energy and Environmental Law Review, 24(5), 102-114
 ²⁴⁵ Ibid

²⁴⁶ The Supreme Court found that section 4 of the Climate Act, requiring that the Mitigation Plan must "specify the manner in which it is proposed to achieve the national transition objective," is clearly a "statutory obligation". ²⁴⁷ Pouikli, K. (2022). Editorial: a short history of the climate change litigation boom across Europe. ERA Forum. https://doi.org/10.1007/s12027-022-00700-1

form of litigation, is the judge expected to assume a proactive role not only as a monitor of the effective enforcement of existing climate laws but also as a potential catalyst for more ambitious climate policies aligned with international commitments²⁴⁸? And if so, what are the grounds for such judicial engagement? These questions become particularly relevant in cases where the court deduces specific mitigation targets or adaptation measures from general legal principles and rules.

Balancing the imperative of climate activism in judicial decision-making with the need to respect the institutional boundaries of democratic legitimacy is an ongoing and complex exercise²⁴⁹. However, taking a more optimistic perspective, each climate lawsuit reinforces the legal stance that the climate issue has transcended mere political debate and become a constitutional and legal matter with far-reaching implications for environmental protection.

Another significant critique revolves around the belief that courts are not the appropriate platform for addressing climate change. This critical perspective arises from the unique characteristics of climate change as a "*super wicked problem*." These characteristics include the intricate relationship between cause and effect, the interaction between human actions and natural factors, the scientific uncertainties surrounding climate change, the involvement of various stakeholders, and the balancing of environmental concerns with economic interests²⁵⁰. Consequently, in certain countries, the judiciary may not feel entirely comfortable scrutinizing climate-related measures implemented by the executive branch. This discomfort stems from the complex technical, scientific, and political assessments involved in such cases, as courts may lack the general expertise and technical knowledge required to interpret scientific reports and provide legal responses²⁵¹.

VI. Chapter four: National Emissions

4.1 Enforcement approach

The notion of enforcement of international law regarding climate issues and enforcement regarding national courts when implementing international law directly or indirectly will be discussed on this part of the master thesis²⁵². The necessity for a compliance system was first addressed in the 1997 Kyoto Protocol, which entered into force in 2005 until the entry into force of the Paris Agreement, when its Second Commitment Period ended²⁵³.

A facilitative and enforcement branches, a plenary and a bureau composed the Kyoto compliance system (operational since 2006) that was based on emission reduction commitments. In the beginning, the enforcing branch seemed to be meticulously consistent with the top-down strategy. However, implementation predicaments were not on time brought before it. Further, it was prohibited to publish relevant information, compromising the system's credibility. Triggering, also, in the event of violations was proved inefficient²⁵⁴.

Overall, experience reveals that the Kyoto compliance system has been underutilized due to a range of issues, ranging from reporting delays to Canada's withdrawal, were not communicated to the competent branches on time or at all²⁵⁵. The top down approach seems to have failed, as several countries did not reach their agreed targets, Canada

²⁴⁸ Ibid

²⁴⁹ Ibid

²⁵⁰ Ibid

²⁵¹ Inidcatively in Greenpeace Norway v. Norwegian State, Oslo District Court, 4 January 2018, Case No. 16-166674TVI-OTIR/06, para. 5.2.7.

²⁵² Colombo, E. (2017). Enforcing International Climate Change Law in Domestic Courts: A New Trend of Cases for Boosting Principle 10 of the Rio Declaration? UCLA Journal of Environmental Law and Policy, 35(1). https://doi.org/10.5070/I5351034672

²⁵³ Ibid

²⁵⁴ ibid

²⁵⁵ Ibid

withdrew and some countries expressed their opposition on signing for a Second Commitment Period. The same approach occurred in the 2012 Doha Amendment (ratified in 2020).

After the Paris Agreement's international consensus, international climate change law raised more and more attention as it was rejuvenated²⁵⁶. Both developed and developing states agreed to abate national emissions and submit NDCs, as previously mentioned. In accordance with Paris Agreement, even though parties will be held accountable for their NDCs, there is not an enforcing mechanism to ensure that. The promotion of "effective implementation" in a "non intrusive" and "non punitive manner" though a transparency framework, i.e. transnational communications, assessments and consultations is the standard rule. However, the bottom-up approach of the Paris Agreement, compared to the top-down one of the Kyoto Protocol, may prove to be considerably more effective.

Despite the entry into force of the Paris Agreement, it is the national policies that will play the primary role in the GHG emissions reduction²⁵⁷. There could be a variety of reasons why international law enforcement has been ineffective thus far. In accordance with international law studies, a state's withdrawal from a treaty occurs when the costs of compliance outweigh the benefits, which may have been the case for Canada's withdrawal from the Kyoto Protocol.

The major Achilles heel in domestic enforcement stems from two factors: first, the court's reluctance to involve in policy decisions; and second, the multiple difficulties that even trans-nationalist courts may encounter in the implementation of environmental treaties that often do not seem to set rules but rather encourage the fulfillment of ambitious targets²⁵⁸.

Further, the basic nature of the Paris Agreement, particularly the requirement for its application through national policies, has enhanced the potential of enforcement through domestic courts. The Paris Agreement will not magically unravel the challenges in enforcing international climate law in domestic courts. Prospective litigation, however, may be successful within the context of the Paris Agreement, since a larger knowledge of procedural and substantive environmental rights is rapidly emerging.

Environmental procedural rights²⁵⁹, initially set forth in Rio Declaration Principle 10, may serve as a foundation for increasing domestic adjudication of climate change disputes. Domestic courts, as the Urgenda court indicates, provide such procedural rights more liberally by employing a variety of tools, including the adoption of international law in domestic courts²⁶⁰. This phenomenon has the potential not only to strengthen the democratic participation of individuals and non-governmental organizations (NGOs) in climate matters but also to allow for the incremental protection of substantive rights, such as the well-being of current and future generations and the importance of mitigation and adaptation mechanisms.

²⁵⁶ Colombo, E. (2017). Enforcing International Climate Change Law in Domestic Courts: A New Trend of Cases for Boosting Principle 10 of the Rio Declaration? UCLA Journal of Environmental Law and Policy, 35(1). https://doi.org/10.5070/I5351034672

²⁵⁷ Ibid

²⁵⁸ Ibid
²⁵⁹ Ibid, Procedural environmental rights: the right to information, participation in decision-making, and effective access to judicial and administrative proceedings. The effective differentiation between substantive and procedural environmental rights was initially expressed in Principle 10 of the 1992 Rio Declaration. This principle was subsequently integrated into the 1997 Aarhus Convention, which is considered the most significant treaty regarding procedural environmental issues. The Aarhus Convention was developed under the supervision of the United Nations Economic Commission for Europe and has garnered participation from over 40 member states of the United Nations Framework Convention on Climate Change (UNFCCC).

The Bali Guidelines adopted by UNEP Governing Council on how national governments should deploy state laws relating to the above principle. However, the Paris Agreement, in contrast to regional conventions such the Aarhus Convention and the Latin Caribbean initiative, only mentions public participation and public access to information, with no mention of access to justice²⁶¹. Environmental treaties and international courts tend to interpret existing human rights in a way to include access to information, participation in decision-making, and effective access to justice²⁶².

In fact, procedural rights may be more successful than substantive rights to a clean/healthy environment and similar rights. Environmental procedural rights, for instance, raise a few of the broad and policy-based concerns involved in defining substantive environmental rights, allowing judges to avoid public debate over the political complexities of their judgments. Furthermore, they are more easily enforced than substantive rights²⁶³. They are significant in recognizing certain substantive environmental rights. Constructing a claim based on substantive rights in climate change litigation may present numerous flaws. For instance, in contrast to traditional litigation, there is no specific injury to a specific claimant, and obtaining clear evidence is difficult.

Subject to the above the 2015 Agreement demonstrated that states have failed to build a clear and enforceable legal framework for the prevention of climate change repercussions. However, it lacks exact and enforceable substantive emission reduction commitments for Parties, as well as measures requiring states to impose emission reduction commitments on private parties²⁶⁴. Further, the Agreement incorporates somewhat ambiguous and openended financial compensation measures that are typically only considered as recommendations rather than legal duties²⁶⁵.

4.2 National Determined Contributions

The fundamental components of the Paris Agreement and its long-term objectives are the Nationally Determined Contributions (NDCs). The Nationally Determined Contributions (NDCs) embody the endeavors made by individual countries to mitigate their national greenhouse gas (GHG) emissions and enhance their resilience to the detrimental repercussions of climate change. According to Article 4, paragraph 2, "each Party is required to prepare, communicate, and maintain" successive nationally determined contributions that it wants to achieve. Parties must seek national mitigation measures in order to meet the goals of such contributions.

The effectiveness of these climate actions will play a crucial role in determining the extent to which the long-term objectives outlined in the Paris Agreement can be realized. These objectives include the timely attainment of a global peak in greenhouse gas (GHG) emissions, followed by rapid and substantial reductions based on the most up-to-date scientific knowledge. Ultimately, the aim is to achieve a state of equilibrium between human-caused emissions and natural absorption of GHGs by the latter half of the 21st century. It is well acknowledged that developing nations would require a longer duration to reach the point of peaking emissions. The emission reductions are being pursued in the context of sustainable development. Every five years NDCs are submitted to the UNFCCC secretariat. To increase ambition over time, the Paris Agreement requires that subsequent NDCs show advancement from the previous NDC and reflect its maximum achievable ambition.

²⁶¹ Colombo, E. (2017). Enforcing International Climate Change Law in Domestic Courts: A New Trend of Cases for Boosting Principle 10 of the Rio Declaration? UCLA Journal of Environmental Law and Policy, 35(1). https://doi.org/10.5070/I5351034672

²⁶² Ibid 263 Ibid

²⁶⁴ Faure, M., & Peeters, M. Liability and Climate Change. Oxford Research Encyclopedia of Climate Science. Retrieved 17 May. 2023,

²⁶⁵ Ibid

4.3 Dutch emissions

In 2020, the goal set by Urgenda i.e. a reduction in GHG emissions at least by 25% by 2020 was achieved, as the country managed to reach a 25.5% emissions reduction²⁶⁶. Emissions caused by coal generated power stations were decreased by 80%, between 2015 and 2020 as coal was being replaced and emissions generated by the electricity sector fell by 39% compared to 2015. During 2020 quarantine, transport emissions were decreased by 15% compared to 2019²⁶⁷. Further, in accordance with Statistics Netherlands (CBS) 2020 was a rather warm year and residential emissions were less.

Annual GHG emissions in 2020 were 164 megatonnes of CO2 equivalents. This meant a reduction of 56 megatonnes from 1990. In 2020, a reduction of 16 megatonnes out of a total of 56 was accomplished. By utilizing less coal, the electricity sector reduced emissions by about 9 megatonnes compared to the previous year. Further, emissions from the mobility sector (traffic and transportation) decreased by 4.5 megatonnes compared to 2019. This was due to a 15% reduction in vehicle traffic emissions as a result of the government's encouragement to stay at home as much as possible and preferably work from home (Covid-19 measures)²⁶⁸. In the moderately mild year of 2020, less natural gas combustion resulted in fewer GHG emissions from residences and offices (by approximately 1.5 megatonnes of CO2 equivalents).

4.4 Irish emissions

In accordance with the Environmental Protection Agency (EPA) inventory data, the Irish state failed to decrease its 2021 emissions compared to 2020 ²⁶⁹. In 2021, Ireland's GHG emissions were estimated to be 62.11 Mt CO2eq, that was 5.2% higher than the 2020 emissions²⁷⁰. Reportedly emissions were 1.5% higher than pre-pandemic figures. Agriculture constitutes the largest source of emissions in Ireland representing 33.3% of total national GHG emissions. Transport with 15.7% and the energy industry with 14,4% follow. On the contrary, the residential sector, waste, and commercial sector and public services presented a slight decrease (-6.0%, -3.0%, -2.0% and -3.4% respectively)²⁷¹.

Consequently, it was due to COVID-19 measures that Irish emissions decreased by 3.6% in 2020. However, this was not the case for the following year as some sectors recovered with the lift of the restrictions²⁷². That increase resulted from the increased use of fossil fuels (coal and oil) for electricity generation and the recovery of both Agriculture and Transport sectors. Reductions in 2021 residential emissions took place due to the relatively lower amount of time people stayed in their homes, a milder winter and a peak in fuel prices. Further, a rise in using synthetic nitrogen fertiliser and in liming of soils led to higher emissions in Agriculture.

4.5 French emissions

In 2020, the convergence of the Covid-19 crisis and a mild winter had contributed significantly to a substantial reduction in greenhouse gas (GHG) emissions²⁷³. Overall, across all sectors, emissions decreased by 9.6% compared to 2019, with the transport sector alone

²⁶⁶ Netherlands, S. (2022, February 9). Urgenda reduction target for GHG emissions achieved in 2020. Statistics Netherlands. https://www.cbs.nl/en-gb/news/2022/06/urgenda-reduction-target-for-ghg-emissions-achieved-in-2020

²⁶⁷ Ibid

²⁶⁸ Ibid

²⁶⁹ Environmental Protection Agency. (n.d.). Latest emissions data. https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/latest-emissions-data/

²⁷⁰ Ibid

²⁷¹ Ibid

²⁷² Ibid

²⁷³ Communiqué de presse, Emissions de gaz à effet de serre en France : estimations provisoires sur l'ensemble de l'année 2022 avec le baromètre des émissions mensuelles du Citepa, édition mars 2023,https://www.citepa.org/wp-content/uploads/CP-Citepa_Barometre_Emissions_GES_mars2023_VF.pdf

accounting for over half of this decline with a reduction of 16.5%²⁷⁴. The energy production and buildings sectors, benefiting from the mild temperatures, experienced respective emissions reductions of 11% and 6%. Consequently, in 2020, the total emissions level in France amounted to 393 million metric tons of CO2 equivalent (Mt CO2e), excluding the LULUCF (Land Use, Land-Use Change, and Forestry) carbon sink balance²⁷⁵.

However, in 2021, a rebound in emissions was observed, with an increase of 6.4%. This rebound can be attributed mainly to temporary economic factors, as the sharp decline in GHG emissions in 2020 was linked to the unique circumstances of the pandemic²⁷⁶. The estimated emissions level for 2021, as reported in the Secten 2022 edition, was 418 Mt CO2e, which remains lower than the pre-pandemic level in 2019 (435 Mt CO2e).

In terms of France's efforts to combat climate change, the year 2022 concluded on a positive note. The country witnessed a decline of 2.5% in greenhouse gas emissions, as revealed by provisional official data released on Monday, April 3, by CITEPA, the organization responsible for compiling the French emissions inventory²⁷⁷. Notably, carbon dioxide emissions have resumed their downward trajectory after experiencing a significant rebound of 6.4% in 2021, following the historic decline in 2020 caused by the Covid-19 pandemic and subsequent lockdown measures (-9.6%)²⁷⁸.

However, it is important to acknowledge that most of the changes observed last year, as in previous years, can be attributed to specific circumstances. It was pointed out that it remains uncertain whether a permanent reduction in emissions due to structural factors will be observed in the near future. During the initial nine months of 2022, emissions remained nearly stagnant, experiencing a marginal decrease of $0.3\%^{279}$. However, they saw a significant decline in the final quarter compared to 2021, with reductions of 9% in October, 11% in November, and 5% in December.

The sector-wise analysis presents a more varied picture²⁸⁰. Emissions in the residential/tertiary sector witnessed a remarkable decrease of 15%, reaching their lowest level since 1990. This drop, particularly pronounced in April-May and between October and December, can be attributed to a sharp reduction in fossil fuel consumption. Factors contributing to this reduction included the prevailing energy crisis, increased gas and oil prices, calls for energy conservation by households and businesses, greater utilization of wood, and an exceptionally mild winter. Notably, October 2022 recorded the highest temperatures ever documented in France, with record-breaking heat persisting until mid-November and the final two weeks of December.

Moreover, emissions in the manufacturing industry also declined by 8% due to decreased natural gas consumption in small-scale industries, reduced utilization of coal and ferrous metals in iron and steel plants, and diminished production in certain sectors such as inorganic chemistry and cement manufacturing²⁸¹.

VII. Chapter five: The Aftermath 5.1 A realistic approach

276 Ibid

²⁷⁴ Ibid

²⁷⁵ Ibid

 ²⁷⁷ Garric, A. (2023, April 4). Greenhouse gas emissions decreased by 2.5% in France in 2022. Le Monde.fr. https://www.lemonde.fr/en/france/article/2023/04/04/greenhouse-gas-emissions-decreased-by-2-5-in-france-in-2022_6021659_7.html
 ²⁷⁸ Ibid
 ²⁷⁹ Ibid
 ²⁸⁰ Ibid

²⁸¹ Ibid

The achievement of the Urgenda target, if it has been met in 2020, cannot be attributed to the government's delayed and rushed measures, which may have even led to a slight increase in global emissions in the long run. While the case did raise awareness, it is uncertain whether it has generated more momentum for climate change action or hindered new policy improvements²⁸².

The Urgenda case gained recognition as a pioneering legal ruling that compelled a state to decrease its greenhouse gas (GHG) emissions, departing from conventional statutory obligations. Certain academics have posited that this particular lawsuit has the potential to inaugurate a novel epoch of climate change litigation and thereafter yield more rigorous climate legislation²⁸³. Nevertheless, these experts have expressed reservations regarding the soundness of the legal rationale and the interpretation of scientific findings that served as the foundation for establishing the Urgenda objective.²⁸⁴. Furthermore, concerns have been raised regarding the compatibility of court rulings establishing mitigation objectives with the principle of the separation of powers, as extensively discussed above.

Similar cases in other countries have been dismissed by courts, often on the basis that imposing a mitigation target was outside their "constitutional power" (e.g. Juliana v USA). Other cases that ruled in favor of plaintiffs regarding climate change mitigation primarily focused on assessing a state's compliance with its own legislation and strategies, rather than judicially determining a specific mitigation target for the defendants²⁸⁵.

Looking at the bigger picture, the Urgenda case may have had mixed effects on climate change mitigation efforts. On one hand, it could have increased awareness about the issue, potentially aiding mitigation. On the other hand, it might have hindered progress by disrupting international negotiations and implementing ineffective measures, leading to a decline in political support for further action. Overall, it is deemed that Urgenda has not resulted in an improvement in climate action; if anything, some scholars conclude that it has hindered progress in this regard²⁸⁶.

It is argued that judges lack the necessary time and expertise to create comprehensive climate change mitigation policies, and relying solely on emission-reduction targets is not an ideal solution. When imposed within a limited time-frame and without considering existing policies and measures, national emission-reduction targets can encourage ineffective or counterproductive actions. Judges are generally not equipped to effectively monitor and enforce compliance with such targets. Although courts have a role in holding states accountable for their actions or lack thereof regarding climate change, it appears that setting targets and making policy decisions are tasks better suited for the government's political branches²⁸⁷.

Different methodologies exist for accounting and attributing GHG emissions to specific states. Therefore, when setting mitigation goals, it is crucial to include detailed technical specifications concerning the geographical area, sectors, and types of greenhouse gases that should be considered²⁸⁸. Furthermore, it is important to address the potential for international transfer of mitigation outcomes²⁸⁹. However, none of the three judgments in

²⁸² Benoit Mayer, The Contribution of Urgenda to the Mitigation of Climate Change, Journal of Environmental Law, 2022;, eqac016, https://doi.org/10.1093/jel/eqac016

²⁸³ Ibid

²⁸⁴ Benoit Mayer, 'Climate Change Mitigation as an Obligation Under Human Rights Treaties?' (2021) and Benoit Mayer, 'Te State of the Netherlands v. Urgenda Foundation: Ruling of the Court of Appeal of Te Hague (9 October 2018)'

²⁸⁵ Benoit Mayer, The Contribution of Urgenda to the Mitigation of Climate Change, Journal of Environmental Law, 2022;, eqac016, https://doi.org/10.1093/jel/eqac016

²⁸⁶ Ibid

²⁸⁷ Ibid

 ²⁸⁸ Greenhouse Gas Protocol, Mitigation Goal Standard (World Resources Institute 2014), 12
 ²⁸⁹ Ibid

the Urgenda case provide specific guidelines for these modalities²⁹⁰. For instance, the District Court's reference is limited to "Dutch annual greenhouse gas emissions."

It seems that the Dutch government has interpreted the Urgenda target as pertaining to the emissions reported in the annual National Inventory Reports (NIRs) that the Netherlands submits under the UN Framework Convention on Climate Change (UNFCCC). This interpretation does not take into account any potential international transfer of mitigation outcomes. The standards for reporting emissions are primarily based on the idea that each state is responsible for reporting the emissions produced within its own jurisdiction. The compliance of National Inventory Reports (NIRs) with these guidelines is evaluated through technical reviews performed by experts listed in the UNFCCC roster²⁹¹. However, methodological enhancements that are periodically approved by the Conference of Parties can have unforeseen implications for the level of stringency associated with the Urgenda target and, consequently, its achievement.

Additionally, the Dutch government has interpreted the Urgenda target as referring to the national emissions excluding land use, land-use change, and forestry (LULUCF). These emissions are typically accounted for separately in National Inventory Reports (NIRs). States tend not to commit in reducing LULUCF emissions, particularly in EU Member States²⁹², due to their higher level of uncertainty.

It is noteworthy to mention that although emissions are commonly monitored on a yearly basis, the decision issued by the District Court specifically stipulated the attainment of the objective "by the conclusion of 2020." Due to the presence of seasonal fluctuations in certain emission sources, such as those related to heating and agriculture, it is not appropriate to directly compare emissions particularly happening at the end of 2020 with the duration of the year 1990.²⁹³. Hence, it may be argued that the government's interpretation, which argues that the Urgenda goal specifically refers to the emissions documented in the National Inventory Report (NIR) for the entirety of the year 2020, is a justifiable stance.²⁹⁴.

Moreover, it is anticipated by the government that the aforementioned aim must be achieved not only in the year 2020 but also in the following years. This assumption is presumably derived from the belief that courts would impose a non-regression norm on the state with regards to national emissions levels, but the legal foundation for this standard remains ambiguous. The significance of this assumption lies in the fact that the observed emission reductions in 2020 were predominantly impacted by external variables that are unlikely to endure in the forthcoming years²⁹⁵.

In March 2021, Statistics Netherlands (CBS) presented an initial evaluation indicating a reduction of around 24.5% in the State's emissions compared to those recorded in 1990.²⁹⁶. Nevertheless, an updated preliminary assessment in September 2021 revealed that a decrease of 25.4% had really been accomplished. In April 2022, the initial National Inventory Report (NIR) was submitted to the UNFCCC Secretariat, providing an account of the state's emissions for the year 2020. ²⁹⁷. This report conclusively verified a noteworthy decline of

²⁹⁰ Benoit Mayer, The Contribution of Urgenda to the Mitigation of Climate Change, Journal of Environmental Law, 2022;, eqac016, https://doi.org/10.1093/jel/eqac016

²⁹¹ Ibid

²⁹² Ibid

²⁹³ Ibid ²⁹⁴ Ibid

²⁹⁵ Ibid

²⁹⁶ NU ...

²⁹⁶ Netherlands, S. (2021, March 15). Greenhouse gas emissions 8 percent down in 2020. Statistics Netherlands. https://www.cbs.nl/en-gb/news/2021/10/greenhouse-gas-emissions-8-percent-down-in-2020

²⁹⁷ Netherlands, S. (2022b, February 9). Urgenda reduction target for GHG emissions achieved in 2020. Statistics Netherlands. https://www.cbs.nl/en-gb/news/2022/06/urgenda-reduction-target-for-ghg-emissions-achieved-in-2020

25.5% in the nation's overall emissions. Based on the uncertainty range provided by the NIR, it may be inferred that there exists a 69% likelihood that the Netherlands has successfully attained a minimum of 25% decrease in emissions by the year 2020, in comparison to the emission levels recorded in 1990.

The attainment of the Urgenda aim was unforeseen²⁹⁸. In June 2015, it is possible that the District Court saw the 25% emission-reduction objective as necessitating a substantial escalation in ambition. This perception may have arisen due to the fact that the state had predicted a mere 17% decrease, even while taking into account measures that it had not yet implemented. Nevertheless, it is important to acknowledge that these estimates naturally possess a significant level of uncertainty, particularly within the context of a very small nation with a highly integrated economic system²⁹⁹. The Emissions Trading Scheme (ETS) implemented by the European Union (EU) effectively governs around 50% of the EU's aggregate emissions. However, it is important to note that the ETS does not directly dictate the emissions of individual member states. Instead, the member state-specific emissions are controlled by the secondary market for emission permits.

In the final analysis, the emissions of the state exhibited a more rapid decline than originally projected, manifesting a significant reduction of 9% from 2019 to 2020³⁰⁰. This was primarily due to two factors: the COVID-19 pandemic measures reducing travel, leading to a 15% reduction in the transport sector, and historically low natural gas prices promoting the substitution of coal with gas, resulting in a significant 16% emissions drop from energy industries³⁰¹. Nevertheless, these elements were of a transient nature. In the year 2021, there was a notable rise in natural gas prices, coinciding with the Netherlands witnessing a period of heightened economic expansion with a very harsh winter season. According to CBS projections, it is projected that national emissions in 2021 may have climbed to 167.8 MtCO2 eq, representing a reduction of just 23.9% compared to their 1990 levels. This increase may be attributed mostly to the heightened emissions from energy businesses. Furthermore, with the relaxation of travel restrictions, there will be a subsequent rise in emissions from the transportation sector, which had an atypical decrease in 2021. As a result, it is anticipated that the Netherlands will require a significant amount of time, maybe spanning several years, in order to restore adherence to the Urgenda aim.

5.2 The shortcomings of implementation policies

The judgements rendered in 2015 and 2018 were deemed to be temporarily enforceable, prompting the Dutch government to pledge its commitment to promptly implementing them. Nevertheless, no steps were undertaken until the year 2019.³⁰². Several of the interventions implemented during that period were not able to be executed in a timely manner, hence failing to provide any substantial mitigation effects by the year 2020. As an illustration, the enforcement of a legislative limit on carbon dioxide emissions originating from coal-fired power plants is scheduled to commence exclusively in 2022. Similarly, the implementation of a policy pertaining to the incorporation of biofuel in inland navigation fuel is set to be initiated from 2023 onwards. Additionally, certain measures adopted by 2020 were not directly linked to the court's decision. The implementation of reduced speed limits on highways during daylight hours was primarily intended to align with European nitrogen pollution guidelines in response to a recent court decision.³⁰³ Nevertheless, it is

²⁹⁸ Benoit Mayer, The Contribution of Urgenda to the Mitigation of Climate Change, Journal of Environmental Law, 2022;, eqac016, https://doi.org/10.1093/jel/eqac016

²⁹⁹ Ibid

³⁰⁰ Ibid

³⁰¹ Ibid

³⁰² Ibid

³⁰³ Ibid

evident that this specific policy did not have a significant outcome in terms of mitigating transport emissions for the year 2020.

As a result, the government predominantly relied on three measures that were deployed either in late 2019 or in 2020 as components of its compliance plan.³⁰⁴. These measures included the accelerated closure of the Hemweg coal-fired power plant, an additional budget allocation to the feed-in tariff program known as "Stimuleringsregeling Duurzame Energieproductie" (SDE+), and the introduction of a tax on the disposal of foreign waste. The Hemweg coal plant, which was initially planned to be closed by the end of 2024, was hastened in its closure by the government, ultimately ceasing operations on December 23, 2019. Furthermore, an additional allocation of ≤ 1.2 billion was made by the government towards the SDE+ program, a scheme aimed at providing financial support to authorized renewable energy initiatives by means of feed-in tariffs.

Collectively, these three measures resulted in a reduction of the Netherlands' 2020 emissions by 1.3 MtCO2eq, which corresponds to a 0.6% decrease from the 1990 baseline³⁰⁵. Although not negligible, this outcome is significantly less substantial than what might have been anticipated based on the 2015 Urgenda decision and is only a fraction of the emissions reductions typically involved in other legal cases concerning states' climate change mitigation efforts. Nearly all of these emission reductions were accomplished through the closure of the Hemweg coal plant³⁰⁶.

Following the Urgenda Foundation v. The Kingdom of the Netherlands case, the Friends of the Irish Environment CLG v. Government of Ireland case was the second national judgement to promote the state's duty of care, its legal obligation to promote national environmental policies that reduce GHG emissions and prevent hazardous climate change³⁰⁷. Upon the Supreme Court's decision, the Irish government published the Amendment Bill amending the Climate Act. They did so to ensure that GHG targets are specified in order to meet Ireland's net-zero emission goal and achieving a climate neutral economy by 2050.

The Amendment Bill recognised several defaults of the Climate Act, apart from not having a specific goal in reaching climate neutrality, such as the institution of a concrete reporting mechanism for Ministers regarding carbon budgets and the determination to decarbonise specific sectors of the Irish economy to meet net-zero emissions by 2050³⁰⁸. Further, the "climate action plans and strategies" are amended and provisions replacing the "Climate Act's Mitigation Plan" are included³⁰⁹.

An annual update to the Climate Action Plan and a decennial "National Long Tern Climate Action Strategy" are required. The proposed amendments went hand in hand with the Supreme Court decision and could be a valuable asset of the Irish legal climate change framework. However, the Amendment Bill did not manage to set firm legal duty on the Irish government to secure the achievement of the net-zero transition by 2050, but rather stated that the government would pursue it³¹⁰. Simultaneously, Ireland adopted its share of mitigation measures under its EU commitments (e.g. EU Effort Sharing Decision and Regulation) to promote Member States' compliance with the international law i.e., the UNFCCC and the Paris Agreement³¹¹.

³⁰⁴ Ibid

³⁰⁵ Ibid

³⁰⁶ National statistics show no reduction in emissions from coal-fred power plants in the frst quarter of 2022, compared with the frst quarter of 2021. Ibid, 10

³⁰⁷ Van Wyk, S. (2022). Climate Change Litigation: Determinations of the Supreme Court of Ireland on the National Mitigation Plan. Journal of Environmental Law and Litigation, 37, 101-122

³⁰⁸ Ibid

³⁰⁹ Ibid

³¹⁰ Ibid

³¹¹ Ibid

The recent ruling in the "Affaire du Siecle" by the Paris court had effectively determined that France's efforts to combat climate change were insufficient, prompting the court to grant a deadline of December 31, 2022, for the implementation of "*all necessary measures to address the consequences of its inadequacy in addressing climate change*.³¹²" However, after a span of fourteen months, these organizations contend that the government's actions remain inadequate, substantiating their assessment "based on an array of extensive studies and reports." Preliminary data from Citepa, the organization entrusted with compiling the national emissions inventory, indicates that the contributors to global warming in France have exhibited a nearly stagnant trend (-0.3%) during the initial nine months of this year when compared to the corresponding period in 2021³¹³. This trajectory falls significantly short of the decline required for the country to fulfill its commitments³¹⁴.

5.3 Global, long-term results

The Urgenda case, as the older one, has given more data and statistics on the issue under discussion. According to estimates, the implementation of the set measures is expected to result in a reduction of national emissions (excluding LULUCF) in the Netherlands in the long-term, but it will lead to a slight net increase in global emissions³¹⁵. In the absence of the Urgenda case, it is probable that the Netherlands would have implemented comparable measures such as the SDE+ top-up and the tax on foreign trash, albeit with a slight delay in their implementation timeline. The reason for this is that the European Union legislation requires the Netherlands to gradually decrease emissions in sectors that are not included in the EU Emissions Trading System (ETS)³¹⁶, such as waste incineration. This reduction must follow a linear trajectory, aiming for a 36% decrease by the year 2030 in comparison to the emission levels recorded in 2005. Furthermore, the Netherlands is obligated to make a contribution towards the binding collective objective set by the Union for 2030, which aims to achieve 32% renewable energy. This commitment would need the implementation of measures like to those employed in the SDE+ program.³¹⁷.

In contrast to a hypothetical situation in which comparable policies were implemented incrementally over the 2020s, it is anticipated that the SDE+ top-up and the tax on foreign trash will together result in a decrease of 1.6 and 0.8 MtCO2eq in national emissions, respectively.³¹⁸. The Urgenda rulings have further spurred the Dutch government to implement a biofuel blending requirement for inland navigation, scheduled to be enforced by 2023. It is anticipated that there would be a decline in emissions generated by inland traffic throughout the 2020s as a result of enhanced efficiency, although a marginal rise in traffic volume, mirroring the pattern experienced in the preceding decade. Nevertheless, it is important to acknowledge that the biofuel blending rule implemented by the Netherlands might potentially lead to a distortion in the reported emissions.

The measures implemented by the Dutch government are expected to result in significant carbon leakage³¹⁹. The shutdown of the Hemweg coal plant, for instance, results in a rise in electricity imports, maybe sourced from neighboring nations with higher emission-intensive

³¹² LOEK, A. (2023, January 2). Émissions de CO2 : l'Affaire du Siècle relancée pour obtenir des pénalités financières contre l'État. TF1 INFO. https://www.tf1info.fr/justice-faits-divers/emissions-de-co2-l-affaire-du-siecle-relancee-pour-obtenir-des-penalites-financieres-contre-l-etat-2243666.html
³¹³ Ibid

³¹⁴ Ibid

³¹⁵ Benoit Mayer, The Contribution of Urgenda to the Mitigation of Climate Change, Journal of Environmental Law, 2022;, eqac016, https://doi.org/10.1093/jel/eqac016

³¹⁶ Directive 2003/87/EC of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community, [2003] OJ L275/32, Annex I para 2

³¹⁷ Benoit Mayer, The Contribution of Urgenda to the Mitigation of Climate Change, Journal of Environmental Law, 2022;, eqac016, https://doi.org/10.1093/jel/eqac016

³¹⁸ Ibid

³¹⁹ Ibid

facilities. Germany, being the primary provider of imported electricity to the Netherlands, has coal-fired power facilities that exhibit lower levels of climate efficiency when compared to the Hemweg power plant. Based on three distinct forecasts, it is anticipated that the closure of coal plants in the Netherlands throughout the 2020s will lead to higher emissions in surrounding countries, offsetting between 50% and 75% of the emission reductions achieved inside the Netherlands.

Nevertheless, it is expected that the phenomenon of carbon leakage would see a decline in its pace as adjacent nations undergo a gradual shift towards more environmentally sustainable methods of electricity production. The research postulates a linear decrease in the rate of carbon leakage, starting at 70% in 2020 and gradually declining to 55% by 2030.³²⁰.

5.4 The waterbed effect

The emission reductions achieved through the closure of the Hemweg plant or the SED+ topup primarily occur within the EU Emissions Trading Scheme (ETS). Consequently, there may be a waterbed effect where these reductions free up emission allowances for use by other greenhouse gas emitters³²¹. The implementation of the ETS market stability reserve in 2019 was intended to address the waterbed effect through the regulation of surplus allowances. However, it is important to note that despite these efforts, the waterbed effect is not entirely eradicated.

The imposition of a levy on foreign waste was anticipated to result in substantial carbon leakage due to the necessity of finding alternative disposal methods for waste that is no longer burnt within the Netherlands. In the best-case scenario³²², the waste that was previously sent to the Netherlands would be burnt in alternative locations with comparable energy recovery conditions, so minimizing any substantial influence on world emissions. Nevertheless, in the event of an extreme situation, the waste would be disposed of in landfills rather than being subjected to incineration. ³²³ This would result in a heightened negative impact on the environment owing to the release of methane emissions, even in contemporary landfill facilities. Despite making the assumption of a fast expansion in incineration capacity within the area, it is anticipated that this policy would ultimately lead to a net increase of total world greenhouse gas emissions by 2.7 MtCO2 eq.³²⁴.

The biofuel mandate seems to impact global emissions in three ways³²⁵. Firstly, it may lead to emissions from ships being attributed to neighboring countries as operators choose to refuel abroad. Secondly, the mandate could reduce emissions from domestic and cross-border traffic within the Netherlands if ships opt to fuel within the country. Lastly, the production of biofuel generates indirect emissions from land-use changes, accounting for about one-third of emissions avoided compared to fossil fuels. Overall, the biofuel mandate is expected to result in a net reduction of 0.5 MtCO2 eq in global cumulative emissions.

Overall, the emission reductions achieved within the Netherlands are largely transferred to other countries, resulting in a displacement of emissions. In certain instances, such as the imposition of taxes on foreign waste, this policy can result in a noteworthy overall rise in world emissions. When examining various manifestations of carbon leakage, such as the waterbed effect, the anticipated implementation actions are estimated to result in a net rise

³²⁰ Ibid

³²¹ Ibid

³²² Impacts of the Proposed Dutch Waste Import Tax – RDF Industry Group. (n.d.). https://www.rdfindustrygroup.org.uk/resources/impacts-of-the-proposed-dutch-waste-import-tax/ ³²³ Directive 2008/98/EC of 19 November 2008 on waste

³²⁴ Benoit Mayer, The Contribution of Urgenda to the Mitigation of Climate Change, Journal of Environmental Law, 2022;, eqac016, https://doi.org/10.1093/jel/eqac016

³²⁵ Ibid

of 0.3 MtCO2eq in cumulative world emissions, before managing to mitigate the repercussions of this phenomenon.

5.5 Holistic-atomistic cases

States have recognized their insufficient efforts in preventing dangerous climate change and litigation is considered as one approach to prompt stronger action on climate change mitigation³²⁶. Plaintiffs from many jurisdictions have put forth assertions that States³²⁷ possess inherent obligations, namely a duty of care, to address the issue of climate change. These contentions are grounded on overarching legal ideas derived from tort law, human rights law, and customary international law. These arguments claim that the mere adherence to particular treaty or legislative provisions falls short in meeting the overarching responsibilities of mitigation. The overarching responsibility of mitigation duties is the implementation of reasonable measures to effectively reduce or minimize the release of greenhouse gas emissions. This necessitates the adoption of relevant and essential actions.³²⁸.

Courts can apply general mitigation obligations in two ways: holistically and atomistically. In holistic decisions, the court determines the necessary and sufficient conditions for an entity to fulfill its general mitigation obligation at a specific point in time³²⁹. This typically involves the court determining the level of mitigation action required from the defendant, often expressed as an emission-reduction target³³⁰. In the instance of Urgenda v the Netherlands, the Supreme Court of the Netherlands affirmed that the State was obligated to attain a 25% decrease in emissions by the year 2020, relative to the levels observed in 1990. This imperative was deemed necessary to meet the State's duty in safeguarding certain human rights as outlined in the convention. In certain instances where a comprehensive strategy is not completely implemented, courts have been petitioned to assert that an entity's attempts to mitigate were insufficient, without specifically establishing the precise degree of mitigation measures that would be deemed satisfactory.

On the other hand, atomistic cases identify conditions that are requisite but not sufficient to fulfill an entity's general mitigation obligations³³¹. This means that compliance with an atomistic judicial decision does not guarantee compliance with the broader obligations of mitigation. Atomistic cases may involve both procedural measures, such as the requirement to adopt a clear and specific national strategy³³² for climate change mitigation, and substantive measures, such as ordering a government to take "all useful measures" to adhere to a statutory emission budget or cap on emissions³³³. Nevertheless, it should be noted that even when dealing with significant measures, individual actions made in isolation are insufficient to guarantee adherence to the entity's overall requirements for mitigation. If the statutory emission budget is too low, just sticking to it will not be adequate to meet the overall mitigation responsibilities.

In essence, there are two types of cases: holistic and atomistic. Holistic cases involve a complete range of general mitigation requirements, whereas atomistic cases lack such comprehensiveness. Nevertheless, it is important to note that from a strict perspective, it is

³²⁸ Mayer, B. (2023). PROMPTING CLIMATE CHANGE MITIGATION THROUGH LITIGATION. International & Comparative Law Quarterly, 72(1), 233-250. doi:10.1017/S0020589322000458

³²⁹ Ibid

- 331 Ibid
- ³³² Friends of the Irish Environment v Ireland

³²⁶Mayer, B. (2023). PROMPTING CLIMATE CHANGE MITIGATION THROUGH LITIGATION. International & Comparative Law Quarterly, 72(1), 233-250. doi:10.1017/S0020589322000458

³²⁷ But also, subnational or supranational authorities, and corporations. However this is out of the scope of this master thesis.

³³⁰ Ibid

³³³ Mayer, B. (2023). PROMPTING CLIMATE CHANGE MITIGATION THROUGH LITIGATION. International & Comparative Law Quarterly, 72(1), 233-250. doi:10.1017/S0020589322000458

not possible to categorize any case as genuinely holistic.³³⁴. For example, the Urgenda case focused solely on emissions occurring within the Netherlands, disregarding the government's control over and potential responsibility for extraterritorial emissions.

On the contrary, atomistic cases have been consistently building a body of transnational jurisprudence. These cases define specific expectations for each entity involved, aiming to achieve a broad deterrence effect. Atomistic cases pertain to situations in which judges ascertain that entities are obligated to embrace and implement rational and internally coherent viewpoints concerning the imperative of mitigating climate change and assuming their equitable portion of accountability. As a result, it is becoming evident that adopting an atomistic approach is more successful in stimulating proactive measures for mitigating negative outcomes, in contrast to making judgments based on a holistic perspective.

VIII. Conclusion

Concluding, comprehending climate change and the notion of energy transition proves exceedingly challenging because it is usually not directly observable or experiential to human beings. Tackling an energy crisis due to exogenous factors (i.e., the Russian invasion to Ukraine) made the issue of energy transition even more burdensome. This transition from fossil fuel to sustainable sources of energy is a journey, not a moment in history and this master thesis has examined how energy transition could interact with climate-change litigation. Surely they go hand in hand relating to the fight against climate change, but does the latter promotes the former?

The media and academic communities have shown significant interest in high-profile judicial cases pertaining to climate change. However, there has been a noticeable lack of focus on whether the outcomes of these cases effectively contribute to the resolution of energy transition and the issue of climate change in a substantial manner.³³⁵ There are not many studies that delve into the actual impact of climate change cases, examining whether the States are compliant with the decisions and reduce their greenhouse gases (strengthening the energy transition).

The prevalence of climate change legal suits against national governments seems to steadily increase. Courts have ruled in favor of individuals seeking to compel States in view of their *duty of care* to take more ambitious efforts to address and mitigate anthropogenic greenhouse gases in a number of such cases. While the executive and legislative branches of government are largely responsible for climate policy-making, courts may play an important role in supervising and enforcing established laws. While legal systems and traditions vary across Europe, the above-mentioned examples show a striking trend of domestic courts taking a proactive role in tackling climate change challenges, i.e. reducing GHGs and enforcing energy transition.

Even though climate litigation is still in its infancy on the European legal scene (in comparison to the United States or Australia), it has become evident that it is a "vehicle" to confront governments' lack of effort and legislation³³⁶. Court decisions may differ due to the multiplicity of legal systems. Despite that, recent domestic court cases are clearly willing to enforce existing legal requirements and norms. As illustrated by the cases under consideration, courts do not function as independent decision-makers, but rather intervene based on existing laws that can be contested by citizens. Litigation, while important, cannot function effectively on its own and must be complemented by other political and social

³³⁴ Ibid

³³⁵ Peel, J., & Osofsky, H. M. (2020). Climate change litigation. Annual Review of Law and Social Science, 16(1), 21–38. https://doi.org/10.1146/annurev-lawsocsci-022420-122936

³³⁶ Pouikli, K. Editorial: a short history of the climate change litigation boom across Europe. ERA Forum 22, 569– 586 (2021). https://doi.org/10.1007/s12027-022-00700-1

strategies³³⁷.The above mentioned cases have demonstrated that judicial decisions without robust national policies resulting from in-depth interdisciplinary studies may lead to short-term increase of greenhouse gases.

Climate litigation has undergone a transformation from an exploratory strategy endorsed by climate activists and scrutinized by legal scholars to a widespread worldwide occurrence that impacts governments, corporations, and society at large.³³⁸. The main driving force behind the notable increase in "climate litigation" may be attributed to the generally acknowledged inadequacy of national governments in fulfilling their duty of care and meeting their obligations under the Paris Agreement. This situation is further exacerbated by the mounting urgency of the climate catastrophe, which adds to the demand for legal action. The evident lack of ambition and dedication displayed by governments, coupled with the inherent shortcomings of the Paris Agreement (i.e. the lack of legally binding responsibilities or robust enforcement mechanisms), clearly indicate that the climate change goals need further strategies and mechanisms to be reached. Consequently, climate litigation has emerged as a mechanism, albeit not a primary mechanism, for catalyzing international efforts to combat the climate crisis and mitigate its adverse ramifications.³³⁹

The courts' contribution to regional climate protection has been limited in substantive significance thus far. Establishing a direct connection between locally-emitted greenhouse gases and specific damages to individuals or energy projects impacting the climate is challenging. Climate change-related lawsuits require demonstrating a statistically significant change in observable parameters like global mean surface temperature, above and beyond natural variability, to link it to factors influencing the climate system's energy balance, such as increased CO_2 concentration³⁴⁰. Proving causal influence is an essential but intricate process in such cases.

The Urgenda case spurred global climate litigation, but the Netherlands has not done enough to align its greenhouse gas emissions with the Urgenda target³⁴¹. The government initially delayed action, but due to the 2019 Supreme Court decision, they had to take urgent measures to meet the 2020 target, mainly due to external factors like COVID-19 lockdowns and technical failures in a coal-fired power station. Further, there have been insufficient climate measures in 2021, despite the ruling implying the need for continued emissions reduction beyond 2020. Both in Ireland and France, it seems that the judicial cases under discussion followed a similar path as the Urgenda case. The first year of their implementation managed to fulfill their goals but only due to exogenous factors.

The relationship between energy transition and climate litigation is complex, but in general, these initiatives complement each other in pushing accountability and action on lowering emissions and mitigating climate change effects. Climate litigation can help to accelerate the energy transition by establishing a legal framework for the use of renewable energy sources and enforcing emission-reduction policies. On the other hand, energy transition can benefit climate litigation by lowering emissions and decreasing the effects of climate change.

As per the most recent IPCC report, the true impact of climate litigation on the development of new climate regulations and policies for the strengthening of energy transition remains uncertain. Caution is advised, as it is premature to have a definitive understanding at this

³³⁷ Peel, J., & Osofsky, H. M. (2020). Climate change litigation. Annual Review of Law and Social Science, 16(1), 21–38. https://doi.org/10.1146/annurev-lawsocsci-022420-122936

³³⁸ Pouikli, K. Editorial: a short history of the climate change litigation boom across Europe. ERA Forum 22, 569– 586 (2021). https://doi.org/10.1007/s12027-022-00700-1

³³⁹ Ibid

³⁴⁰ Ibid

³⁴¹ Observers, S. (2021b, December 28). The second anniversary of the Urgenda climate ruling: a day to celebrate? - Strasbourg Observers. Strasbourg Observers. https://strasbourgobservers.com/2021/12/28/the-secondanniversary-of-the-urgenda-climate-ruling-a-day-to-celebrate/

stage. Evaluating the precise influence of litigation on greenhouse gas emission reductions is currently challenging. Only time will reveal whether these legal decisions will indeed signify an essential shift in climate policy.

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