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A top-down European revolution for climate policy governance?

A comparative case study on the Green Deal (2019) and Germany´s Climate Change Act (2019)

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List of Abbreviations:

CCS → Carbon Dioxide Capture and Storage

CSS → Carbon Dioxide Sequestration and Storage

CCU→ Carbon Capture and Use

CCA → Climate Change Act

ENMOD → Environmental Modification Convention

ETS → Emission Trading System(s)

EU → European Union

GG → Grundgesetz (German constitutional law)

IPCC → International Panel on Climate Change

UN → United Nations

UNCC → Paris Agreement

TEU → Treaty on the European Union

TFEU → Treaty on the Functioning of the European Union

Abstract:

Within this thesis, the goal was to find out more about European climate politics and especially the new Green Deal. European Climate politics have a long history of continual promises and new premises towards the actual commitment. With the new policy initiative by the European Commission in 2019, the European call for a revision of established climate law across all governmental levels of Europe has been started. This call is also accompanied by Member States´ own climate policies and their interpretation of the European guidelines. In this case, the Green Deal´s initial policy, the COM (2019) 640 final, and some of its extents, are being compared to the German Climate Change Act (2019 and 2021). The European climate policies are a highly complex field of topics, into which multiple legal implications need to be accounted for. Additionally, the literature on European climate policies and climate policies in general indicate a rising trend on bottom-up litigation efforts to hold European governments accountable. This trend could gain more momentum, given new European climate policies allow for more legal accountability by governments. The comparison tried to find evidence that could further indicate if the trend is able to gain more or less political salience in the future.

1. Introduction

1.1 Climate change and political agreements:

Climate change and the affecting role of human beings has gained increased political recognition throughout the last couple of decades (UN, 1974, 2015, EU, 1999, 2019,2021). From a normative perspective, the aspirations to mitigate human impacts on climate dynamics could be described as lacking in efficiency (Lomborg, 2020). Even the effectiveness of certain traditional climate policies has a history of criticism (Keith, 2000, Lomborg, 2020). However, the rising voices of not only grassroot organisations were eventually supported from legislators, by providing an increase in their participatory and controlling capacities (Schütze, 2015, Kotzé, 2021, Minnerop, 2020). One of the most ambitious international commitments to mitigate further impacts was held in the UN Paris Agreement in 2015.

The summit and the following transnational policies were scientifically reasoned through the IPCC and its climate report of 2014. It contained recommendations to "achieve this [1.5-2°] long-term temperature goal, [allowing] countries aim[ing] to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century" (UNCC, 2015, Art. 4(1)). With 196 overall signatory parties, the European Union and its Member States entered this formally binding policy framework.

Despite the harmonious international agreement to follow certain climate policies (e.g., Emission Trading Systems (ETS)), critical voices raise concern towards a different approach towards a comprehensive understanding in finding and defining the most efficient pathways to the ambitious goals that were set for virtually every political level (Lomborg, 2020, Keith, 2000, Sovacool et al, 2021, Minnerop, 2020, Petri & Biedenkopf, 2021). Some scientific and political actors argue for a stronger focus on carbon pricing and Emission Trading Systems (ETS) to effectively tackle climate change (IMF, 2020, EU, 2022). Others argue that a wrong focus might lead to blind spots and evoke undesired effects that current policies are unwillingly omitting from their risk analyses (Lomborg, 2020, Sovacool et al., 2021).

The Green Deal (2019), i.e., Com (2019) 640 final, and the German Climate Act (2019) (CCA) are two climate policies that are different in their hierarchical standing within the European legal order. Whereas the former is a European policy initiative by the Commission, the latter is a Member States´ climate policy. Despite both policies sharing the same normative characteristics, they both follow the same legal doctrines and frameworks to differing extents, but with the same purpose and guiding framework (Kotzé, 2021, Minnerop, 2020, COM (2019) 640 final, Sec. 2.1.1, CCA, Sec. 1, 2).

By exercising its competence arising from Art. 17 TEU, the Commission acted in its function of being the main European policy initiator. Through its Communication (2019) 640 final, i.e., Green Deal, the EU Commission´s competency is to provide other European institutional organs with an initial framework for further legislative

implementations (see Art.288 TFEU). So, one can read: “This vision [of a Green Deal] should form the basis for the long-term strategy that the EU will submit to the United Nations Framework Convention on Climate Change in early 2020” (Green Deal, Sec. 2.1.1, 2019). Consequently, the guidance from the international frameworks and the EU Green Deal´s initiative affect the national legislation by its Member States as well (see Art. 288 TFEU). In the context of climate change, the EU acts as a mediator between the international and the domestic level. Domestic here refers to the European jurisdiction, which ultimately includes the national level.

The Communication (2019) 640 final had adopted the policy guidance from the Paris Agreement (2015) and provided the other EU institutional organs with structures for further European so-called hard law. Simplified, hard law refers to those laws that are accompanied by controlling and monitoring mechanisms. Soft law refers to mostly international law, due to the constant lack of those mechanisms. However, the COM 640 final could also be viewed as a soft law, despite its direct binding competency towards other EU organs. These organs, depending on the legislative instrument they choose (Art. 288 TFEU), can produce the hard element that is lacking within the COM 640 final. These mechanisms are designed to increase governmental accountability and provide citizens with more transparency during the process (e.g., Regulation (EC) No 1049/2001). The European legal system and its policy relationship with its Member States is therefore being explored in the second part of analysis. Second level of analysis is found within the Member States` national legal order, which has adopted the spirit of the Communication and its following EU policies.

The Communication was set out to guide the EU towards “a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use” (COM(2019) 640 final, p. 1). Both versions of the CCA (2019/21) took direct reference to the same previously mentioned international frameworks and the connected European normative and legal hierarchy. However, these legal implications are not the primary law to the German constitutional court. The German constitution serves as its main point of reference. However, it is also obliged to evaluate for whether European interests are involved, or at stake (Schütze, 2015). Furthermore, empirical evidence points towards an increase of European competences (Schütze, 2015), which is also accompanied by an increase of constitutional courts trying to protect or preserve their own national competences (Punev, 2022). These conflicting trends apparently have produced some effects on European climate change governance, which are explored within this thesis. This turmoil can be found on both, the European, and the national level.

Art. 20a of German basic law obliges the state to take climate action with the strive to minimise a German influence on the global climate, despite the "fact that no state can resolve the problems of climate change on its own due to the global nature of the climate and global warming does not invalidate the national obligation to take climate action" (BvR 2656/18, preface). The international character of the problem can be defined by the general human impact on climate dynamics through the means of general technological and industrial progression (Lomborg, 2020, Sovacool et al., 2021). This technological and industrial progression inadvertently is coupled to the clash between individual governmental responsibility for climate on both, a European, and Member State, level as well as a communitarian sensibility on a global scale. The individual responsibility of a state to care for its own citizens and the communitarian sensibility to care for the citizens of others. This trend of national legislators being forced to enforce their own climate policies is not only to be found in Germany, but other European countries such as the Netherlands as well (Klimatzaak, 2021). The rising trends of human rights being connected to environmental rights (Kotzé, 2021, Punev, 2022), are further indicators of European citizens being able to participate and shape environmental politics on both levels. They are opening new lanes for private litigation efforts, because the implementation of human rights also, by now inexorably, implies judicial accessibility to enforce the granted rights. The accessibility is coupled to the contents of the policies. Depending on the so-called enforcement mechanisms, i.e., the provisions that oblige the government to commit to the cause with proper action, the lanes for private litigation are increasingly expanding. The new European climate policy of the Green Deal in its entirety provides a number of those provisions, which are considered to be hard laws. They could be used, from governments and citizens alike, to be upheld in front of the European courts, which would further confirm the observed trend in the increasing numbers of private claimants pushing for climate litigation in front of courts on all judicial levels (Kotzé, 2021, Minnerop, 2020, Biedenkopf & Petri, 2021, Punev, 2022).

1.2 The research gap and framework of the Thesis

The Green Deal and the CCA are policies that are both designed under the same international commitments towards achieving the lowest possible impact of humans on the climate, whilst guaranteeing for the survival of economic prosperity. The revision of the German CCA has the potential to serve as further precedent for further European legislation to be revised. If the European law has passed down, or adopted, this flawed approach (Punev, 2022). The explicit search for literature on the direct relationship between the Green Deal and the CCA was difficult. Them being published one day apart is only a partial explanation. Whilst the research showed many results for either German or European climate policies, the literature on their interacting relationship was comparably scarce. The rising trends in private litigation are observable around the world (Kotzé, 2021, Punev, 2022). When accounting for a Member State´s legislation as well as its normative attitude, the comparison complicates. However, both policies compared, albeit complicated, facilitate the exploration of the relationships within the European climate policies.

This exploration is done from two perspectives, the first is the normative, or political, perspective. Here the political commitment is analysed. The bulk of literature that was read focused on this part of the analysis. Even the literature that was aiming on the legal aspects did not specifically embed the Green Deal and the CCA into the

context of European primary norms. Despite some acknowledgements of European climate policy being able to adapt on all levels (Punev, 2022, Kotzé, 2021), the broad bulk of the studied literature left the underlying principles of European laws untouched. The interactions between the different legal instruments of European law making are extremely difficult to bring in relation with each other unless they are specifically connected. Why that might be is explored in section 2.4 The European framework and climate policies. Furthermore, the legal mechanisms are constantly evolving and affected by newly introduced policies. These effects can be unforeseen and tend to be unpredictable. A thorough understanding of those effects can give insight into the European climate policy.

Therefore, the thesis was most interested in two things. First, the political context of European and German climate policies. Second, the legal ambition that is connected to the general climate policies of both actors and eventually their interplay. This thesis tried to fill the current gap of a missing combined direct political and legal comparison between the two laid out policies. The topic of climate change is surrounded by a heated political debate. The recency and limited access to much needed empirical data rendered a thorough comparison of the general climate policies between both levels impractical. However, climate change is a topic that is best tackled from all angles. The literature from all scientific fields that were studied showed the same stress of importance in diversifying efforts and not focusing on just one solution. Therefore, the rise of scientific and citizen involvement in the political processes of tackling climate change gave way for new challenges and opportunities on all political levels. Most interesting for private entities would be those provisions on both levels that have controlling, and enforcement mechanisms anchored within them. These are the provisions that hold governments accountable and provide the judicial branch with means to control for a legal securitisation of normative rights for citizens and governmental aspirations alike.

The thesis sought to find evidence for those controlling mechanisms, and if found, to find out how they interlock with the existing frameworks on European domestic and national governance levels. Additionally, the observable rising trends in private litigation are also correlated to new policies including further controlling and monitoring, i.e., accountability, provisions. This potentially creates a positive-feedback loop that could incentivise all levels of governance to adhere more strictly to their own frameworks.

To what extent does the latest version of the Klimaschutzgesetz (7/7/2021) diverge from the European Climate Policy laid out in the COM (2019) 640 final regarding the included mechanisms of governmental accountability and citizen participation?

By formulating the question to focus on the differences between both policies without explicitly involving a level of distinction, the argument can be made for more than just one dimension of analysis. The lack of specification in what exactly divergence is to be expected within the question was a personal deliberation, which was not easy to justify accurately. The reasoning was that divergences in policies can be studied from multiple fields within multiple dimensions (see Schütze, 2015,

Klabbers, 2017, Lomborg, 2020, Sovacool et al. 2021). One of the most common characteristics of the reviewed literature was found in their general limitation of scope. Except for Punev (2022) none of the studied literature, despite arguing for a potential international revision (Kotzé 2021, Minnerop, 2020), alluded to the European and German climate policy relationship. Punev´s article focused on the legal perspective of European climate policies and its interplay with the Member States´s constitutional courts. The incorporation of the normative focus expanded on the legal dimension and combined what inevitably belongs together. The legal and the political realm are two inseparable and key domains of any social interaction on a societal level. Both are inexorably connected and yet separated. Therefore, they affect each other respectively. The thesis was written to find more about these effects and whether they are reproducible to analyse other Member States and their climate policies in a European context.

The general interplay between European and Member States´s policies are a well-studied field. Nevertheless, the studied literature on the interplay of German and European climate policies, has indicated that the future of European climate policies will be accompanied by a rising trend of private litigation efforts towards not only Member States´, but also International and European forms of government alike (Kotzé, 2021, Minnerop, 2020, Punev, 2020). The rising trends of private litigation are stirring up the already complicated relationship between the legal and political realms. They produce further judicial and political revisions and are currently (2022) gaining more salience than ever. The rising trends are connected to the underlying principles of European policy making. Especially, the normative functions and provisions of the TEU and TFEU provide the European citizens with more legal power than it appears (Schütze, 2015).

Why could it become important to study the underlying principles of European policy interactions when comparing two climate policies on hierarchically different positions? European policy interactions are often accompanied by unforeseen, or undesired, effects (Schütze, 2015, Klabbers, 2017). Whether they manifest themselves despite or because the existing framework is unclear. An example of those effects can be found in the functional spillover effects (Schütze, 2015), i.e., when competences from apparently non-connected fields of different institutions overlap and thus result in a tug-of-war between two or more institutions, or actors, for said competences. The argument is being made that an accurate measurement of any differences between the two policy documents requires to construct a multidimensional approach beyond plain words on a piece of digital paper. The differences in measurement will be explained in detail in the 3.4 Methods of Analysis. The goal was to explore the relationship between those two policy documents by exploring their policy surroundings more profoundly and, perhaps, provide a way of measuring differences beyond what is in plain sight of traditional comparative policy analysis.

During the search for a proper research method on which the analysis could be grounded, the concept of critical realism as characterised by Garrison (2022) and

Lawani (2020) seemed to provide a plausible concept to its baseline. The essence of this concept is the breakdown of the traditional perception that A is connected to B and that D and C are separated. The choice of putting one letter in front of the other already implies either connect or disconnect. The same principle is applicable in European legislation. Words matter, especially when those words are connected without explicitly having a connection. Thus, to further complicate the matter, the analysis included the words that were not explicitly connected and connected them to the ones that were explicitly included. The critical realists´ distinction between the 1. Actual 2. Real and 3. Empirical allowed the analysis to include these implicit connections with palpable results, which is further explained in chapter ***2.5 Climate policies and political realism***.

Within a master's thesis, any analysis with a broad scope like this can only become possible within the confinement of a rudimentary simplification of what would be necessary to provide an extensive embedding of both policies within the European policy context. Therefore, the direct legal comparison will be restricted to the CCA, the Regulation PE-CONS 27/21 as part of the Green Deal, and the treaty hierarchy. The normative context will expand into the international dimension because both policies are based on international guidelines and principles, which themselves are normatively loaded. This is, in part, due to the lack of rigorous enforcement mechanisms for international climate commitments. Despite the denial of a European revision by the German constitutional court, there is empirical evidence that indicated a clear potential for a general bottom-up permeability for a European legal revision (Krommendijk et al. 2022, Punev, 2022). The next chapter outlines the status of climate policies in general and then dive more into details of the European climate policies more specifically. Furthermore, the theory chapter will try to outline the current state of literature and the resulting theoretical considerations for the analysis. The connection between critical realism and comparative policy analysis is established. Additionally, the legal context of both, TEU and TFEU, are introduced. Focus here is to provide a short overview of the complexity and some of the unseen mechanisms in a direct comparison.

2. Theory

2.1 Introduction: International Climate sciences and its critics

The measurable impact of humans on the climate is hardly debated anymore (Lomborg, 2021, Keith, 1999, Moreno-Cruz, 2015). The main debate is now focused on the magnitude and the steps taken to minimise anthropogenic impacts (Lomborg & Oberthür, 2022, Homeyer et al. 2021). Despite high political ambitions, the desired effects appear to lack behind (Lomborg, 2020, Eckes, 2021, Minnerop, 2020, EU, 2019). The UN and IPCC are two of the most highly regarded Institutions in promoting climate awareness and supplying legitimate data on climate change and its prospects (Lomborg, 2020). Their reports are regarded as guiding markers and they supply an extensive overview on current global trends in terms of climate change. These reports are therefore contributing to the technocratic justification for all European and German environmental policies (Green Deal, 2019, CCA, 2019/21). The next sub-chapters will provide an overview on the various levels of climate policies and how they are connected. Additionally, the current state of literature and theoretical considerations are introduced and applied.

2.2 Traditional Climate policies and their effectiveness

Lomborg (2020) focused on the effectiveness of common climate policies versus economic and developmental policies by establishing and testing different scenarios or baselines. These were grounded in data gathered from the UN Climate Panel, the IPCC, and other global leaders on generating data on climate change. His focus was global, albeit taking some references to a national (US) level. He argued for a careful reconsideration of "successful" practices and warned of what he calls the "expanding bulls-eye effect" (p. 7). Traditional climate policies are heavily reliant on common climate policy practices. Emission Trading Systems (ETS) and Carbon Capture and Sequestration/Storage (CCS/CSS) are methods to facilitate a transition towards a more economic net-neutrality. Apparently, some of the traditional climate policies are comparatively ineffective at best (Sovacool, 2021) and, more probably, inefficient plus inaccurate on top (Lomborg, 2020). The thesis argues that the Green Deal (2019) and its accompanying policies are designed not only in the same international spirit but are also aspiring to the same international ideal as the CCA (2021). As a result, the thesis included traditional policies into its framework to have its first determinant of comparison.

2.3 The European Union and International Climate Sciences

The EU renewed its promise to tackle the identified issues by the IPCC and UN by publishing the Green Deal in 2019. It took reference to the international framework provided in the 2030 Agenda by the UN and the annual reports provided by the IPCC (2018). Although it contained the highest ambitions, the Green Deal Communication in 2019 left a series of unanswered questions for science and politics alike (Ossewaarde & Lowtoo, 2020). Is the Green Deal only a mere continuation of endless commitment without action? Or does it allow not only the EU, but also its Member States, to come forward with a ground-breaking interpretation of the

previously established European climate laws? The result of the Green Deal was a weave of European policy documents aiming to focus on green growth and sustainable investment (e.g., Regulation [EU] 2020/852, PE-CONS 27/21, etc.).

The EU openly formulated and addressed a desired shift towards becoming emission free, environmentally conscious, and conscientious towards its socio-political responsibilities (EU Green Deal, Agenda 2030, …,). The goal was set out to bring justice to not only all Europeans, but the whole world's population, eventually. The success of these great ambitions, on a German level, could be described by uncertainty and a lack of specificity (BvR 2656/18, confirmed on 24.03.2022, Lomborg, 2020, Punev, 2022). The reality of European and German climate policies however still is grounded in good faith and the highest of expectations (TEU, TFEU, Green Deal 2019, 2021, CCA 2019, 2021). This interpretation aligns with the findings of the German constitutional court for the German Climate Act in March of 2021. The consensus of most critics is found in the lack of definitive commitment by European governments. This conceptualisation is confirmed throughout the reviewed literature and applicable to both, national and international contexts alike.

An analysis of internal debates in the European parliament has shown that despite political rifts, climate change remains a central topic for most parliamentarians within and beyond EU borders (Petri & Biedenkopf, 2021, Burns, 2019). Additional research has indicated that the European court of justice had already intervened on multiple occasions on environmental policies by the EU and its Member States (Krommendijk et al., 2022, Klabbers, 2017, Schütze, 2015). Krommendijk and his colleagues´ research also identified that the reliance "on (human rights) law and litigation before national and international courts has been growing in these [environmental] areas, also because political action is often absent or difficult to realise" (p. 2). Additionally, the increase of scientific involvement into decision making processes, through e.g., IPCC, EU Expert Boards, …, is accompanied by civic engagement and activism. They also confirm the rise of private climate litigation against respective governments is a growing body of literature. The trend within the literature is confirmed by other socio-political trends like Fridays for Future, Scientists for Future, and more. The increased political salience of a climate crisis evoked the response of an environmentalist trend across most developed countries (Lomborg, 2020, Ossewaarde & Lowtoo, 2020), which then was followed by an increased trend in private litigation efforts (Kotzé, 2021, Krommendijk et al. 2022, Minnerop, 2020). These trends also confirmed the thesis´ assumption of the need for a legal and political analysis.

2.4 The European framework and German climate policies

The interactions between German constitutional law and European policies are well documented and laid out here in three interlocking dimensions (Schütze, 2015, Klabbers, 2017). The first dimension is found in the *Treaty on the European Union* (TEU) and *The Functioning of the European Union* (TFEU). Second, the subsequently enacted competences and legal instruments by the European Union (e.g., Regulation [EU] 2020/582). The last dimension is on a national policy level

(CCA, 2019/22) where every policy is not only subjected to national law revision (German Grundgesetz (GG)), but also to European legal revision (e.g., Art. 17 TEU, 114 TFEU, Art. 258, 288 ff., TFEU). The Communication of the Green Deal is best understood as an initiative for following European legislation to be designed in its spirit. It is not a binding instrument such as a Regulation or a Directive (Art. 288 (2), (3) TFEU). However, when connected to the normative character and the competences granted to the Commission, the indirect bindingness becomes almost irrefutable (e.g., Art. 17 and 188 TFEU).

The European Union is based on conferred competences (Art. 1(1) TEU, 3 ff. TFEU), which are aimed towards an "**ever closer union** among the peoples of Europe, in **which decisions are taken as openly as possible and as closely as possible to the citizens**" (Art. 1(2) TEU). This is one of the two normative lenses to keep in mind throughout the following analysis. The other lens is found within Art. 2 ff. TEU, where the Union of states is expanded by their citizens and their "dignity, freedom, **democracy**, **equality**, **rule of law** and **respect for human rights**, ... These values are common to the Member States in a society in which pluralism, non-discrimination, tolerance, **justice**, **solidarity** and **equality between women and men** prevail". These Articles set the baseline for all European legislation and the following Member States´ legislations. They are providing the foundations on which the current socio-political European machinery is working, growing, and inevitably, debating.

Despite lacking a constitution like Germany, in 2009, the treaty of Lisbon (TFEU) amended the treaty of Rome (TEU, 1958). Together both treaties have established the modern version of the European community. A consolidated, yet ever expanding, web of policies and following regulations with a delicate legal standing on all levels. The beginning were two legal documents that have since served under a constitutional function without possessing the legal status as such. The result is a slow accumulation of competences and progressions that were enabled by the mechanisms which were implemented in both treaties (e.g., Art. 3,4, 5 TEU, Art. 114, 288 TFEU, Schütze, 2015). The EU managed to bring European standards and policies to almost any sector imaginable within its Member States. Some are more standardised than others, but the efforts are considerable and encompassing (Schütze, 2015, Green Deal 2019, Regulation [EU] 2020/852).

The European Union and its Member States are deeply intertwined due to multiple legal and political mechanisms. These are based on different principles, such as the harmonisation of markets (e.g., Art. 114 TFEU), the ordinary legislative procedure (e.g., Art. 289, Art. 294 TFEU), and the normative commitment towards "the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities. These values are common to the Member States in a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail" (TEU, preamble). Thus, the European Union is always striving towards

not only establishing a socio-political balance, but also putting efforts towards an inclusive and encompassing policy framework for all its citizens.

The newest version of the Klimaschutzgesetz (CCA (July of 2021) was a direct adherence by the German government to the court's order. The order demanded from the German government “to create a framework that makes further developments aimed at protecting fundamental rights possible in the first place” (Headnotes 5, last sentence). The BVG explicitly confirmed the German framework to be revised and excluded involvement of European jurisdiction within its order (BvR 2656/18, L.141), apparently, neglecting the European strive and practice to harmonise and adjust standards (Schütze, 2015, Art. 3ff. TFEU, Art 26 TFEU, Art. 188 TFEU, …).

2.5 European Climate Commitment and Climate change litigation

An analysis of internal debates in the European parliament has shown that despite existing political rifts, climate change remains a central topic for most EU parliamentarians within and beyond EU borders (Burns, 2019, Petri & Biedenkopf, 2021). Other research has shown that the European court of justice had already intervened on multiple occasions on environmental policies by the EU and its Member States (Krommendijk et al., 2022). Additionally, the increase in scientific involvement into information and data gathering through e.g., IPCC, EU Expert Boards, German Council of Experts, is accompanied by an increase of civic engagement and activism. The rise of private climate litigation against respective national governments is a quickly growing body of literature. The trend is further confirmed by other socio-political trends like Fridays for Future, Scientists for Future, and others. The political salience of a climate crisis evoked the response of an environmentalist trend across most developed countries (Lomborg, 2020, Ossewaarde & Lowtoo, 2020), which is now being spearheaded by the European government.

The verdict concluded by the constitutional court in Germany in 2018 (BvR 2656/18) has demonstrated that the German legal system allows for legal permeability in terms of democratic input. It can push towards the democratic correction of incorrect policies. The claimants who gained the Court´s acknowledgement of an intergenerational responsibility were private citizens. Further, Kotzé (2021) observed a “rapid rise in climate litigation globally, which evidences an increased reliance on the judiciary to step in to fill regulatory gaps where governments and corporations fail to address global climate change, [which] suggests that courts can and will play a critically important role in advancing planetary stewardship in the climate context” (p. 1425).

In his research he explored the “extent to which the Court in Karlsruhe innovatively managed to embrace a holistic planetary view of climate science” (Abstract). Furthermore, Kotzé also stated that he believes that the court's order “is a concrete example of how a domestic court can become a planetary climate steward” (p. 1442). The court's decision, “however, does reflect the dawn of a new planetary consciousness that humanity, its regulatory institutions, and its legal actors including the courts, will have to embrace to be able to more effectively respond to earth

system transformations" (p. 1444). He describes a possible European legal bottom-up permeability without explicitly mentioning. His focus had been on the German constitutional framework and the German/International perspective, exclusively.

The "planetary stewardship" he describes omitted the intermediary step between the international and national level. Thus, despite his acknowledgement of "the Court's most explicit attempt to understand climate change within a planetary context", the European context is completely missing from his analysis.

In the same scope of German constitutional analysis, Minnerop (2020), had also focused on the German constitutional revision, and expanded her analysis to the international frameworks. She researched on the case from 2018, which had laid the foundations for the court´s order from March 2021. Her "[a]rticle examines the order within the context of German constitutional law and the complex relevant legal doctrines that the Court used and expanded, and on that basis, analyses the interlinkages between the state's objective to protect the climate pursuant to Article 20a Basic Law ('Grundgesetz') and international law on climate change, and how the state's constitutional obligation to promote climate protection unfolds a concrete mandate for the state's international efforts" (p. 2).

Within her analysis, she dissected the different doctrines used by the court to examine and rule on the above-mentioned case. The doctrines of intergenerational equity and advance interference-like effect are important legal interpretations that were used by the court to justify its order toward the revision of the CCA (2019). To Minnerop, the doctrine of advance-like interference was an advancement of the doctrine of interference. This doctrine references the "state's obligation to abstain, in the specific context of climate change, and thereby opened constitutional doctrine for an innovative approach towards protecting the future enjoyment of fundamental rights" (p. 3). In other words, the German Government must follow a political and economic path that leads towards the set goals as efficiently as possible. These doctrines are derivatives of the international legal system and therefore also partially applicable in a European context.

Minnerop further explained that "[i]t rather constitutes creative judicial reasoning that took calculations of a remaining national carbon budget into account and permitted the Court to examine the emission reduction targets until 2030 against the strict constitutional yardsticks that judicial review reserves for the state's undue interference with fundamental rights" (p. 3). Subsequently, the court had interpreted the advanced interference-like doctrine as "the emphasis on the intertemporal dimension of fundamental rights [which] stress the significant function of a legal determination of emission amounts in directing transformational changes while protecting—to some degree—future generations" (p. 3). This protection led the court to further bolster its argument by referring to the doctrine of intergenerational equity, established by Edith Brown Weiß and can also be found in Art 3(2) TEU (Minnerop, 2020, p. 3). The reasoning was that future generations and their fundamental rights must not be affected by lax politics in the present. The reluctance to take effective

steps towards tackling climate change has been criticised by the court within its verdict extensively and continually.

Further, Minnerop argued, in line with Kotzé (2021), that the introduction of those doctrines, and them being connected to the scientific evidence by renown institutions, was pivotal for the court to reach its ground-breaking verdict (Minnerop, p. 17, Kotzé, p. 1435). Again, the European context is missing within both analyses. However, both Minnerop and Kotzé acknowledged the legal precedent that this verdict had set on an (inter)national level. However, "[w]hile this paradigm shift towards a planetary perspective will likely take time to embed itself in society, science and our social regulatory institutions, the implications of such a shift for governance more generally, and for law specifically, including law's agents and actors such as courts and legislatures, are as wide ranging as they are potentially profound, especially in the context of climate change" (Kotzé, 2021, p. 1431).

The search for literature which directly applied the German revision of its CCA to the European context resulted in only one fitting result. Punev (2022) aligns with the findings of Kotzé (2021) and Minnerop (2020) in observing a rising trend of private climate litigation. Additionally, he referred to two of the most recent cases in European legal history. In the *Urgenda* case, the Dutch Supreme Court ruled that the Dutch government was under a legal obligation to reduce its greenhouse gas emissions by at least 25% before the end of 2020. A particularly interesting detail is that the Supreme Court expressly referred to the right to life under the European Convention on Human Rights- unlike the district court, which had resolved the case by applying Dutch law only" (p. 3-4). Additionally, within the *Klimatzaak* case in June 2021, "the Court of First Instance of Brussels declared that Belgium's climate policy violates the legal duty of care and the right to life" (p. 4). "Under Dutch law the due standard of care is interpreted as 'what according to unwritten law has to be regarded as proper social conduct" (p. 4). The court relied on the Intergovernmental Panel on Climate Change and its reports to determine the proper social conduct and care for citizens.

To Punev, as well as to this thesis, "[t]wo points are worth noting. First, in all of the cases, the courts rejected the argument that they were dealing with matters which went beyond their jurisdiction, declaring that they were merely applying the law. Second, with each precedent that is set, the court further transcends the usual judicial context of a legal dispute between two parties, rendering decisions that are relevant to a much larger group of people" (p. 4). In line with Kotzé (2021) and Minnerop (2020), he argued that "First, climate legislation and litigation go hand by hand. In principle, litigation is often used as a tool for enforcing policy. An increase in litigation is a sign of legal mobilisation, often provoked by legislative deficits. Therefore, the climate litigation boom shows that legislation must in the first place be more detailed and less contentious. Better drafted laws would stifle the judiciary's urge to enforce policies through the courts under the pretext of applying the law" (p. 12).

Conclusively, in his words, and in line with this thesis: “Climate litigation is indispensable, but only with clearly defined boundaries of justifiability that do not undermine the separation of powers and do not rely on abstract standards. The European legislator must establish rules that are both more detailed and realistic” (p. 15). This finding strongly resonates with the rest of the literature as well as the views of the German constitutional court.

2.6 How do Climate Policies and Critical Realism connect?

The comparison between a communication by the European Commission and the German CCA (2022) could appear like seeking a comparison between pears and apples. According to Garrison (2022) critical realism offers one of many ways in conceptualising research. Here, special acknowledgement is given to general bias and cognitive limitations by the researcher. To him, these are, to a limited extent, being perpetuated through traditional thinking traditions such as positivism and naturalism. For a comprehensive overview of the relationship between the different research paradigms mentioned by Garrison and Lawani and their respective philosophical positioning, see Table 1, p.3, Lawani, 2020.

Additionally, Garrison stated that “for one to assume value neutrality when studying that which is inherently value-laden is to make a basic error” (p. 56). The values of the European Union are cemented into the previously mentioned treaties of the European Union (TEU) and of the Functioning of the European Union (TFEU). The communication by the Commission and its value-laden commitment are inexorably connected to the treaties and their normative value hierarchy. Subsequently, the German legislation, following along the normative hierarchy, is coupled to these values as well. Critical realism allowed the thesis to pay closer attention to the policy environment of both compared documents. Lawani (2020) and her account of critical realism does not contradict Garrison´s account but adds: “[Critical realism] maintains that dimensions of reality are deep-seated and cannot be reduced to experimental observations, but rather can be known by understanding the mechanisms that produced those experimental events, which are hardly ever visible” (p. 1).

Further, “[o]ntologically, CR assumes that reality is multi-layered into three domains: the real, the actual, and the empirical. The domain of the real consists of deep structures of objects or entities that are physical, social and internally related. The real contains total reality; the mechanisms, events, experiences and causal powers inherent to these objects or entities as they independently exist. The domain of the actual consists of events that take place when causal powers of structures and objects are enacted, despite whether they are observable or not. Lastly, the domain of the empirical are those events that are experienced or observable through perception or measurement” (Lawani, 2020, p. 4). Further, one reads that “[t]hese domains are nested within each other such that it is impractical to reduce what causes an event in one level to another level because at each level, some new experience emerges” (p.4). Therefore, critical realism provided the basis for a meaningful policy comparison of the Green Deal and the CCA, since pears and apples are both rose plants after all.

In other words, the three domains allow critical realism methodologies to not capitulate in front of the sheer complexity of an issue but accept its complexity and the (im)measurable contingencies. Proponents of critical realism accept the fact of human limitations and try to engage in theoretical deduction for a better understanding of the force that is generally attributed to numbers and empirical evidence (Garrison, 2022). This, self-evidently, is not without risk towards the above-mentioned forms of bias and cognitive limitations by any human being. The three domains of 1. The Real 2. The Actual 3. The Empirical are all interconnected and are for this thesis best understood as autonomous yet interconnected and thus not mutually exclusive fields of interaction, within which one aspect may change its importance and characteristic entirely within another domain (Garrison, 2022, Lawani, 2020). To remain in the realm of the possible, the thesis only included the actual and the empirical domains into its analysis, because the real would have been too encompassing.

The domains are tools to separate the otherwise overwhelming complexity that is encountered when researching European and German climate policy interactions. The actual in a European and German climate policy context would shortly be described as the treaty hierarchy (TEU, TFEU) and the resulting legal mechanisms (see Art. 288 TFEU, PE-CONS 27/21). The empirical domain is found in the Green Deal CE-PONS 27/21 and the CCA (2022). The critical analysis of the policy documents within this thesis explored and tested for the separability of the domains and their interactional effects.

Finally, “the epistemological objective of CR is to describe and clarify the relationship between observed experiences, events and mechanisms. For critical realists, the main objective of the investigation is to acquire knowledge about underlying causal mechanisms to achieve an explanation of how things work” (Lawani, 2020, p. 4). The comparison between both documents is providing the first step to the epistemological objective, by examining two policies and their underlying connections, the thesis focused on the actual and empirical domains in its analysis. Therefore, and in line with Garrison´s account (2022) and in Lawani´s words (2020, p .4): “The primary objective of [this thesis] is to explain a social occurrence by referencing causal mechanisms and the potential consequences they have throughout the stratified three layers of reality”. The social occurrence is the revised CCA in 2021. The causal mechanisms are the legal European framework and the European climate policies that are by default connected to the CCA. The potential consequences were moved to the discussion. Thus, the following hypotheses guided the process of analysis and served as cornerstones in the assessment of differences and similarities between both policy documents.

H1: If the Green Deal and the CCA have both followed the international frameworks of the UN and IPCC, then both policies are designed with the same ambitions

H2: If both policies are referring to the same frameworks and hold similar normative attitudes, then a revision of one document could lead to the revision of the other

H3: The overarching European legal framework found in the treaties of TEU and TFEU contain direct provisions that affect the legal permeability of revision for both documents alike

H4: If there is evidence of underlying mechanisms that are applicable to both documents, then there must be evidence for these mechanisms to be enforced accordingly

The following section will provide the conceptualization and all other methodological considerations that were included. It will first start with a brief introduction, which is then followed by the comparative case study, which will introduce the data of direct comparison as well as the treaty provisions in detail. Furthermore, the chapter will provide the 3.3 Method of data collection as well as the 3.4 Method of data analysis. The third chapter will conclude with a summary and an outlook for the 4. Analysis.

3. Methods

3.1 Introduction to the Methods

The interest of this research was to study the European and Member States´ climate policies. Even more so on the effects that are linked to both levels of policy but were not explicitly mentioned. This attempt was made possible through the combination of different theoretical constructs. The conceptualisation of constructs was the subject of the following paragraphs. Further, the complexity of climate change and political accountability necessitated a complex perspective. The complexity was sought to be reduced by splitting the analysis in two. The next paragraph introduces the method of choice and the ***3.2 Comparative case study*** and a short reasoning on the approach. The chapter concluded by ***3.3 Methods of data collection*** and ***3.4 Methods of analysis.***

3.2 Comparative case study of European climate policies

The method of choice to answer the research question was a qualitative critical comparative policy analysis. The unit of analysis is the European climate policy interactions on two levels. Due to the complexity, only a fraction of the policy web that falls under European climate policies could have been analysed. The Commission's communication (COM (2019) 640 final is not even the complete Green Deal. As part of the Green Deal, the Regulation PE-CONS 27/21 is the revised European climate law (orig. Regulation EU 2018/1999) and could be viewed as the equivalent to the German CCA (2021). Together, they become somewhat representative of what the Green Deal actually is. The German case of the CCA (2021) served as an exemplary basis for a Member State climate policy. To fully explore the EU climate policies, the thesis would have necessitated a study of all Member States and their respective climate policies. However, the aforementioned European legal mechanisms of harmonisation and balancing of standards made the exemplary use of Germany as a representative case plausible.

The method of qualitative critical comparative policy analysis seemed the most promising due to the immense load of data on European and the individual Member

States´ climate policies. Through a combination of critical realism (see chapter 2.6) and qualitative comparative Analysis, the goal was to connect the political ambitions to the existing legal framework. The apparent lack of previous commitments almost seemed like pathological negligence, which had sowed distrust among private actors as well as large parts of the scientific community. The relationship between ambition and commitment without action was of most interest for this comparison. As the highest authority on initiating European legislative measures, the Commission acknowledged its historical failures and published the Green Deal. If the Green Deal is to be taken at face value, then there indeed must be a connection to legal accountability for governments. The assumption was that if the Green Deal, as well as the CCA (2021) provided any form of legal anchors for accountability, then the rising trends of private litigation must be further facilitated. Therefore, the political dimension was of as much importance as the legal.

As mentioned above, the amount of legal and political documents that are part of the Green Deal made a complete analysis unfeasible. The literature on climate change and European climate policies is extensive as well. The Green Deal is a "fresh start" and the most extremely ambitious climate policy initiative that there is as of today. Furthermore, it is the guiding framework for all its Member States and their national climate policies. However, a number of additional Regulations and Directives that take direct reference to the Green Deal are already in force. They would have been of invaluable worth to the analysis. However, time and space forbade their inclusion. The same was true for the literature that was included. The following chapter will provide the rationale to the ***3.3 Method of data collection*** and was then followed by the ***3.4 Method of analysis***. The aim of those chapters was to provide a detailed explanation on why and how any data was either in-or excluded. Additionally, the method of analysis elaborated on how the concept of critical realism was combined with the comparative policy analysis.

3.3 Method of data collection

To gain insights into the European climate policies and how they interact with Member-State climate policies, data needed to be gathered. The data that was gathered for this research was sampled from two databases (Google Scholar & SCOPUS). The search terminology was kept the same for both databases to ensure reliable search results. Furthermore, the search for literature was done in three steps, with each step increasingly specifying. First, the goal was to gain an overview on the body of literature on European climate policies. Second goal was to find literature that has German and European climate policies in focus. As the third and final step, the goal was to find literature that specifically aimed at a direct comparison or relation between the Green Deal and the German CCA. Furthermore, literature from previous studies and courses were included, due to their relevance to the topic and the familiarity of the author with their contents.

The body of literature which was included within this thesis had to be representative for the complexity that is connected to European climate policies. Thus, the literature that was adapted and used throughout the thesis was chosen to be specifically broad,

but still connected to European climate policies and their interacting effects with the Member States. The direct comparison between both main documents had to be kept broad as well. Climate change is all encompassing on all levels. Every industry, every field of research, every citizen, every policy, is affected by that topic. By introducing a broad perspective from scholars of different fields and a great variance in expertise, the goal was to explore the framework and its surroundings into which the two main policies are situated. Notably, not all of the available literature on European climate policies could have been read. The articles that were included had to have a) mostly differing fields of expertise, yet still be applicable to climate change and its European regulation, b) approximate findings with the bulk of the excluded literature. These criteria have been applied during abstract and full-text screenings of roughly 60-70 articles and book sections.

Both, the Green Deal and the CCA, are intricately connected to the UN and IPCC frameworks and are taking direct reference, respectively. The communication of the Green Deal was published on the 11th of December of 2019. The CCA was published on the 12th of December of 2019. The Commission acted as the main policy initiator on a European level (Art. 17(2) TEU). Its communication of the Green Deal is the spirit in which all following Regulations and Directives must be designed. Both policies (Green Deal and CCA) were designed and published simultaneously and in the same spirit of the international UN/IPCC framework. The constitutional revision through its court had forced the German government to revise the flawed top-down given framework in 2022. Therefore, the recency of both documents and the revision of the German CCA by its constitutional court facilitate a plausible and relevant comparison.

The Green Deal is already, per definition, embedded into the European legal system (see Green Deal Preamble and Art. 17(1), (2) TFEU). Therefore, it already had served as the basis for legal interpretation by the European and Member States´ courts (Eckes, 2021, Setzer et al. 2021). The competence of the Commission as the main policy initiator is giving policy directions to the EU as a whole. Legally, their initiatives must be at least accounted for (Art. 17 TEU). Additionally, the communications are guidelines and frameworks for future European legislation. When researching European climate policies, the “fresh start” (Green Deal, preamble) was seen to be a good point of departure, because it guides EU climate policies and, indirectly, MS climate policies alike.

From a pure German national perspective, there is no climate policy with higher normativity than the CCA. It is the direct result of the international commitment by the UN and the EU following the 2015 Paris agreement. Nevertheless, as part of the German law apparatus, it is simultaneously subjected to updated European and international commitments. European climate commitments are inseparable from German commitments (e.g., Art. 3 ff. TEU, Art. 20a GG). Their goals are aligned with the UN Framework and therefore designed and implemented in the same manner (see Preambles). Furthermore, the CCA, in both versions, does provide the framework for further German legislation to tackle climate change. It sets national

climate targets and provides national legal enforcement mechanisms for controlling and monitoring purposes. Therefore, the CCA was a reasonable choice to serve as a unit of observation to be somewhat representative of a Member States´ climate policy legislation.

3.4 Methods of analysis

The critical comparative policy analysis was the choice of method for multiple reasons. One goal was to account for differences or similarities between the two main policies. When studying European climate policies, the dimensions of the actual and empirical were the most promising dimensions to find an approximately holistic comparison between both policies. Comparative policy analysis is concerned with seeking a comparison between two or more policies. The German CCA and the Green Deal fulfil this criterion. However, they are mutually interdependent and part of the same frameworks (UN, IPCC, EU). The critical viewpoint within the analysis does not neglect this crucial aspect and further includes the already existing European frameworks and rules. By acknowledging the European legal order and the accompanying mechanisms, the critical comparative policy analysis sought to not separate what appears to be inseparable. To gain an overview on both policies and their surroundings, the thesis made use of a coding scheme, which was applied to both policies.

Codes here referred to "representing the operations by which data are broken down, conceptualised and put back together in new ways" (Flick, 2009, p. 307). Furthermore, as pointed out by Strauss and Corbin (1998), coding can be distinguished into three different categories. For this thesis, open coding was used, which represents one way to break down complex data and rearrange it into meaningful categories. The dimensions of the actual, and the empirical were added to the content analysis as defined by Strauss and Corbin (pp. 103-104; 113-114). The exclusion of the real was a necessary cut, because it would have resulted in an unmanageable approach to the comparison. Additionally, the dimension of the real was considered to be inapplicable, because it would have required the inclusion of data that are generally untenable within the limitations of a master thesis.

Therefore, the inclusion of the actual perspective of analysing allowed the research to include codes that were not directly tied to both documents. The argument went as there are codes that might indicate relevance to the European legal order when explored more in detail. For example, the TEU and TFEU hold multiple provisions for the approximation of standards (e.g., Art. 288 TFEU), and the enforcement of such (Art. 17(1) TEU, Art. 258, ff., 289 ff. TFEU). An analysis from a purely empirical perspective would not have had the capacity to include those provisions, despite them being undeniably related to both documents at hand. Additionally, the coding scheme was also analysed from an empirical perspective, because some codes were aimed for a direct comparison between both documents. Table 1 shows an overview on the codes that were included alongside with a brief rationalisation. A more detailed rationalisation can be found within appendix 1.

3.4.1 The coding scheme

Whenever science tries to measure what is not measurable, the use of theoretical deduction gains attraction. “The domain of the actual consists of events that take place when causal powers of structures and objects are enacted, despite whether they are observable or not” (Lawani, 2020, p. 4). The connected mechanisms can be found not only explicitly within both treaties, several Regulations and Directives, but can also be found within both the policies. The combination of critical realism as defined above and its application to a coding scheme seemed reasonable. For example, a mentioning of standards implicitly refers to the treaty provisions and the following legislative acts. Thus, standards were included into the coding group for treaty provisions. Regulations and Directives have been separated from the treaty provisions because they are the direct result. They could not have been analysed in detail, because that alone would have pressed the limitations of a master's thesis. The last coding group of private litigations aimed to find passages that indicate differences of both policies on the criterion set out by the German constitutional court. The goal of these coding groups was to break down the different angles of analysis and rebuild them into codes according to the critical realist perspective. All codes were used to identify relevant passages and decided according to which groups they must apply to throughout the analysis. The analysis was carried out manually.

The added value of a combination between a normative and a legal analysis is found within the relationship that the realm of the political shares with the realm of the legal. This is done by bringing forward two main arguments that are grounded within the findings of the studied literature. First, International and even European law, have a long history of precedence and case law that is currently gaining salience in all dimensions (Schütze, 2015, Klabbers, 2017). Second, the active political and legal mechanisms oblige both, EU and Member-States, to constantly adjust and balance their standards against each other (e.g., Art. 114 TFEU, 289 ff. TFEU). Aiming for the highest standards on both sides requires action and interactions on both levels. Eventually, the European and Member States´ law will further evolve and is expected to be influenced by multiple actors and events.

This is considered especially true for when the new legislation involves provisions that facilitate the participatory processes. The goal for the thesis was to have direct comparison between climate policies on two different, yet interconnected, levels. Furthermore, the attempt is being made to build a basis of analysis from a critical realist perspective to not add to the complex interplay of European climate policies and its Member States but trying to decompile a truly complicated issue. The issue being the encompassing level of governing climate change on any political level. With this basis laid out, future research could use the framework towards other policy analyses in a European context with different Member States´ policies.

The research goal was to explore the European climate policy interactions on two levels. The main goal of this chapter was to provide a detailed description of the rationale and operationalisation of critical realism in a concept of coding. By using a wide range of literature and differing concepts, the complexity of the topic was

broken down and recontextualised to fit into the analysis. European climate policy interactions with its MS are an understudied field. Especially, when researching on the unseen effects of private litigations, bottom-up permeability, and legal enforcement mechanisms. The discrepancy between attitude and behaviour towards climate change seems to be present throughout all levels of governance and is countered by the rise of active citizens receiving help from the judicial branch. This thesis tried to understand what makes a successful climate policy and, perhaps, offer help to identify indicators for or against climate litigation permeability. The limitations and considerations on reliability and validity were moved to the appendix.

The following chapter will start to analyse the described question. The 4. Analysis first dove into the differences between the normative and legal analysis. Then, the international framework was briefly introduced and contextualised into the realm of European climate policy. The Green Deal and its normative role then were explored in more detail. Additionally, the German CCA and its normative role was analysed. Their relationship to each other then was synthesised before diving into the legal analysis. Here, the second part of the analysis tried to elucidate the legal mechanisms that are overshadowing European climate policies. The focus was set on the treaty provisions as well as on the competences and their limitations. Each policy was analysed separately, and the findings were then synthesised. Finally, the 5. Discussion provided a synthesis of both analyses and contains recommendations for future research.

Table 1. Coding scheme and brief rationale Source: own compilation

Coding Groups	Codes	Short rationale for codes

European treaty legislation	Competence*	Mentions of competences imply EU treaties per definition and refer to European legal mechanisms
	Standard*	Whenever standards are mentioned, treaties and following Directives and Regulations are implied. Standard was accounted to be more on the treaty side, because of the needed legal supremacy
	International*	International treaties and commitments are almost always subject to EU treaty law and therefore might provide valuable insights into the relation to international frameworks
	Union	Although a rather broad code, hits within both documents might show evidence that allows to gain insights on treaty relevant topics
	Partner	The mentioning on partnership between the EU/MS and other partners helped the analysis to single out passages that specifically aimed to establish/foster relationships and partnerships with others
Directives and Regulations	Directive/ Directiv*	Directives are pieces of legislation that followed the treaties and are more specific to a topic and one or more MS. These legal instruments are often tied to Regulations, and other forms of European government (see Art. 288(3) TFEU)
	Regulation/Regulat*	Regulations are the main form of direct European governance. They are binding and directly applicable within all MS. (see Art. 288 (2) TFEU). They are part of the climate policy web and must adhere to not only the treaties, but also the following legislation of the Green Deal communication.
Traditional policies	Emission Trading Systems/ETS Fossil Fuel/fossil/Transitory technologies/CarbonDioxide removal/ sequestration	As taken from Lomborg, traditional climate policies are aiming to: a) reduce or regulate CO^2 b) focus on the transition towards renewable energies c) are not focused on development and education d) lack specificity of goal attainment
Sustainable policies	Renewable*/ Citizen/ Social/ Responsibilit*/ Mechanism*/ Monitor/ Education/ Development*	Are aiming towards education and development. Further, they include the interest and well-being of citizens. Enforcement and monitoring mechanisms for renewables are provided.

4. Analysis

4.1. The differences between normative and legal perspectives

As mentioned above, the following analysis was two-fold. The normative analysis put more focus on the ambitions and commitments found within both documents. Thinking back to the discrepancies between attitudes and behaviour of politics as discussed by Lomborg and supported throughout the rest of the studied literature. The comparison between the desired behaviour and the actual behaviour of European climate governance is made by distinguishing between the normative and the legal perspective. The order of the German constitutional court and the revision of the German climate law gave insights into the observed discrepancies. Especially, from a European perspective, the connection between climate policies is omnipresent. Thus, the analysis did not separate both perspectives completely, but merely tried to pull them apart to the extent as this allowed it to have a closer look between them.

Therefore, the analysis of the normative focused on the political commitment found within both documents. Passages of both documents that were applicable to the

normative commitment had to be identified and then compared to their counterpart. Here, special attention was paid to the passages that aim to establish a stronger commitment towards, e.g., cooperation of MS on climate change. Furthermore, the normative analysis included passages of both Treaties which were perceived to be relevant to the normative commitment and harmonisation practices, despite coming from the legal realm. Subsequently, the legal analysis focused on both documents and their relationship to treaty provisions that are connected to a) legislative procedures (e.g., 294 TFEU) b) competences (e.g., Art. 3 ff. TEU), and c) enforcement mechanisms (e.g., 258 ff., TFEU). The criteria have been selected, because they correspond with the critique that was offered within the German constitutional court´s verdict and order.

4.2 The political analysis

4.2.1 The international basis for European commitments

As briefly mentioned in chapters ***2.1*** and ***2.2***, the international commitment through the UN frameworks is laying the foundation for both European and National climate policies. The UN has tackled climate change by trying to preserve the planet through a number of resolutions and agreements for various purposes. For example, the ENMOD (1978) was specifically designed to prohibit the modification of any weather and climate dynamics for military purposes. In contrast, the Paris agreement (2015) was the most ambitious and encompassing attempt to preserve the planet for future generations. Within its preamble, one can read passages in which the signatory parties are "[a]cknowledging that climate change is a common concern of humankind, Parties **should**, when taking action to address climate change, **respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants**, **children**, persons with disabilities and **people in vulnerable situations** and the **right to development**, as well as gender equality, empowerment of women and **intergenerational equity**".

This passage is representative of the political attitude that is present throughout the Paris Agreement and the following European and German legislations. The agreement provided the signatory parties with an array of values and norms, which have created a tone of absolute and sincere commitment towards international cooperation (see Art. 3 Paris Agreement). The analysis of both documents showed the same unwavering spirit of absolute commitment towards the cause. The analysis was done on both documents separately. Within the third chapter of the political analysis, the findings were synthesised and then briefly discussed. The synthesis served as the take-away for the final synthesis of both, the political, and the legal, analyses.

4.2.2 European climate politics and commitment

From a normative perspective and in an actual dimension, the European commitment towards climate change is represented through the Green Deal for several reasons. Most importantly, the policy initiative provided, from a European perspective, the "new growth strategy" (preamble). Within the introduction, the European

commitment was briefly introduced. Here, the normative commitment within the Green Deal will be explored in detail. The headings of the Green Deal were added into the Appendix 1 to provide a brief overview on its contents.

In the very first paragraph, the main topic is stated. The goal is to "reset [] the Commission´s commitment to tackling climate change and environmental-related challenges, that is this generation´s defining task". The previous commitments, to that date, had been identified to be insufficient. Supported by the international frameworks of the IPCC and the other UN organs, the EU openly tried to rethink its approach to climate governance. Further, one can read that this new strategy for growth "aims to protect, conserve and enhance the EU's natural capital, and protect the health and well-being of citizens from environment-related risks and impacts". Additionally, "it must put people first, and pay attention to the regions, industries and workers who will face the greatest challenges". The starting point to a net-zero emission´s dawn of European climate policies seemed promising.
The introduction to the Green Deal set a clear target: The swift change of the whole European economy and the sustainable protection of social, and economic rights, likewise. Notably, the people have to be put first is a small, yet crucial passage. This small detail, from a normative perspective, requires policymakers to not only put people first, but also put the economy second. The ambitions are clearly stated and aim for the highest of standards possible. Furthermore, the Green Deal is a direct adherence to the UN Agenda 2030 and the sustainable development goals (p.3). Additionally, the "Commission will refocus the European Semester process of macroeconomic coordination to integrate the United Nations' sustainable development goals, to put sustainability and the well-being of citizens at the centre of economic policy, and the sustainable development goals at the heart of the EU's policymaking and action".

What are the implications to refocus the European semester process of macroeconomic coordination? Nothing short of a complete overhaul for the existing frameworks and laws of the European Union. The Commission acknowledged the need for change, especially in the economic department more than once throughout the Green Deal. Additionally, the confirmation of putting people first is a strong indicator for a high ambition towards achieving the stated goals. Eventually, this also would mean that when a MS is able to provide a higher standard than the EU itself, the EU would have to reconsider its ambitions, if they did not adjust their existing standards. To facilitate the transition, the Green Deal proposes a number of key points to tackle climate change sustainably. Figure 1. of the Green Deal (Com (2019) 640 final, p. 3) provides a concise illustration of those key points. When thinking back to the European beginnings, the EU started as a mere economic alliance to prevent future wars. Now, the EU is shifting its normative focus to its people more than ever. In some sense, this indeed could become a novelty in European governance.

However, this apparently novel commitment is not innovative. Other commitments have been made in the past. So far, almost none of them have been achieved. Thus,

the EU provided this new approach. For critics of previous climate policies, this may very well be yet another commitment without action. However, some of the literature indicated that the EU is well aware of the democratic pressure by its denizens and is willing to act on behalf of their interest (see Biedenkopf & Petri, 2021, Burns, 2019). Even more so, through rising trends of activism and judicial intervention on all levels (Punev, 2022). Therefore, the Green Deal proposed a new design for climate policies in Section 2 Transforming the EU's Economy for a sustainable future.

The Commission identified "a need to rethink policies for clean energy supply across the economy, industry, production and consumption, large-scale infrastructure, transport, food and agriculture, construction, taxation and social benefits" (p.4). To be able to achieve this, it is "essential to increase the value given to protecting and restoring natural ecosystems, to the sustainable use of resources and to improving human health" (p.4). Taking this as the basis for any further climate policy, the goal of putting people first is underlined by the urgence in protecting and restoring ecosystems. Second, the implication for a sustainable use of resources is the development of new sustainable technologies. These technologies are inseparable from human resources and coordination of efforts.

The Green Deal acknowledged this issue by bringing forward not only a total increase of the European climate ambitions (Section 2.1.1), but also a decrease of carbon heavy resource generation and usage (2.1.2) in all industries (2.1.3). Thus, the normative ambitions by this policy are accompanied by multiple sections that provide a description of a sustainable approach to virtually all levels and domains of social life in Europe. The Commission had identified that along with the industrial need for innovation, the European infrastructure of housing and buildings had to be made more sustainable. The Commission initiated one of the most encompassing and ambitious climate policies to this date. The normative goals are also tied into the subsections and accompanied by legal initiatives (PE-CONS 27/21), which was the subject of chapter

4.2.3 The European legal framework and the Green Deal

By formulating the highest of ambitions and tying them to the international frameworks, the Green Deal can indeed become the longed-for change in climate politics. From a normative perspective, it is committed to put people first and the economy second. The legal analysis will test for these ambitions. For now, the Green Deal indeed could become the new growth strategy for the European Union in becoming the world's leader in combating climate change. The European climate law (PE-CONS 27/21) provided multiple sections on how the European climate policy has to be rethought and designed. Furthermore, together both, the COM (2019) 640 final and the PE-CONS 27/21 were taking up the ambitious torch that was enlightened by the international commitments of the Paris Agreements. The following chapter tried to find out whether the same ambitions trickled down to a German level as well.

4.2.2 German climate politics and commitment (CCA (2021)

The German CCA (2021) is a revised version and was originally published in December of 2019. The revision was based on the constitutional court´s order in 2021 and its verdict in 2018. The constitutional court had found that the policy was lacking a future commitment. Thus, the court stated that "national climate targets and the annual emission amounts allowed until 2030 are incompatible with fundamental rights insofar as they lack sufficient specifications for further emission reductions from 2031 onwards. In all other respects, the constitutional complaints were rejected" (Preamble, Press Release No. 31/2021 of 29 April 2021). The revised version included target reductions after 2030 and was published on the 18th of August in 2021. The CCA takes direct reference to the same international frameworks of the UN, IPCC, and EU (Part 1 Section 1, p. 1). The European framework and its relation to the CCA will be detailed in section 4.3 Legal analysis.

One core function to the CCA (2021) is the introduction and enforcement of national climate targets (see section 3 of the CCA). These targets are annual commitments to reduce the total volume of greenhouse gases within the EU. The targets are supplemented by multiple provisions on the Emissions, data, authority to enact, and statutory instruments (See section 5 of the CCA, p. 5). The political commitment of Germany is focused to follow its high standards and allow for future European revision, based on the conferred competences through the treaties and Regulations. "The Federal Government shall review the permissible annual emission budgets set in Annex 2 in the light of possible changes to the European Effort Sharing Regulation and the European Emissions Trading Directive in implementation of the raised European Union climate target for 2030 and shall present a legislative proposal to adapt the permissible annual emission budgets in Annex 2 no later than six months after their entry into force, if this appears necessary" (Section 4.1, p. 4). Furthermore, the CCA adds in Section 4.5 that the: "Federal Government shall be authorised to enact statutory instruments not requiring the consent of the Bundesrat to alter the allocation of annual emission budgets to the sectors listed in Annex 2 to this Act with effect from the start of the next calendar year. Such alterations must be consistent with the achievement of the climate targets of this Act and with the requirements of European Union legislation" (p. 4).

The teeth of the policy and the second pillar of the CCA is found in the Climate Action Programmes (Section 9) and the reporting of climate relevant data (Section 10). Here, the government is obliged "[i]n each climate action programme the Federal Government, having regard to the current climate projection report within the meaning of section 10 subsection (2), shall specify which measures it will take to achieve the national climate targets in the individual sectors" (p.7). The measures require the "Federal Government [to] involve the Länder, municipalities, business associations and civil society organisations as well as the Scientific Platform on Climate Change and scientific advisory bodies of the Federal Government in every climate action programme through a public consultation procedure" (p.7). The German government designed this policy in the same cooperative spirit as the Green Deal. However, this policy is more technical and less normative in its formulations.

The technocratic trend of European decision making is also found within the German CCA (e.g., Section 1.1, 7, 10, 11). This technocracy is especially true for section 11 on the Independent Council of Experts on Climate Change, a national authority to enact statutory instruments. The Council of Experts is the focal point of data processing and basis for future decisions and action plans to come. Even further, the Council obtains through section 12(5) the competence that all "public bodies of the Federation within the meaning of section 2 subsection (1) of the Federal Data Protection Act (Bundesdatenschutzgesetz) shall enable the Council of Experts on Climate Change to peruse the data required for the performance of its tasks and shall make such data available. The Federal Government shall ensure that the protection of third parties' industrial and commercial secrets and of personal data is guaranteed. The Council of Experts on Climate Change may hear and question public authorities as well as experts, particularly representatives of business organisations and environmental associations, on matters relating to climate action" (p.9). The Council is appointed by the Federal Government and guides German climate policies.

Normatively, the CCA is as ambitious and committed as the Green Deal and the international frameworks. The CCA even included an increased regulation of some of the non-CO^2 gases that were criticised by Sovacool and his colleagues in 2021 (see section 2.1). It also included provisions on the sustainable federal administrations (section 15) and cooperation across the Bundesländer (section 14). The policy provided a standard for sustainable governmental behaviour and the strive for improvement (Climate targets can be raised, but not lowered, section 2, p.3). The ambitions were tied to the action plans and the Council of Experts. Together they are gathering relevant data through the given competences for acquisition and processing on all levels. This political commitment is further tied to accountability provisions like reporting duties (section 10).

4.2.3 A harmonious commitment?

Both policies are taking reference to the international frameworks of the IPCC. The CCA also took direct reference to previous European legislation (see Section 2 Definitions). Whereas the Green Deal resulted in a higher frequency of normative signalling words (see coding scheme), the CCA took reference to the same virtues that were initiated in the international domain and further developed on a European level. To remain clear, CCA does not take reference to the Green Deal and its renewed thinking. However, from the actual perspective, the Green Deal and the CCA are interdependent entities of European climate policy. Both are reliant on the already existing framework (TEU, TFEU) and their enforcement mechanisms (see Art. 288 TFEU).

The political commitment towards the best possible frameworks and the best possible approaches is common to both policies. For example, the Green Deal is committing the European governments to "set out clearly the conditions for an effective and fair transition, to provide predictability for investors, and to ensure that the transition is irreversible, [therefore] the Commission will propose the first European 'Climate Law' on the 21st of April 2021" (p.4). The Climate Law (2020/0036 (COD),

PE-CONS 27/21) was adopted through the Council and signed by the presidents of the EP and Council on the 30th of June 2021. It is part of the Green Deal which affects the CCA. Even further, the climate law is declaring that "the Union's and Member States' actions should be guided by the precautionary and 'polluter pays' principles established in the Treaty on the Functioning of the European Union, and should also take into account the 'energy efficiency first' principle of the Energy Union and the 'do no harm' principle of the European Green Deal" ((9), p. 6). The climate law and the Green Deal share the same normative focus with the CCA. Together they commit themselves to find the most effective ways to this energy efficiency first principle by applying the highest scientific standards.

"(24) Scientific expertise and the best available, up-to-date evidence, together with information on climate change that is both factual and transparent, are imperative and need to underpin the Union's climate action and efforts to reach climate neutrality by 2050. A European Scientific Advisory Board on Climate Change (the 'Advisory Board') was established to serve as a point of reference on scientific knowledge relating to climate change by virtue of its independence and scientific and technical expertise. The Advisory Board should complement the work of the European Environment Agency (EEA) while acting independently in discharging its tasks. Its mission should avoid any overlap with the mission of the IPCC at international level. Regulation (EC) No 401/2009 of the European Parliament and of the Council should therefore be amended in order to establish the Advisory Board. National climate advisory bodies can play an important role in, inter alia, providing expert scientific advice on climate policy to the relevant national authorities as prescribed by the Member State concerned in those Member States where they exist. Therefore, Member States that have not already done so are invited to establish a national climate advisory body" (p.14).

Therefore, the commitment is already per definition not contradictory, but indeed, harmonious for both policies. It is common practice in European law, that no new law shall substantially contradict previous law. The European and German climate policies are alike in their stated ambitions and commitments. Both documents contain provisions on sustainable monitoring, governmental accountability, and transparency to the public. The Green Deal used more general provisions on sustainable policy design and problem identification, whereas the CCA used a more technical design. The possible reasons were discussed in the next chapter. There, both documents were again analysed separately, and then synthesised before the final discussion.

4.3 Legal analysis

4.3.1 The European climate policy framework

On a European level, both main treaties are providing the Commission with the competence to act and ensure European legislative initiatives (see Art. 17 TEU). Furthermore, the communication of the Green Deal acted as the initiator for an extensive revision of the existing European policy network. This framework consists of several differing legal instruments (Art. 288 TFEU). The instruments that were

relevant for this research were Regulations (Art. 288(2) TFEU), and Directives (Art. 288(3) TFEU). They are the main instruments for European climate policies for multiple reasons. First, Art. 288(2) states: "A regulation shall have general application. It shall be binding in its entirety and directly applicable in all Member States".

The notion of direct effect refers to "be enforceable by a public authority in a specific case", and the "concept of direct applicability is [thus] wider than the concept of direct effect. Whereas the former refers to the internal effect of a European norm within national legal orders, the latter refers to the individual effect of a binding norm in specific cases" (Schütze, 2015, p. 120). Schütze further distinguishes between direct effects of primary and secondary European law. In short, the precedence of primary law has direct effects on non-state actors and thus, allows for very specific admissibility criteria to legal litigations for private entities, or as Schütze elegantly answered his own question of whether primary law could have direct effect: "If, so the application of the Treaty will not just impose *indirect* obligations on individuals, …; they will be directly prohibited from engaging in an activity."
Additionally, the European court of justice has ruled in favour of this interpretation in multiple cases, such as Van Gend en Loos[1] as well as Familiapress v. Bauer[2]. The precedents set by the European Court of Justice resulted in a direct effect both, horizontally, as well as vertically. Further, the court had confirmed the monistic view to be an established and accepted concept among Member States, i.e., the European applicability of EU law is binding for States as well as to international commitments, and vice versa. However, European law does not only apply to its Member States as governments. It also does apply to their citizens. Therefore, a legal distinction is being made between horizontal and vertical direct effects (Schütze, 2015). The distinction between horizontal and vertical is crucial for two main reasons. First, it clarifies not only competences for national courts and legislators, but also for citizens of such jurisdictions. "Where treaty provision [primary law] is directly effective, an individual can invoke European rights in a national court (or administration). This will normally be against the State. This situation is called [the] vertical effect, since the State is "above" its subjects" (Schütze, 2015, p. 125). Horizontal effect then refers to "a norm [or dispute] between private parties", since they are on par, hierarchically.
This was confirmed by the above-mentioned cases and allowed both primary and secondary law of the EU to be covering private actions as well. From a legal standpoint, this in turn allows private entities, with respect to the subsidiary principle, to bring forward their concerns first to a national court, and eventually before the European Court system on the basis of the provided principles of direct applicability and direct effect. If a state court finds the issue to be outside its

[1] Van Gendt en Loos, Case 26/62 (supra n.6), 12: European law therefore not only imposes obligations on individuals[.]
[2] Vereinigte Familiapress Zeitungsverlag- und Vertriebs GmbH vs. Bauer Verlag, Case C-368/95, [1997] ECR I-3689

competences, it can refer the case to the next higher court, which eventually leads to the ECJ and its sub-courts. If it is perceived to have failed the correct assessment of its competences, a possibility for further legal revision is given (Punev, 2022). The Green Deal explicitly mentioned several Regulations and Directives, which in turn follow the principles of direct effect and direct applicability. Thus, the effectiveness of the policy must also be measured against the vertical effects on European citizens and their interests.

4.3.2 The European legal framework and the Green Deal

Within the legal analysis of the Green Deal, the goal was to connect the provisions of the treaties and secondary law to the Green Deal and the affected legal mechanisms. Due to the sheer number of different Directives and Regulations that are affecting the Green Deal, they could not have been analysed in detail. However, the European Climate law (PE-CONS 27/21) is the European equivalent to the German CCA and part of the Green Deal. It provided a number of similar approaches and provisions to a sustainable climate governance. Furthermore, it possesses the full legal status of a European law. It was signed by both presidents, of the Council and of the Parliament, and was published on the 30th of June in 2021.

Despite its normative loading of rethinking the whole macroeconomic European Semester, the Communication of the Green Deal was never meant to be one policy to rule them all. It was a guideline and initiative to rethink sustainable governance across all levels. This rethinking in turn should then also be found within the legal implementations on both, European and MS, levels. This in turn must especially be true for the PE-CONS 27/21, as its first rethought European climate law. Legally, the PE-CONS 27/21 is a Regulation (Art. 288(2) TFEU) and will from now on be called the European climate law. Therefore, the above-mentioned principles of horizontal/vertical effects, as well as the direct applicability are subjectable to it (Schütze, p. 132, 2015). A thorough analysis of the European climate law would have exceeded the limits of this analysis. However, the following paragraphs will combine excerpts from the European climate law with the Commission's initial Green Deal communication. This is done, because the Regulation is part of the Green Deal policy, and it is providing a substantial approach to the high ambitions found in the communication of the Green Deal.

The European climate law refers to the same international framework as the CCA and the communication. Furthermore, in its sixth point, the European climate law refers to “the Charter of Fundamental Rights of the European Union, in particular Article 37 thereof which seeks to promote the integration into the policies of the Union of a high level of environmental protection and the improvement of the quality of the environment in accordance with the principle of sustainable development” (p.4). This is the same normative commitment, but with a legal tool implemented. By referring to the Charter of Fundamental Rights, the direct horizontal effect is strengthened by the implicit prioritisation of the European people. Additionally, greenhouse gas emissions are tackled from multiple angles.

Provision (13) for example, raises the “EU ETS [to] a cornerstone of the Union’s climate policy and [it] constitutes its key tool for reducing greenhouse gas emissions in a cost-effective way” (p.8). Thinking back to chapter 2.2 Traditional climate policies and their effectiveness, the ETS, although efficient, may not be the most effective tool in the shed of policy instruments (Lomborg, 2020). In other words, what good is a system of moving poisonous gases, when they become more diverse instead of less in numbers? Even worse, what good is a system where poisonous gases are traded like a commodity instead of a hazardous sword of Damocles that nobody wants to receive? Nevertheless, the advantage of the Green Deal approach is to be found in its complexity and adaptability.

Next to these traditional policy instruments, the European climate law included another indicator of putting people first and science up front, like the Commission had intended. In part (20) it is stated that: “The Union should aim to achieve a balance between anthropogenic economy-wide emissions by sources and removals by sinks of greenhouse gases domestically within the Union by 2050 and, as appropriate, achieve negative emissions thereafter. [...] Solutions that are based on carbon capture and storage (CCS) and carbon capture and use (CCU) technologies can play a role in decarbonisation, especially for the mitigation of process emissions in industry, for the Member States that choose this technology.” (p. 12). The mentions of CCU and CSS are important to explain, because they are perceived to be two of the main technologies in the transitory process. These technologies themselves are already regulated and fall under multiple frameworks, such as the ENMOD, the Directive (2009/31/EC), and other international obligations, such as the UN convention of Biological Diversity.

The scientific and legal justification for actions of the law is granted through part (24), where “[s]cientific expertise and the best available, up-to-date evidence, together with information on climate change that is both factual and transparent, are imperative and need to underpin the Union’s climate action and efforts to reach climate neutrality by 2050. A European Scientific Advisory Board on Climate Change (the ‘Advisory Board’) should be established to serve as a point of reference on scientific knowledge relating to climate change by virtue of its independence and scientific and technical expertise” (p. 14). This advisory board shares fundamentally the same competences as the Council of Experts on the German level. As the European supervisory body it cooperates with “[n]ational climate advisory bodies [which] can play an important role in, inter alia, providing expert scientific advice on climate policy to the relevant national authorities as prescribed by the Member State concerned in those Member States where they exist" (p. 14). In other words, the European level and the national level share the same legal basis, but both follow the subsidiary principle that is present throughout all European policies.

The legal embeddedness of the Green Deal and its European climate law into the European framework is complex. The European climate law amended Regulations (EC) NO 401/2009 and (EU) 2018/1999 (‘EUROPEAN CLIMATE LAW’). However, the changes of those Regulations produced shifts and changes in a vast

number of other Regulations and Directives, which, sadly, had to be cut from the analysis. The important changes were found in several amendments and shifts in the two above mentioned Regulations. Here, the EU committed itself towards the finalisation of greenhouse gas emission goals. Art. 2 clarified this finalisation as: "Union-wide greenhouse gas emissions and removals regulated in Union law shall be balanced within the Union at the latest by 2050, thus reducing emissions to net zero by that date, and the Union shall aim to achieve negative emissions thereafter. 2. The relevant Union institutions and the Member States shall take the necessary measures at Union and national level, respectively, to enable the collective achievement of the climate neutrality objective set out in paragraph 1, taking into account the importance of promoting both fairness and solidarity among Member States and cost-effectiveness in achieving this objective" (p. 26).

Further, one can read in (29) of the objectives: "In light of the objective of achieving climate neutrality by 2050 and in view of the international commitments under the Paris Agreement, continued efforts are necessary to ensure the phasing out of energy subsidies which are incompatible with that objective, in particular for fossil fuels, without impacting efforts to reduce energy poverty" (p. 16). These objectives and the legal enforcement mechanisms of the European climate law and the Green Deal are providing the Commission with the competence to monitor and assess not only European climate policies (Art. 6 *Assessment of Union progress and measures*), but also ensure adherence of the MS to their legal obligations (Art. 7 *Assessment of national measures*). The EU indeed provided its ambitious policy with some tools to enforce these extraordinary ambitions. Even more so, when considering the previously referred to legal frameworks of the UN, and Charter of Fundamental Rights of the European Union.

The Green Deal in its original form only provided few examples of what an actual European climate law would have had to entail for a legal analysis. Nevertheless, the European climate law in its current form indeed picked up what had been criticised by the German constitutional court. The Green Deal as a whole, if applied rigorously, might indeed be able to give European legislators the technocratic justification not only through expert opinions, but also through tangible results. Furthermore, the European climate law included one Article that is especially interesting to the question of legal liability and public responsibility. Within Art. 9 *Public participation* of the new European climate law, it states that "[t]he Commission shall engage with all parts of society to enable and empower them to act towards a just and socially fair transition to a climate-neutral and climate-resilient society. The Commission shall facilitate an inclusive and accessible process at all levels, including at national, regional, and local level and with social partners, academia, the business community, citizens and civil society, for the exchange of best practice and to identify actions to contribute to the achievement of the objectives of this Regulation. The Commission may also draw on the public consultations and on the multilevel climate and energy dialogues as set up by Member States in accordance with Articles 10 and 11 of Regulation (EU) 2018/1999. 2. The Commission shall use all appropriate instruments, including the European Climate Pact, to engage citizens,

social partners and stakeholders, and foster dialogue and the diffusion of science-based information about climate change and its social and gender equality aspects" (p. 42).

The inclusion of the public into not only the decision-making processes, but also in finding the best practices to tackle the high ambitions, raise the chances of a successful implementation. This provision is crucial in concordance with the responsibilities tied to the European climate law and the European Charter of Fundamental Rights. The interdependency between the international (UN, IPCC), European (Primary and Secondary law), and the national (German CCA), is now further substantiated by stressing the importance of utilising all available resources. The democratic participation and governmental accountability are providing the rising trends of private litigations with more sustainable fuel to ensure the commitments and actions to the undeniably high ambitions. The lack of legal enforcement and controlling mechanisms within the communication of the Green Deal is filled by the provisions and changes in the European legal order through the European climate law (PE-CONS 27/21) as part of the Green Deal.

Therefore, the legal analysis of the Green Deal concludes with a brief summary and outlook for later synthesis. As the main initiator for new European legislative acts (Art. 17(2) TEU), the Commission's proposal of the Green Deal (COM (2019) 640 final) was a needed shift of European perspectives on how to govern the European Union long term. The need was voiced and confirmed from multiple political and civilian actors. The voices raised scientific concerns (IPCC, Lomborg, 2020), political concerns (UN, EU, Germany), or social concerns through grassroot movements like Fridays for Future. The accountability of the European government through the Green Deal and its European climate law is tied to reporting and adjusting duties (e.g., Objective (36), p. 21). Furthermore, the reporting is coupled to the European Scientific Advisory Board on Climate Change (e.g., Art. 3 ff. PE-CONS 27/21). Throughout the whole fabric of the Green Deal, the political ambitions are, on paper, tied to extensive calls for action with special regard for the well-being of European citizens. These calls are, next to the scientific legitimation for action, tied to the political obligation to act.

To ensure the correct political action, the Green Deal included two Articles that focused on political action and accountability (Art. 6, 7, PE-CONS 27/21, p. 35 ff.). The communication by the Commission set the guideline for the European climate law. The law adopted the high ambitions and tied them to controlling mechanisms that are also subjected to the Charter of Fundamental Rights of the European Union (Objective (6), PE-CONS 27/21). This further substantiates the rising trends of private litigation efforts in concordance with the vertical effects of direct applicability and direct effect as described by Schütze (2015).

Furthermore, scientific importance and the need for technocratic justification are present within the political, and the legal, dimension of the Green Deal (Section 1. COM (2019) 640 final, Art. 8(3), PE-CONS 27/21, p. 40). The Green Deal has made some considerable progress in approaching climate change in a more sustainable

way. The encompassing efforts that can be found within the communication and the European climate law, which contain some of the characteristics of traditional climate policies, such as focusing on the ETS and other traditional approaches. However, these are also coupled to more innovative policy tools, which further expand on the already existing web of European climate policies. These tools include a strong focus on human and animal rights, as well as a right of preservation for natural resources and the protection of biodiversity. These allow private entities to demand their rights to be upheld and, if necessary, enforced.

4.3.3 European legal framework and the CCA

The German CCA is the national climate policy. As such, the policy is in a European context on the lowest end of the European legal hierarchy. It must not only adhere to its own standards, but also to the European standards that are set through the European primary and secondary law. These standards require a constant exchange of information and data between the competent authorities. The European Scientific Advisory Board on Climate Change is the European equivalent of the German Council of Experts on Climate Change and funnels the data on climate change of each respective national authority to the EU. The German national authority is found in the previously mentioned section 5 Reporting data, authority to enact statutory instruments of the CCA (2021).

The CCA further took direct reference to the Regulation (EU) 2018/1999, the very same Regulation that was amended by the European climate law in 2021. What does that mean for the CCA and its relation to the Green Deal? On the one hand it implies not only adherence to the Regulation (EU) 2018/1999, but also to the revised version of 2021. This would also imply the strengthening of importance to the Charter of Fundamental Rights of the European Union, as well as the international commitments of the UN and IPCC. On the other hand, the Green Deal´s European climate law (PE-CONS 27/21), allowed the MS to remain within a certain level of discretion on how they achieve the set goals (e.g., amendment to Art. 11 Regulation (EU) 2018/1999). The discretion is also subjected to the treaty provisions of the primary European norms (Art. 288(2) TFEU). Thinking back to the clash between individual and communitarian responsibilities in the introduction, the new harmonised approach and commitment to European and German climate policies becomes increasingly evident.

The CCA and the European climate law must be consistent per definition (e.g., Art. 114, 258, 288 TFEU). If at some point any monitoring or controlling instances found inadequacies within either application of the respective law, both policies were prepared to adjust their governmental actions accordingly. The critique of the German constitutional court was indeed addressed within the European climate law. Here, the Green Deal obliged the MS national orders to adjust their efforts accordingly. According to the European climate law, and in conjunction with sections 5 ff. of the CCA (2021), “Each Member State shall establish a multilevel climate and energy dialogue pursuant to national rules, in which local authorities, civil society organisations, business community, investors and other relevant stakeholders and the

general public are able actively to engage and discuss the achievement of the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/…+ and the different scenarios envisaged for energy and climate policies, including for the long term, and review progress, unless it already has a structure which serves the same purpose. Integrated national energy and climate plans may be discussed within the framework of such a dialogue" (Art. 11, PE-CONS 27/21, Regulation (EU) 2018/1999, p. 49).

The CCA (2021) further emphasised the German commitment to the shared European climate ambitions. Within section 6 Provisions governing fines, the German government held its actions accountable to the public. Here, "(1) A regulatory offence is committed by anyone who intentionally or negligently infringes a statutory instrument within the meaning of section 5 subsection (4) of this Act or an enforceable order enacted on the basis of such a statutory instrument in so far as the statutory instrument refers, in respect of a particular offence, to this provision governing fines. (2) The regulatory offence is punishable with a fine of up to fifty thousand euros" (section 6, CCA, p. 6). Admittedly, fifty thousand euros are not much money. However, a palpable punishment for failure is a good sign for legal litigation efforts.

4.3.3 A harmonious interpretation?

The clash has been acknowledged by the EU and the MS governments alike. Both levels are indeed making progress towards a non-traditional European climate legislation. By implementing provisions that directly link the high ambitions to legal mechanisms, both policies strictly follow the international frameworks of the UN and IPCC. Even further, both policies connect to the European Charter of Fundamental rights and stress the importance of putting people first. However, both policies also include traditional climate policy approaches. The ETS, and Carbon capture and sequestration technologies are easy to criticise. However, in the lacking face of an alternative, they are the best possible bet to enhance the ambitious transition efforts. That is why the EU as well as the German government also included multiple provisions on how to find new approaches and solutions pro-actively.

Through the inclusion of Scientific Advisory Boards (EU) and Council of Experts (GER), the technocratic trend of European governance is further strengthened. The scientific method is indeed the best approach against careless and ineffective climate policies. Surprisingly, the Green Deal explicitly included the participation of citizens and private entities. This is one of the main differences to the CCA. Here, the citizens are only briefly mentioned and not part of any decision-making process or development of concepts. This difference is probably grounded within differing scope of both policies. Whereas the Green Deal is a guiding policy for the EU and its Member States, the CCA is the direct result of the guiding principles and a measure for German accountability against its own as well as the European standard.

In short, the legal analysis of both policies concluded that the highest of political ambitions are connected to some legal enforcement mechanisms. These mechanisms include, monitoring, controlling, and adjusting, of the European standards. Further,

the German policy included a provision for fines if the ambitions are not met. The critique of the German constitutional court was not only addressed by the German government in its revised version of the CCA but was also addressed within the Green Deal. This was a welcomed surprise during the research phase. The EU indeed seemed to have learned from past mistakes and proactively addressed the issue of lacking commitment and specificity. From a private climate litigation perspective, the different sections and provisions from the Green Deal facilitate the observed trend towards successful litigation efforts. If the European government and its Member States fail to uphold their own commitments, the European legal system is now equipped with leverage not only for the Commission, but also private entities and Member States as well.

In the following, the final synthesis of the normative and the legal analysis was done. Here, the above-mentioned legal enforcement mechanisms will be discussed. As the normative analysis has shown, the ambitions are indeed harmonious. From the legal perspective, they are somewhat harmonious as well. However, when critically looking at the regulatory provisions and enforcement mechanisms within both documents, some grey areas have been identified. These grey areas were the main concern of the discussion. Furthermore, the thesis concluded with some concerns about limitations to the qualitative critical comparative policy analysis and provided some outlooks for future research.

5. Discussion

5.1 Closing the gap between ambition and commitment?

The analyses of the normative and the legal showed strong interdependencies between the new commitment of European climate policies on all levels. The thesis tried to shed some of the much-needed light on the self-proclaimed new direction of European climate policies. The Green Deal is described as the new dawn of European climate policy. All the European Member States must oblige to its standards, which are further supported and substantiated by the treaty frameworks of the EU and UN. For the Member States of the EU, the Green Deal is the new gold standard in approaching and handling climate change matters. The CCA is one of the last links in the top-down chain of international and European climate policies. It is the German anchor for governmental accountability on climate issues. By bringing forward multiple provisions on action plans and monitoring as well as controlling, the CCA and the Green Deal, on paper, made use of the same commitments and mechanisms. However, the harmonious ambitions and the instalment of legal enforcement mechanisms does not guarantee a successful climate policy. Nevertheless, the CCA only prescribes a fine of up to 50.000 € upon a violation of the "regulatory offence" (Section 6). Considering the stakes, this does not seem to be a strong incentive to fulfil the commitments.

As identified by Lomborg (2020) the traditional approaches to climate change have not brought the desired effects yet. This understanding also arrived on the political level as well. The Green Deal and the CCA tried to improve on their existing frameworks. Therefore, both policies also included, next to the traditional ETS and CSS/CCS provisions, the participation of scientific experts to find new approaches. Both policies have acknowledged the importance of the European citizens. The European emphasis on the governmental responsibility to care for its citizens' wellbeing is not novel. However, the Green Deal, as well as the German government are further unavoidable obligations to prioritise this social wellbeing over absolute economic growth. This obligation is cemented within the COM (2019) 640 final as well as the PE-CONS 27/21 and the CCA. These obligations have further been tied to international commitments and ambitions. The normative emphasis on the citizen was not new, the legal emphasis however indeed is.

As the European climate law, the PE-CONS 27/21 is taking legal reference to the Charter of Fundamental Rights of the European Union and the consistent emphasis of the newly acquired prioritisation. The governmental accountability that came from the Green Deal can not only be found within the Commission´s competence to

monitor and control the EU as well as its Member States policies. Additionally, the new European climate policy of the Green Deal stressed the importance of governmental responsibility towards its citizens. This accountability was further substantiated by introducing scientific bodies that are designed to help in guiding the European government towards the most effective climate policy possible. The CCA as well as the Green Deal were committed to learn from past mistakes and prepared a much-enhanced policy from what previously had been enacted. The emphasis on the citizen and the inclusion of non-traditional climate policy approaches indeed made the Green Deal a novelty in its own field.

The policy interaction between the CCA and the Green Deal happens in both dimensions (EU and MS) simultaneously. Both levels of the European climate policy interact and influence each other at the same time. Whereas the Green Deal provided the overarching framework for the new climate policy strategy, the CCA provided the same strategy on a national level. The action plans are grounded in international frameworks like the UN Agenda 2030. The European commitment is tied to Action Plans on all levels. The European Action Plans provide the overall strategy, whereas the Member States Action Plans provide the individual strategy and paths of commitment. One of the most striking findings was the immense increase in advisory power that is attributed to the scientific bodies and public domains. Notably, advisory is not executive power, which was the subject of the following paragraphs.

On a German level, the CCA provided the Council of Experts on Climate Change with the competence to "be bound only by the mandate assigned by this Act and shall be independent in its activity. The Federation shall meet the costs incurred by the Council of Experts on Climate Change, subject to the provisions of the federal budget" (Section 11(3), p. 8 CCA). This provision was included to make sure that the scientific body would not be corrupted by a political agenda. Furthermore, in Section 12(3) the executive function by the Council of Experts is displayed, as one can read: "The Federal Government shall obtain the opinion of the Council of Experts on Climate Change regarding the underlying assumptions on greenhouse gas reduction before ordering the implementation of the following measures: 1. alterations to or setting of the annual emission budgets pursuant to this Act ; 2. updating of the Climate Action Plan; 3. adoption of climate action programmes pursuant to section 9" (p. 8). Even further: "All public bodies of the Federation within the meaning of section 2 subsection (1) of the Federal Data Protection Act (Bundesdatenschutzgesetz) shall enable the Council of Experts on Climate Change to peruse the data required for the performance of its tasks and shall make such data available, [...]. The Council of Experts on Climate Change may hear and question public authorities as well as experts, particularly representatives of business organisations and environmental associations, on matters relating to climate action" Section 12(5), p. 9, CCA).

In short, the Council of Experts has received an extensive competence on gathering and processing virtually all data on climate change. As stated above, the technocratic trend is not necessarily new to the European and German governments. The novelty

is in the extent of the competences. The Council is allowed to gather and process data from all German authorities as well as public and private entities, given the data is relevant for tackling climate change. Arguably, every data is relevant to tackle climate change. The question then is, what is and what isn't legitimate data gathering. The CCA as well as the Green Deal are both prone to the already mentioned functional spillover effects. In theory, the competences are clear cut and neatly separated.

In practice however, the overlap of competences in much fewer complex fields of governance have occurred. A policy that strives to “rethink the whole European macroeconomic semester” begs for said effects. This goes not without saying that these are under any circumstance avoidable. Governing large groups of people never was more complicated than in today's world. The complex interdependencies and the fast technological progressions are putting a lot of strain on the slow democratic process (see ordinary legislative procedure). The functional spillover effects, if there are any, will be difficult to spot. Since the Green Deal is all encompassing, a somewhat encompassing competence is to be expected. This brings on the one hand normative clarity to the legislators, but also brings legal certainty to the judicial controlling instances.

The Green Deal explicitly allowed private entities to be included in the monitoring transparency processes of the new European climate policies. This also entails the previously introduced vertical effects and direct applicability for the Member States. In other words, the Green Deal facilitated the rising trends of private litigations, by acknowledging the governmental responsibilities and anchoring them in the European legal order. The European government indeed cares for its citizens and took up the responsibility of becoming the world's leader in tackling anthropogenic climate change. The European government provided itself and the Member States with a new approach to traditional climate policies. The policies were explicitly designed to be adaptive and progressive. The Green Deal and its following legal mechanisms (Art. 288 TFEU) stressed the importance of transparency and governmental accountability.

Conclusively, the European climate policy interactions have changed due to the Green Deal. They grew closer and became even more mutually dependent. By building upon existing monitoring and controlling mechanisms, the Green Deal emphasised the governmental responsibilities through public accountability and policy transparency. Furthermore, the involvement of scientific bodies into the decision-making processes on all levels help the policymakers to make competent decisions. The principle of subsidiarity is also applicable to the scientific bodies. The Scientific Advisory Board of the European Union receives data and information from the German Council of Experts. This process of subsidiary information processing is true for the whole EU. From a legal perspective, the technocratic justification of climate policies is the most promising solution to the wicked issue of climate change.

However, the policies themselves are only describing the path to the goal. Despite initiating an extensive review of the whole European legal apparatus, the Green Deal

and the CCA are not capable of preventing climate change by themselves. Even with the provisions on fines and statutory instruments, there is no guarantee that the high ambitions will be met by reality. Especially from a private litigation perspective, the preservation of the economy seems to play a minor role when compared to the preservation of the environment and its fauna. The EU has to account for economic interests as well. The Green Deal might be able to provide the much-needed balance between social and economic interests, because a differentiated view of climate change requires to balance both interests against each other.

The Green Deal is exemplary of the shift in European interests. Away from purely economic "trickle-down" effects, into a transdisciplinary solution-seeking. This finding was striking. The EU understood the importance of including all relevant stakeholders. In the case of climate change, everyone. Further, the Green Deal specifically aimed to combat so-called greenwashing. A practice in which the responsible institution or organisation only pretends to act environmentally friendly. On paper, the EU wants a long-term change of its economy. The future will tell whether its commitment is followed by extensive action. Future science could investigate to what extent the national action plans have been met and what really happens when the targets are not met. The basis for accountability is there and the judicial branch has proven multiple times to be reliable interpreters of European law, who is acting in the interest of its people. Hopefully, this is not just a trend, but stays as the norm.

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7. Appendix

The Green Deal table of contents:

The CCA (2021) table of contents:

8. Immediate action programme in the event of annual emission budgets being exceeded
9. Climate action programmes
10. Reporting
11. Independent Council of Experts on Climate Change, authority to enact statutory instruments
12. Tasks of the Council of Experts on Climate Change
13. Consideration requirement
14. Federation-Länder cooperation
15. Climate-neutral federal administration

Concerns to Reliability and Validity

The thesis does not try to anticipate the future, but to provide an empirical comparison of European policy interactions in the context of climate change. The competing competences within the EU, and the legal ambiguity of governmental responsibilities beyond borders, necessitate a comparison beyond traditional research methodologies. This complicates the reliability of the approach. Critical realism is an unspecified way of thinking by itself, when compared to naturalism or positivism (see Lawani, 2020, Table 1. Additionally, comparing European and German climate policies without a detailed examination of the international legal system leaves several questions unanswered. First, the UN/IPCC Framework has its own legal standing. However, connected to its legal standing are all the international legal doctrines and customary practices. Focusing on just the European perspective does some injustice to the interdependent legal apparatus across all levels of global climate governance. However, by restricting the thesis to the European context, the argument becomes more stringent and tangible.

Other research that might seek to replicate this approach is best advised to remain within the three domains of critical realism but switch the units of observation. For example, a similar comparison could be done with the Dutch climate policy and the Green Deal. As previously mentioned, the *Urgenda* case had a very similar background, and its claimants followed the same reasoning as the claimants did within the German BvR 2656/18 case. For its internal reliability, the thesis sought to substantiate its arguments by incorporating multiple disciplines and perspectives. This could be problematic for two main reasons. First, by expanding the argument, the reasoning must expand as well. For a simple comparison, a simple argument can be made. Policy interactions on a transnational level are far from simple and thus, difficult to categorise without cutting off important aspects. Conclusively, tackling the interaction of European policies by comparing policies on two levels appears to be 1. reproducible with many different types of policies, if they are connected to a specific field and 2. open for a diffusion of assessment criteria.

Rationale for coding and subgroups

The codes aimed to grasp any section or sub-section, sentences or even words within both documents that relate to the coding groups under the actual perspective. Thus,

the code-groups were designated as follows: 1. Treaty relevant 2. Directive or Regulation relevant 3. Private litigation relevant. The three categories were further codified into subgroups. Within the first sub-group, the following codes were chosen accordingly: 1.1 Competence* 1.2 Standard* 1.3. International* 1.4 Union 1.5 partner*. The reasoning was that sections containing these codes are taking direct reference to the TEU and TFEU. The treaties are the overarching framework and always a point of reference whenever any European law is at question (Schütze, 2015). Both the legal and the normative analysis use these codes to explore the policy surroundings and the not explicitly connected treaty provisions.

The second coding group represented the accumulation of hits on 2.1 Directive and 2.2 Regulation. The explicitly connected Directives and Regulations are each connected to other Directives and Regulations and so forth. The fact is that European climate policies are not just one policy document. No matter how representative a policy document is, it can never replace the whole web of already existing policies. The analysis pinged out the immediate environment of both documents in terms of Regulations and Directives. A holistic analysis would have explored this in more detail.

The third group of codes aimed to look for sections or phrases that were either directly or indirectly related to the issues brought up by the German constitutional court in Germany. Coming back to Lomborg (2020) and his meta-analysis, the codings for 3.1 traditional climate policies, 3.2 research 3.3 development* 3.4 education* 3.5 social* 3.6 citizen 3.7 balance were chosen to scan the documents for passages that could be related to the issues brought up by the constitutional court in Germany.

The key words were chosen according to the rationale of Lomborg and his findings, as well as the perspectives of the empirical and the actual as synthesised from Lawani (2021) and Garrison (2022). The codes aimed to find specific sections that might contain the same keywords, but perhaps differ in scope or reach. The codes were used as part of the basis for further analysis. Interpretation of the codes and its passages was done via the aforementioned critical realism.