1. Climate policy integration: evidence on coherence in EU policies*

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1.1 INTRODUCTION

Climate change represents the most exigent environmental problem our societies face. Just as much as a wide array of activities are or will be affected by climate change, current production and consumption patterns drive the emission of greenhouse gases (GHG). Many climate-relevant decisions are taken in policy areas other than environmental policy with only little regard to climate change impacts. It has to be recognized that climate policy is a cross-sectoral issue and needs to be firmly integrated in general and sector-specific policy areas that frame economic activity and societal development (Kok and de Coninck 2007; Ahmad 2009; Mickwitz et al. 2009). Experience however shows that there is a divide between the need of addressing climate policy as cross-sectional issue and short-term policy decisions that imply a low hierarchical rank for climate policy. Still a big step is necessary to depart from climate policy as add-on policy area towards comprehensive integration.

Climate policy integration or mainstreaming is not only required for sectoral policies with direct physical interlinkages like energy or transport but also for other policy areas including budgetary, R&D or regional policy. Complementing climate-specific policies with sectoral policies that integrate climate policy objectives ensures that producers and consumers are confronted with coherent signals for investment decision and behavioural changes (Mickwitz et al. 2009).

Climate policy integration (CPI) has experienced increased interest in recent years, which is also reflected in the incorporation of climate policy aspects in various EU policy documents (for example, the Europe 2020 Strategy). This development builds on the experience with environmental policy integration but also stems from the recognition of the urgency of the problem of climate change that requires action to be taken in almost
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every sector of society and economy. The EU strives for a leading role in international negotiations, underpinning this ambition with domestic action like the introduction of the EU Emission Trading Scheme in 2005 and the adoption of the Climate and Energy Package in 2009. The 20-20-20 targets for energy and climate and the visions for 2050 underline the political commitment on the general EU level and the increased consideration of climate change issues in energy policy.

However, the existence of a wide range of different institutions and departments in the EU, as well as of different levels of governance (EU, Member State, regional, local) represents a major obstacle for policy integration and the development of a coherent climate policy framework. As a number of studies (Kok and de Coninck 2007; Adelle et al. 2009; Dupont and Oberthür 2011; Mickwitz et al. 2009; Medarova-Bergstrom et al. 2011) show, while general political commitment for CPI exists, the actual mainstreaming in sectoral policies still has to be improved. The complexity of the institutional setting in the EU limits a comprehensive analysis of all aspects of CPI into other policy areas in the chapter. The focus here is on horizontal policy integration at the EU level. The chapter contributes to the new research field of CPI concentrating on some selected policy areas by identifying (potential) conflicts and synergies.

1.2 CONCEPTS AND APPROACHES TO CLIMATE POLICY INTEGRATION

Climate policy integration (CPI) can be regarded as a continuation of approaches for environmental policy integration (EPI) in the 1980s and 1990s that aimed at contributing to the reduction of environmental problems and guiding the transition to sustainable development (Adelle et al. 2009; Jordan and Lenschow 2010).

On a general level EPI refers to the integration of environmental aspects and policy objectives into sector policies like energy and agriculture (Adelle et al. 2009). Based on the definition for EPI by Lafferty and Hovden (2003) CPI can be defined as:

- the incorporation of the aims of climate policy objectives into all stages of policymaking in other policy sectors,
- complemented by an attempt to aggregate expected consequences for climate change mitigation and adaptation into an overall evaluation of policy and a commitment to minimize contradictions between climate policies and other policies.
Accordingly climate policy objectives are given priority in decisions in non-environmental policy areas and the integration should be reflected in general and sector-specific policy strategies as well as applied instruments and ideally in policy outcomes (Mickwitz et al. 2009).

Thus policy integration or mainstreaming aims at increasing coherence, minimizing duplications or contradictory policies and identifying trade-offs and synergies between policy areas (Kok and de Coninck 2007). While occasionally there will be obvious synergies that can be exploited – for example, the promotion of renewables that is beneficial for ensuring energy security and reducing carbon emissions – in other cases the sectoral and climate policy objectives may be conflicting – for example, increasing cohesion and accessibility by developing road transport infrastructure in peripheral regions. In the latter cases political decisions have to be made regarding the importance that is assigned to climate policy aspects relative to the sectoral objectives. However, sectoral policies in general tend to have a short-term focus, while climate change requires long-term strategies coupled with the requirement to immediately implement measures.

Policy integration can be analyzed from different points of view, in other words, within or across government levels. Horizontal policy integration focuses on mainstreaming climate policy objectives into other sectoral policies on one level of government. Vertical policy integration in contrast takes a top-down approach and focuses on mainstreaming throughout multiple levels of government and policymaking.

The analysis in this chapter focuses on horizontal CPI on the EU level, in other words, the assessment of the extent to which other non-environmental sectoral policies take into account climate policy targets and whether the climate relevance of measures represents a relevant criterion for funding or if funds are provided for specific climate-related activities (for example, for R&D or infrastructure). As the comprehensive assessment of EU policies is an extensive research agenda, the chapter focuses on selected policy areas.

For our analysis we choose a hierarchical approach starting from strategic documents (Lisbon Treaty, Europe 2020 Strategy). We then focus on two sectoral policies – energy and cohesion policy. On the EU level energy policy focuses mainly on target setting (for example, the renewable, energy efficiency targets for 2020) and formulating medium to long-term development paths (for example, by defining infrastructure priorities), while the choice and implementation of policy instruments remains in the competence of Member States. We therefore focus the analysis on strategic EU energy policy documents. In contrast, regional policy makes up a large part of the EU budget and represents an important source of funding for infrastructure projects in predefined priority areas. We therefore assess
the thematic priorities of regional policy in two periods (2007–2013, 2014–2020) and the budget allocations for climate related areas.

Our analysis illustrates the evolution of climate policy issues over time, maturing from a secondary policy concern to an acknowledged central policy issue. It furthermore discusses the potential synergies and conflicts between the different policy areas.

1.3 EU CLIMATE POLICY INTEGRATION: TREATY ON THE FUNCTIONING OF THE EUROPEAN UNION AND EUROPE 2020 STRATEGY

With the Treaty of Lisbon (European Union 2008) the Treaty on European Union and the Treaty establishing the European Community that ‘organizes the functioning of the Union and determines the areas of, delimitation of, and arrangements for exercising its competences’2 were amended. Regarding climate and energy issues the Lisbon Treaty implied the inclusion of a specific article on energy (Article 194) as well as the explicit reference to the commitment to sustainable development and the combat against climate change (Articles 113 and 191 4). The introduction of energy into the Treaty – a policy area for which previously no EU competence was defined5 – provides a legal basis for a more harmonized, common energy policy. The aims of EU energy policy are stated in the Lisbon Treaty as:

1. ensuring the functioning of the energy market,
2. ensuring security of energy supply in the European Union,
3. promoting energy efficiency and energy saving and the development of new and renewable forms of energy and
4. promoting the interconnection of energy networks.

Energy is one of the areas of ‘shared competences’ between the EU and Member States as defined in Article 4. However, the EU’s competence is limited by the requirement included in Article 194 (2), namely that EU measures ‘shall not affect a Member State’s right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply’. In such cases decisions have to be adopted unanimously, while in general a qualified majority and the cooperation with the EU Parliament are sufficient. This reflects that energy is still widely regarded as a national policy issue although the codification in the Treaty creates better possibilities for a common policy focusing on sustainable structures that are compatible with climate change mitigation. It has to be taken into account, however, that the promotion
of energy efficiency and renewables is just one out of four objectives of the EU’s energy policy and the energy policy objectives are of equal rank.

With the Europe 2020 Strategy (EC 2010b) a vision for a social market economy was presented defining the kind of growth aspired:

1. Smart growth: developing an economy based on knowledge and innovation.
2. Sustainable growth: promoting a more resource efficient, greener and more competitive economy.
3. Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.

Five headline targets were defined for employment, social inclusion, research and development and climate and energy. The Europe 2020 strategy has incorporated the targets for (GHG) emission reductions, energy efficiency and renewables set out in the EU’s Climate and Energy Package (see below), integrating them at the highest political level. The targets stand alongside the objectives for employment, R&D and social inclusion. The Strategy thus references the legal obligation accepted by adopting the directives under the Climate and Energy Package. But while synergies between resource efficiency, innovation and competitiveness are emphasized, the potential trade-offs between the targets are not explicitly discussed in the Strategy or the related documents. The main conflict can be identified by the need to achieve economic growth in order to ensure employment, social cohesion and fiscal stability, while the climate and energy policy targets require a paradigmatic change and a redefinition of growth in order to ensure the long-term decarbonization of the economies.

1.4 EU CLIMATE POLICY INTEGRATION: ENERGY POLICY

With the recognition of climate change as the most challenging environmental problem and energy use as the main driver for GHG emissions the interdependence of energy and climate policies has gained increased political attention. It is acknowledged that efforts to mitigate climate change support energy policy objectives like increasing energy security and vice versa (de Jong et al. 2010; Adelle et al. 2009).

Although energy issues were one of the reasons for establishing the European Coal and Steel Community,6 Member States regarded this policy area as their own competence related strongly to national security and energy sovereignty considerations. In recent years the reluctance to
agree to a common energy policy has declined in light of rising and volatile oil prices, increasing import dependence, political instability in supplying regions or interruptions in the gas supply from Russia. Last but not least the recognition of environmental impacts, especially GHG emissions, has contributed to the shift of competences to EU level (Dupont and Oberthür 2011; de Jong et al. 2010; Adelle et al. 2009). However, energy policy on the EU level is concerned with strategic aspects and setting medium to long-term goals while instrument choice and implementation remains in the competence of Member States.

In 2006 the Green Paper ‘A European Strategy for Sustainable, Competitive and Secure Energy’ (EC 2006) was published. Just as the Communication ‘An energy policy for Europe’ (EC 2007a) it identified the main challenges for energy policy and calls for a balance between:

- combating climate change, in other words, significantly reducing energy-related GHG emissions;
- limiting external vulnerability, in other words, decreasing the reliance on imported energy sources and increasing the security of supply and;
- promoting growth and jobs (competitiveness), in other words, decreasing the vulnerability due to rising and volatile energy prices by completing the internal market and increasing investment in energy savings and renewable energy.

The Communication further outlined the need for a strategic vision, internal action and international cooperation since ‘[e]xisting measures on areas such as renewable electricity, biofuels, energy efficiency and the Internal Energy Market have achieved important results but lack the coherence necessary to bring sustainability, security of supply and competitiveness’ (EC 2007a).

The presidency conclusions from the European Council Meeting in March 2007 (European Council 2007) also emphasized the issues of sustainability, competitiveness and security of supply and called for the development of an integrated European climate and energy policy in order to achieve effective climate protection.

The importance of security of supply in the EU’s energy policy was underlined in 2008 by the Communication ‘An EU Security and Solidarity Action Plan’ (EC 2008b) acknowledging the EU’s role in protecting its energy interests beyond Member States’ actions, especially in terms of external relations and important infrastructure projects.

In 2007 the EU covenanted to ambitious GHG reduction targets (EC 2007b). The climate and energy targets set for 2020 ought not only
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Contribute to climate change mitigation but also increase energy security and ensure a head start in the development of low carbon technologies. EC (2008a) defined two key objectives for 2020:

- A reduction in EU GHG emissions of at least 20 per cent below 1990 levels and
- A 20 per cent share of renewable energy sources in EU energy consumption.

In January 2008 the EC proposed binding legislation to implement the 20-20 targets. This ‘Climate and Energy Package’ became law in spring 2009 via four central documents that recognized the interdependencies between the two policy areas:

   While in the first two trading phases national caps were set by the Member States, since 2013 an EU-wide cap applies to the emissions trading system (ETS) sectors. The overall emission reduction target for the ETS sectors amounts to 21 per cent in 2020 compared with 2005 emissions. Allocation of permits is increasingly based on auctioning.

2. **Effort Sharing Decision** (Decision 406/2009/EC)
   Emissions from non-ETS sectors have to be reduced by 10 per cent until 2020 compared with 2005. In the effort sharing decision, this target is split between Member States reflecting their economic welfare. The national emission targets range from −20 per cent for Luxembourg and Denmark to +20 per cent for Bulgaria.

   The EU target of achieving a share of renewables in gross final energy consumption of 20 per cent by 2020 is distributed among the Member States. The national targets range from 10 per cent for Malta to 49 per cent for Sweden.

   The directive provides the legal framework to minimize ‘any risk to the environment and human health’ related to carbon capture and storage. The provisions cover the selection of sites, permitting, CO2 stream acceptance criteria (post-)closure obligations and financial issues.

In 2010 two communications were published by the European Commission that defined the challenges for a common European energy policy until 2020. Energy 2020, a strategy for competitive, sustainable and secure energy (EC 2010c), refers to the central energy policy goals laid down in the Lisbon Treaty, in other words, ‘to ensure the uninterrupted
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physical availability of energy products and services on the market, at a price which is affordable for all consumers (private and industrial), while contributing to the EU’s wider social and climate goals’.

The second communication ‘Energy infrastructure priorities for 2020 and beyond – A Blueprint for an integrated European energy network’ (EC 2010d) focuses on providing the physical basis required for reaching the energy policy and economic goals set out in Europe 2020. The efforts for fundamentally restructuring the energy systems, in other words, to make them compatible with the long-term policy objectives, have to be lifted from Member State to EU level requiring a common infrastructure strategy and funding. The main challenges that have to be tackled comprise electricity and natural gas grids and storage, oil transport and refining infrastructure, district heating and cooling networks, CO₂ capture, transport and storage, removing regulatory obstacles and financing gaps.

Summarizing, it can be concluded that although for a long time energy security issues and the creation of an efficient internal market were the main objectives of EU energy policy, an increasing consideration of climate policy concerns can be observed in recent years. Strategic energy policy documents (especially Energy 2020) indicate the integration of climate policy and the emphasis given to synergies, especially between the objectives of sustainability and security of supply. However, pursuing the different energy policy goals can also bring trade-offs. Regarding infrastructure development the continued important role of fossil fuels is underlined. With the agreement on the Climate and Energy Package, however, the interlinkages between the two policy areas seem to have been recognized and are being addressed jointly.

1.5 EU CLIMATE POLICY INTEGRATION:
REGIONAL POLICY

In addition to CPI in overarching strategies, and other policy areas with direct linkages like energy, the consideration in terms of defining priorities for expenditure is also called for (Medarova-Bergstrom 2011). In this context not only is funding for climate policy measures of relevance but also spending in other areas that might have counterproductive effects. The need for CPI in other areas like cohesion, agriculture and research of the EU budget is also emphasized in the 2010 EU Budget Review Communication (EC 2010a). In order to illustrate the importance of EU spending for climate policy issues Regional Policy is chosen as an example. The main goal of the EU’s regional policy is to improve the economic welfare of regions and to reduce regional disparities...
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(Climate policy integration) This policy area has a share of one third of the EU’s total budget at its disposal. Thus the funds for Cohesion Policy are important in quantitative terms. In addition this policy area is relevant in qualitative terms as it affects structural change and long-term development decisions, for example, for transport or energy infrastructure, contributing either to low carbon development paths or carbon lock-ins.

In terms of governance the responsibilities are split between the EU and the Member States. The overarching priorities for regional policy are defined at EU level. The Community Strategic Guidelines represent the framework for all actions that can be supported by the Funds. The Member States develop National Strategic Reference Frameworks which describe their economic strengths and weaknesses and define the respective priorities for regional development. Finally Operational Programmes are developed that account for requirements in individual regions. Operational Programmes and NSRF have to be approved by the European Commission before implementation. The Member States manage the programmes and implement the Operational Programmes by selecting projects and evaluating them.

The Cohesion policy budget is mainly divided into three sources (depending on the kind of measure and the region in which it is funded):

- The European Regional Development Fund (ERDF) focuses its investments on the priority areas innovation and research, the digital agenda, support for small and medium-sized enterprises and the low-carbon economy.
- The European Social Fund (ESF) focuses on improving employment and education opportunities, promoting social inclusion and combating poverty.
- The Cohesion Fund focuses on environmental and transport infrastructure projects (including the Trans-European Transport Networks, TEN-T).

While in the first place targeting economic growth, competitiveness and job creation in the supported regions, regional policy can also contribute to solving long-term challenges like climate change. This was highlighted in the reflection process on the future Cohesion Policy (EC 2008c) and an external report (Barca 2009) recommending climate change as one of the key priorities of Cohesion Policy. Especially in the period 2007–2013 the extent of CPI in regional policy seemed to be limited although on the strategic level it has been emphasized. Under Cohesion Policy about 3 per cent of the total budget was allocated to energy efficiency and renewables (see Figure 1.1). Clean public transport, intelligent transport systems
Figure 1.1 EU regional policy available budget by priorities 2007–2013 and 2014–2020

Source: https://cohesiondata.ec.europa.eu/
and rail infrastructure received a further 10.5 per cent of the budget. In contrast 12 per cent has been allocated to road construction and rehabilitation, which improves accessibility of (peripheral) regions but can also be expected to increase GHG emissions and furthermore contributes to locking regions into carbon-intensive structures.

In preparation of the new programme period 2014–2020 a thorough reform of regional policy was discussed and implemented. Generally cohesion policy plays a key role for achieving the EU’s 2020 goals. Thus one main aspect of the reform concerned the definition of 11 thematic priorities that reflect the 2020 targets. With respect to CPI the relevant topics are supporting the shift towards a low-carbon economy, promoting climate change adaptation, protecting the environment and sustainable transport. For the shift in thematic priorities and their respective shares in the available budget 2014–2020 see Figure 1.1. While in the period 2007–2013 climate related aspects were included in topics like transport or energy they are now explicitly labelled and funded: More than 12 per cent of the budget are dedicated to climate change adaptation and the shift towards a low-carbon economy. Additional funds are provided under the title of network infrastructure (including sustainable transport) and environment (for projects promoting resource efficiency).

In addition to aligning cohesion policy with Europe 2020 and defining new investment priorities the reform also included procedural aspects aimed at reinforcing the policy’s performance via the definition of conditionalities, monitoring and stronger evaluation of results.

The reform shows a stronger integration of climate change issues on the strategic level of regional policy. It has to be evaluated after the end of the current programme period to which extent the thematic concentration of resources was successful and contributed to a real shift towards a low-carbon economy.

1.6 IDENTIFICATION OF SYNERGIES AND CONFLICTS: CONCLUSIONS

Energy and climate policies are highly interrelated policy areas with strong spill-overs. This is increasingly recognized in EU policy documents. In recent years climate policy aspects have been progressively integrated into strategic energy policy as reflected in the main objectives: security of supply, competitiveness and sustainability. With the Climate and Energy Package the two policy areas were finally addressed jointly.

Within energy policy documents there is some ambiguity concerning
the consistency and synergies/conflicts with climate policy. In the specific policy documents – especially the Climate and Energy Package defining the 2020 targets – climate policy objectives are supported whereas in the basic strategic documents some inconsistencies or conflicts prevail especially given the future role attributed to natural gas and energy security issues.

In general interactions and potential synergies between various policy objectives are recognized (see Figure 1.2). Especially the sustainability objective is regarded as having positive impacts on energy security and climate policy. However, the policies are not all mutually reinforcing. Improving energy security does not necessarily imply reducing GHG emissions. The focus on diversifying the sources for fossil fuel imports and considering carbon capture and storage as viable methods for maintaining fossil electricity generation do not contribute to increasing energy efficiency and decarbonizing the economy.

Regarding an assessment of climate policy concerns being integrated in regional policy and in project funding in particular, the focus has to be put on the ERDF and the Cohesion Fund, as these funds include the programme categories that potentially affect GHG emissions. This is especially the case for energy infrastructure, focusing on renewables, which can be expected to contribute to the climate policy objectives. In contrast investments in the transport infrastructure can result in either positive (in the case of rail networks) or negative (road infrastructure) impacts. While in the period 2007–2013 some reference was made to integrating climate policy concerns into programmes, the regional policy reform for the period 2014–2020 brought major changes. CPI is addressed more

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**Figure 1.2** Synergies and conflicts between energy, regional and climate policy

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*Source:* Own illustration.
explicitly given the alignment of regional policy with the EU 2020 targets and the explicit definition of respective thematic priorities. In addition more weight is given to result monitoring and evaluation.

Our qualitative assessment of EU policies confirms that while there is a high general commitment to climate change action on EU level, evidence on climate policy integration into specific policies analysed here is not clear cut.

The scoping of some EU documents with respect to CPI indicates that in the recent past climate change issues have been recognized in a number of strategic EU documents, even in the Lisbon Treaty. From the examples chosen for our analysis it cannot be concluded that climate policy has widely been acknowledged as a cross-cutting issue along all horizontal policy areas within the EU. However, this chapter only addresses a snapshot of the wide range of EU policies. The research on CPI in the EU thus needs to put further emphasis on a comprehensive analysis of policy integration on the horizontal as well as vertical level.

NOTES

* This research is based on the project ICPIA that was funded by the Austrian Klima- und Energiefonds.
1. This definition is also followed by Dupont and Oberthür (2011) and Mickwitz et al. (2009).
3. Article 11 comprises the objective to integrate environmental protection requirement into the definition and implementation of the Union policies and activities, in particular with a view to promoting sustainable development.
4. Article 191 states the following objectives for environmental policy: preserving, protecting and improving the quality of the environment, protecting human health, prudent and rational utilization of natural resources, promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.
5. On the evolution of EU energy policy and the interlinkages with climate policy see de Jong et al. (2010) and Adelle et al. (2009).
7. These are complemented by regulations for transport. Energy efficiency is not directly addressed in the legal framework of the energy and climate package. The EU’s framework for increasing primary energy efficiency by 20 per cent by 2020 is regulated under Directive 2012/27/EU.
8. For details on the EU ETS see Kettner et al. (2010).
9. For the period 2014‒2020 a maximum of €351.8 billion will be available.
10. Available for the Member States whose living standards (Gross National Income per capita) are less than 90 per cent of the EU average.
REFERENCES