

# The EU - a climate change driver?

A study of EU's climate change ambitions

# Abstract

Climate change is regarded as one of our times greatest environmental, social and economic challenges, the cross-boundary effects and global implications makes it an issue high on the EU agenda. When the EU in 2008 implemented a climate reduction target of 20% in greenhouse gas emissions for its Member States the ambitions were clearly altered from the Kyoto Protocol taking place only a decade prior. The emission target negotiated at Kyoto stated a collective carbon reduction of 8% for the EU, which implies that there had been a great change in climate change ambitions from 1997 to 2008. This thesis examines the field of climate change and aims at identifying the underlying factors that can explain the increase in climate change ambition during this time period. Germany and the United Kingdom are used as empirical evidence and analysed with the help of neofunctionalist and liberal intergovernmentalist theories, with the aim of explaining the change in EU environmental ambition as developments by nation-states or the influence of supranational actors.

*Key words:* European Union, Kyoto Protocol, Climate and Green Energy Package, Germany, United Kingdom

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# 1 Introduction

Climate change is regarded as one of our times greatest environmental, social and economic challenges. Over the past 150 years, mean temperature has increased by almost 0.8 C° globally and by about 1 C° in Europe (European Environment Agency 2011). According to reports from the Intergovernmental Panel on Climate Change (IPCC) there are increasing scientific evidence that most of this warming can be attributed to the emissions of greenhouse gases (GHG) and aerosols by human activity (IPCC 1995). The impacts of climate change on natural ecosystems, human society and economics are potentially severe, making it one of the most significant political issues facing the international community.

The international political response to climate change commenced in 1992 with the establishment of the United Nations Framework Convention on Climate Change (UNFCCC), the first international cooperation that provided an arena for negotiations at the Conference of Parties (COP). The objective of FCCC is to stabilise atmospheric greenhouse gas concentrations “at a level that would prevent dangerous anthropogenic interference with the climate system” (UNFCCC 1992, Art.2). The first step towards achieving this was taken in 1997 during the negotiations of the third COP in Kyoto. The agreement constitutes the most important international agreement on climate change, and established emission commitments for industrialised countries, requiring the EU to reduce their collective carbon emissions by 8% over 1990 levels by 2012.

Environmental policy ranks high on the EU’s political agenda due to its cross-boundary effects and global impact. The EU has promoted a self-image of an ambitious actor in global climate agreements and has implemented reductions for their Member States that goes beyond its Kyoto commitments. In January 2008, 11 years after the Kyoto Protocol, the EU heads of government agreed to cut emissions with 20% for 2020 compared to 1990-level for all Member States when they put forward the Climate and Energy Package, also expressing a willingness to further commit to a 30% reduction if a multilateral successor to Kyoto could be negotiated.

The EU’s response to global climate change, from the Kyoto Protocol in 1997 with the 8% emission reduction to 2008 years Climate and Energy Package with a 20% reduction, illustrates a clear increase in ambition for the region.

## 1.1 Statement of Purpose and Question of Research

The general purpose of this thesis is to investigate the impact of Member States on the policy-making process in the field of environmental policy, more specifically the issue area of climate change, the objective being to describe and interpret changes in EU climate policy strengths from 1997 to 2008. I will look at the explanatory power of two theories that have potential for explaining climate policy integration in the EU; liberal intergovernmentalism which provides a state-centred focus, and neofunctionalism which highlights the overlap between policy areas and the municipality of actors involved in decision making, for an understanding of the EU's leap in climate change ambition.

The increased awareness of the impacts of climate change has led to the development of several climate change actions both globally and in the EU during the last decades. The Kyoto Protocol of 1997 is a milestone in global climate policy where developed countries received quantitative emissions reduction targets and timetables for the very first time. When the US decided not to ratify the Protocol the EU demonstrated the ability to act as a prominent player by encouraging enough countries to ratify the Protocol. The next decade highlighted the impact of climate change even further and the EU in 2008 initiated higher targets for their Member States in emission reduction, thereby setting the standard for the rest of the world. What then caused this quite remarkable change in EU climate ambitiousness from 1997 to 2009? i.e. which explanatory factors can account for the change in overall climate target, from 8% to 20%, in a time period of only 11 years? The implementation of higher targets would imply a severe cost for the Member States and an altering change in energy use. Can increasing change in EU environmental policy be explained by the actions of the nation-states, is it the pressure from Member State and internal targets, which has led to the higher level of ambition or are the supranational actors such as the Commission and the European Parliament the factors behind such a development?

Hence the main research question of this study:

*What can explain EU's increased ambition in the area of climate change from 1997 to 2008?*

The answer will be compiled in a two-step analysis. First a better understanding of EU and the history of climate change before 1997 is needed, because it provides the framework for EU in terms of climate change. Then the two climate agreements, the Kyoto Protocol with juridical binding reductions in emissions, and the Climate and Green Energy Package with increased emission reductions for the Member States will be compared and discussed to establish that there actually has been an increase not only in targets but also in timeframe, policy tools and measures. Explanatory factors of the increased ambition level will be discussed in the second step, to discuss if development of ambitions can be found amongst the Member States preferences and their desire to develop further climate change ambitions, or within the EU institutions.

In relation to domestic influence on the EU's environmental policies there are usually two countries that stand out as environmental leaders, Germany and the UK. They are high profiled Member States who set the agenda in the EU and influence the policy-making, industrialized countries facing similar impacts from climate change for future generations and both agreed to relatively ambitious targets under the Kyoto Protocol whilst pledged to meet even stricter domestic policy targets. I believe they will provide a sufficient framework to answer the questions initially posed but taken into account is also the fact that there are 25 other Member States in the EU which also influence the policy-making and may be part of the explanation, although this thesis lacks the resources to in-depth analyse all 27 Member States and their positions, I believe that the Germany and UK will provide a adequate basis.

## 1.2 Disposition

Five chapters follow the introductory chapter. Chapter two presents the analytical framework of the study and is divided into two parts; the first specifies the methodology whilst the second gives an account of the theoretical perspective guiding the study. Chapter three presents the empirical record and maps out the background of climate change and EU until 1997, along with the Kyoto Protocol and Climate and Energy Package. Chapter four presents the theories of European integration, neofunctionalism and liberal intergovernmentalism guiding the findings in chapter five where the case studies of UK and Germany are presented. Finally, chapter six gives a conclusion on the main findings of the study before it discusses the theoretical implications of these findings.

# 2 Methodological and Research Design

## 2.1 Methodological framework

For a deeper understanding of the EU and the explanatory factors that may explain the increased level of ambition in the scope of climate change the thesis will approach this in a two-step analysis. First part of the paper presents the Kyoto Protocol and EUs Green Energy Package respectively to see if my hypothesis that there has been an increase in level of ambition is correct. Both of the agreements are legally binding, while the first is internationally the second is regional, the comparison of time frame, policy tools and measures to meet the target, and making the countries reach the target implemented on them will showcase the differences and similarities. In comparative studies, researches try to characterise social systems by describing and explaining similarities and differences. The core issues are clearly stated while at the same time the downfall of the method is that the result may be coloured by my own subjective of what is central of EU ambitiousness, and intersubjectivity may be hard to reach (Esaiasson 2003:233). In *Vetenskaplig metod* by Ejvegård, the difficulties with qualitative comparative study is discussed, the difficulty of finding relevant comparison point to derive from, generalization what shall be compared and described similarities as well as differences (Ejvegård 2003:41-42). In regards to the agreements the difficulty of relevant comparison points will be overcome as time frame, policy tools and measures are part of both agreements and thus comparable.

The second section of the thesis focuses on empirical evidence taken from the field of environmental policy and applies the theoretical framework to the empirical examples. This theoretical interpretive single case study is motivated by the aim of understanding the empirical case by using theory to shed light on the case (Andersen 1997:68). The empirical research is based on German and British approaches to climate change and utilises the two theories neofunctionalism and LI to explain the developments of ambition within the EU in so matter to see what choices they have made during the time period 1997-2008 to see if their actions may explain the increased awareness, or if during this time period it is the EU: s own mechanisms and implementation that have facilitated such an development.

## 2.2 Theoretical Framework

In the study of European integration there are many competing theories that provide different explanations on the nature of integration and European policy-making. The common denominator being what factors influence the outcome of the European bargaining process and the extent to which Member States influence on this process. Two of the ‘grand’ theories of European integration that will be used in this thesis to investigate the impact of Member States on policy in order to seek and explain the increased ambition level of the EU within the field of climate change are Liberal Intergovernmentalism (LI) and neofunctionalism.

The neofunctionalism approach to integration process focuses on the concept of ‘spill-over’, when two Member States engage in effective cooperation in a sector that eventually leads to integration in another sector. To facilitate such integration the actors appoint a supranational ‘high authority’ to which the Member State can delegate some part of their sovereignty (Jensen 2007:90). By transferring authority towards regional level the supranational institutions can make and execute policy as well as impact the policy outcomes. The LI on the other hand criticised the neofunctionalist premises and places focus on the integration process from the viewpoint of domestic actors. Whilst neofunctionalism places a heavier focus on the process, the LI highlights the context in which the Member States express their interests also drawing upon political economic considerations. According to LI the Member States preferences is what sets the EU agenda, and an explanation of changes in level of ambition will be to find amongst a change within the nations.

The essence of the debate between the two theories is also to a great extent the essence of policy-making in the EU; the struggle between supranational institutions and individual member states. Each of the theories can explain the extent of Member State and climate policy integration and together they can provide a fuller picture of the EU’s climate change ambition.

The framework of these integration theories has received criticism by various scholars on its account for weakness of cooperation between self-interested Member States, for LI, and neofunctionalism on its behalf of lack of international dimension in integration. Several other theories could be considered in order to explain the EU and Member State influence but I believe that for this thesis the theoretical framework chosen will prove sufficient for the aim and research study.



## 3 Climate change in the EU

### 3.1 Climate change before 1997

The EU's prominent position in the politics of climate change today is noteworthy as environmental policy traditionally has been dealt with at the national level, which in turn is quite remarkable as the European Coal and Steel Community in 1951 was the start of the integration process, which later led to the formation of the EC (subsequent EU).

Environmental policy was not included in the primary legislation of the EU until the 1986 Single European Act which spelled out the goals and principles and provided the EU with a legal basis to take action on environment where the objectives could be "attained better at the community level than at the level of the individual Member State" (SEA Article 130). The milestone for environmental policy though was in 1990 when the European Council called for early adoption of targets and strategies for limiting the emission of greenhouse gases, with particular emphasis on CO<sub>2</sub>, and later the same year an agreement was reached on CO<sub>2</sub> emissions to be stabilized at 1990 levels within the EU as a whole by year 2000 (Wettestad 2000:27). This was partly a result of a position pushed by Germany and other like-minded European governments for whom environmental policy ranked high on the national agendas (McCormick 2001:281). The agreement acknowledged a need for a differentiation within the EU, a sharing of responsibility, on the basis of the Member States diverse pre-requisites of meeting their targets. The Commission tried to introduce an explicit burden sharing with three levels, where Denmark, Germany and the Netherlands would reduce their emissions with 5%, the Southern European countries could increase with 15% and stabilisation for the rest of the Member States would stabilize their emissions. The suggestion was not accepted by France, Italy and the UK and therefore not further pushed (Michaelowa and Betz 2001:268).

In 1991, the Commission developed a package of measures to ensure that the EU would meet its stabilisation target before year 2000 (Wettestad 2000:27). National incentives designed to implement the stabilisation objective was developed, included different programmes on energy efficiency, renewable energy, and the establishment of a monitoring mechanism of Community GHGs. The decision required each Member State to "devise, publish and implement national programmes for limiting their anthropogenic emission of CO<sub>2</sub>". Member States were to regularly provide the Commission with information on emission inventories and progress, and the Commission was then to report to the European

Parliament and the Council. There was a considerable struggle within the Commission and between Member States concerning the choice of policy instruments and watered down version of the package was adopted in 1993 (Wettstad 2000:33).

The Maastricht Treaty granted the EU competence to conclude environmental negotiations as a single block on the basis of common position (Damro et al. 2008:183). Leading up to the COP3 there was a call for more adequate measures, and Germany outlined a proposal, which led the EU in March 1997 to formulate a common position for the Kyoto negotiations in December the same year. This called for a 15% emission reduction for 3 GHGs before 2010, individual or collected, compared to 1990 levels, and an interim target of 7,5% reduction before 2005 would be included in the proposal, if other industrialised countries would agree to the same commitments (COM(97)). The proposal enabled the EU to stand out as the most ambitious of the major actors and proved them as a major actor to count on before the negotiations in Kyoto (Harris 2007:223-224)

## 3.2 Kyoto Protocol

The Kyoto Protocol was negotiated during the third COP held in Kyoto of Japan in 1997 and was regarded as an extraordinary achievement in the sense that it was the first global climate agreement of its kind which set juridical binding greenhouse gas emission targets.

The Protocol included binding targets for 38 industrialized countries to reduce or limit their collective emissions of six greenhouse gases with 5.2% below 1990 level during the period 2008 to 2012, known as the first commitment period. The Protocol placed a heavier burden on economically developed countries, referred to as Annex I Parties, under the principle of “common but differentiated responsibility” since they are primarily regarded responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity (UNFCCC 1997). The EU wanted to differentiate targets and due pressure from the Union the Protocol enabled for ‘bubble’ formation where a group of countries, such as the EU, could manage their efforts unison. This created controversy as the US and Canada argued that it allowed for wide differentiation between member states but not for other Annex 1 countries (Brennan & Curtin 2008:4). The commitments varied in range from -8% for the EU to +8 and +10% for Australia and Iceland, respectively, 7% by the US, 6% by Canada, Hungary, Japan and Poland. Russia, New Zealand and Ukraine are to stabilize their emissions, while Norway may increase emissions by up to 1%. Annex II countries, including India, China and Brazil were not required to make any commitments to specific targets. They must, however report their emissions levels and develop national climate change mitigate programs (UNFCCC 1997).

For the EU to meet the targets set by the Protocol there was identified a necessity to differentiate the targets between the Member States based on every countries capability and capacity. In subsequent negotiations within the EU as to how these goal would be obtained, the Member States agreed in June 1998 to the “Burden Sharing Agreement” which differentiate targets for each Member State on individual emissions commitment. Luxemburg and Germany would take the largest reductions, 28% and 21% respectively, with the UK a 21% reduction (COM(98).

The Kyoto Protocol set a number of policy tools, known as flexible mechanisms, to facilitate the efficient accomplishment of target emission levels and reducing the cost of meeting the targets for the developed countries. These are known as Joint Implementation (JI), which allows Annex I countries to earn emission credits by investing in another Annex I country’s emission reduction project. The Clean Development Mechanism (CDM) is similar to JI, but Annex I countries can hereby manage programs of joint emission efforts in Annex II countries. Emission trading, which allows for transfer to, or acquisition from other Annex I parties of assigned amount units (UNFCCC 1997).

The agreement would not enter into force until two conditions were fulfilled. Firstly, at least 55 parties to the Convention would have to ratify the treaty by their national parliaments. Secondly, industrialized countries among ratifying Parties must account for at least 55% of total CO<sub>2</sub> emissions from this group. In March 2001, President Bush announced that Kyoto would not be ratified, describing it as “a lousy deal for the American economy” (Curtin & Brennan 2008:5). The EU then demonstrated the ability to act as a prominent player by encouraging enough countries to ratify the Protocol, a target that was met in 2002, and the Kyoto Protocol became a legally binding treaty on 16 February 2005.

### 3.3 Climate and Green Energy Package

The EU urged in 2007 for action to reduce the consequences of climate change and acknowledged the need to adopt further necessary domestic measures and taking the lead to ensure that global average temperature increase do not exceed by more than 2 degrees compared with pre-industrial levels.

The first step towards this was taken in March 2007 when EU heads of government endorsed an integrated approach to climate and energy policy. The aim was a reduction of at least 20% in GHG by 2020, expressing a willingness to commit to further 30% reduction if a multilateral successor to Kyoto could be negotiated committing other developed countries and the more advanced developing nations to comparable emission reduction. If no other countries would follow, then the EU would reduce their emissions with minimum 20% before 2020 compared with 1990-levels (COM(2007)).

The European Council agreed that the best way to reach such ambitious goals was for every Member State to know what was expected and for the goals to be legally binding. Only a year later, in January 2008, the EU Commission introduced a detailed plan on how to meet these targets. The Climate and Energy Package, also known as the “20-20-20 plan”, on account of its aim of reducing greenhouse gas emissions by 20%, increasing the share of renewable energy from the current 8.5% to 20% (Schmidt 2008:84) and a 20% improvement in energy efficiency compared to Business As Usual (BAU), all by the year 2020. The proposal rested on five key principles: Target must be met, effort required from Member States must be fair, costs must be minimised, even deeper cuts must be made beyond 2020, EU must promote a comprehensive international agreement to cut emissions. Member States reductions were tied to per capita GDP with EU-wide reductions in energy allocations to specific industries under the EU Emission Trading Directive (COM(2008)).

The strategy for how the commitments should be achieved include a package where the one of the most high profiled climate change policies was the updating of the EU Emission Trading System (EU ETS) directive, created in 2001. The ETS is an instrument for allocating carbon emissions allowances to industry. Industry can buy or sell these allowances as deemed necessary. The system limits the amount of CO<sub>2</sub> firms can produce in six key industries<sup>1</sup> and the proposed aggregated number of allowances allocated to each installation for the period is set down by each Member State in a National Allocation Plan (NAP) (Brennan & Curtin 2008:17). Interestingly enough the EU was a leading sceptic towards such a mechanism in the run-up to the Kyoto negotiations but now described it as the cornerstone of the climate policy of the European Union. Targets were also set for greenhouse gas reductions in those sectors of not covered by EU ETS, such as transport, housing, agriculture and waste. The Renewables Directive decided the increase proportion of renewable energy in which the Commission required each Member State to increase renewables by 5.5% and modulate this to reflect GDP and early progress in developing renewables (Brennan & Curtin 2008:22). The Directive on geological storage of CO<sub>2</sub>, outlined a regulatory framework for safe capture, transport and storage of carbon dioxide in the EU (COM(2008a)).

When the Commission launched the package it was together with a “Joint Impact assessment on the package of implementation measures”. The aim of the analyse was to provide an overview of cost and consequences for suggested political measures. It was based on several key principles; cost efficiency, flexibility, just competition and innovation (COM(2008b)).

Following an agreement between the Commission and the Parliament on the Climate and Energy Package in December 2008, six legislative acts were adopted on 23 April 2009.

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<sup>1</sup> Energy, steel, cement, glass, brick-making and paper/cardboard production

### 3.3.1 1997 versus 2008

Prior to the Kyoto negotiations the EU had put forward a suggestion of 15% reduction within 2010 for OECD countries, this was point for further negotiations and the target EU had was "based on the assumption that other industrial countries will make comparable commitments" (COM(1997)). The result from Kyoto were lower reductions and over a longer period of time than the initial EU proposal. Respectively in 2008 the 20-20-20 package was independent of other countries actions, but an increase from the set 20% to a 30% reduction, if other countries would follow their lead.

The Kyoto commitments were not anchored in any clear climate political strategy from EU side. There was at the time little information on the cost of climate change and measures, the EU15 used a long time to establish a strategy on how to reach their GHG emission reductions and there were few means and clear objectives on how this would be reached. In 2008 there was a larger focus on climate issue globally and the EU had expanded the climate objective to not only include reduction of CO<sub>2</sub> but also to include energy efficiency and the increase of renewables.

The flexible mechanisms introduced at Kyoto to reduce the cost for the implementation were JI, CDM and emission trading, whilst an updated version of the ETS would be the main aim of reaching the targets in the 2008 package.

The EU itself had gone through vast changes during the decade and the EU15 had 12 new Member States, which would imply even further difficulties in reaching the targets as many of the new Member States did not have long tradition or ways of implementing environmental policies (Skjærseth & Wettestad 2010:315).

# 4 European Integration Theory

## 4.1 Liberal intergovernmentalism

Stanley Hoffman in the 1960s initially presented the idea of intergovernmentalism, which is characterized by its state-centrism. The theory views integration from the viewpoint of domestic actors, arguing that *'European integration is driven by the interests and actions of nation states'* (Cini 2003:100). According to intergovernmentalism European cooperation implies a sharing of sovereignty, rather than any transfer of sovereignty from national to supranational level (Cini 2007:102). The Member States have voluntarily delegated the sovereignty of some areas to the EU because it contributes to making cooperation between member states easier, more efficient and commitments more credible, and is therefore in their interest (Cini 2003:96).

In the 1990s Andrew Moravcsik presented a softer variant of intergovernmentalism, Liberal Intergovernmentalism (LI), which views European integration as a result of a series of rational choices made by national leaders who pursue economic interests (Moravcsik 1998:18). To support this assumption Moravcsik introduced a so-called 'rationalist framework of international cooperation'. The framework implies a negotiation process that consists of three stages. Namely national preferences, which highlights that major choices made in favour of European integration are a reflection of the preferences of national governments not of supranational organizations. Secondly, these national preferences reflect a balance of domestic economic interests rather than any political bias of politicians or national strategic security concerns. Third, the outcomes of negotiations among the member reflect the relative bargaining power of the states, and the delegation of decision making authority to supranational institutions reflect the wishes of the governments to ensure that commitments are honoured (Moravcsik 1998:7). Together these three elements result in integration outcomes that rests on considerations for the economic interests of states, their relative power and credible commitments made in favor of cooperation (Moravcsik 1998:3).

The theory identifies the EU as an international forum where the Member States search the biggest gain for their nation state in specific interests, and agreements are usually reached on a 'lowest common denominator basis', with clear limits placed on the transfer of sovereignty to supranational agents (Skjærstad & Wettestad 2010). The main influences of EU politics is the nation

states, their preferences are what sets the EU agenda, and an explanation of the changes in level of climate change is therefore a reflection of the preferences of the Member States. Supranational actors such as the Commission and the Parliament, along with other branches within the EU play a marginal role; even though they have formal roles, they must be assumed to have acted either neutrally or in line with Member States preferences, serving the goals of national governments and any increase in power at supranational level results from a direct decision by governments (Cini 2003:112). A change towards a more ambitious approach in climate change for the EU is according to LI assumed to have originated in Member States changing their preferences and wanted more ambitious targets.

## 4.2 Neofunctionalism

The major assumptions of neofunctionalist theory were developed in the 1950 and 60s by scholars based in the USA such as Leon Lindberg and Ernest Haas (Jensen 2007:86).

The theory views integration as a process and in so the interaction between actors becomes essential, whereby the concept of spill-over was introduced to explain the integration process. The process of spill-over describes a situation where cooperation by Member States in one policy area would create pressures in a neighbouring policy area, ultimately leading to integration of other sectors. In order to facilitate this interaction, actors appoint a supranational 'high authority' to which Member States can delegate some part of their sovereignty in order to make cooperation more effective. These supranational institutions would become more and more independent and able to formulate their own agendas, forcing nation states to delegate further competences to the supranational level. Elite socialization is an aspect of neofunctionalism which suggests that people involved on a regular basis in supranational policy making will shift loyalties to the European institutions and away from nation states making supranational institutions, interest groups and political parties key actors in driving integration forward (Jensen 2007:92). The role of non-state actors and supranational institutions such as interest groups and political parties is the focus of neofunctionalism even though the perspective acknowledges that member states remain important actors in the process as they set the terms of the initial agreement, but they do however not exclusively determine the direction and extent of the subsequent change (Jensen 2007:85).

In the late 1980s the theory was updated and further specified by Wayne Sandholtz and Alec Stone Sweet. Their view of neofunctionalism is related but not identical to Haas, mainly they do not use the concept of spillover, instead they developed a 'transaction based' theory of integration. This focuses on the increasing levels of transactions across EU-borders, which in turn increase the demands for European-level regulation. The demands generate a process of

institutionalisation leading to the establishment of ‘supranational governance’, where the institutions will consistently work to produce policies, even when they are resisted by the most powerful Member States, as they are not simply agents of the member states but trustees exercising responsibilities (Sandholtz & Sweet 1998:12). In the situations of trusteeship, the EU organs can then act with genuine independence from national governments without fear that their decisions will be subjected to reversal. The EU organizations would routinely produce supranational outcomes that the Member States would not have produced on their own (Sandholtz & Sweet 1998:18). Over time neofunctionalisms predict, the supranational agenda will tend to triumph over interests formulated by member states (Jensen 2007:89).

A change towards a more ambitious approach in climate change for the EU is according to Neofunctionalism a reflection of the influence of the supranational institutions and non-state actors, such as the Commission and Parliament on Member States.



# 5 Comparative study of selected Member States

## 5.1 Germany from 1997-2008: The EU's climate alibi?

Traditionally Germany has been known as a climate change driver within the EU, positioning itself as a global leader and as one of the standard-setting countries for environmental policy.

The rise of climate change to an important political and public issue in Germany began in the mid-1980s with the Federal Environment Agency and establishment of the "Climate research" committee in order to coordinate climate research and advise the government (Weidner & Mez 2008:362). The controversy over nuclear power triggered by the 1986 Chernobyl nuclear accident created a debate where an immediate shutdown or phase-out of all nuclear plants was called for (Harris 2007:43). Subsequent to this a thorough formulation of climate policy was initiated and the 'Protection of the Earth's Atmosphere' report concluded that there was 'an extraordinary need for action' (Wiedner & Mez 2008:59). Based on this conclusion the German government adopted a domestic CO<sub>2</sub> reduction of 25-30% until year 2005 with a 1987 baseline (Eichhammer et al 2001:5). This made Germany one of the first countries to adopt a specific reduction target within a time frame and Germany became a 'frontrunner', demonstrating its responsiveness and competence. The strategy was motivated less by the desire to protect the climate, and more by improving the national bargaining position so they would avoid being forced to act against national interests. The primary goal was to prevent imposing regulatory burdens that would impact the competitiveness of German industries and their attractiveness for foreign investors (Beck et al. 2009:16).

Between 1990 and 2000 there was a decline of over 18% in actual greenhouse gas emissions in Germany (Eichhammer 2001:5). The developments were largely due to economic decline and a different energy mix following the German reunification in 1990. Many of the old-energy inefficient technologically outdated factories and power plants in East Germany were closed down or significantly modernized in terms of energy efficiency (Eichhammer 2001:5). The impact of voluntary agreements (VAs) has also played an important role in German environmental policy and gained a broad support. It was first established between

the majority of German industrial associations and the Federal government in 1995-1996 and included commitments by industry to reduce its emissions by 20% before 2005 with a 1990 baseline. In return, the government promised not to take initiatives to achieve the reduction targets by command and control measures. (Watanabe 2005:25-26).

Under the Burden sharing agreement subsequent to the Protocol, Germany took on a large share of reduction, a 21% reduction, which meant that once the Protocol was ratified Germanys emissions set in 1987 would no longer simply be a national statement of intent but a part of EUs legally binding commitments. This is one of the most ambitious targets in the EU Burden-Sharing agreement; in tons the German share was  $\frac{3}{4}$  of EU15's total target, even though Germany is only  $\frac{1}{4}$  of EU15 inhabitants. With regards to JI and CDM Germany held the view that priority should be given to measures that would promote renewable energy and efficient energy use. They made the argument that a central consideration in the choice measures ought to be their sustainable effect on the climate. The calculation was that these instruments might create a major market for the types of environmentally friendly technologies developed by German industry in response to the domestic regulatory environment (Harris 2007:54).

When the SPD/Green coalition came in government in 1998, they initiated a number of successful energy policy projects during their first term 1998-2002. The "National Climate Protection Programme of 2000", was regarded as ambitious and included 64 concrete measures for climate protection, set reduction targets by sector and a number of related measures (Beck et al. 2009:20). A general agreement on several voluntarily actions was also signed between the government and industry that committed industry to specific CO<sub>2</sub> reduction of 25% before 2005 and a 38% reduction of Kyoto gases before 2012 (Harris 2007:52). Of the 50-70 million ton CO<sub>2</sub> necessary to fulfil the 2005 target, 18-25 million would have to be done by households, energy supply and industry 20-25 million and transport 15-20 million (Michaelowa 2003:33). They also introduced the eco-tax in 1999, which gradually raised the price on gasoline, heating oil, natural gas and electricity and to initiate the phasing-out of nuclear power in 2002. The Renewable Energy Sources Act (EEG) was introduced in 2000 and obliged electricity grid operators to give priority to the purchase of electricity from solar energy, hydro power, wind power, geothermal power and biomass, in order to improve the competitiveness of the industry (Weidner & Mez 2008:364). After this Germany experienced an accelerated growth in power from renewables, specifically from wind power. At the beginning of 2003 over 12,000 MW of electricity was being generated by wind power, representing 3.5% of all electricity consumption in Germany. The proportion of electricity from renewables increased from 5.2% in 1998 to over 10% in 2004 (Harris 2007:50-51).

German industry associations have been a strong force within the environmental policy and many observers argue that VA was the backbone of German climate policy. The industry fought strongly against any attempt to change the voluntary agreement into a binding emission target and when the EU

implemented the ETS they were very sceptical towards the proposal, arguing that it imposed additional burdens that would further threaten their competitiveness (Skjærseth & Wettestad 2010). German concerns were the imposition of mandatory quotas on CO<sub>2</sub> emissions in selected industrial sectors and the level of permitted cuts (Harris 2007:55). They wanted trading to be purely voluntary and that all allocation of permits should be for free (Michaelowa 2003:37). In December 2001 nine large German firms from several industrial sectors sent a letter to the chancellor threatening to terminate the voluntary agreement between industry and government if proposed EU guidelines for emission trading was adopted (Michaelowa 2003:37). A compromise was agreed in 2002 which reflected the influence of Germany in the deliberations, 1990 could be used as the base year for allocation of emission permits and member states would be able to distribute these free of charge through 2012. Also emission credits from JI and CDM projects could be sold on the European emission market, certain sectors and companies could apply to opt out of emission trading until 2008 (Harris 2007:55).

After the re-election in 2002 the Red-Green coalition government continued its efforts in area of climate change, in order to maintain Germany's pioneering position and a new domestic reduction target was proposed. Germany was to reduce the emissions of all GHG by 40% before 2020 if the EU as a whole commits itself to a 30% reduction within the same time frame (Weidner & Mez 2008:363).

In November 2005 the Red-Green government was replaced by the grand coalition led by the Christian Democratic Union, who in the coalition agreement reaffirmed Germany's 'frontrunner' role in international relations (Beck et al. 2009:20). The National Climate Protection Programme of 2000 was so updated with emphasis on technological innovations for enhancing energy and resource productivity and efficiency, a range of policy instruments such as voluntary accords, regulatory networks and agencies were introduced (Beck et al. 2009:20). When defining the overall targets for the different sectors the 21% CO<sub>2</sub> reduction target from the Kyoto/EU burden-sharing was taken as point of departure, not the more ambitious domestic 40% target, there was neither introduce many new instruments and the government was confronted with accusations of climate policy slow down. A review of the NCPP 2000 showed that Germany was able to reduce its greenhouse gas emissions by 18.5% up to 2003 and was already close of reaching its goal. Even if they appeared to be on track to meeting the Kyoto Protocol commitments, almost 50% of the reduction of all 6-greenhouse gases was a benefit from the reunification in 1990. Which meant that the contribution of all policies combined was slightly higher than the impact of unification and higher targets would not be achieved without far-reaching policy measures (Beck et al. 2009:25).

In 2007, the new Federal Cabinet (a coalition of conservatives and social democrats) passed a demanding Integrated Energy and Climate Program, which included 29 steps, to achieve at least a 35% reduction in GHG emissions by 2020 (Weidner & Mez 2008:364).

## 5.2 UK from 1997 to 2008: from coal nation to renewable energy frontrunner?

Traditionally the United Kingdom (UK) has been one of the biggest defender of national interests and most sceptical to the wider benefits of European integration.

During the 1970 and 80s, the UK was regarded as the 'Dirty Man' of Europe and the government dragged their feet when it came to formulating a common European environmental policy. This took a turn in 1990s when the environmental strategy was altered and they appeared as environmental pioneer (Harris 2007:63). Before 1995 the Parliament confined its environmental efforts to qualitative measures and avoided the designation of environmental goals, there was no focus on national emission reductions and instead the focus was largely on the negative effects that it had on human health and the environment (Harris 2007:66).

Before the Kyoto negotiations the UK was well placed to meet the 2000 stabilization target, largely due to the shift from coal to natural gas for energy production (Harris 2007:77). Natural gas had been the main change in the overall energy balance, rising from zero in the 1960s to over 40% in 2001 (Eyre 2001:311). This meant that the government could accept more ambitious targets for the post-2000 period, the fact that that additional domestic measures would not be needed minimized domestic opposition. Industrial interests supported the government's policy and undertook voluntary commitments to cut CO<sub>2</sub> emissions (Harris 2007:77). Under the EU burden-sharing agreement the UK received emission reduction of 12.5%.

Co-operation between government and business have been a trademark of UK environmental politics and British environmental policymakers have been very conscious of the costs of regulation to industry. The British government has traditionally been a defender of the interest of British industry and has been reluctant to pursue international environmental policy changes without securing the support of the industry (Harris 2007:69). The government has proved to be reluctant to accept binding emission standards and mandatory environmental control technologies (Harris 2007:68).

UK held the EU Presidency of the Council of Ministers during the first part of 1998, and environment minister John Prescott claimed that the UK "had pioneered a new integrated approach" to EU environment and transport policies, amongst key achievements was the implementation of national commitments to limit greenhouse gases in June 1998 (ENDS 1998).

Between 1990 and 2000, actual greenhouse gas emissions in the UK decreased by about 12%, in particular CO<sub>2</sub> emissions, which account for some 80% of all UK greenhouse gas emissions fell by 8% (Eichhammer 2001:24). The Governments strategy was set out in two Climate Change Programmes published in 2000 and 2006 each stating the policies needed to achieve the UK emission target. CCP 2000 outlined measures to achieve a 23% cut in GHG and a 19% reduction in carbon dioxide emission against the base year by 2010. The

document set out the Governments overall strategic approach to climate change and identified numerous policy decisions and measures included target for delivery of 10% energy through renewable sources, doubling Combined Heat and Power (CHP) capacity and the Climate Change Levy, policies that combine regulation, investment, fiscal measures and other economic instruments. If fully implemented the Government estimated that the policy proposals and market developments in the Programme could reduce UK greenhouse gas emissions by about 23% and CO<sub>2</sub> emissions by about 19% over the period 1990-2010 (Eichhammer 2001:34). The subsequent year the Renewables Obligation was introduced, placing an obligation on all electricity suppliers to provide 10% of the electricity they sell from renewable sources.

Further actions were needed to ensure the security of energy supply as Britain was set to become a net importer of energy in 2010 for first time in 30 years. So in 2003 the Government introduced the Energy White Paper, *Our Energy Future – Creating a Low Carbon Economy*, which committed the UK to a long-term target of reducing emissions of greenhouse gases by 60% by 2050 (DTI 2003). The government also encouraged other member states to follow, and in a joint letter to the EU's Greek Presidency, Tony Blair and Sweden's Prime Minister Göran Persson challenged all EU leaders to commit to emission cuts, and urged a series of new measures including further national targets for increasing renewable energy and continued EU-wide work to increase energy efficiency (END 2003). To further increase energy efficiency the government launched the Energy Efficiency – the Governments Plan for Action, which included extensions of the Energy Efficiency Commitment, the improvement of the housing stock through the Decent Homes standard for social housing and through changes to the Building Regulations for new buildings and refurbished properties, the introduction of the EU emissions trading scheme as a complement to EU economic instruments, as well as the roles of advice and new technologies in achieving energy reductions (DEFRA 2004).

The UK and Germany jointly crafted a proposal for combating climate change to be promoted by Britain during its six-month presidency of the G8 group of industrialized countries in 2005. The proposal was to promote action in six areas; tackling CO<sub>2</sub> emissions from aviation and shipping sectors, future investments in energy sources, recommendations for CO<sub>2</sub> reductions, finance of green projects, scientific research on climate change and public relations campaigns to draw attention to the issue (ENDS 2004).

The UK was early supportive of implementing the international emission trading system within the EU, and proved to be politically important for the Commission as they had previously contributed to block adoption of a common carbon tax in 1991 (Skjærseth & Wettestad 2008:109). The UK had a domestic trading scheme that launched already in 1999 with the first phase operating between 2002 and 2006, this created a institutional learning base with regard to the operation of trading, within both government and industry before the implementation of EU ETS (Skjærseth & Wettestad 2008:111).

The government announced its review into its UK domestic climate change programme in September 2004, admitting that it was not on course to meet the commitments to cut CO<sub>2</sub> by 20% by 2010 rather a cut of 15-18% by the end of the decade was more likely (BBC 2006).

The proposal of a 60% reduction target in emissions by 2050 was introduced after the Stern Review on the Economics of Climate Change, was published in Autumn 2006. The report was commissioned jointly by Tony Blair and Gordon Brown to provide an economic analysis of climate change. It concluded that national the benefits of strong and early action far outweigh the economic costs of not acting and proposed that 1% of global gross domestic product (GDP) per annum was required to be invested in order to avoid the worst effects of climate change, and that failure to do so could risk global GDP being up to 20% lower than it otherwise might be (Stern 2006). UK had gained an understanding of what the fight against climate change would cost and the subsequent year the Climate Change Bill was introduced into Parliament, and became law in 2008. The Climate Change Act, set legally binding target for the UK to a commitment of at least 80% reduction in carbon emissions by 2050. It also sets an interim target of a 34% reduction by 2020 and establishes the concept of carbon budgets. The key aims for the Act was; to improve carbon management, helping the transition towards a low-carbon economy, and to demonstrate UK leadership internationally, signalling that UK are committed to taking their share of responsibilities for reducing global emissions. The policy also recognised that the UK would need around 30-35 GW of new electricity generation capacity as many of the UK coal and nuclear stations were set to close (DECC 2008).

Following the Energy White paper 2007 the House of Commons introduced in January 2008 The Energy Bill which updated the legislative framework in the UK to reflect the current policy towards the energy market and the challenges facing climate change and security of supply, included CCS, renewables, and offshore oil & gas (DECC 2011).

### 5.2.1 Domestic preferences and EU influence

Germany is often portrayed as an environmental leader because it adopted a relatively progressive domestic environmental policy early on while the UK lagged behind for some time, before altering the environmental policy approach and appeared as an ambitious nation. British environmental policy has been heavily conditioned by domestic political norms while Germany developed environmental regulations under the threat to the natural environment rather than primarily because of public health concerns (Harris 2007:67).

In the after-match of Kyoto Germany did not believe in the mechanisms created and preferred measures that would promote renewable energy and efficient energy use, as this were mechanisms incorporated in their national agenda. The Protocol did not have direct impact on Germany's climate policies, but rather

indirect impacts and the the Burden. Setting Agreement relied heavily on German fulfilment of their target. The UK was already on target to reaching their requirements, the domestic pressure from industry would not be an issue, which made them willing to accept more ambitious targets. As stated earlier the strong link to industry has been an important factor for the UK and the government has been reluctant to international environmental changes without having the support of industry, showcasing that national interest override the national. In international agreements the EU acts on behalf of its Member States, which may prove the neofunctionalist theory that nation states transfer some of their sovereignty to supranational agents. On the other hand, it could also be viewed that this transfer is made purely on domestic preferences as it contributes to making cooperation between the Member States easier, more efficient and in their interest. The Kyoto outcome might have been very different if not the EU had taken upon the role and acted as a facilitator, convincing other nations to ratify.

Germany and the UK are both countries of size, political influence and great weight within the EU and are able to influence the EU politics. The UK presents a case of the ability of individual member states to pursue their national preferences within the context of the broader European process. British government has supported EU initiatives when they serve UK interests, but they were also willing to use international institutions to constrain European initiatives that opposed to Britain's broader interests. The British government has developed a highly innovative approach to climate policy where industry group were heavily involved in the design of key instruments and therefore reluctant towards any international agreement before the support of domestic industry is secured. The risk of becoming a net-importer of energy in 2010 made the commitment to reduction of emissions 60% by 2050, a domestic preference which acknowledges the economic implications and cost of not acting.

In October 2001 the Commission proposed the ETS directive, which would be the cornerstone of EU environmental policy in the future years. The proposal built on response to the 2000 Green Paper and required adaptation by a qualified majority among the Member States in the Council and a co-decision with the Parliament. A majority of the Member States were initially reluctant towards the emission trading system but a significant change occurred. The principal was that the two largest EU emitters, the UK and Germany, preferred a voluntary EU ETS in the pilot phase before 2008, but in the end these countries had to give in and accept a mandatory system from 2005, partly due to the "hidden stick" provision of qualified majority voting. The final proposal was also more decentralised than the Commission had preferred, showing that they had taken the member states interest into account (Skjærseth & Wettetstad 2008:111). Germany not only had an impact on general objectives and articulations of the ETS but influenced major characteristics of the EU's carbon reduction targets as well. The strong influence of German industry who were opposed against changing the VA into binding emission target threatened to terminate the VA if the ETS was adopted. This influence had an impact in so that the baseline year was agreed to 1990 as and renewable energy included. The baseline year of 1990 was important to Germany

due to the domestic target set in 2002 that had a 20% reduction by 2005, based the year 1990. The basis of 1990 was also preferable to Germany because of economic considerations after the reunification.

The British ETS was almost in the last year of its first assigned trading period when the EU's ETS was launched in 2005. The greatest difference being that participation in the British scheme was based on voluntary measures, whilst the EU decided for a mandatory measure. The UK regarded the EU ETS as not possible had it not been for an already up-and-running British pioneer.

The Commission through the establishment of ETS shows that the EU formulate their own agenda, the ETS and approval of NAP largely facilitated the development of ambition level. The Commission has continued to push for a more ambitious climate politic.

According to McCormick (2001:2) it is now safe to say that environmental policies in the EU are made more as a result of the requirements of EU law than as a consequence of domestic needs and pressures. There are no longer 15 (then now 27) sets of national environmental policies but in most areas a single set of regional policies. The Member States still have their own priorities but the most important environmental decisions are now taken by the governments of Member States come in response to the obligations inherent in their membership of the EU.

I contrast to this the diverse set of policies implemented by both countries through the national programmes shows in contrary to McCormicks stand a clear ambition towards acting in line with national preferences, securing Member States own interest. The UK published its first National Adaptation Strategy in July 2008, that sought to bring together a variety of adaptation activity that and been taking place through a number of programmes and initiatives. Germany in December 2008 adopted a National Adaptation Strategy, which provides a framework for adaptation to climate change in Germany.

According to neofunctionalism the influence of the supranational institutions and non-state actors, such as the Commission and Parliament on Member States will strengthen the assumption that these have increased in ambition. The argument being that in terms of environmental issues, these are better made at EU level than at the level of the member states. The gradual transfer of authority over environmental policy from the member states to the EU is therefore inevitable.

Environmental policy as a whole can be regarded as strengthening of core assumption for the EU. Since the beginning environmental policy was not a very strong mark, but as time has passed the EU has become very focused on the environment. EU policy can impact on domestic policy through new regulations, directives and decisions where Member States will have to transpose EU directives into their national legislation. In line with LI the Member States preferences, strong opposed to implementation of policies that are not favourable for domestic interests and implementing of national plans that mainly serve the own state, shows the influence of LI.

The theoretical approaches are by no means mutually exclusive, they highlight different actors and institutions, but can still offer complementary explanations which seen together can provide credible answers to the research question.



Politics and policies related to climate change may not be fully understood by looking solely at domestic politics and policy making, on the one hand, or by examining international politics and supranational institutions on the other hand. Climate change crosses over between the domestic and international areas and created an arena where domestic preferences win on occasion but where the influence of EU also gains power.

## 6 Conclusion

The purpose of this thesis was to look at the field of environmental policy in the EU to measure and explain the impact of Member States on the policy-making process in the field of climate change. The objective being to describe and interpret changes in EU climate policy strengths from 1997 to 2008 by analysing the Member States Germany and UK to find plausible explanatory factors as to if the Member States has influenced developments in EU policy, or if changes are mainly due to internal developments. The main reason why this is of such great importance is the effect that climate change and global emissions may have on the global world. EU has for the last two decades proved itself as a leading actor within the field, their actions effects not just the Member States, what they do will determine what other countries may choose future actions.

The first part of the thesis showed that environmental policy is a relative new area for the EU, which before the SEA in 1986 was not high on the agenda. The first emission reduction target was set in 1990 and already from the start the EU acknowledged that they would need burden sharing between the Member States. The ambition to set a frontrunner example before the Kyoto negotiations was stated when a proposal of 15% reduction target was proposed. The Kyoto Protocol was a milestone for environmental negotiation; the binding targets were set for industrialised countries allowing for a 'bubble' formation where the EU was to collectively reduce their emissions by 8%. Fastforward 11 years and environmental policy has climbed to the very top of the agenda and with the introduction of the Climate and Green Energy Package in 2008 the EU showed a clear ambition and aim of further developing mechanisms for implementing changes also including energy efficiency and renewables in the package making it more ambitious than the Kyoto Protocol. This shows that there has been a clear increase in the ambition level of EU from the Kyoto protocol of 1997 to the Climate and Green Energy Package of 2008.

With the help of available theories of European integration Germany and the UK environmental policies between 1997 and 2008 was analysed in order to find explanatory factors to the increased ambition level. Both countries have shown a clear focus on climate change issue and wish to act as a pioneer or frontrunner.

Germany had the largest reduction cut as part of the Burden-Sharing agreement after Kyoto of 21% that was largely achievable due to progressive policies, voluntary agreements with the industry and the effects after the reunification.

The UK were before the Kyoto agreement on track to meeting their commitment due to the transfer from coal to gas, the 12.5% reduction they received was implemented through domestic ETS and national measures.

The biggest environmental policy introduced during these years was the ETS. The idea was not initiated by any of the Member States, through the implementation of ETS it became clear that not only the Member States are central figures in design of climate change politics. The Commission worked as a driving force for ETS and were responsible for approval of the Member States national allocating plans (NAP). Even so, national preferences were clearly shown in the case of Germany who heavily opposed the ETS and took an active part in formulating the framework.

The main findings from the thesis concludes that there has been an increase in ambitions from 1997 to 2008 and that this largely can be accounted to a combination of influence from Member States on policies as well as the strengthening of EU policies, mainly through the implementation of EU ETS.

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