

Article

The Policy Coherence Framework Approach in a Multi-Level Analysis of European, German and Thuringian Climate Policy with a Special Focus on Land Use, Land-Use Change and Forestry (LULUCF)

Justus Eberl ¹, Evgenia Gordeeva ²  and Norbert Weber ^{2,*} 

¹ Faculty of Resource Management, University of Applied Sciences and Art (HAWK), 37077 Göttingen, Germany; justus.eberl@hawk.de

² Chair of Forest Policy and Forest Resource Economics, Technische Universität Dresden, 01737 Tharandt, Germany; evgenia.gordeeva@tu-dresden.de

* Correspondence: norbert.weber@tu-dresden.de

Abstract: This work sets out to apply the Policy Coherence Framework (PCF) to the case of climate policy, taking into account the European, German and Thuringian political levels of analysis. It combines an analysis of vertical coherence between these levels and horizontal coherence within and between different sectoral policies. The study demonstrates disparities between coherence within climate policy itself and between other policy sectors as regards forest area development. It further reveals some contradictions between economic and ecological goals in German climate policy, particularly as concerns the role of forests. According to the authors, this observation can, at least in part, be explained by the national security obligations of Germany as a nation state. This assumption is supported by the observation that the regional level of Thuringia is more consistent with the supranational level of the European Union, both of which can “afford” to favour ecology over economy due to not being nation states. Another finding suggests that the broad and ambiguous definition of climate policy causes many contradictions, leading to an “omnipresence” of climate policy, and in doing so, strips it of its meaning and, consequently, practical relevance.

Keywords: land-use policy; climate policy; forest policy; multi-level governance; European Union; policy coherence



Citation: Eberl, J.; Gordeeva, E.; Weber, N. The Policy Coherence Framework Approach in a Multi-Level Analysis of European, German and Thuringian Climate Policy with a Special Focus on Land Use, Land-Use Change and Forestry (LULUCF). *World* **2021**, *2*, 415–424. <https://doi.org/10.3390/world2030026>

Academic Editor: Manfred Max Bergman

Received: 1 June 2021

Accepted: 16 August 2021

Published: 23 August 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

At the present beginning of the 21st century, forest policy faces numerous challenges. It must address requirements that are more numerous, novel and diverse than ever before in recent history. Among the most important challenges are climate change and biodiversity. Land use, land-use change and forestry (LULUCF) have been incorporated into these challenges through various binding international agreements, such as the Paris Climate Accord, the Convention on Biological Diversity (CBD) or the EU's LULUCF Regulation 2018/841, and their respective national instruments of implementation, e.g., the German National Strategy on Sustainability of 2002. They all aim to maintain or enhance biodiversity and mitigate climate change. Being the dominant type of terrestrial landscape on Earth, forests play a pivotal role in these policy areas by providing carbon sinks and critical habitats for biodiversity. Therefore, forest policy constitutes a central element of both climate and biodiversity policy.

Aimed at determining the consequences of these new requirements for forest policy and implications of related, often intermingled policies, this study was conducted to investigate how these various, at times contradictory, new policy goals can be reconciled and integrated without interfering with other policy targets, i.e., reduce trade-offs and promote policy coherence. In order to achieve this goal, coherence among policy goals was studied

by means of the policy coherence framework (PCF) and in consideration of the multi-level governance (MLG) approach. Following this established framework, policy coherence between the three political levels (European, national, subnational) was investigated as “vertical coherence”. Coherence between climate policy and other policy fields on the same political level was researched and referred to as “horizontal coherence”. Within a policy field, coherence of programs was investigated as “internal coherence”, whereas relations and interactions to policy goals of other areas were referred to as “external coherence” [1]. Additionally, “departmental coherence”, as the coherence between the different departments involved in a policy, as well as “coherence dynamics”, the development of coherence over time, were investigated. For reasons of conceptual clarity, we did not apply the related construct of consistency/inconsistency (e.g., Sianes 2017) as these terms are more relevant when it comes to addressing incoherence [2].

In the following, we first outline the suitability of PCF and MLG approaches for our research purposes and the subsequent conceptual adaptations. We then disclose the empirical basis and the methods applied. This will be followed by a description of climate policies with forest policy relevance on the European Union, national (German) and subnational (Thuringian) levels of analysis. Finally, we present possible explanations for the identified forms of coherence and incoherence, respectively.

2. Theory and Methods

The theoretical body of this study is constituted by the policy coherence framework and the multi-level governance approach. The PCF gained importance after the paper by Mickwitz et al. [3] and it was scientifically harnessed by Nilsson et al. [1]. These authors give examples of the successful application of the PCF framework in multi-level systems with regard to national, community and federal law as well as in intersecting fields of policy, especially in development policy, energy transition and water policy. However, they also point out that the framework in its initial stage “applies an admittedly simplistic and instrumental-rationalist view on governance” [1] (p. 413). Makkonen et al. [4] apply the PCF idea to policy coherence in climate change. In their study on forest corridors in Scotland, Muñoz-Rojas et al. [5] aim at identifying synergies, conflicts and incoherencies by using different categories at the vertical and horizontal levels of policy. Hoberg et al. [6] combine the PCF with a policy gap analysis. For the purpose of this paper, policy coherence is regarded “as an attribute of policy that systematically reduces conflicts and promotes synergies between and within different policy areas to achieve the outcomes associated with jointly agreed policy objectives” [1] (p. 396). It should be mentioned here that pluralism is a common phenomenon when it comes to defining political objectives and targets and it therefore does not always point to policy incoherence. However, in sectors such as land use, policy coherence has special importance, since its base (land cover) is limited.

Since the publication of the seminal paper “European integration from the 1980s: State-Centric vs. Multi-level Governance” by Marks et al. [7], the multi-level governance approach has been a method of analysis often applied on the European level. Stephenson [8] (p. 817) sees the MLG “as a conceptual framework for profiling the ‘arrangement’ of policy-making activity performed within and across political-administrative institutions located at different territorial levels”. He expounds on the enormous variety of MLG topics and differentiates their original, functional, combined, normative and comparative uses. Based on his observations, Stephenson recommends renewing the approach, including a more applied research orientation. For the forest sector, Pirlot [9] stands out with her work in which she combined the multi-level view with a multi-sectoral view.

Using the established theoretical framework, 46 policy programs (4 of which were taken from the EU level, 27 from the national level, and 15 from the sub-national level) in which the current forest policy is constituted were analysed (see Table 1). On the subnational level, the *Land* Thuringia was chosen as a case study. With a high percentage of forest cover and its image as the “Green Heart of Germany”, it is an emblem of the high importance of forest policy in rural Germany. Furthermore, the authors had access to

valuable background information about decision-making processes on forests in Thuringia and their respective links to the national and European levels.

Table 1. Selected policy programs.

| No. | Document Code | Policy Sector/Department | Title | Year | Pages |
|-----|---------------|------------------------------|--|------|-------|
| 1. | EU.1 | Climate policy/EU | LULUCF-Regulation | 2018 | 42 |
| 2. | EU.2 | Bioeconomy policy/EU | EU Forest Strategy | 2013 | 20 |
| 3. | EU.3 | Forest policy/EU | Green Paper on Forest Protection | 2010 | 26 |
| 4. | DE.N1 | Nachhaltigkeitspolitik/BReg. | Nationales Klimaschutzprogramm | 2005 | 58 |
| 5. | DE.N4 | Nachhaltigkeitspolitik/BReg. | Nat. Nachhaltigkeitsstrat.-NNS 2017 | 2017 | 260 |
| 6. | DE.U1 | Umweltpolitik/BMU | Aktionsprogramm Klimaschutz 2020 | 2014 | 84 |
| 7. | DE.U2 | Umweltpolitik/BMU | Klimaschutzbericht 2015 | 2015 | 84 |
| 8. | DE.U3 | Umweltpolitik/BMU | Klimaschutzplan 2050 | 2016 | 91 |
| 9. | DE.U4 | Umweltpolitik/BMU | Nationale Biodiversitätsstrategie-NBS | 2007 | 180 |
| 10. | DE.B2 | Bioökonomiepolitik/BML | Charta für Holz 2.0 | 2017 | 60 |
| 11. | DE.B5 | Bioökonomiepolitik/BML | Nationale Politikstrategie Bioökonomie | 2014 | 80 |
| 12. | DE.B6 | Bioökonomiepolitik/BML | Holz in der Bioökonomie | 2016 | 8 |
| 13. | DE.W3 | Waldpolitik/BML | Bericht zur BWI3 | 2014 | 56 |
| 14. | DE.W5 | Waldpolitik/BML | Zweiter Waldbericht | 2017 | 289 |
| 15. | DE.W6 | Waldpolitik/BML | Waldstrategie 2020 | 2011 | 36 |
| 16. | TH.N1 | Nachhaltigkeitspolitik/TMLU | Thür. Nachhaltigkeitsstrategie-TNS | 2011 | 56 |
| 17. | TH.K1 | Klimaschutzpolitik/TMLU | Thür. Bioenergieprogramm | 2014 | 77 |
| 18. | TH.K2 | Klimaschutzpolitik/TMLU | Klimawandel in Thüringen | 2014 | 48 |
| 19. | TH.K3 | Klimaschutzpolitik/TMLU | IMPAKT | 2013 | 147 |
| 20. | TH.K4 | Klimaschutzpolitik/TMLU | Thür. Klima-und Anpassungsprogramm | 2009 | 64 |

Among the 46 analysed policy programs were non-normative ones, such as strategies, reports, white papers, etc., as well as normative programs (laws, regulations and binding spatial planning programs). Both laws and policy needed to be analysed with the appropriate methods drawn from the respective scientific disciplines: legal and policy science, respectively. Data collection followed the principles of qualitative content analysis [10] where the building of categories is essential. It started with a priori building of the main categories, followed by the building of subcategories. The latter were reorganized, blended and shifted in a deductive–inductive manner, demonstrated in the subsequent detailed analysis of the selected documents. When necessary, subcategories were shifted to main categories and vice versa. This process was documented and made public in the underlying study [11], which can be accessed online. With regard to climate protection, the following subcategories were identified: climate (general); climate change; adaptation; mitigation; CO₂ sink soil/peatlands; CO₂ sink forest/wood. Hence, the main category—climate protection—encompassed aspects and political objectives of mitigation in the context of forests and land use as well as in correlation with other political objectives. A closer look was taken at the ways that LULUCF can contribute to climate protection. We were interested in specific objectives for the analysed sector and comparisons between the different forms of land use; we did not include such aspects as the role of oceans, industry and traffic.

The examination of policy coherence was conducted by using the MAXQDA coding software (for further details, see Eberl [11]). The aforementioned terms—vertical and horizontal coherence, both internally and externally, as well as departmental coherence and coherence dynamics—were used as categories for coding and applied to the four critical elements of EU regulation LULUCF 2018/841: forest area, climate protection, bioeconomy and biodiversity. Internal coherence refers to policy objectives within one policy sector. This means a lack of internal contradictions, avoiding conflicts between these objectives as well as promoting synergies. The principle can be applied to specific sector programmes as well. In contrast to that, external coherence displays the degree to which objectives of other policy sectors influence the sector of interest. Similar to internal coherence, conflicts between objectives and synergies should also be scrutinized. Horizontal coherence characterizes

the coherence of political objectives on the same level of policy making, e.g., subnational, national and European. Of course, these types of coherence can be combined.

In addition to vertical and horizontal types of coherence, departmental coherence and coherence dynamics were introduced as additional categories of analysis. While departmental coherence refers to the coherence between positions of the different governmental departments involved in a policy, coherence dynamics takes a look at the development of coherence over time in the respective policy fields. The aims of the respective policy areas were analysed for policy coherence in the dimensions mentioned above using the PCF and MLG framework for analysis.

3. Policy Analysis and Results

As stated above, climate policy and the protection of biodiversity are among the central issues of today's global environmental policy. In both policy areas, the role of forests is being intensely discussed (see Bastin 2019 [12] and the critical responses), even if not always mentioned directly (Einecker 2020 [13]). The highly intertwined nature of the three policy areas reflects their close relationship with the natural environment. Constituting the dominant type of a terrestrial landscape, forest areas play a central role in both the mitigation of climate change and the conservation of biodiversity. Nevertheless, there are strong linkages to other policy sectors like agricultural policy, bioeconomy, recreation, landscape protection and protection of soil and water.

3.1. *The EU LULUCF Regulation 2018/841*

In an attempt to reduce trade-offs and promote coherence between climate, biodiversity and forest policy and make them applicable at the national level of the European member states, the EU's LULUCF regulation 2018/841 has been adopted. Focused on land use, land-use change and forestry and building on existing regulations, the LULUCF regulation sets out to create a European legislative framework for greenhouse gas emissions originating from the land-use sector for the period 2021–2030 in order to harmonize the accounting of these emissions among the EU's member states and to regulate their reporting.

The regulation does not define concrete climate mitigation targets for the land-use sector (e.g., through distinct measures to reduce greenhouse gas emissions or their phasing out from the atmosphere); however, it subjugates the land-use sector to the goals of climate change. These goals are defined by the European Climate and Energy Framework 2030 and by the 2015 Paris Agreement. Following the European Climate and Energy Framework 2030, greenhouse gas emissions in the EU are to be reduced by 40% in comparison to the reference year 1990. The Paris Agreement, of which the EU is part, requires a 30% greenhouse gas reduction by 2030 compared to 2005 as well as an active "de-carbonization" of the atmosphere. Thus, while referencing this double obligation, the LULUCF regulation (EU) explicitly obliges member states not to generate net emissions, the so-called "no-debit" obligation. In this obligation, forests are intended to play a key role by generating natural sinks for greenhouse gases. Apart from that, through the EU's Climate and Energy Framework 2030, the LULUCF is integrated into the European Emissions Trading System to ensure that the EU's total balance in greenhouse gas emissions remains neutral. Overall, the LULUCF is sufficiently vague to leave the member states room to decide how to fulfil the "no-debit" obligation defined by the regulation.

3.2. *Germany*

3.2.1. Internal Horizontal Coherence

Climate policy-related forest preservation in Germany is characterized by heavy incoherence. On the one hand, the sink function of forests is promoted through stock increase and non-utilization; on the other hand, an increase in the usage of timber is regarded as a contribution to mitigating climate change. These contradictions follow the general pattern of argumentation found throughout both national and international forest-related programs aimed at climate protection: the current loss of forest cover in the Global

South is seen to be among the central drivers of climate change and, consequently, its discontinuation is demanded. Contrarily, the same demands are not made in reference to the historical as well as current losses of the forest cover in Europe and Germany.

An absence of central climate protection goals that could otherwise define the land-use sector has also been observed. For instance, the goal of greenhouse gas neutrality that is to be achieved by the second half of the 21st century as formulated by the Paris Agreement is addressed only partially in the EU regulation and its respective adoption in German national law. The climate change policy presents itself as ultimately incoherent. This becomes especially evident in the contradicting role that forests are intended to play in climate protection—either through the conservation of their stocks as carbon sinks or their use as a source for timber products. These findings give rise to the question of whether the forest sector should even be a part of climate policy.

3.2.2. External Horizontal Coherence

Synergies between climate action in forest and land use and other policy goals are challenging to identify within the analysed policy programmes. The reason for this is that “climate action” does not exist per se but is most commonly formulated as an adaptation or change of the current pattern of economic practice. This is true for specific climate programmes as well as for affiliated policies. Apart from that, the ambiguity of the definition of climate action is evident, since any policy that is somehow related to climate protection, e.g., the restoration of swamps, floodplains and other wetlands, can be referred to as “climate action”. Some programs set a goal of increased use of wood as a means of climate protection, while others at the same time emphasize the importance of forest conservation. This is most often the case on the international arena.

Forest conservation can simultaneously contribute to the goals of biodiversity policy. Next to climate and biodiversity policy, forest-related actions also generate synergistic effects with economic and social policy. However, possible conflict areas within forest policy are rarely assessed thematically. If addressed as such, those themes would most probably be centred on competition over land and related questions of agricultural structure and food security. Overall, while there are certain attempts at strategy-building, their variety and inconsistency make their problem-solving capacity rather weak. Thus, the external horizontal consistency of the German climate policy can be seen as incoherent.

3.2.3. Internal Vertical Coherence (EU–Germany)

Ever since the adoption of the LULUCF regulation (EU) of 2018, the German climate policy in relation to forest use can be seen as incoherent in relation to the European policy. While European policy emphasises the role of forest and land use in achieving the climate protection goals, the German policy assigns forests and land use only a secondary role. This discrepancy became evident even before 2018, as the German government had shown itself to be opposed to the European position on forests. This opposition did not fade with the adoption of the LULUCF regulation but rather gained substance. The German Climate Protection Plan 2050 denies that use of biomass from agriculture as a source of energy contributes to climate protection. Furthermore, it posits that biomass from forestry is subject to capacity limits. This is among the central reasons why national climate policy in Germany, at least regarding LULUCF, must be classified as incoherent in relation to the goals of the European Union.

3.2.4. External Vertical Coherence (EU–Germany)

Several interdependencies can be identified between the external and vertical interactions of the forest area and bioeconomy policy of the European Union and the climate policy of Germany. This is especially true for the European guidelines on forest conservation and forest area increase, which strengthen the corresponding approaches in the national climate policy. At the same time, these interactions create tensions, as highlighted in the commitments from the field of bioeconomy to increase the role of timber use for reasons of

climate protection, which contradict the goal of forest conservation for the same reason of climate protection. These partly conflicting and partly synergetic relations indicate a need for policy adjustment. As a result, the German climate policy can be seen as externally incoherent in relation to European climate policy (See Table 2).

Table 2. Coherence within German climate policy.

| | Horizontal Coherence | | Vertical Coherence | |
|--------------------|----------------------|----------|--------------------|----------|
| | Internal | External | Internal | External |
| Climate Protection | -- | - | -- | - |

Key: -- strong incoherence; - incoherence.

3.3. Thuringia

3.3.1. Internal Horizontal Coherence

Climate protection goals were mentioned in all the analysed programmes. This finding implies the current and crosscutting nature of climate protection issues. Without thematic integration, there is the potential for a highly fragmented policy field and, as a result, incoherent policy formulations. This assumption did not, however, hold true against the verified climate protection programmes. Steady references to land use and especially the role of forests—both in reference to forest conservation and forest use—could be found in all the programmes but two. Overall, no contradicting statements could be identified between the German and the Thuringian climate policies, which allows us to assess the latter as sufficiently coherent.

3.3.2. External Horizontal Coherence

Synergies in the field of climate policy were explicitly thematized in all of the analysed programmes, especially in relation to forest use. These cross-references, however, do not imply any specific actions, but remain of an abstract nature. However, they seem to mostly reference the economic aspects of timber use. Conflicts between overlapping policies were found to be addressed less clearly. So, the negative interrelations identified between the different land-use purposes were implied, but no solutions offered. Thus, the external horizontal coherence of the Thuringian climate policy can be seen as low.

3.3.3. Internal Vertical Coherence (Germany–Thuringia)

The differences in the adoption of climate policy at the national level of Germany compared to the regional level of Thuringia seem to be of a rather minor character at first glance and to mostly concern deviations with regard to the role of swamps and wetlands. These are given a higher attention at the national level than at the regional one, which can be explained by the low portion of swamplands to be found in Thuringia. Yet, upon closer inspection it becomes evident that the contradictions with regard to the role of forests that are found at the national level are absent at the level of Thuringia. While both levels emphasize the role of forest conservation in climate protection, statements on the assessment of the impact that other land use types have on climate are present only for the Thuringian level. Apart from that, the requirements for so-called “climate proofing”, i.e. the call for the development of adaptation and mitigation strategies for climate change for a given land-use type, at the regional level by far exceed Germany’s statements for the national level, which remain fairly abstract. Thus, given the differences with regard to the role of forests and wetlands as well as a higher specificity of measures provided on the regional level, the Thuringian climate policy can be seen as overall incoherent in relation to the national climate policy of Germany, but coherent with the goals formulated at the EU level.

3.3.4. External Vertical Coherence (Germany–Thuringia)

The influence of German policy upon Thuringian climate policy is evident from the analysis and can be most clearly seen on the joint goal of non-utilization of 5% of the forest area as well as on common economic goals. However, other synergies can also be found in the handling of biotopes and their recreation function, in flood control or in the protection of land and soil. Once again, the Thuringian programmes can be seen as more specific than the national ones. The greater emphasis on the role of forests found in the Thuringian climate policy, as well as the higher specification of the respective policies, e.g., of the economic and nature conservation policies, lead to an assessment of the Thuringian policy as partially coherent with the national climate policy of Germany (See Table 3).

Table 3. Coherence within Thuringian climate policy.

| | Horizontal Coherence | | Vertical Coherence | |
|--------------------|----------------------|----------|--------------------|----------|
| | Internal | External | Internal | External |
| Climate Protection | + | – | – | + |

Key: +, coherence; –, incoherence.

4. Discussion

In summary, we can conclude that the internal horizontal coherence of German climate policy is weak as found in the identified contradictions within the German forest policy. These contradictions become especially clear between programmes of opposing government departments, such as the Department of Agriculture and the Department of Environmental Protection. On the one hand, forest conservation and stock increase are considered desirable; on the other hand, an increased use of timber is promoted as a climate protection measure. In this respect, it should be mentioned that, in some cases, sustainable forest management practices might allow for the combination of those two objectives to a certain extent. While this assumption is true for forest stock conservation as carbon sinks and, through this, relevant in the context of climate policy, forest conservation for reasons of biodiversity, for example, usually requires a cessation of economic use of the respective forest area. This case is a very illustrative example of the prevalent conflict in environmental policy between commodity and amenity (cf. Winkel et al. [14]). The external horizontal coherence of Germany's environmental policy is also weak, which is mostly the result of an ambiguous definition of "climate policy". The concept is too broad and vaguely formulated to exclude contradiction and generate effective policy measures. The coherence dynamic of German climate policy is present, yet uneven. While a clear increase in the role forests are intended to play in climate policy has been detected, the contradictions with regard to their role—either increased conservation or increased use of timber—create serious uncertainties. Apart from that, the role assigned to other land-use types did not undergo any serious changes over the analysed period of time (approximately 30 years). Departmental coherence is low, which is due to a lack of effective coordination between the institutions involved. This may also be the result of a lack of a clear definition and allocation of competences.

The internal vertical coherence between German and European climate policy is also weak. Here, Germany's federal government seems to be less concerned with ecological goals than the EU. The reason for this could be related to the national security premise that governs the thinking of any nation state. While the traditional domains of national security are foreign and defence policies, the economy can be directly related to the realization of a state's power and can therefore be safely placed within the realm of high politics (adapted from Barnett [15]). Not being a nation state but a supranational geopolitical entity, the EU is not directly bound by the strict premise of national security thinking. It can therefore afford to adopt more normatively motivated behaviour. It is perhaps even a rational step for the EU, since its hard power is limited such that its normative power is more relevant

than in the case of a nation state. One could therefore assume that the reason Germany is more reluctant than the European Union to accept widespread ecological obligations that might undermine its economic security lies in the obligations it must fulfil as a state. Congruent to this line of thinking, the external vertical coherence of Germany's climate policy is marked by contradictions between economic and ecological goals and is, therefore, generally weak.

Unlike in the case of Germany, the internal horizontal coherence of Thuringian climate policy is coherent and does not display any significant conflicts. This might be explained by the reasoning of the preceding paragraph: it is not a nation state, but a sub-national unit (*Land*) within Germany. Due to this, it does not share the burden of the national security obligation experienced by a national state, as in the case of Germany. As a result, Thuringia can be expected to be more willing to favour ecology over economy. The external horizontal coherence, in turn, is weak, as was the case for Germany. The reasons for this are the same as in the case of the German nation state—the ambiguous definition of climate policy leading to many uncertainties. This similarity is easily explained by the fact that Thuringia is at the sub-national level of the German state and the regional adaptation of the German national policy can, therefore, be expected to be similar to the national document. The same is true for coherence dynamics and departmental coherence. Both are weak, as in the case of Germany and for the same reasons.

The internal vertical coherence of forest-related climate policy between Thuringia and Germany is rather low. The reason for this is the higher specificity with regard to forest policy of Thuringia and its overall preference for ecological over economic goals in forest management. Thus, while the coherence between the regional level of Thuringia and the national level of Germany is low, the coherence between Thuringia and the EU, i.e., between the regional and the macro-regional level, is higher. In fact, it is higher than that of the national level. This finding supports the observation made by Gordeeva [16] with regard to the effect macro-regionalism has on the effectiveness of complex environmental regimes. The external vertical coherence between Thuringia and Germany is higher than between Germany and the EU, which is due to the higher specificity of the policies provided in the Thuringian action programmes, but also due to the fact that the sub-national (regional) and national levels are closer to each other than the national and the macro-regional levels.

Notwithstanding that the PCF proved useful in explaining horizontal and vertical relationships in policy making, critical views on the approach should be mentioned. Rationalist and institutionalist analysts have criticized the PCF method for being too descriptive and arbitrary. Furthermore, it has been noted that coherence might not be the most suitable method to analyse political processes where power is the decisive factor. With regard to the first point of criticism, it should be taken into account that the PCF offers the possibility of analysing complex governance systems consisting of political and legal elements. This is especially important with regard to the observation of the “delineation of politics” by law and the “politicisation of law”. Moreover, in contrast to certain expert opinions, scientific analysis is open-ended. The second caveat (negligence of the factor of power, e.g., Bocquillon [17]) is more relevant for social and economic questions where coherence does not have the same meaning it has for policy fields related to spatial planning, water and forests. Finally, with regard to the example of German forest strategy, it can be clearly seen that the government aims at policy coherence between climate policy (German Climate Protection Plan 2050 and further instruments for climate protection and adaptation) and other national strategies, e.g., sustainability, biological diversity and bioeconomy.

5. Conclusions

This study sought to apply the policy coherence framework to the case of climate policy and its application at the European, German and Thuringian political levels with regard to the role of forest areas. An analysis of this kind, including three political levels and containing more than two policies, has not been conducted before. In order to succeed in our tasks, certain adaptations of the theoretical and methodological framework were

required and successfully applied. The data analysis was carried out by means of matrix screening. Apart from that, the PCF was extended by two further categories, namely, coherence dynamics and departmental coherence. Overall, while the authors are aware of the limitations set by both the PCF methods and the selection of just one subnational level, the obtained results were sufficiently precise to draw scientifically relevant, although preliminary, conclusions.

The major findings obtained by means of the conducted analysis were the contradictions between economic and ecological goals that characterize German climate policy, especially regarding the role of forests. This observation can be explained by the national security obligation of a nation state. This assumption is supported by the observation that the regional level of Thuringia is more consistent with the macro level of the EU, both of which can afford to favour ecology over economy due to the fact that sub-national entities lack a nation state's typical limitations. Another finding suggests that the broad and ambiguous definition of climate policy creates many contradictions and leads to a seemingly indeterminate ubiquity of climate policy, undermining its necessary and appropriate presence and application.

Finally, it should be mentioned that applying the PCF in a wider context demonstrated large differences of coherence in and between other policy sectors (e.g., biodiversity, bioeconomy, landscape protection, recreation, soil protection, etc.) regarding the question of forest area development. From this perspective, a moderate and strategically placed increase in forest area might be a solution to some of the incoherencies mentioned above.

Author Contributions: Conceptualization: J.E., E.G., N.W.; investigation: J.E.; writing—original draft preparation: E.G.; supervision: N.W. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by Cusanuswerk, Bischöfliche Studienförderung, Germany, supported by the Federal Ministry of Education and Research.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Original data is available on request by the first author.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Nilsson, M.; Zamparutti, T.; Petersen, J.E.; Nykvist, B.; Rudberg, P.; McGuinn, J. Understanding Policy Coherence. Analytical Framework and Examples of Sector-Environment Policy Interactions in the EU. *Environ. Pol. Gov.* **2012**, *22*, 395–423. [[CrossRef](#)]
2. Sianes, A. Shedding light on policy coherence for Development: A conceptual framework. *J. Int. Dev.* **2017**, *29*, 134–146. [[CrossRef](#)]
3. Mickwitz, P.; Aix, F.; Beck, S.; Carss, D.; Ferrand, N.; Görg, C.; Jensen, A.; Kivimaa, P.; Kuhlicke, C.; Kuindersma, W.; et al. *Climate Policy Integration, Coherence and Governance*; PEER Report No 2; Partnership for European Environmental Research: Helsinki, Finland, 2009.
4. Makkonen, M.; Huttunen, S.; Primmer, E.; Repo, A.; Hildén, M. Policy coherence in climate change mitigation: An ecosystem service approach to forests as carbon sinks and bioenergy sources. *For. Policy Econ.* **2015**, *50*, 153–162. [[CrossRef](#)]
5. Muñoz-Rojas, J.; Nijnik, M.; González-Puente, M.; Cortines-García, F. Synergies and conflicts in the use of policy and planning instruments for implementing forest and woodland corridors and networks; A case study in NE Scotland. *For. Policy Econ.* **2015**, *57*, 47–64. [[CrossRef](#)]
6. Hoberg, G.; St-Laurent, G.P.; Schittecatte, G.; Dymond, C.C. Forest carbon mitigation policy. A policy gap analysis for British Columbia. *For. Policy Econ.* **2016**, *69*, 73–82. [[CrossRef](#)]
7. Marks, G.; Hooghe, L.; Blank, K.; Eilstrup-Sangiovanni, M. European integration from the 1980s: State-centric vs. multi-level governance. *J. Common Mark. Stud.* **1996**, *34*, 341–378. [[CrossRef](#)]
8. Stephenson, P. Twenty years of multi-level governance: 'Where Does It Come From? What Is It? Where Is It Going?'. *J. Eur. Public Policy* **2013**, *20*, 817–837. [[CrossRef](#)]
9. Pirlot, P. Fragmented Forest Policy: Asset or Concern? In *Forestry in the Midst of Global Changes*; Farcy, C., Rojas-Briales, E., de Arano, I.M., Eds.; Taylor & Francis Group: Boca Raton, FL, USA, 2018; 446p.
10. Schreier, M. *Qualitative Content Analysis in Practice*; Los Angeles SAGE: Newbury Park, CA, USA, 2012.
11. Eberl, J. *Walderhaltungs- und Waldmehrungepolitik. Kohärenz der Programmgestaltung eines Politikfeldes*; Dissertation Technische Universität Dresden (=Wald in Raum und Öffentlichkeit, Band 7); Books on Demand: Norderstedt, Germany, 2020; 416p.

12. Bastin, J.-F.; Finegold, Y.; Garcia, C.; Mollicone, D.; Rezende, M.; Routh, D.; Zohner, C.M.; Crowther, T.W. The global tree restoration potential. *Science* **2019**, *365*, 76–79. [[CrossRef](#)] [[PubMed](#)]
13. Einecker, R.; Kirba, A. Climate Change: A Bibliometric Study of Adaptation, Mitigation and Resilience. *Sustainability* **2020**, *12*, 6935. [[CrossRef](#)]
14. Winkel, G.; Aggestam, F.; Sotirov, M.; Weiss, G. EU Policy Options for the Protection of European Forests against Harmful Impacts. 2009. Available online: <http://ec.europa.eu/environment/forests/fprotection.htm> (accessed on 26 May 2021).
15. Barnett, M. High Politics is Low Politics: The Domestic and Systemic Sources of Israeli Security Policy, 1967–1977. *World Politics* **1990**, *42*, 529–562. [[CrossRef](#)]
16. Gordeeva, E. Regionalization and environmental regime effectiveness. *J. Sustain. Dev.* **2021**, *14*, 164–167. [[CrossRef](#)]
17. Bocquillon, P. (De-)Constructing coherence? Strategic entrepreneurs, policy frames and the integration of climate and energy policies in the European Union. *Environ. Policy Gov.* **2018**, *28*, 339–349. [[CrossRef](#)]