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# Integrated Strategies for Climate Policy Integration and Coherence: the Case of Germany

Klaus Jacob, Hannah Kannen

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## Integrated Strategies for Climate Policy Integration and Coherence: the Case of Germany

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## Abstract

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Climate change mitigation is a cross-cutting policy issue that requires coordination between policy departments and different levels of governance. However, the constitutional division of responsibilities (polity) and changing political constellations in government and society (politics) are constraining factors for achieving a horizontal climate policy integration and vertical coherence. This is especially the case in the federal system of Germany which is characterized by high degree of independence of departments and interdependence of the federal and subnational level.

In recent years, integrated climate mitigation strategies were increasingly employed as a new governance mechanism to cope with the challenges of climate policy integration, coherence and long-term planning. This paper analyses and assesses the impact of three integrated climate mitigation strategies in Germany, namely the 2007 federal government's "Integrated Energy and Climate Program" as well as regional strategies from Baden-Wuerttemberg and Hamburg. It shows that existing approaches especially at federal level so far lack important strategic elements that would ensure long-term impacts. Baden-Wuerttemberg's recently initiated strategy process might serve as a role model for other entities because it combines clear objectives and targets with institutional innovations, legal codification and broad participation. The case studies demonstrate that effective strategies not only require ambitious and targets and measures, but also a continuous process and dedicated strategic capacities. However, the impacts of strategies on actual policy development are hard to attribute.

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## 1 Introduction

Climate change has acquired a top position on Germans governmental agendas in recent years. The relevance of a global temperature rise is hardly questioned, and there is broad agreement about the necessity of reducing greenhouse gas (GHG) emissions into the atmosphere. However, when it comes to the actual adoption and implementation of policies to achieve such a reduction, basic convictions clash against obstacles and barriers. There is a broad range of competing interests over adequate mechanisms to approach the problem. While some actors see a need for drastic and immediate transformation, others deny the priority of the matter vis-à-vis immediate issues such as employment or financial crisis that demand more urgent attention. Hence, short-term thinking often undermines long-term decision-making.

Furthermore, institutional responsibilities for climate change mitigation are widely spread. Energy use and the level of GHG emissions from households, transport or business is determined or influenced by many different policy domains. As a result, several ministerial departments and different levels of governance, from the global to the local, have stakes in climate policymaking. Therefore, climate change mitigation implies a significant challenge for the current division of work between departments and levels of policy making. The political system is organized to represent the interests of relevant regional, sectoral and social groups in decision making. Mitigating climate change requires cooperation among the related organisations and actors and certainly affects their interests. In other words, effective and coherent climate policy can only be achieved through a high degree of climate policy integration (CPI) in everyday policymaking (Urwin & Jordan 2008, Mickwitz et al. 2009, Adelle & Russel 2013). The basic assumption of CPI is that the cross-sectoral and multi-level challenge of climate change requires the integration of climate concerns into non-environmental policy fields, and coherence of policy activities across different levels of government (Dupont, 2011). Adelle and Russel (2013) distinguish between three different ways of approaching CPI analytically: First, the concept of CPI implies a certain normative statement, postulating that (principled) priority should be assigned to climate policy objectives vis-à-vis other sectoral goals. Second, CPI can also be regarded as a process of governing which focuses on the development of a set of tools to ensure that climate-related policymaking and implementation processes integrate climate concerns across policy sectors (horizontally) and levels of government (vertically). Third and finally, CPI is being conceived as a policy output and outcome, e.g. with regard to the amount of greenhouse gas emissions avoided (outcome) by means of specific policies (output). This paper focuses on the governance dimension of CPI. We assuming that there is a political will for climate protection and are interested in the design of strategies for the implementation. Integrated strategies are conceived and analysed as a means for CPI.

In recent years, policymakers have increasingly turned attention towards strategies as a new governance mechanism to address long-term challenges like sustainable development or climate change mitigation (Casado-Asensio & Steurer, forthcoming). Strategies aim to

define a given problem, identify requirements for action, set medium to long-term targets and develop a set of measures to achieve them. They are usually written down in documents that lay down objectives, instruments and implementation mechanisms (content dimension). Furthermore, they are processes with many different actors who take part in preparing, formulating, implementing and updating the strategy (process dimension). Finally, strategic capacity is an integral part of strategies. This includes the creation of a knowledge base about the given problem and its causes and effects, the establishment of a network of supporters, the opportunity to set the agenda and influence political processes, and the development of communication channels and formats (capacity dimension) (Jacob et al. 2012). These three dimensions of strategies (content, processes and capacities) form the analytical framework for our analysis of climate strategies. Strategies are conceived as a means to overcome the described barriers to integration. Rather than representing yet another policy document, they are supposed to initiate comprehensive governing processes suitable for tackling long-term and large-scale problem contexts (Rayner & Howlett 2009).

German governments have shown particular effort to pioneer in climate change mitigation since the late 1980s (Weidner & Mez 2008). While urging for an effective international climate regime, they have agreed upon ambitious targets and measures domestically. However, CPI is confronted with a number of challenges in Germany (Michaelowa 2008). These stem from the federal state structure that guarantees a certain degree of autonomy and co-decision power to the regional entities (Länder), the necessity to form coalition governments among competing parties, the fact that German governments operate on the basis of the departmental principle, thereby allowing a great amount of leeway for single ministries to shape the configuration of policies under their responsibility, and the frequency of elections on either federal or regional level that are scattered throughout the year. Given the various structural, procedural and political barriers, scholars have concluded that Germany's capacity for policy integration is "poor" (Jordan & Lenschow, 2010, p. 150), and that policymaking is usually dominated by "negative coordination" (Scharpf 1972, Fleischer & Hustedt 2012, p. 265).

This paper assesses climate mitigation strategies at federal and regional level, asking whether these governance approaches were so far able to overcome the barriers to climate policy integration, coherence and long-term focus. Given the federal state structure and the division of ministerial responsibilities (polity) as well as changing political constellations in government and society (politics), this article is guided by the following research question: Are integrated strategies an effective means to cope with the challenges of climate policy integration, coherence and long-term orientation?

In order to answer the research question, a comparative analysis of three climate mitigation strategies was conducted. At federal level, the 2007 "Integrated Energy and Climate Program" (IEKP) is scrutinized. For Germany, it represents the most comprehensive attempt to implement an integrated strategy for climate change mitigation

so far (Hierl 2011). At sub national level, case studies on climate policy activities in the Länder Baden-Wuerttemberg and Hamburg were selected because of their pioneering role in climate protection over the last decades. In Germany, the Länder are responsible not only for the implementation of national legislation, but in many policy domains can develop own standards and programs. For instance, both have passed provincial legislation to achieve GHG emissions reductions in the buildings sector that goes far beyond federal provisions (Jacob & Kannen, 2015). The empirical analysis is based on comprehensive desk research and 23 semi-structured expert interviews (see annex for a list of interviewees). Experts were chosen on the basis of their involvement in the policy processes to be analysed. They are affiliated with federal or Länder ministries, political parties, non-government organizations or advisory bodies.

The article is structured as follows: The next section provides an overview of challenges for achieving a horizontal CPI in the relevant policy domains and a vertical coherence of climate policies across the different levels in Germany so as to gain a picture of the structural and political context in which strategies operate. This is followed by a description of attempts to implement a climate mitigation strategy at the federal level and in the Länder Baden-Wuerttemberg and Hamburg. A subsequent discussion outlines a number of strategic elements that could potentially enhance coherence and long-term focus in German climate policy.

## 2 Challenges for an effective and coherent climate policy in Germany

It is a characteristic of German climate policies that a national consensus emerged from the 1980s on the need to combat climate change (Weidner & Mez 2008). Discussions subsequently focused on concrete GHG reduction goals and strategies. The first reduction goal of 25 percent by 2005 compared to 1987 was set in 1990. In 1995, the target's base year was changed to 1990. These goals provided a strong impetus for the international climate change agenda and the foundation for Germany's self-claimed leadership position (Jänicke 2011). Within the framework of the 1997 Kyoto Protocol and the related EU Burden Sharing Agreement, Germany, together with Denmark (-21%) and Luxemburg (-28%) was among the most ambitious EU Member States and committed to a 21 percent reduction of GHG by 2008-12 relative to 1990 levels. This target was already achieved in 2007. Partly, this was a result of the so called wall-fall profits: The transformation of the eastern German energy sector and industry after reunification resulted in an enormous decline of GHG emissions. It is estimated that about 100 Mt (i.e. ca. 50%) of the reduction can be attributed to this (Eichhammer et al. 2001). Currently, Germany aims at reducing GHG emissions by 40 percent in 2020 and at least 80 percent by 2050 compared to 1990 (BMW i & BMU 2010).

Despite widespread agreement on the need for action, concrete measures to achieve the self-set targets were oftentimes discussed controversially. The result is an incremental, sectorally fragmented implementation of targets (Beck et al. 2009). Even though changes

in government constellations did not make a great difference to the overall direction of climate policy, the preferences for specific instruments, and the willingness to burden the economy and society in order to protect the climate varied significantly. For instance, social and economic concerns gained importance after German reunification under the Conservative-Liberal government led by Chancellor Kohl, while environmental issues became more prominent after the election of a Social Democrat-Green coalition government in 1998 (Michaelowa 2008, Jänicke 2011).

Today's German climate mitigation policy is marked by a great variety of policy instruments. These range from regulatory requirements (e.g. minimum efficiency standards and mandatory use of heat from renewable energies in newly constructed buildings) and economic incentives (e.g. ecological tax reform, emissions trading, feed-in tariff for renewable electricity, subsidies for energy efficiency measures) to voluntary agreements with industry and awareness-raising campaigns (Weidner & Mez 2008). Overall, subsequent government coalitions have put a great emphasis on the economic advantages that result from the development of environmental and climate-friendly technologies. Climate change policy could be legitimized by economic success stories and hence further ensure public and industry support (Jänicke 2011). Nevertheless, effective and coherent climate policy is faced with a number of challenges on the horizontal and vertical dimension. In the following, these challenges are described in more detail, with a special focus on the political system and the governance practices it prescribes.

## **2.1 Horizontal CPI: departmental egoism and the challenge of coordination**

Due to the cross-sectoral nature of climate change mitigation, eight ministries have responsibilities in this field. Overall responsibility for climate change and renewable energy rests with the Ministry of Environment (BMU)<sup>1</sup>. The Ministry of Economics (BMWi) coordinates energy policy; the Ministry for Transport, Building and Urban Affairs (BMVBS) is responsible for targeting GHG emissions in the transport and buildings sector; and the Ministry of Agriculture (BMELV) deals with agricultural emissions. Furthermore, the Ministry of Finance (BMF) decides on the provision of financial resources for climate protection measures, the Ministry of Education and Research (BMBWF) grants funding for research activities, and the Foreign Office (AA) and the Ministry for Economic Cooperation and Development (BMZ) are concerned with international climate policy. Each of the ministries has set up so-called "mirror units" that keep track of environmental policy activities. While one might suspect that the installation of mirror units represents a step towards integration,

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<sup>1</sup> The empirical study was undertaken before the election and the reshuffling of governmental responsibilities end of 2013. Therefore, we keep the former denominations of departments. Although there has been a fundamental reorganization of responsibilities and in particular a concentration of energy related responsibilities in the BMWi, climate policies remain a cross sectoral task.



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Wurzel (2008) demonstrates that they are rather a means of control, making sure that non-environmental interests are equally taken into account.

This is partly a result of the German polity: Article 65 of the German Constitution (Grundgesetz) establishes three principles that constitute the basis of cooperation within the Federal Executive. First, the “chancellor principle” implies that general policy guidelines are determined by the Chancellor. Second, the “departmental principle” establishes sole responsibility of ministers for decisions taken within their realm of authority, thus implying a strong role to single ministries within their portfolio. Third and finally, the “cabinet principle” requires that disagreements between ministries are settled within the Cabinet. In reality, however, these principles are not perfectly balanced. While the chancellor principle has proved to be nearly irrelevant in light of a chancellor’s dependence on his or her coalition party and his or her party’s parliamentary group, the fulfilment of the cabinet principle is highly dependent on a harmonious coalition willing to rationally dissolve tensions between single ministers. Mayntz and Scharpf (1975) have revealed structural constraints in the German federal executive that lead to “negative coordination” patterns, i.e. decision-making based on the lowest common denominator. A turf war mentality in ministerial departments and an unwillingness in the Cabinet to constructively discuss the issues at stake frequently results in modest policy change or even political stalemate (Fleischer & Hustedt 2012).

Differing problem perceptions and policy goals are particularly evident between BMU and BMWi. As one interviewee put it, the two ministries “have diametrically opposed regulatory ideas, interests, cultural identities, and usually also party political affiliations”. Different stakeholders and considerations inform strategic decisions. While the BMU is concerned about environmental and climate protection, the BMWi’s main goals are economic growth, cost efficiency and job creation. Therefore, it frequently rejects climate protection measures perceived as too constraining for industry (Michaelowa 2008).

Besides the polity, competing parties which form coalition agreement play a role: Their different views and opinions in the Cabinet have substantial implications for German climate policy. An illustrative example is the 2012 disagreement over Germany’s position on the EU Energy Efficiency Directive that was only solved after several months of open conflict between the liberal Economics Minister and the Christian democratic Environment Minister (EurActiv 2012). But differing perceptions do not only culminate in discussions on single measures. Notwithstanding the achievements in climate protection over the last decades, continuous discussions about competitive disadvantages and other constraints from environmental legislation have led to a certain degree of incoherence in German policies. Eco-tax exemptions for energy-intensive companies, environmentally harmful subsidies for coal-fired power plants and the absence of a general speed limit on German highways are just a few examples of Germany’s ambivalent policy mix (Bär et al. 2011, Jänicke 2011).

In an attempt to increase coherence in German climate policy, an Inter-ministerial Working Group on CO<sub>2</sub> Reduction (IMA CO<sub>2</sub>) was set up in 1990. IMA CO<sub>2</sub> was supposed to provide recommendations for the future direction of climate policy. Its configuration reflects the cross-cutting nature of the issue: While the IMA was chaired by the environmental ministry, several subgroups responsible for analysing GHG reduction potentials in particular issue areas were led by the respective line ministry. The fragmentation of responsibilities, however, complicated the process of decision-making. Several conflicts between ministry representatives impeded mutual problem-solving. As a result, IMA CO<sub>2</sub> reports were criticized for their vague and at times inconsistent recommendations (Fleischer & Hustedt 2012). Even though IMA CO<sub>2</sub> was not formally abandoned, it has been inactive since 2007. One of our interviewees suspects that it “petered out at the political level” when conflicts could no longer be dealt with constructively at the working level. Despite some initial successes in fostering policy integration (Beck et al. 2009), the eventual fate of IMA CO<sub>2</sub> illustrates the German government’s limited capacity to overcome departmental conflicts.

## 2.2 Vertical dimension: implications of a federal state structure

Coherent climate policy is further complicated by the fact that respective responsibilities are fragmented vertically. This is especially the case in federal countries (Galarraga et al. 2011) such as Germany. The German federation consists of 16 semi-autonomous states (Länder), each having its own constitution, parliament and government. Even though most climate-related policies are adopted at the federal level, Länder may engage in climate mitigation policy in three different ways (Rodi & Sina 2011). According to the constitution, state representatives in the second chamber (Bundesrat) have to approve all federal legislation affecting their financial and administrative matters. This makes the Länder an important veto-player in federal policymaking. Furthermore, Länder are responsible for executing and enforcing most federal legislation. Finally, they can take own action with regard to certain aspects of climate change mitigation. Beyond federal legislation, Länder may adopt additional provisions in fields that are not exhaustively regulated on federal level. In addition, they have (albeit not exclusive) competences in construction, land-use and urban planning as well as in training and education, they can initiate pilot projects, engage in research promotion, establish funding programs, conclude voluntary agreements with domestic industry, and act as role model by enhancing the energy performance of state-owned buildings or by adopting a climate-friendly procurement policy (Biedermann 2011).

What are the consequences of the division of competencies in climate change mitigation? While the regions have a say in federal policymaking, the federal government has very limited means to influence policy activities on the regional level. Since no institutional framework requires coordination or cooperation, it depends on the policy priorities of the Länder whether and to what extent they engage in climate change mitigation (Rodi & Sina 2011). According to our interviews, levels of ambition depend on a range of factors, e.g.

climate change impacts on the region, the overall governmental agenda, party politics, or personal preferences of a prime minister. Federal proceedings, on the other hand, seem to play only a minor role. In this context it should be added that most states have very limited financial and administrative capacities for climate protection measures because the so-called “debt ceiling” constitutionally requires a balanced budget by 2020.

Our interviews reveal that the distribution of competencies has both positive and negative consequences for climate change mitigation. On the positive side, some Länder compete over the most ambitious reduction targets for climate protection. Furthermore, federalism has proved to be a driver of Germany’s energy transition (Energiewende) because regions find it to be in their self-interest to promote renewable energy generation on their territory. In this regard, they have supported the development of renewable energies already in the 1980s well before the federal level started to act (Gordon et al., 2010). On the negative side, however Länder suffer from a lack of financial and administrative resources to implement federal regulatory provisions, e.g. in the building sector (Ziehm 2010). In addition, Länder are able to block the adoption of federal policies in the Bundesrat. For instance, in December 2012 the Bundesrat vetoed a bill on the tax deductibility of building refurbishments. Even though the great majority of politicians and experts agree on the effectiveness of the instrument, partisan considerations and concerns about revenue losses led to the rejection of the bill by social democrat-led governments. Finally, the lack of institutionalized coordination between federal and regional activities sometimes leads to a “regulatory jungle” that confuses the addressees of regulation. In 2007, for instance, the BMU published an overview of funding possibilities for energy efficiency improvements and renewable energy. The publication lists more than 900 funding programs financed by the European Union (EU), the federal government, states and municipalities (BMU 2007).

There is a certain parallelism between federal and Länder activities that sometimes leads to sub-optimal outcomes. However, this is not to say that coordination does not exist. Federal and Länder representatives frequently meet to discuss relevant topics, for instance in the context of the biannual Conference of Environment Ministers (UMK), within issue-specific working groups (Bund-Länder-Arbeitsgruppen), or on sporadic, issue-specific meetings on political level. Yet, concrete decisions are rare when 16 states and the federal government negotiate, given the various party-political compositions of governments and the heterogeneity of states with regard to population, finances and expected impacts of policies. In addition to these formal and informal meetings that are usually concerned with rather general political questions, state administrations are consulted by federal ministries when legislation is drafted. However, the deepness of cooperation depends on the respective ministry’s openness for input. One interviewee pointed to the formalism of these meetings, which are more about allocating institutional responsibilities than about exchanging ideas and problem solving. Another interviewee complains about state administrations’ lack of influence in these meetings for which he uses the term “unilateral cooperation”.

The overview shows that climate policy integration, coherence and long-term orientation are challenges that arise in a context of hampering institutional and political conditions, both on the horizontal and vertical axes of governance. Are strategies a means to overcome this and to effectively promote integration and coherence of climate policies?

### 3 Federal and regional climate mitigation strategies in Germany

#### 3.1 Federal climate mitigation strategy 2007

Germany looks back at almost twenty-five years of climate mitigation strategies. The first strategy (“CO<sub>2</sub> Reduction Program”) was adopted as early as 1990 under the Kohl administration. It was up-dated and extended under the Schröder administration in 2000 and 2005 (“Climate Protection Programs”). These strategy updates were compiled in order to achieve Germany’s Kyoto target, i.e. a 21 percent reduction of GHG emissions by 2008-2012. Detached from international commitments, the Grand Coalition under Chancellor Angela Merkel adopted a new strategy in 2007. The “Integrated Energy and Climate Program” (IEKP) constitutes the German government’s most comprehensive attempt to implement an integrated strategy for climate change mitigation so far (Hierl 2011, p. 67).

What were the reasons for Germany’s the updated strategy in 2007? As one interviewee put it, a “critical mass of external occasions and events” led to a window of opportunity for ambitious climate protection. Increased international attention to the issue of climate change was triggered by the publication of the Stern Review in 2006 and the IPCC’s 4th Assessment Report in 2007, both calling for immediate action in the fight against climate change (IPCC 2007, Stern 2007). At the same time, the fate of the international climate regime was uncertain as negotiations on a post-Kyoto agreement were stagnating. In this context, both Chancellor Merkel (CDU) and then Environment Minister Gabriel (SPD) were eager to push through ambitious climate mitigation programs at EU and national level so as to point the way forward for international developments. Their approach was backed by the Bundestag (Deutscher Bundestag 2006), by Environment Ministers of the Länder (Umweltministerkonferenz 2007), and by the general public (Itzenplitz 2012, p. 174). Thus, the IEKP, announced in August 2007 and adopted in two steps in December 2007 and June 2008, has to be considered in the wider international context and Germany’s desire to maintain its reputation as climate change mitigation forerunner.

In the IEKP Germany commits for a 40 percent GHG reduction target until 2020 compared to 1990. To achieve this, it pursues a threefold approach: increasing energy efficiency, especially in buildings and transport; expanding renewable energies in electricity, heating, cooling and transport; and reducing non-CO<sub>2</sub> emissions (BMU 2008, p. 2). In addition to the rather general GHG reduction target, the IEKP contains a number of sectoral goals for 2020, for instance increasing the share of electricity generated by renewables to 25-30 percent, increasing the share of renewables in heating to 14 percent, or doubling the use

of combined heat and power plants. Interim targets on the path to 2020 were however not included.

In essence, the IEKP is an action program with 29 specific measures that are supposed to jointly achieve a 36 percent reduction in GHG emissions by 2020 compared to 1990. Thereby, the program went considerably beyond the 21 percent reduction achieved until 2007, however a gap remained to achieve the objective of a 40 percent reduction (Deutscher Bundestag 2007, p. 65, Hierl 2011, p. 77). The remaining gap should be closed by additional measures not yet defined. Already until 2009, all 29 measures were implemented through laws, regulations or funding schemes (UBA 2011). This indicates that a number of measures were either already in place and only modified or reinforced (e.g. Combined Heat and Power Act, Renewable Energies Act, subsidies for energetic renovation of buildings), or would have been introduced anyway because of EU legislation (e.g. regulatory requirements for biofuels, newly constructed buildings and carbon capture and storage). Therefore, it is hardly possible to attribute a specific impact of the strategy.

What was new about the IEKP was the assignment of responsibility for each of the 29 measures to a respective line ministry. The idea was that every sector would have to contribute to the overall climate mitigation target, irrespective of potential conflicts with other sectoral targets. However, this approach led to suboptimal outcomes. While the initial IEKP document was drafted by the BMU, its provisions were subsequently weakened in the legislative process. Derogations and exceptions for influential lobby groups like energy companies or car manufacturers were introduced. Already in 2008, the German Advisory Council on the Environment criticized the IEKP's inadequacy for meeting the 2020 target (SRU 2008, p. 107 ff.). Thus, the IEKP was not spared from the known conflicts between BMU on the one hand, and BMWi, BMVBS and BMELV on the other (Hierl 2011, p. 88). The chosen way of proceeding proved to be a gateway for the latter ministries to pursue sector-specific interests without openly questioning the strategy as such (cf. interviews and Itzenplitz 2012, p. 199). The legislative process preceding the adoption of a Renewable Energy Heat Act (Erneuerbare-Energien-Wärmegesetz, EEWärmeG) is an illustrative example. Mandatory standards for heat from renewable energies in newly constructed as well as existing buildings were announced in the BMU's IEKP draft. However, subsequent negotiations between departments and coalition parties were tough. While BMU and Social Democrats pushed for demanding standards, BMWi, BMVBS and Conservatives were eager to ensure economic viability and respect to property rights. The main issue of conflict was the question of whether standards for existing buildings should be included in the law. For the sake of agreement, and through mediation of the Chancellery, this contentious point was decided in favor of the less ambitious approach - mandatory country-wide standards now only apply to newly constructed buildings, but not to existing ones (Bruns et al. 2009, Hierl 2011, p. 459). As a result, EEWärmeG is being criticized for being the "weakest element" of the IEKP (Futterlieb 2011, p. 88).

A dedicated governance mechanism for the development and implementation of the IEKP was not discussed. On the contrary, the chosen way of implementing the strategy's action plan was based on the Joint Rules of Procedure of the Federal Ministries (*Gemeinsame Geschäftsordnung der Bundesministerien*), according to which responsibility for a policy is assigned to a lead ministry whose task is to involve other affected departments and stakeholders in the legislative process. There was neither a coordination unit for the whole IEKP nor a predetermined standard for third party involvement. The responsibilities for drafting and implementing the 29 measures were assigned to the different ministries, but other cross cutting responsibilities were not explicitly assigned. For instance, the strategy document stipulates that the IEKP should be subject to periodical monitoring. Its first evaluation was scheduled for November 2010 and then every two years thereafter. However, until today the IEKP has never been monitored or deliberately updated, presumably because the new conservative-liberal government felt less committed to the strategy while pursuing its own policy priorities. It rejected an "isolated monitoring" of the IEKP while referring to reports on the status of the German Energiewende (*Deutscher Bundestag 2012, p. 5*).

The absence of a clear responsibility for monitoring and evaluating the strategy helps to understand why the IEKP's impact significantly lost momentum after the 2009 change of government and an associated shift in political priorities. A number of interviewees complain that Chancellor Merkel's position has changed from climate mitigation forerunner to opponent of ambitious climate policies. All interviewees agree that the IEKP is not an issue in current politics any more, although its provisions are still in place. Overall, the IEKP did not break open existing governance structures and therefore failed to meet the expectations to achieve a comprehensive CPI. While it was certainly a step forward with regard to the formulation of objectives, goals and instruments, it was rather weak with regard to process and capacity. Neither did it assign clear responsibility for monitoring and updating (process), nor did it manage to establish a coordinating network within the federal executive and beyond (capacities).

By 2012, German GHG emissions were about 23.8 percent below 1990 levels (UBA 2014). Although there was a slight increase in emissions compared to 2011 these figures are impressive in international comparison. Yet, the analysis sheds doubts on whether they are the result of a comprehensive strategic process that managed to increase the degree of CPI in Germany. The feasibility of ambitious climate policies in 2007 was rather the result of a set of favourable contextual circumstances, e.g. an increased awareness of the need to combat climate change, an international agenda on which the issue acquired a top position, progressive leaders in German government convinced about the need for action and able to assert themselves, and an already existing path towards renewable energy promotion that was initiated by earlier governments and widely supported by the general public. The did not manage to change existing priorities in non-environmental departments, and it did not impose new governance structures so as to ensure that climate change mitigation

becomes an ongoing task in ministries other than the BMU. As a result, commitment to the strategy and its objectives faded quickly after the 2009 federal election. Thus, one can conclude that the IEKP did not represent a new and innovative governance mechanism to sustainably enhance horizontal CPI in Germany. It was rather a package of measures for climate change mitigation that could be adopted in times of fortunate external circumstances and leadership.

While horizontal CPI could therefore not be sustainably enhanced by the IEKP, this was not even attempted for vertical CPI or coherence. The Länder role in the strategy process was marginal. Even though federal and state governments jointly declared their willingness to pursue demanding national and EU climate targets (Umweltministerkonferenz 2007), the Länder were not involved in conceptualizing or negotiating the IEKP. Their role was limited to approving legislative acts in the Bundesrat (see also BLAG KliNa 2010). Being a purely federal strategy, the IEKP could neither set requirements for action at Länder level nor define regional targets. The parallelism between federal and regional activities was hence sustained and there is no coordination of subnational climate policies.

### **3.2 Regional climate mitigation strategies**

Länder efforts in climate change mitigation vary significantly. Most Länder have adopted GHG reduction targets, strategies and measures without coordination from the federal level. The approaches, however differ in substance, level of detail and bindingness (Biedermann 2011). In January 2013, North Rhine-Westphalia was the first state to adopt a climate protection law, thereby legally setting GHG reduction targets and planning their implementation (Nordrhein-Westfalen 2013). Many states, albeit not all, have set up energy agencies which, according to one interviewee, are important actors for anchoring climate protection at municipal and individual levels. The following section briefly depicts two differing approaches to regional climate policy that were initiated independently from federal proceedings.

#### **3.2.1 Baden-Wuerttemberg: institutionalization & codification**

With more than ten million residents and a surface area over 35,000 km<sup>2</sup>, Baden-Wuerttemberg is one of the largest German states. It is marked by above-average economic strength and household income (AEE 2012, p. 40). Between 1953 and 2011, Baden-Wuerttemberg was led by conservative minister presidents who sometimes formed coalitions with Liberals or Social Democrats. In May 2011, however, political majorities turned around and the Green party won the largest number of seats. Baden-Wuerttemberg is currently the first and only state that is governed by a green-red coalition under a green Minister President.

However, already before this took place, Baden-Wuerttemberg was perceived an environmental forerunner. Its first climate mitigation strategy dates back to 1994 when awareness raising and advisory services were the main foci. In the course of time, Baden-Wuerttemberg has further developed and refined its climate policy activities by means of environmental plans, provincial legislation, and efforts to influence federal climate policymaking. A centrepiece of its endeavours is the Renewable Heat Act (*Erneuerbare-Wärme-Gesetz, EWärmeG*) adopted in 2007, which mandatorily obliges homeowners to deploy heat from renewable sources in existing and newly built houses. Until today, Baden-Wuerttemberg is the only German state that legally prescribes the use of renewable heat in existing buildings.

Since the election of the green-red government coalition in 2011, climate policy activities have gathered even more momentum. The new government is determined to implement a long-term strategy that proves robust in the face of future resistance or crisis situations. The strategy goes certainly beyond a policy document and develops strategic capacities and processes. Based on experience with former processes of coordination and planning, it has pooled responsibilities for environmental, climate and energy matters in one department, thereby minimizing frictions. Baden-Wuerttemberg's climate mitigation strategy is based upon two pillars. First, a climate protection law was adopted in July 2013. It defines GHG reduction targets for 2020 and 2050 (-25% and -90%, respectively) and clarifies that they should be achieved by means of an implementation concept and an exemplary role of the public sector. According to our interviewees, the climate protection law entails a strong moral self-commitment of the state. Even though targets are not legally binding in the sense that they are enforceable before a court, dissociation from them in the future is made extremely difficult, particularly since it was adopted by the three biggest fractions in parliament (Greens, Social Democrats and Conservatives). In essence, the law's aim is to enhance the reliability of long-term concepts for the economy and the public in general. Second, an "Integrated Energy and Climate Protection Concept" (IEKK) is currently being developed. The IEKK comprises sectoral targets and defines specific steps of action in various climate-related sectors like energy supply, industry, transportation, agriculture, or private households. Its adoption is legally prescribed by the climate protection law.

Baden-Wuerttemberg breaks new ground with regard to the inclusiveness of its strategy process. While responsibility for IEKK formulation rests with the Ministry of Environment, Climate and Energy, an inter-ministerial working group facilitates coordination with other ministries. In addition, a comprehensive process of participation has been initiated that involves a great variety of stakeholders, from industry groups to the ordinary citizen. Besides the statutory hearing of associations, topic-specific round tables were organized that resulted in 751 recommendations on the content of the strategy. Furthermore, an online con-



sultation yielded more than 82,000 assessments of measures and almost 7,000<sup>2</sup> comments . According to our interviewees, this participation process occupied substantial resources, but will presumably exert a legitimizing effect once the IEKK is being implemented. They argue that participation in early conceptual phases of strategy development forestalls conflicts that arise at later stages when concrete burdens have to be accepted.

An additional means to ensure the robustness of Baden-Wuerttemberg's strategy process is the creation of institutions for effective monitoring and updating. A coordination center for climate issues (Leitstelle Klimaschutz, LSK) will be installed. The LSK will have the task to monitor implementation of sector-specific measures by the responsible ministries. Equipped with information rights, it will be the central unit for IEKK implementation and monitoring. The LSK will be supported by a newly assembled Advisory Council on Climate Protection. The Advisory Council is composed of actors from society, industry and academia who will have the task to critically assess the state's climate policy activities and provide suggestions for further progress.

At present, Baden-Wuerttemberg's new path towards strategy development cannot be evaluated on the basis of successes in terms of avoided GHG emissions or the like. However, the combination of institutionalization and juridification appears promising to ensure strategy robustness in the long term. In contrast to the federal IEKP, Baden-Wuerttemberg attempts to combine objectives, goals and instruments for climate change mitigation with the involvement of all actors relevant to the strategy's success (affected departments, experts, interest groups and citizens) and the creation of strategic capacity (pooled responsibility in one department; institutions for monitoring and updating; legally binding commitments in the climate protection law).

### **3.2.2 Hamburg: A pragmatic approach based on regular performance reviews**

With 1.8 million residents, the Free and Hanseatic City of Hamburg is the second-largest city in Germany and at the same time the second-smallest German state. Known particularly for its port, but also as a media and industrial center, Hamburg is an economically prosperous urban area (AEE 2012, p. 80). Between 1957 and 2001, it was governed by Social Democrats, at times in coalitions with Liberals or Greens. In 2001, conservative Mayor Ole von Beust won the elections and his party ruled until 2011 in three different coalition constellations. In 2011, the Social Democrats took over again with a one party government led by Mayor Olaf Scholz. The following section deals with Hamburg's Climate Action Plan 2007-2012, which represents a different approach to climate policymaking at regional level than the one chosen by Baden-Wuerttemberg.

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<sup>2</sup> See <http://www.beko.baden-wuerttemberg.de/ergebnisse/>.

In 2007, Major von Beust got convinced that Hamburg had to strengthen its efforts to reduce GHG emissions. Word is that von Beust watched the documentary film *An Inconvenient Truth* over the winter holidays. Returning back to work, von Beust initiated a climate change concept that avoids as many GHG emissions as possible in the years to come. Within two months, the Climate Action Plan 2007-2012 was drafted. It took a pragmatic approach: The Action Plan was essentially a funding mechanism for energy saving and climate mitigation projects. Its aim was to avoid 2 million tons of CO<sub>2</sub> emissions (ca. 11%) until 2012 compared to 2007. Endowed with budgetary means of 25 million Euros annually, more than 400 projects were funded within the five-year period. The project list includes, inter alia, awareness raising campaigns, training and qualification programs, and funding for the reduction of energy consumption in industry, transportation and buildings. The Action Plan explicitly refers to federal level activities for target achievement. According to the calculation, at least one fifth of Hamburg's stated GHG reduction target would have to result from federal provisions like legislative acts, fiscal steering, or funding measures (Hamburger Bürgerschaft 2007, p. 9).

In order to coordinate implementation and updating of the Climate Action Plan, an inter-departmental coordination center (Leitstelle Klimaschutz, LSK) was established. Although formally tied to the environmental authority<sup>3</sup>, the LSK was supposed to work independently from departmental instructions. It was responsible for the coordination of an inter-departmental working group and the annual submission of a climate protection report that includes an overview of funded projects and proposals for further action. Even with these limited responsibilities, according to our interviewees, the LSK was conceived as a powerful, but also at times unpopular entity because it aimed to correct self-serving interests in non-environmental sectors and caused extra workload through reporting requirements.

Our interviewees estimate that the Climate Action Plan has slightly increased climate protection efforts in Hamburg's non-environmental authorities during the period of time for which it was established. However, this was mainly due to the fact that they could apply for funds from the budget, and not because of a change in general guidelines. The approach as such is being praised for its pragmatism, i.e. avoiding CO<sub>2</sub> emissions in a cost-efficient manner. However, interviewees agree that the Climate Action Plan 2007-2012 is not a strategy in the most literal sense. It particularly lacks a long-term vision and a plan of how to fulfil it. The Action Plan represents a stringing together of single projects, but it is not an integrated concept that identifies priority fields of action. On the other hand, it proved successful in reaching its stated target, namely reducing Hamburg's annual GHG emissions by 2 million tons until 2012 compared to 2007 (Hamburg.de 2013).

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<sup>3</sup> Note the semantic difference between ministries and authorities.

Overall, Hamburg's approach differed substantially from the federal and Baden-Wuerttemberg strategy. While strategic capacity was ensured by a significant budget for climate and energy-related projects and the establishment of a coordination unit (LSK) responsible for implementation and monitoring, the other strategy dimensions (process and document) are less pronounced. With its Climate Action Plan 2007-2012, Hamburg neither developed a long-term, post-2012 vision or a strategic plan for how to achieve this, nor did it put emphasis on the involvement of actors outside the public administration. Neither the political level nor non-governmental stakeholder were involved in the strategy process.

#### 4 Comparative analysis

The empirical analysis shows that the federal government and the states of Baden-Wuerttemberg and Hamburg have chosen very different approaches in the formulation and implementation of their climate mitigation strategies. It appears as if only Baden-Wuerttemberg has managed to design a comprehensive strategy that combines the three dimensions "content", "process", and "capacity". Although it is too early to evaluate the effects of this approach, former coordination barriers were presumably removed through the pooling of responsibilities for environment, climate and energy matters in one department. Furthermore, Baden-Wuerttemberg decided to enshrine its targets and strategy elements into law so as to ensure long-term planning and commitment. Finally, participation plays a central role in Baden-Wuerttemberg. The decision for a comprehensive participation process for interest groups, associations and ordinary citizens was informed by the belief that involvement and resulting support is essential for the legitimacy of a strategy and its resulting policies.

The federal IEKP, on the other hand, did not manage to overcome the diametrically opposed interests of BMU on the one hand, and BMWi, BMVBS and BMELV on the other. Dedicated institutional settings were not established so as to enhance coordination and mutual problem-solving. Furthermore, participation on the strategy itself did not take place. As a statutory requirement, only legislative proposals as part of the action plan were subject to the hearing of stakeholders. Finally, strategic capacity was insufficient to initiate a continuous strategy process that survives changes in government constellation. Therefore, after the 2009 election, the IEKP did not play a central role in federal climate policy activities any more. The fact that the IEKP has never been monitored, despite a clear intention in the strategy document, is an illustrative example for its fading support.

In Hamburg, horizontal CPI is equally at a low level. However, the availability of a significant budget as part of the Climate Action Plan 2007-2012 led to a slightly enhanced interest in non-environmental authorities to carry out projects in the area of climate change mitigation. The Climate Action Plan managed to achieve its target of reducing Hamburg's annual GHG emissions by 2 million tons, but it is not a strategy in the sense that it provides

long-term orientation, initiates comprehensive governing processes and overcomes existing barriers to climate policy integration.

Three further observations can be made: First, vertical CPI is fairly detached from strategy processes so far. IEKP formulation happened without any Länder involvement, and the final document does not touch upon the issue of vertical coordination - although it does point to the need for action at every level of governance. Strategy formulation at regional level, on the other hand, takes place without any involvement from federal actors. Even though federal provisions and funding are regarded essential for target achievement, strategies do not aim at altering the current state of affairs, i.e. parallelism of activities between the two levels. On the whole, interviewees were sceptical about the integrating effect of existing coordination patterns, both in the context of strategies and beyond. From the Länder perspective, they are perceived as ineffective because suggestions are barely taken into account.

Second, strategies essentially depend on political leadership and commitment to be effective. This was the case with Chancellor Merkel and Environment Minister Gabriel in the IEKP process, Minister President Kretschmann in Baden-Wuerttemberg's intensified efforts after 2011, and Mayor von Beust's initiation of Hamburg's Climate Action Plan 2007-2012.

Third and finally, the commitment to strategies is thus far limited to a legislative period. In all three cases, existing strategies were either terminated or ignored when new governments with different priorities and, more importantly, party political background took over. This does not necessarily imply a complete turnaround in climate policy. But it means that new governments want to leave a clear political mark by distancing themselves from predecessors. This could potentially result in planning uncertainties. It remains to be seen whether Baden-Wuerttemberg's new approach proves able to overcome this short-termism by means of a climate protection law and the creation of independent bodies for keeping the issue on the agenda and monitoring the strategy's progress. This would imply that legally self-binding of governments could enhance the so far limited strategies.

## 5 Discussion and Conclusions: Options for more ambitious climate policy integration

Strategies are supposedly a means to initiate comprehensive governing processes suitable for tackling long-term problems. As such, they have to be more than single documents or declarations of intent. On the contrary, strategic processes involving all relevant actors and strategic capacity ensuring impact and effectiveness are at least as important for target achievement (Jacob et al. 2012). However, achievements in German climate mitigation policy, conceived as the adoption of instruments suitable to bringing about GHG emissions reductions, cannot be attributed to strategies only. Our findings illustrate that horizontal coordination is rather based upon turf wars leading to lowest common denominator decisions than coordinated action towards a commonly agreed goal. Furthermore, vertical co-

operation is virtually inexistent, resulting in a certain degree of incoherence of policy activities from different governmental levels. Progress can rather be explained by reference to high public pressure, party constellations in government coalitions, individual preferences of leaders, or external circumstances and in particular international and European developments. In light of the enormous challenge posed by climate change, these patterns are not sufficient to ensure that climate mitigation policy continues on the chosen track and achieves long-term GHG emissions reduction targets.

This sheds light on remaining gaps in existing climate mitigation strategies, especially at the federal level. We argue that this is a result of gaps in terms of strategy processes and capacities. The problem of climate change has been described extensively, requirements for action have long been identified, and medium and long-term GHG reduction targets have been set. However, problems arise when it comes to the formulation of measures and their actual implementation, i.e. during the legislative process. Strategies have to provide for mechanisms that ensure the integration of long-term visions in everyday policymaking, when competing interests and worldviews clash against each other. On the basis of our interviews, we argue that such mechanisms in German climate mitigation strategies can be grouped into three categories: institutionalization, codification, and participation.

Institutionalization is a means to enhance both the quality of the process of a strategy and its capacity. Coordination bodies at administrative and political level can ensure proper implementation and, if necessary, strategy adjustment. Inter-ministerial cooperation at administrative level could be coordinated by a management body like the LSK in Hamburg and Baden-Wuerttemberg. In any case, the relation to the existing and constitutionally agreed decision making in government and parliament would need clarification. The source of legitimacy could be evidence on potentials and achievements in GHG reductions and hence independence in commissioning studies and monitoring would be required. Ideally, representatives from Länder administrations would take part in such coordination group.

At political level, a State Secretary Committee could initiate political dialogue between the various departments concerned with climate mitigation issues and characterized by competing interests. Such a “Green Cabinet” has been established for Germany’s Sustainable Development Strategy (SDS) - a governance mechanism widely acknowledged for its high degree of innovation (e.g. Pisano et al. 2013, p. 9). Such a central political steering committee for Germany’s climate mitigation policy could ensure continuous dialogue and strategy updating. Another possibility would be the creation of a federal ministry for environment, climate and energy matters, as in Baden-Wuerttemberg. However, interviewees were skeptical about the integrating effect of such a step. Conflicts would not automatically disappear when all involved stakeholders are permanently brought together under one roof. Thus, the creation of a committee composed of high-ranking officials from all relevant ministries might be an equally effective solution that does not require difficult and timely restructuring of responsibilities. Furthermore, strategies should institutionalize regular monitoring and evaluation to enable learning processes. Coordination units like the

LSK could perform a monitoring function by assembling information on the implementation statuses of measures and their impacts. Another option would be the assignment of responsibility for periodic evaluation to independent actors. Again, Germany has gained experience with peer reviews carried out by international experts when it evaluated its SDS in 2009 and 2013 (Stigson et al. 2009, Stigson et al. 2013). All of these institutional innovations ensure that relevant public actors are continuously involved in the different stages of a strategy process, resulting in proper implementation and early recognition of necessary adjustments, thus enhancing strategic capacity. While such mechanisms would not necessarily guarantee effectiveness in achieving a CPI, they would at least keep up the momentum of strategy processes.

Codification is a further means to increase strategic capacity. A climate protection law with general and sector-specific targets is primarily a self-commitment. Even though this precludes suability, it can represent more than symbolic policy. For instance, periodic monitoring and evaluation could be prescribed by the law, thereby contributing that climate change mitigation remains on the agenda and continuous strategy updating takes place. One could even think of sanctioning options prescribed by the law, similar as in EU legislation. For instance, the EU's Renewable Energy Directive (2009/28/EC) requires re-submission of National Action Plans when interim targets for the share of renewables in a country's energy mix are not achieved. Accordingly, sector-specific action plans could be prescribed by a climate protection law. These action plans would have to be updated when sector-specific targets are not achieved until they are met. Finally, a federal climate protection law could emphasize the need for vertical CPI and coherence. Even though the constitutional division of responsibilities is hard to be changed, it could contain appeals to regional governments to contribute to climate change mitigation within their areas of responsibility, and offer assistance with regard to enforcement or advisory services. Within Germany, the states of North Rhine-Westphalia and Baden-Wuerttemberg take on a pioneering role with their climate protection laws adopted in 2013. Other states and the federal level might well benefit from first experiences with these laws.

Finally, extended participation is potentially a key to a strategy's process dimension. So far, strategies have mostly relied on classical inter-ministerial coordination in line with the joint rules of procedure. External involvement mainly happened through hearings of associations. However, new modes of participation enable involvement of a wider range of interested stakeholders. For instance, the EU Commission frequently carries out online consultation procedures on concepts that tackle specific or general problem contexts. Baden-Wuerttemberg has equally tried to involve as many interested actors as possible in its current process of strategy formulation. Another option would be the set-up of an independent Advisory Council on Climate Protection to give the issue more visibility, contribute new ideas and impulses, and perform a watchdog function. With its SDS, Germany has already gained experience with such a body composed of actors from society, industry and academia (Rat für Nachhaltige Entwicklung).

All these possible innovation in enhancing the process and capacities of strategies are not a guarantee for effective integration and coherence as the example of national strategies for sustainable development has shown. Policies need to be developed and legitimized in the existing institutional apparatus. But the potentials of strategies are so far underutilized in providing the necessary momentum.

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## Annex: List of interviewees

No.	Name	Position/Organization	Location and date (2013)
<i>Federal Level</i>			
1	Harald Kohl	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)	Berlin, 4 March
2	Annegret Niehuss	Federal Ministry of Economics and Technology (BMWt)	By phone, 13 February
3	Wolfgang Ornth	Federal Ministry of Transport, Building and Urban development (BMVBS)	Berlin, 20 February
4	Harry Lehmann	Federal Environment Agency (UBA)	Berlin, 18 February
5	Julia Reuss	CDU/CSU Parliamentary Group	Berlin, 18 February
6	Frank Schwabe	Member of Parliament, SPD spokesperson on climate policy	Berlin, 15 March
7	Ralf Sitte	SPD Parliamentary Group	Berlin, 4 March
8	Christian Hey	Secretary General of the German Advisory Council on the Environment (SRU)	Berlin, 26 February
9	Martin Bornholdt	Deutsche Unternehmensinitiative Energieeffizienz e.V. (DENEFF)	By phone, 6 February
10	Ulf Sieberg	Nature and Biodiversity Union (NABU)	Berlin, 13 February
<i>Baden-Wuerttemberg</i>			
11	Tanja Gönner	Environment Minister 2005-2011	Berlin, 18 March
12	Christine Wolf, Sibylle Hepting-Hug, Jürgen Gaus	Ministry of State	Stuttgart, 10 April
13	Martin Eggstein	Ministry of the Environment, Climate Protection and the Energy Sector, Baden-Wuerttemberg	By phone, 24 April

14	Karl Greißing	Ministry of the Environment, Climate Protection and the Energy Sector, Baden-Wuerttemberg	Stuttgart, 10 April
15	Ulrich Müller	CDU Parliamentary Group; Environment Minister 1998-2004	Stuttgart, 10 April
16	Volker Kienzlen	Climate Protection and Energy Agency, Baden-Wuerttemberg (KEA)	By phone, 17 April
<i>Hamburg</i>			
17	Friederike Mechel	State Ministry for Urban Development and the Environment, Hamburg	Hamburg, 18 April
18	Benno Hain	Hamburg Coordination Centre for Climate Issues (LSK)	By phone, 16 April
19	Rainer Scheppelmann	Hamburg Coordination Centre for Climate Issues (LSK)	Hamburg, 18 April
20	Jens Kerstan	Chairman of the GAL Parliamentary Group	Hamburg, 18 April
21	Monika Schaal	SPD Parliamentary Group, Spokesperson for environmental policy	By phone, 23 April
22	Manfred Braasch	Friends of the Earth Hamburg (BUND)	Hamburg, 18 April
23	One interviewee wants to remain anonymous.		