Austrian climate policies and GHG-emissions since 1990: What is the role of climate policy integration?

Maria Niedertscheider⁎, Willi Haas, Christoph Görg

Institute of Social Ecology Vienna, Alpen-Adria Universität, Schottenfeldgasse 29, 1070 Vienna, Austria

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ABSTRACT

In 1990 Austria has committed to the Kyoto-protocol and later to the Paris Agreement. Since then, it has developed two climate strategies, has passed its first climate protection act, has adopted a strategy for adaptation to climate change and has implemented many new institutions, programmes and local to provincial climate change mitigation (CCM) measures. Indeed, Austrian GHG-emissions have been decreasing since 2005, giving reasons to suspect policy success. A closer analysis, however, challenges this impression. Here, we put climate policies since 1990 into perspective with other, often short-term drivers of GHG-emissions. Employing a conceptual framework, we evaluate the level of climate policy integration, which has been found key for successful climate policies in literature. This framework also helps us to detect benefits and shortcomings of past and existing CCM policies and so to derive insights relevant for policy-makers. We find that short-term climatic and socio-economic events overruled climate policies in their proximate GHG-emission effects, even when policies were implemented due to EU regulation after 2007. Policy effects are much more difficult to uncover, because they often happen within longer time-frames and are usually accompanied by indirect CCM-effects. In the background of accelerating climate change impacts in combination with associated high uncertainties, strengthening climate policies and integrating reflexive mechanisms that allow adjusting and continuously re-evaluating policy effectiveness, will become ever more important. Eliminating inconsistencies between CCM- and other sectoral policies and drastically reforming accounting schemes to include carbon leakage effects are particularly timely, yet considering political realities, very bold but necessary next step to make climate goals attainable.

1. Introduction

Under the Paris Agreement the European Union has committed to cutting domestic Green House Gas (GHG) emissions by at least 40% over the 1990 level in order to limit global temperature rise to 2°C and avoid the most devastating climate change impacts (Rogelj et al., 2016). Hence, all member states are urged to introduce drastic climate change mitigation (CCM) measures. This will be challenging for countries such as Austria, which already had to spend high amounts for emission certificates in order to convey with the Kyoto targets (diepresse.com, 2009; refer to Steurer and Clar, 2015). Examining policy-performance in terms of strengths and weaknesses of past policy frameworks, is crucial for present and future policy makers. Hence, it can be a first step towards more effective CCM-policies. However, CCM-policy analysis are non-trivial, because they involve multiple policy levels (international, EU, national, provincial and community-level), actors and stakeholders (politicians, economic entrepreneurs, the civil society, or community governors). In the past, research on Climate Policy Integration (CPI) has put exactly this intricacy into the centre of policy analysis, arguing that particularly the level of CPI across all policy (and actor-) levels determines CCM-policy success (Lafferty and Hovden, 2003; Kivimaa and Mickwitz, 2006, 2009; Mickwitz et al., 2009; Adelle and Russel, 2013; Jordan and Lenschow, 2010).

Mickwitz et al. (2009) have suggested five key criteria for CPI-analysis: (1) “inclusion”, i.e. acknowledgement of CCM by different sectors, is the precondition for all remaining criteria. (2) “consistency”: Have contradictions between existing policies and climate policies been...
minimized? This implies a high level of (3) “weighting”, defined as prioritization of CCM relative to other sectoral priorities. (4) “reporting” is a pre-condition for tracking CPI progress and for evaluating policy effects. Finally, mainstreaming CPI requires substantial (5) “financial resources”, i.e. for information dissemination, or the institutionalization of relevant positions.

However, CPI must also entail a high level of reflexivity, in order to avoid lock-ins, resolve path dependencies and evaluate effects of unintended outcomes. Rational problem solving strategies based on a linear understanding of “cause and effect” fail in this context, because CCM-policies are confronted with a high level of uncertainty, both regarding epistemological uncertainties of climate models, as well as ontological uncertainties regarding feedback loops between climatic change and the socio-economic system (Voß, 2005). Thus, instead of sticking to a clear-cut problem-actor constellation, re-evaluating and re-opening the problem and solution space is central for enabling a reflexive learning-process (Voß, 2005). In the context of CCM, reflexive governance entails “learning from the past” in order to re-adapt climate policies iteratively (Mickwitz et al., 2009). However, it is an empirical question whether reflexivity can be achieved under certain conditions in terms of the institutional and structural frameworks and the existing constellations of power.

This research paper analyses Austrian CCM-policies from 1990 until today, with a focus on CPI, using and extending the constellations of power. Based on primary and secondary literature, and (b) to put these findings into perspective with GHG-emission trends and effects of external, short-term economic and climatic events and carbon leakage. We find this research aim especially interesting for the Austrian case due to its particular challenging actor constellation: Austria is characterized by a high level of federalism and corporatism (Staroff, 1999; Brand and Pawloff, 2014) and since the early 2000s, the EU has become an additional influential actor. Corporatism is particularly relevant in Austria, because, although corporatist actors have no direct legislative power, they are strongly interwoven with political parties and so directly influence decision- and policy implementation processes.

2. Research framework

As a research framework we build on the key criteria raised by Mickwitz et al. (2009), which we modified and extended according to our study focus (Table 1). In particular, we include “reflexivity” and “uncertainty” as central components of CPI. While Mickwitz et al. (2009) have described “multi-actor governance” as one level above the CPI-criteria, we add “multi-level” and “multi-actor” as additional key criteria to the analytical framework (Table 1). This allows us to integrate Austrian particularities in terms of actor-constellations into the analysis.

This paper starts with a narrative on Austrian CCM-policies since 1990 (Section 3), focussing only on the most relevant CCM policies. A complete list of all cross-sectoral policies and measures was beyond the scope of this paper. For detailed sectoral policies and acts, please refer to additional literature, such as Steurer and Clar (2015), Bitterling (2010), or Brand and Pawloff (2014). Section 4 integrates these findings into the CPI-framework (Table 1) and scrutinizes strengths and shortcomings of Austrian CPI. Section 5 draws a time-line that integrates findings on CPI with GHG-emission trends, and puts policy-effects into perspective with other external drivers, such as short-term economic (recessions, energy prices) and climatic drivers (i.e. heating degree days). We also show trends of consumption based GHG-emissions in order to highlight carbon leakage as an important issue that is not addressed in national GHG-inventories. Section 5 represents the conclusion and outlook.

3. Four phases of CCM-awareness and action in Austria

Based on a literature recherche we could distinguish four phases of CCM-policy progress in Austria, which are characterized by distinct levels of CCM-prioritization and concrete actions. We start in the early 1990s, a time in which climate-change awareness gained momentum in the public discourse.


The early to mid-1990s were marked by an upswing of climate change awareness as a side-effect of the overall “natural protection” euphoria (Hackl, 2001), fuelled by recent successes of the environmental movement in Hainburg and Zwentendorf (Lauber, 1997; Natter, 1987). Austria committed to bold GHG-emission targets in the Toronto agreement of 1988, which foresaw a reduction of global emissions by –20% over 1988 until 2005. CCM experienced a high level of prioritization in the political arena. New institutions were founded and the environmental ministry was drastically empowered from 35 relevant positions in 1989, to 208 in 1995 (Hackl, 2001).

The Austrian CO2 Commission (ACC) was implemented in 1990 as a multi-actor, interdisciplinary board, targeted at identifying high potential areas for reaching the Toronto agreement. The ACC consisted not only of scientists, environmental speakers of the parties, NGO-s, academic representatives, but also of members from the corporatist interest groups, hitherto referred to as Social Partners. Hence, corporatism played an important role already at this early stage. The ACC was provided with an annual budget from the environmental ministry and the Academy of Environment and Energy (“Akademie für Umwelt und Energie”) of Lower Austria, which also provided space and literature

| Table 1 |
| Key criteria for CPI used as a research framework. |

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Definition</th>
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<tr>
<td>1. Inclusion&lt;sup&gt;a&lt;/sup&gt;</td>
<td>To what extent is direct as well as indirect climate change mitigation covered?</td>
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<td>2. Consistency&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Have the contradictions between the aims related to climate change mitigation and adaptation and other policy goals been assessed and have there been efforts to minimise revealed contradictions?</td>
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<td>3. Weighting&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Has the relative priority of climate change mitigation and adaptation impacts compared to other policy aims been decided and are there procedures for determining the relative priorities?</td>
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<td>4. Reporting&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Are there clearly stated evaluation and reporting requirements for climate change mitigation and adaptation impacts (including deadlines) ex ante planned and have such evaluations and reporting happened ex post?</td>
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<td>5. Resources&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Is internal as well as external knowhow about climate change mitigation and adaptation impacts available and used and are resources provided?</td>
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<tr>
<td>6. Reflexivity&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Is learning over time encouraged based on reporting and evaluation of policy measures</td>
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<td>7. Commitment and sanctions&lt;sup&gt;a&lt;/sup&gt;</td>
<td>A high level of commitment is usually accompanied by sanctions in case of non-fulfilling targets</td>
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<tr>
<td>8. Uncertainties&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Are uncertainties of climate change policies addressed and how are they addressed (epistemological, ontological)?</td>
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<td>9. Multi-level&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Is the interplay of different levels of decision-making (EU, national, regional) addressed properly?</td>
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<tr>
<td>10. Multi-actor&lt;sup&gt;a&lt;/sup&gt;</td>
<td>To which degree are different stakeholders, i.e. politicians, industry, civil society, NGO-s, involved?</td>
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<sup>a</sup> Directly taken from Mickwitz et al. (2009). Note that we have slightly adapted the related definitions.

<sup>a</sup> Additional criteria introduced in this study.

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