

This is a post-print version of:

Skjærseth, Jon Birger and Jørgen Wettestad
'Implementing EU Emissions Trading: Success or Failure?'
International Environmental Agreements, Vol 8, No 3, 2008, pp. 275-290

The definitive version is available at SpringerLink: www.springerlink.com/content/82825652xm42032q/

IMPLEMENTING EU EMISSIONS TRADING: SUCCESS OR FAILURE?

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Abstract

This article assesses and explains the implementation of the EU emissions trading scheme (EU ETS). It argues that implementation in terms of ambitiousness has been only moderately successful so far, but significant differences between the Member States are also observed. Similarities and differences are then explained within a multi-level governance approach emphasizing the need to search for explanations at national, EU and global levels. The EU ETS case shows that the multi-level governance approach can be as relevant for understanding implementation as for explaining policy-making. In addition to factors located at the national level, the decentralized nature of the EU scheme itself is important for understanding how the system works in practice. At the global level, the link to the Clean Development Mechanism under the Kyoto Protocol is particularly important for determining how well the EU ETS will perform in the future.

Abbreviations:

CCA	Climate Change Agreements
CDM	Clean Development Mechanism
CEECs	Central and Eastern European Countries
CER	Certified Emissions Reduction
EB	Executive Board
EEA	European Environmental Agency
EITs	Economies in Transition
ETS	Emissions Trading Scheme
EU ETS	EU Emissions Trading Scheme
GHG	Greenhouse gas
JI	Joint Implementation
NAO	National Audit Office
NAP	National Allocation Plan
UNFCCC	United Nations Framework Convention on Climate Change
VAs	Voluntary Agreements

1 Introduction

The EU emissions trading scheme (ETS) is the first large-scale international emissions trading system in the field of the environment. No wonder it has been called ‘the new grand policy experiment’ and ‘a fundamental systems change in environmental governance’ (Kruger and Pizer 2004, p.1; CEPS 2002, p. 6). The ETS is a scheme whereby companies are allocated allowances for their emissions of greenhouse gases (GHGs) in accordance with the overall environmental ambition of their government’s National Allocation Plans (NAPs); they can then trade these allowances with each other. Deciding upon the number and distribution of allowances (denominated in metric tonnes of carbon dioxide equivalent) thus constitutes the core of implementing the EU ETS. Following the adoption of the 2003 emissions trading Directive (EU Council 2003) and the 2004 linking Directive (EU Council 2004), which links the EU ETS to the Kyoto Protocol’s flexible mechanisms,¹ the ETS allowance market was officially launched on January 1, 2005 (Wettestad 2004; 2005; Wettestad and Sæverud 2005; Skjærseth and Wettestad 2008). The ETS pilot phase (2005-2007) is now history, and we have entered the main Kyoto commitment period (2008-12). It is this unprecedented implementation process which is the focus of this article.

Differing views on the success of implementation so far may certainly be noted. The first publication of verified emissions data after the introduction of the ETS took place in May 2006 and indicated more allowances than actually needed leading to a steep decline in allowance prices, from around 30 down to 12 euro (and since then below one euro!). Vociferous proclamations were therefore made about the ETS being a scandalous, failed system (e.g. WWF 2006a). Yet at about the same time, representatives of the European Commission stated that the implementation process had gone “remarkably well” (e.g. Vis 2006, p. 212). Against this backdrop, the purpose of this article is to assess and explain the success of the implementation of the EU ETS so far, and interesting similarities and differences in the implementation process.

The article is structured as follows. Section two presents the analytical approach of the study. Section three assesses the implementation of the EU ETS, with particular emphasis on the level of ambitiousness. Sections four and five explain similarities and differences in implementation. In section six, we wind up by summarizing findings and discussing prospects ahead.

2 Analytical point of departure

In order to assess and compare implementation between the Member States, we need a criterion against which actual performance can be assessed. The main criterion applied here is goal attainment. The principal goal of the EU ETS is stated in Article 1 of the ET directive: “This Directive establishes a scheme for greenhouse gas emissions allowance trading within the Community...in order to promote reductions of greenhouse gas emissions”. As it is too early to assess whether the EU ETS has actually contributed to any reduction of GHGs, we have to apply a proxy for something that will qualify to ‘promote reductions’. A number of criteria are relevant here, such as timeliness (e.g. in handing in NAPs) and consistency in the application of overall implementation criteria and steering signals. Moreover, the implementation of the EU ETS includes several other issues than production of the NAPs, such as setting up national allowance registries (Mullins 2005, p. 183). Nevertheless, the criterion of the ambitiousness of the NAPs is clearly the most important from an environmental point of view. There is a need to decide upon emission caps far enough below the business-as-usual needs of the industries participating in the system to lead to a scarcity of allowances and high and stable allowance prices. This will warrant investments in abatement

efforts and ensure that the overall objective of the emissions trading scheme – to promote reductions of greenhouse gas emissions – will be met.² Our operationalization of goal attainment is thus the environmental ambitiousness of the system measured in terms of the stringency of allocations in relation to projected emissions.

How can we explain variation in ambitiousness among the Member States? One approach to understand similarities and differences is based on the conceptual perspective of multi-level governance, which looks for explanatory factors at the domestic, EU and global levels (e.g. Weale et al. 2000); Hooghe and Marks 2001; Fairbrass and Jordan 2004). This approach has mainly been applied to understand EU *policymaking*. In this article, we show that multi-level analysis, including the global level, is useful also for understanding *implementation* of EU policies. Multi-level governance has been criticized for serving as a good but complex description of contemporary changes at EU level, rather than pointing to the causal drivers and mechanisms of EU policy-making (Fairbrass and Jordan 2004). Below, we will present some likely explanatory mechanisms compatible with the multi-level approach.

At the *domestic level*, institutional fit between the introduction of emissions trading and earlier climate policy can shed light on variation in implementation. Implementation theory focusing on institutional fit emphasizes the critical role of the pre-existing institutional context in which new policy instruments such as emissions trading are introduced (Knill and Lenschow 2000, p. 30; Knill 2001). Within this broad perspective, we will focus on specific policy fit pointing to the match between national climate policy instruments, such as domestic emissions trading, and the EU ETS. It seems clear that a high degree of fit will enhance the ability of the parties to implement various tasks necessary for emissions trading, such as the establishment of national allowance registries. The relationship between institutional fit and ambitiousness is, however, more indirect. It is reasonable to assume that high uncertainty about the data needed to make emissions trading work and lack of experience in industry and government is likely to lead to a cautious approach with regard to ambitiousness. The assumption is thus that good fit will enhance ambitiousness.³ Conversely, poor fit will lead to delayed implementation and low ambitiousness as actors struggle with a new and complex instrument.

Our second explanation for understanding varying implementation is the ‘need’ for the EU ETS in relation to varying domestic targets, either within the EU burden-sharing agreement or the Kyoto Protocol. The main assumption here is that little progress in relation to these targets means a high need for ambitious measures also for the specific industries included in the ETS.⁴ Third, we distinguish needs from deeds. The need to do something and the political willingness, or ‘drive’, to do it are sometimes two very different things. Climate policy ‘deed’ is here measured in terms of domestic climate policy targets. In sum, we propose that differing implementation ambitiousness is caused by varying institutional fit, sheer need for ambitious ETS implementation in relation to progress made, and climate policy drive. Good fit, high need and strong climate policy drive will lead to high ambitiousness.

At the *EU level*, we will narrow in to the relationship between the degree of centralization and allocation dynamic. A decentralized emissions trading system will leave the allocation of allowances to the discretion of the member states. Lack of harmonization will lead each state to allocate total allowances in the light of total allowances in ‘rival’ countries. Thus, countries will be inclined to lower their ambitiousness to avoid loss of competitiveness (Porter 1999). In other words, the Member States will have incentives to protect their own industries by providing them with generous allocations. This means that high Member State autonomy in the implementation of the EU ETS will probably lead to relatively low environmental ambitiousness. On the other hand, a more centralized and harmonized system will provide the European Commission and the European Court of Justice with significant

authority and power to oversee the allocation process. Common procedures and criteria for allocation of allowances will counterbalance a ‘race-to-the-bottom’ dynamic among the Member States and pull in the direction of high(er) environmental ambitiousness. Against this backdrop, we propose that a decentralized EU ETS will lead to low ambitiousness.

With regard to the *global level*, we shall focus on certain aspects of the international climate regime with particular relevance for the EU ETS and NAPs, primarily the Clean Development Mechanism (CDM). A direct link between the EU ETS and the CDM can reduce costs of compliance for sectors covered by the emissions trading Directive by allowing emission reduction in a non-EU country at often assumed lower cost (as CDM projects are generally perceived as more risky and hence cheaper). The availability of CDM credits will thus make it easier for industries to agree to ambitious allocation. However, the Commission has set limits to the use of such credits (e.g. in NAP II a rough 10% limit has been introduced, as further elaborated in section 5.2.). We thus propose that good availability (within the limits set by the EU) of comparatively cheap CDM credits in the member state’s allocation plans will lead to ambitious allocations.

3 Implementing the EU ETS: the level of ambitiousness

A key instrument for implementing the EU ETS became, as noted, the production of National Allocation Plans (NAPs). With regard to the pilot phase (2005-2007), there were prescriptions for a certain ambitiousness in the setting of total emission caps. The ET Directive and guidelines from the Commission prescribed several criteria for the overriding goal of ambitiousness, most important that the allocation was to be *consistent with a path to the Kyoto target* and that *the total quantity of allowances to be allocated should not be more than would be necessary, taking into account both actual and projected emissions*.

3.1 Producing the NAPs for the pilot phase (NAP I, 2005-07)

As a starting point, we should note that several other independent NAP ambitiousness assessment efforts basically agreed on an overall low ambitiousness score for the pilot phase NAPs, regardless of whether they were judged on past emissions, projections, or distance to Kyoto targets (i.e. Zetterberg et al. 2004; Ecofys 2004; Grubb et al. 2005; CAN 2006).

When the first verified EU ETS emission figures (for 2005) were put on the table in mid-May 2006, these figures strengthened considerably the impression of the ambitiousness in this round being on the low side (EU Commission 2006; Ellerman and Buchner 2007). In essence, CO₂ emissions were about 80 million tonnes or 4% lower than the number of allowances distributed to installations in order to cover 2005 emissions. Seventeen countries were on the ‘long side’ (more permits than needed), with Lithuania on the top of the list and around 50% long, and four countries around 25% long (i.e. Denmark, Estonia, Finland and Latvia). The important emitters Germany and Poland were respectively 4.2% and 12.8% long. Only five countries were on the ‘short side’, i.e. Greece (-0.2%), Italy (-4.4%), Spain (-6.3%), Ireland (-16.4%), and the UK (-17.7%) (Ellerman and Buchner 2007).

Although there is a somewhat complex and indirect relationship between NAP ambitiousness and these figures, at least they further confirmed suspicions about a lenient Polish approach to handing out allowances, in contrast to a more sound and sobering British approach. Moreover, the publication of these data also sent shock waves into the up until then surprisingly floundering allowance trading market, and led to a steep price drop from a top level of around 30 euro per tonne CO₂ in late April 2006 down to around 12 in early May.

3.2 Producing the NAPs for the Kyoto commitment phase (NAP II, 2008-12)

With regard to the NAPs for the second ETS phase (2008-12), the Commission would be requiring changes to NAPs where “the proposed total of allowances is not consistent with expected emissions and the technological potential to reduce emissions, *taking into account independently verified emissions in 2005*, anticipated changes in economic growth and carbon intensity” (EU Commission 2006; our italics).

With regard to ambitiousness, the early picture was not encouraging. For instance, on 22 October 2006, EU environment commissioner Stavros Dimas noted that ‘much to my regret, taking the first 17 notified national allocation plans, they propose a cap about 15% above actual emissions in 2005’ (ENDS Daily 2006). This statement also clarified that the Commission would use the verified 2005 emissions data as a key measuring rod in its assessment of the NAPs. Several independent assessments also painted a rather bleak picture (e.g. Neuhoff et al. 2006; WWF 2006b; ENDS Report 2006, p.13; Rogge et al. 2006). However, there was a certain degree of variation between the states. As the main exception to the gloomy picture, the UK plan was lauded as good and pioneering (Point Carbon 2006).

Hence, when the Commission’s first NAP II assessment of ten plans was published on November 29, it did not come as a total surprise that only the UK plan was unconditionally accepted. All the other plans were modified. Given Germany’s position as top EU emitter, the 28 MT or around 7% shaved off the German plan was particularly important (i.e. from the suggested 499 to the accepted 453.1 MT). As another important sign of a tougher line, in March 2007, the Commission cut the suggested Polish NAP II by more than a quarter (i.e. down from 284.6 million allowances to 208.5, around 27%). By November 2007, all 27 NAP II plans had been assessed by the Commission, with all but four plans cut (i.e. Denmark, France, Slovenia, and the UK) by an average of 9.5%.

3.3 Overall picture: moderate, but mixed, implementation success so far

Setting up the EU ETS was a formidable challenge, with among other things limited availability of data, not least about the emissions of participating installations. Still, a functioning market has been established, with for instance more than a doubling of reported trading volumes and value from 2005 to 2006 (Point Carbon 2007, p. 6). Registries and reporting procedures are in place. Allowance prices were initially higher than expected, and although the pilot phase allowance price dipped very low (down to to 0.1 euro), in March 2008 allowances for 2008 are sold for around 21 euro.

Not at all ignoring this “institutional achievements in light of formidable challenge” perspective, we will nevertheless put forward an overall sobering implementation assessment, based on the quite moderate achievements with regard to ambitiousness so far. Also the Commission itself has not been satisfied with the first NAP process in this respect and has been fighting to beef up the NAPs for the Kyoto commitment phase.⁵ However, within this overall moderate implementation success picture, there are some interesting variations in national performances so far. We will focus on four countries that represent significant variation with regard to ambitiousness:

- **The UK – frontrunner:** Seeing NAP I and II in combination, the UK stands forward as the main EU ETS implementation frontrunner. For instance the UK was among the comparatively more ambitious countries in NAP I and, when 2005 emissions were put on the table, also turned out to be among the few countries which had not handed out more allowances than the ETS industries needed (hence ‘under-allocated’). The UK has also been able to meet the deadlines quite well⁶, and theirs was the only plan out of ten which was unconditionally accepted in the first Commission NAP II ‘verdict’.

- **Germany – intermediate:** Germany is of key ETS importance and interest as it is the biggest EU emitter, accounting for almost 25% of total allowances. The country has been quite timely and somewhere in the middle with regard to comparative ambitiousness. 2005 emissions showed that Germany had handed out slightly more allowances than the ETS industries needed (hence a slight ‘over-allocation’ in NAP I). In NAP II, Germany has seen its proposed NAP II cap rejected and considerably adjusted down by the Commission. Germany embraced the ETS only very reluctantly.
- **Spain – improving laggard:** Spain initially delayed submitting its NAP I, but speeded up significantly from late spring 2005 on and ended up with comparatively decent NAP. When 2005 emissions were put on the table, it turned out that the country was among the few countries that had not handed out more allowances than the ETS industries needed (hence on the ‘under-allocation’ side), further confirming a certain NAP I soberness. Its NAP II has been favorably received and was accepted almost unconditionally by the Commission in late February 2007.
- **Poland – laggard:** It is hard to escape the conclusion that Poland must be counted as figuring centrally among the ETS implementation laggards so far. It was seriously delayed in NAP I, and the cap showed comparatively little ambition. When 2005 figures were released, it turned out that Poland was among the group of countries which had been most generous in handing out allowances to the ETS industry (i.e. turning out as a clear ‘over-allocator’). Although the country has been timely in NAP II, its ambitiousness has again been seriously questioned. This was confirmed in late March 2007, when the Commission cut Poland’s suggested NAP II with not less than 27%. In late May 2007, Poland then announced that it would take the Commission to the European Court of Justice over the Commission’s NAP II decision.

4 Explaining differing implementation: fit, needs, and deeds

Table 1 shows that our expectations (cf. section 2) are roughly in line with the actual implementation patterns above. This means that our three explanatory factors located at the national level have been able to explain differences in implementation reasonably well.

Table 1: Implementation of the EU ETS: Expected vs. actual outcome (in relative terms)

Countries	Fit	Need	Deed	Expected outcome	Actual outcome
UK	M/H	L/M	H	Intermediate/ Frontrunner	Frontrunner
Germany	L/M	L/M	H/M	Intermediate	Intermediate
Spain	L	H	L/M (C ^a)	Laggard/ Intermediate	Laggard/ Intermediate (C ^a)
Poland	L	L	L	Laggard	Laggard

^aC=Change

Space does not allow a systematic discussion of all countries in relations to all three explanatory factors (for a more complete analysis, see Skjærseth and Wettestad 2008). Instead, we shall undertake a pair-wise comparison of the most interesting differences.

4.1 Institutional fit: Germany and the UK

In the EU ETS initiation and decision-making processes, the UK was a clear trading proponent. The UK was the second of the EU countries (after Denmark) to develop a

domestic ETS. We would thus expect a relatively high degree of institutional fit concerning the UK. True, the domestic UK emissions trading scheme created a certain institutional learning base with regard to the operation of trading, within both government and industry. Not least this included basic data collection, the establishment and operation of allowance registries, knowledge about the pros and cons of allocation methods, and, of course, a certain trading experience for industry.⁷ Both the National Audit Office (NAO) and the ENDS Report agreed that the creation of the allowance registry was an important “but often over-looked” institutional success (ENDS Report 2004; see also NAO 2004). Moreover, a clear majority of participants emphasized how their participation in the system had improved their collection of data on energy use and measurement of emissions (NAO 2004, p. 27). However, it should also be noted that the ENDS Report was highly critical about other aspects of the functioning of the UK’s domestic emissions trading system (ENDS Report 2004).

The design of the initial domestic UK trading scheme, which started in March 2002, differed substantially from the design of the EU ETS. This created tension between the EU and UK. The UK domestic system covered all six main greenhouse gases (EU: only CO₂) and several sectors not covered by the EU ETS. The scheme was voluntary (EU: mandatory), and the UK Government provided funding support of 43 million pounds per year over a five-year period to encourage participation (EU: no such support).⁸ Moreover, due to differences in scope and coverage, the two schemes engaged and distributed regulatory burdens among emitters differently (see also Sorrell 2003a; 2003b). Nevertheless, the UK trading experiences facilitated UK NAP I implementation in terms of timeliness. It was also a positive factor for ambitiousness, as the previous work provided some of the necessary data and modeling tools (Interviews, London February 2005).

Compared to the UK, Germany is a relatively clear case of institutional misfit in terms of emissions trading.⁹ In the negotiations leading up to the Kyoto Protocol, Germany was one of the leading sceptics within the EU to the use of the flexibility mechanisms. And in the EU ETS negotiations, Germany was the main laggard with several critical objections (see Skjærseth and Wettestad 2008). The main instruments in German climate policy have been voluntary agreements (VAs) with industry and an ecological tax reform which was introduced in 1999. Since 2000, negotiated agreements on a sectoral basis were established. About 80% of final energy consumption in industry, and almost 100% of the electricity supply (industrial and utilities, private and public producers), were covered by the agreements. The agreements covered 18 associations/sectors, including chemicals, non-ferrous metal industry, steel, oil refining, gas and water utilities, and electricity suppliers.

The substance of the commitments was, however, diffuse and the reporting of emissions under the agreements was voluntary (Interviews, Berlin September 2005). Within the German government, the Ministry of Economics and Technology was responsible for the agreements. With the voluntary agreements, the balance of power between industry and government favored industry, since it controlled the reporting of data, these data were primarily at the aggregate, sector level, the targets were open for interpretation, and no sanctioning mechanism was involved. This is in clear contrast to the EU ETS. The majority of German industry was generally quite happy with the regulatory regime based on the VAs and embraced emissions trading only very reluctantly and hesitantly (Interviews, Berlin September 2005; Point Carbon 2005). The strongest opponents included powerful industrial associations like the Federation of German Industries (BDI) and the Chemical Industry Association (VCI). Support for the EU ETS was forthcoming from only a few big companies, including the subsidiaries of BP and Shell.

Compared to the UK, institutional misfit implying higher abatement costs among emitters seems to at least partly explain why Germany has lagged behind. The picture is, however, not entirely bleak. Closer examination of the negotiations on the German NAP I cap

between mid-2003 and March 2004 shows that the voluntary agreements came to represent one of four main focal points in the complicated process of determining the total emissions cap (Mullins 2005, p. 188).

4.2 Needs and deeds: Spain and Poland

In 2003, as the EU's NAP deadline was getting closer, a public debate developed in Spain questioning the fairness of the Spanish target under the EU burden-sharing agreement (ENDS Daily 2004). Under the burden-sharing agreement, Spain, like several other southern Member States, is allowed to increase its greenhouse gas emissions, but the Spanish target of a 15% emissions increase has been characterized as somewhat stricter than other southern countries' targets and national policies at the time (Ringius 1999).

By 2000 the Spanish emissions had risen far above the target (29% above 1990 level), and in 2004 emissions were almost 45% higher than 1990 levels. Furthermore, as pointed out in the 2004 EEA assessment, Spain was 30 percentage points above a linear Kyoto target path (EEA 2004, p. 14). According to the 2006 EEA assessment, the situation is basically the same (EEA 2006, p. 20). In sum, there has been a considerable need to squeeze the industries covered by the EU ETS in addition to other sectors. However, this need was initially not acted upon by the government.

It was only with the new socialist government in April 2004 that the Spanish implementation process started to follow a completely different track.¹⁰ The new prime minister early on pledged to comply with the emissions trading Directive whatever the costs. A contribution to relaxing the opposition towards emissions trading in the business community was the appointment of a former representative of industry (i.e. the company Repsol) to Director of the Spanish Climate Office (Interviews, Madrid May 2005). The new political drive in the implementation process led to a draft Spanish NAP being published in the end of June 2004 (ENDS Daily 2004). And as noted earlier, the new drive in Spanish climate policy has led to a NAP II that was applauded and approved by the Commission at first try in late February 2007. Hence, the Spanish case shows that a change in climate policy drive occurred due to a change in government responding to a high need for cutting emissions.¹¹

As with other Central and Eastern European Countries (CEECs), Poland is a party both to the UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. Within these instruments, the CEECs have status as 'Economies in Transition' (EITs). They are not part of the EU burden-sharing agreement, which only cover the 'old' EU-15. All CEECs have ratified the Kyoto Protocol, under which they are committed to emissions limitations as Annex B Parties. Poland is committed to a 6% reduction target. However, given the economic and industrial restructuring processes the CEECs have been through in the post-Communist period of the 1990s, their Kyoto targets are generally expected to be quite generous and set them up as sellers in the ETS.

As expected, progress in 2002 was pretty good. According to the 2004 EEA assessment, Poland was 29 percentage points below a linear Kyoto target path (EEA, 2004:17). According to the 2006 EEA assessment, progress is only marginally less promising (i.e. two percentage points 'down') (EEA, 2006:23). Good progress led the Polish Ministry of Environment representatives to state in February 2005 that Poland had already met its Kyoto commitments and that was why "it doesn't really have to take part in EU ETS" (Point Carbon 2005).

However, a warning signal can also be noted in the 2006 EEA report, as, by 2010, CEEC greenhouse gas emissions are expected to increase by 11 percentage points (EEA 2006, p. 24). This warning signal had clearly been picked up by industry. For instance, when the Commission demanded a significant cut of the proposed Polish cap in the spring of 2005, this

created a further uproar in several sectors of Polish industry, including the cement, steel and power sectors. The suggested cut ‘could hinder the growth of the Polish economy’ (EU Energy 2005, p. 18). This trade union and industry concern about the need for allowances in the future related to a fast growing economy was shared by the Polish government (Reuters/Planetark 2005). Furthermore, the case of Poland was further complicated by a change of government and environment minister in the spring of 2005. This led to further delays in the Polish ETS implementation process, and the late entry of Polish companies into the market impeded market liquidity. Hence, the Polish laggard position relates to both lacking need and political willingness to implement the ETS ambitiously.¹²

5 Explaining moderate implementation

Let us then turn to two other important factors which can shed further light upon why the system is only a moderate success so far. The first factor explored here is the level of centralization of the EU ETS. The second factor is the link between the EU ETS and CDM.

5.1 Decentralization and competition

The EU ETS became decentralized providing significant autonomy to the Member States in the allocation process. We would thus expect that Member States will be inclined to provide their own industries with generous allocations leading to low environmental ambitiousness. Our observations generally support this assumption for NAP I. In NAP I, lack of time in the implementation process led countries to focus ‘inwards,’ and there was not enough time for consultation with and learning from other Member States, although some valuable consultation took place within the framework of the Climate Change Committee (cf. Vis 2006, p. 204). No wonder then that the logic of the process resembled a ‘race to the bottom’, where Member States had incentives to over-allocate permits because of concerns over loss of competitiveness. The strongest indication of this dynamic was perhaps the observation that, in 2005, the CO₂ emissions were about 80 million tonnes or 4% lower than the number of allowances distributed to installations in order to cover 2005 emissions.

Although the EU ETS became basically decentralized, allocation of allowances was not totally unconstrained. The emissions trading Directive contained many important NAP design principles and signals, particularly Annex III which contained 11 guidance points and criteria for the development of NAPs.¹³ The Commission aimed at clarifying these criteria in the beginning of January 2004 (EU Commission 2004). One of the most important criteria was the need to be on a path towards the Kyoto target in the period 2005-2007 and consistent with Kyoto targets in the period 2008-2012. This provision resulted largely from the European Parliament’s efforts to centralize the system in the direction of setting the cap on the total quantity of allowances at EU level. Against this background, the European Commission was given the authority to approve (and consequently reject) NAPs which it thinks do not comply with the relevant provisions. This means that the consequences of a centralized system are still worth exploring since the EU ETS included elements aimed at harmonizing NAPs. More specifically, we assumed that such elements would pull in the direction of higher environmental ambitiousness.

As noted, the Commission has been assigned the function as the main supervisor and watchdog in relation to the processes of drawing up the NAPs and implementing the ETS. In the spirit of a decentralized system, “the Commission’s role was always going to be one of moderate tightening, as opposed to wholesale revision” (Vis 2006, p. 201). So what did the Commission achieve? Overall, it managed to shave off some 290 million tonnes of the proposed NAP I total. As this represents less than 4.5% of the total allocation of about 6.6 billion tonnes, this is not very much. However, the effect of common criteria is as expected.

In the case of NAP II, the Commission has adopted a tougher line and achieved more significant cuts, as shown in section 3.2.

In sum, the harmonizing elements of the national allocation process and the ‘watchdog’ role played by European Commission pulled in the direction of higher ambitiousness, as expected.

5.2 Link to CDM credits

The 2004 linking Directive opened up the possibility of using credits stemming from CDM projects already from the start of the EU ETS in 2005. However, the EU countries have no formal international targets to comply with before the 2008-12 Kyoto commitment period. This is why the discussions about NAP I ambitiousness centered on a ‘path’ to Kyoto compliance. Hence, in the ETS 2005-2007 pilot phase, there was in reality little sense in ‘using up’ CDM credits, even if they were available (which they were only to a very limited extent, as further described below).

Although the interest in and priority given to the development of CDM projects surged in the wake of high ETS prices in 2005 (cf. Grubb and Neuhoff 2006, p. 19), the fact is that the capacity of the CDM’s Executive Board (EB) to assess and approve projects has been inadequate (see e.g. ECP 2005; Reuters/Planetark 2006).¹⁴ Hence, the CDM EB has been characterized as something of a bottleneck in the system, slowing down the progress of approving projects. By late 2006, there were around 1400 submitted projects, with around 430 projects formally registered by the CDM EB, and with 88 Certified Emissions Reductions (CERs) approved by the EB and actually issued, the latter amounting to 22 MT CO₂ (Point Carbon 2006, p. 3). This is roughly similar to Slovenia’s total allowances in the ETS pilot phase. No country seemed inclined to use CDM credits for compliance purposes in the ETS pilot phase.

However, for the second phase of the ETS, the CDM issue becomes much more pertinent. Earlier EU discussion about ‘supplementarity’ centered on the extent to which the Member States could rely on credits from the Kyoto mechanisms. In addition to opening up for CDM credits from 2005 onwards, a main outcome was a general requirement that the use of the mechanisms should be only ‘supplemental to domestic action’. In the Commission’s December 2005 guidelines for the second-phase NAPs, no further specified limit was introduced. The Commission only repeated that the Member States’ planned use of such credits should be consistent with their supplementarity obligations under the Kyoto Protocol (EU Commission 2005, p. 7-8).

The Commission’s first NAP II verdict in late November 2006 clarified that not ‘anything goes’ with regard to supplementarity. The Commission’s press release stated that “the Commission considers that, as a general rule, installations should be allowed to use JI and CDM credits to supplement their allowance allocation by up to 10%. In assessing proposed limits that are greater than 10%, the Commission has taken into account the efforts a Member State has to undertake to respect its Kyoto target” (EU Commission 2006, p. 3). As can be recalled, nine out of ten proposed NAP II plans were rejected by the Commission in its first assessment. In three of these cases, this included their proposed use of JI/CDM credits (i.e. Ireland, Sweden and Malta). Overall, the Commission has cut one third of the CDM plans, more than halving the plans of Ireland, Spain and Poland.

This specified and tougher line taken by the Commission can also be seen in light of alarming reports published in the fall of 2006, indicating that the Member States’ planned use of JI/CDM credits at this point in time was “significantly larger than the expected shortage” (of allowances) (WWF 2006), pointing towards a downward pressure on prices in phase two of the ETS and low incentives to abatement *within the EU itself* (Ecofys 2006). Hence, it is clear that the Member States’ and the Commission’s further handling of this issue is of

substantial importance for the very climate policy success of the ETS, and the possibility of seeing allowance prices rising to levels stable and high enough to spur substantial further abatement efforts in the EU. Somewhat paradoxically, the CDM factor may increase the willingness for governments to take on ambitious ETS targets, but in the implementation phase mean less abatement taking place in the EU area. Hence, increased cost effectiveness may go hand in hand with less reduction within the EU.

6 Conclusion

The analysis in this article provides further substance to the value of applying a multi-level approach to understanding not only EU decision-making, but also implementation of EU policies. In order to explain the ‘moderate but somewhat mixed’ ETS implementation so far, it is absolutely essential to bring in factors both at the domestic, EU and global levels.

Nationally, better fit between existing climate policy instruments and the EU ETS is an important factor for understanding why the UK has been more ambitious than Germany. A combination of varying need for the EU ETS and the respective governments’ climate policy drive contribute to our understanding of the differences between Spain and Poland. With regard to the EU level, a basically decentralized system provided the member-states with significant autonomy. There were incentives to treat domestic industry as favorably as possible, as no one was interested in being the one ‘left holding the bag’ and giving its particular industry less favorable conditions than its competitors. High time pressure meant limited time for inter-state consultation and reassuring, and led to a certain ‘race to the bottom’ with regard to NAP ambitiousness. However, not all harmonization ambitions were defeated in the setting up of the EU ETS, as witnessed by the role of EU Commission as the central NAP and ETS watchdog. Despite its somewhat wing-clipped mandate, the Commission managed to toughen up the NAPs of all four countries analyzed here.

Globally, we focused on the links between the EU ETS and the Clean Development Mechanism (CDM). Could it be that a lacking possibility of using such cheaper priced ‘global credits’ for ETS compliance purposes already from 2005 on further dampened the willingness to agree to ambitious NAP I caps? The answer is no. True, it has taken considerable time to get the CDM machinery really into gear and only a limited number of final and usable credits are so far available. But even if more credits had been available, it would not have made very much sense to use them in the pilot phase because tougher times, with formal Kyoto commitments, did not kick in before 2008. However, from 2008 on, the use of such credits has become a much more important and pertinent matter, and one of the important determinants for the degree to which the EU ETS will really stimulate abatement measures also in the EU.

Finally, what about the prospects ahead? As noted earlier, although the NAP II process started out with alarmingly low ambitiousness, the Commission took a tougher line and succeeded in toughening up almost all the NAPs. Allowances for the EU ETS’s second phase are currently trading for around 21-22 euro, so it is clear that the market has a certain confidence in the EU countries’ and the Commission’s abilities to deliver. However, analysts are far from certain that the necessary scarcity and related high and stable allowance price will come about.

In January 2008 the Commission launched its proposal for a revised ETS in the post-Kyoto 2013-2020 period (EU Commission 2008). Here, the Commission has taken the centralization process already started in NAP II further and proposes a centralized and harmonized cap setting process at EU level. If the proposal is adopted, National Allocation Plans will not be needed anymore. Furthermore, if no ‘satisfactory’ global agreement is reached in the next years, then no new CDM/JI credits will be allowed to enter the ETS from 2013 on. This will probably lead to less interest in CDM projects. But if such an agreement is

reached, then the opening up for CDM is increased considerably. The revised ETS is set to be finally adopted in the spring of 2009.

Acknowledgements

We would like to express thanks to Steinar Andresen, FNI, and Sebastian Oberthür, IES, for helpful comments, and to Lynn P. Nygaard for language polishing and Maryanne Rygg for editorial assistance. The article is based on Chapter 6 in Skjærseth and Wettestad (2008).

References

- CAN (2006). *National Allocation Plans 2005-7: Do they deliver?* Brussels: Climate Action Network Europe.
- CEPS (2002). *Greenhouse gas emissions trading in Europe: Conditions for environmental credibility and economic efficiency*. CEPS Task Force Report no.43.
- Del Rio, P. (2007). Spain, in Ellerman, D., Buchner, B. and Carraro, C. (Eds.), *Allocation in the European Emissions Trading Scheme*. (Cambridge: Cambridge University Press), 182-213.
- ECP (2005). *Improving the Clean Development Mechanism, European Climate Platform* (Report for presentation at a UNFCCC side event in Montreal, Canada).
- Ecofys (2004). *Analysis of the National Allocation Plans for the EU Emissions Trading Scheme*. (Utrecht, NL: Ecofys)
- Ecofys (2006). Market risks becoming long. Ecofys press release, 27 November 2006.
- EEA (2004). *Greenhouse gas emissions trends and projections in Europe 2004*. EEA Report No.5/2004. (Copenhagen: European Environment Agency).
- EEA (2006). *Greenhouse gas emissions trends and projections in Europe 2006*. EEA Report No.9/2006. (Copenhagen: European Environment Agency).
- Ellerman, D. & Buchner, B. (2007). The European Union Emissions Trading scheme: Origins, Allocation, and Early Results. *Review of Environmental Economics and Policy*, 1:1, 66-87
- ENDS Daily (2004a). *Spain wobbles on Kyoto protocol commitments*. Issue 1597, 28 January 2004.
- ENDS Daily (2004b). *EU urged to take hard line on emissions plans*. Issue 1684, 10 June 2004.
- ENDS Daily (2006). *Dimas gives damning verdict on emissions plans*. Issue 2190, 23 October 2006.
- ENDS Report (2004). *Watchdog fails to bite on UK Emissions Trading Scheme*. No. 351, 27-30.
- ENDS Report (2006). *Excess credits threaten EU ETS, says WWF*. No.381, 13.
- EU Commission (2004). *Communication from the Commission on guidance to assist Member States in the implementation of the criteria listed in Annex III to Directive 2003/87/EC*. Brussels. COM(2003) 830 final.
- EU Commission (2005). *Communication from the Commission: Further guidance on allocation plans for the 2008 to 2012 trading period of the EU emissions trading scheme*. Brussels. COM(2005) 703 Final.
- EU Commission (2006). *EU emissions trading scheme delivers first verified emissions data for installations*. Brussels. IP/06/612, 15 May 2006.

- EU Commission (2006). Emissions trading: Commission decides on first set of national allocation plans for the 2008-2012 trading period, Brussels. IP/06/1650, 29 May 2006.
- EU Commission (2008). Proposal for a Directive of the European Parliament and the Council amending Directive 2003/87/EC as to improve and extend the greenhouse gas allowance trading system of the Community. Brussels, COM(2008) 16 final, 23 January 2008.
- EU Council (2003). Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EU.
- EU Council (2004). Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms.
- EU Energy (2005). Government, industry 'disappointed' by EU NAP decision. Issue 104, 25 March 2005.
- Fairbrass, J. & Jordan, A. (2004). Multi-level governance and environmental policy. (Chapter 9 in I. Bache & M. Flinders, (Eds.), *Multi-level governance* (pp.147-165). Oxford: Oxford University Press.
- Fraunhofer ISI (2002). German policy context – other climate policy instruments. Report for the project 'Interaction in EU climate policy'.
- Grubb, M., Vrolijk, C. & Brack, D. (1999). *The Kyoto Protocol – A guide and assessment*. (London: The Royal Institute of International Affairs and Earthscan).
- Grubb, M., Azar, C., & Persson, M. (2005). Allowance allocation in the European emissions trading system: a commentary. *Climate Policy*, 5, 127-136
- Grubb, M. & Neuhoff, K. (2006). Allocation and competitiveness in the EU Emissions Trading Scheme: Policy overview. *Climate Policy* 6:1, 7-30
- Harrison, D. & Radov, D. (2007). United Kingdom, in Ellerman, D., Buchner, B. and Carraro, C. (Eds.). *Allocation in the European Emissions Trading Scheme*. (Cambridge: Cambridge University Press), 41-71.
- Hooghe, L. & Marks, G. (2001). *Multi-Level governance and European integration*. (Oxford: Rowman and Littlefield).
- Jankowski, B. (2007), Poland, in Ellerman, D., Buchner, B. and Carraro, C. (Eds.). *Allocation in the European Emissions Trading Scheme*. (Cambridge: Cambridge University Press), 301-339.
- Knill, C. & Lenschow, A. (Eds.) (2000). *Implementing EU environmental policy: new directions and old problems*. (Manchester: Manchester University Press).
- Knill, C. (2001). *The Europeanisation of National Administrations: Patterns of Institutional Change and Persistence*. Cambridge: Cambridge University Press.
- Kruger, J. & Pizer, W.A. (2004, April). The EU Emissions Trading Directive: Opportunities and potential pitfalls. RFF report DP 04-24. (Washington, DC: Resources for the Future).
- Matthes, F.C. and Schafhausen, F. (2007). Germany, in Ellerman, D., Buchner, B. and Carraro, C. (Eds.). *Allocation in the European Emissions Trading Scheme*. (Cambridge: Cambridge University Press), 72-105.
- Mullins, F. (2005). Implementation Challenges: Insights from the European Union Emission Allowance Trading Scheme. In Yamin, F. (Ed.), *Climate change and carbon markets: A handbook of emissions reduction mechanisms* (pp. 183-200). London: Earthscan.

- NAO (2004). *The UK Emissions Trading Scheme – A new way to combat climate change*. (London: National Audit Office).
- Neuhoff, K., Ferrari, F., Grubb, M., Gabel, E. & Keats, K. (2006). Emission projections 2008-2012 versus NAPs II. *Climate Policy* 6, 395-410.
- Point Carbon (2005a). Polish NAP under pressure, 22 February 2005.
- Point Carbon (2005b). German installations see emissions trading negatively, 26 September 2005.
- Point Carbon (2006a). Point Carbon expects the EC to slash 240 million allowances per year off NAPs, 30 October 2006.
- Point Carbon (2006b). CDM and JI project pipeline, CDM & JI Monitor, 13 December 2006.
- Point Carbon (2007). Carbon 2007 – A new climate for carbon trading Report.
- Porter, G. (1999). Trade competition and pollution standards: “Race to the bottom” or “stuck at the bottom”? *Journal of Environment & Development*, 8:2, 133-151.
- Reuters/Planetark (2005). Poland weighing legal options on EU emissions, 20 March 2006.
- Reuters/Planetark (2006). Investors wary of Kyoto market controls, 9 November 2006.
- Ringius, L. (1999). Differentiation, leaders, and fairness: Negotiating climate commitments in the European Community. *International Negotiation*, 4, 133-166.
- Rogge, K., Schleich, J. & Betz, R. (2006). *An Early Assessment of National Allocation Plans for Phase 2 of EU Emission Trading*. (Karlsruhe: Fraunhofer ISI).
- Skjærseth, J.B. & Wettestad, J. (2008). *EU Emissions Trading: Initiation, Decision-making and Implementation*. (Aldershot: Ashgate).
- Sorrell, S. (2003a). *Back to the drawing board? Implications of the EU Emissions Trading Directive for UK climate policy*. SPRU report for the project ‘Interaction in EU climate policy’. January. (Brighton, UK: SPRU, The University of Sussex).
- Sorrell, S. (2003b). Carbon trading in the policy mix. *Oxford Review of Economic Policy*, 19:3, 420-437.
- Vis, P. (2006). The first allocation round: a brief history. (In Delbeke, J., Hartridge, O., Lefevre, J., Meadows, D., Runge-Metzner, A., Slingenberg, Y., Vainio, M, Vis, P. & Zapfel, P. (Eds.), *EU energy law, volume IV EU environmental law, the EU greenhouse gas Emissions Trading Scheme* (pp.187-212). Brussels: Claeys&Casteels).
- Weale, A., Pridham, G., Cini, M., Konstakopulos, D., Porter, M. & Flynn, B. (2000). *Environmental governance in Europe*. (Oxford, Oxford University Press).
- Wettestad, J. (2004), The Rapid EU Process: Causes and Consequences, *Environment*, vol.46, no.9, November 2004, pp. 43–44.
- Wettestad, J. (2005), The Making of the 2003 EU Emissions Trading Directive: Ultra-Quick Process Due To Entrepreneurial Proficiency? *Global Environmental Politics*, 5(1), 1-24.
- Wettestad and Sæverud (2005), Implementing EU Emissions Trading: Institutional Misfit?, FNI Report 10/2005, The Fridtjof Nansen Institute.
- WWF (2006a). EU member states abuse emissions trading system. Press release from European Policy Office, WWF.
- WWF (2006b). Use of CDM/JI project credits by participants in phase II of the EU emissions trading scheme – A WWF summary of the Ecofys UK report, November 2006.
- Zetterberg, L., Nilsson, K., Kumlin, A.S., & Birgersdotter, L. (2004, August). Analysis of national allocation plans for the EU ETS. (Stockholm, Sweden: IVL – Swedish Environmental Research Institute Ltd.).

Interviews:

Chris Dodwell, DEFRA, UK, 16 February 2005.

Adrian Gault, DTI, UK, 16 February 2005.

Teresa Ribera, Ministry of Environment, Spain, 9 May 2005.

Larry Philips, CO2 Spain, 9 May 2005.

Lucia Martin Bermejo, Confederation of Industry, Spain, 10 May 2005.

Pedro Mora, Cement Industry, Spain, 10 May 2005.

Javier Rodriguez Morales, Paper Industry, Spain, 10 May 2005.

Jose Luis Ortega, Greenpeace Spain, 10 May 2005.

Eduardo Loma-Osorio Riano/Felix de las Fuentes, Iberdrola, Spain, 10 May 2005.

Klaus Werner, E.ON AG, Germany, 28 September 2005.

Felix Christian Matthes, Öko-Institut e.V, Germany, 28 September 2005.

Stefan Besser, Ministry of Environment, Germany, 28 September 2005.

Joachim Löchte, RWE AG, Germany, 29 September 2005.

Jürgen Landgrebe/Thomas Langrock, Federal Environmental Agency, Germany, 29 September 2005.

¹ The Kyoto Protocol was adopted in December 1997 and, in addition to emissions trading, two other flexible mechanisms were established: the Clean Development Mechanism (CDM) and Joint Implementation (JI) (see e.g. Grubb et.al., 1999).

² As noted by Vis (2006, p. 188): “Only if there are fewer allowances than there would be emissions in the absence of a trading scheme will there be any environmental added value”.

³ One could argue, however, that high data certainty could reveal little need for the EU ETS to meet relevant commitments and previous experience with trading could be negative. This situation would probably affect ambitiousness negatively. See Knill (2001) for a differentiated and nuanced approach to the ‘goodness of fit’ proposition.

⁴ As elaborated in section three, the EU ETS so far only covers certain industries, accounting for around half of EU CO₂ emissions.

⁵ In the 2005 NAP II Communication, it is for instance noted that “the EU ETS needs to be used more to fully realize the potential of emissions trading” (EU Commission 2005, p. 4).

⁶ Still, it should also be mentioned that the case of the UK in NAP I was prolonged and complicated when the British government tried to submit a revised and somewhat less ambitious NAP in November 2004. See Vis (2006, p. 204-206) for an overview and discussion of this case.

⁷ But as discussed by Harrison and Radov (2007), much additional data collection and institutional groundwork had to be carried out in order to meet EU ETS requirements.

⁸ In the British ETS, 31 organizations (‘direct participants’) took on targets to reduce their emissions against 1998–2000 levels, aiming to deliver close to 12 million tonnes of additional CO₂ equivalent emission reductions over the period 2002–2006 (www.defra.gov.uk/environment/climatechange/trading/).

⁹ As noted by Matthes and Schafhausen (2007, p. 72-73), ‘Significant powers from politics and the Federal Administration have a very negative stance towards the implementation of the EU Emissions Trading System (EU ETS), or still oppose it even today’.

¹⁰ The positive impact of the new government is also emphasised by Del Rio (2007, p. 208).

¹¹ This pattern is not unique for Spain. The same dynamic can be seen in the case of Italy where a change of government in the spring of 2005 led to a more positive and vigorous NAP process. This may indicate that environmental issues generally figure higher on the agendas of European socialists/social-democrats than Conservatives.

¹² EU ETS implementation in Poland has generally been characterised as ‘wearing an ill-fitted suit’. See Jankowski (2007, p. 333).

¹³ (1) Consistency between total quantity of allowances and the Member States’ commitments under the Kyoto Protocol; (2) Consistency between quantity of allowances and assessments of emissions development; (3) Consistency between quantity of allowances and potential to reduce emissions; (4) Consistency with other Community legislative and policy instruments; (5) Non-discrimination between companies or sectors; (6) Information on the treatment of new entrants; (7) Information on how early action would be taken into account; (8) Information on how clean technology would be taken into account; (9) How the public would be involved; (10) List of installations and their respective allowances; 11) How competition from outside the EU would be taken into account.

¹⁴ The CDM Executive Board is composed of ten members drawn from all constituencies of the Kyoto Protocol’s parties.