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Interaction between EU Carbon Trading and International Institutions: Synergies or Disruptions?

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Abstract

This paper discusses various dimensions of the developing positive and negative interaction between the company focused EU emissions trading (ETS) and the country focused global carbon trading and other relevant global institutions. More specifically, the following three cases of interaction are analysed: First, the interaction between the Kyoto Protocol (as source) and the ETS as target. The first and seminal phase of this interaction started quite immediately after the adoption of the Protocol in late 1997. A second phase of interaction started in 2004 when the EU states started to develop national allocation plans (NAPs) where bringing in credits/allowances developed under the Clean Development Mechanism (CDM) and (subsequently) Joint Implementation (JI) became one compliance strategy. Second, the opposite relationship is examined. i.e. with the ETS as the source and the Kyoto Protocol institutions as targets. The first phase started after the adoption of the 2003 ET Directive and with the developing ETS possibly leading to a more rapid and extensive CDM development than would otherwise have been the case. A separate case of interaction deals with the possible role the ETS plays and could play for an emerging global carbon market. Third, attention is given to a different and quite recent type of interaction involving the ETS, namely interaction between the ETS and the International Civil Aviation Organization (ICAO).

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1. INTRODUCTION¹

Much as a follow-up of the 1997 Kyoto Protocol under the UN Framework Convention on Climate Change (UNFCCC), the EU started its pilot emissions trading system (EU ETS) in the period 2005-7, based on the 2003 emissions trading (ET) Directive (Skjærseth/Wettestad 2008). The ETS will continue first in the 2008-12 Kyoto commitment phase and then also post-Kyoto (i.e. 2013-2020), broadening its sectoral scope from the power sector and some industries to include e.g. aviation. Although there are clear differences between the EU ETS and global institutions such as the UNFCCC/Kyoto Protocol and the International Civil Aviation Organization (ICAO) with regard to institutional 'architecture', there is also significant present or future overlap with regard to targeted actors and activities. In the terms proposed by Oran Young, there are both 'functional' and 'political' linkages between the ETS and such global institutions (Young 1999).² Linkages also imply that *interaction* has been and will be taking place between the ETS and global institutions, i.e. that these institutions will causally influence each other, either complicating or facilitating decision-making and/or implementation (Oberthur/Gehring 2006).

Emissions trading is fundamentally about bringing environmental concerns – and in the case of the ETS, climate change concerns – into corporate boardrooms and the standard operating procedures of business and political executives, be they power producers, airline operators or others. So it can be framed and analysed as a special case of environmental policy integration (cf. Homeyer 2006). As noted by Homeyer, 'competition' which harnesses market forces to environmental purposes can be seen as a 'market-oriented governance' that may be employed to improve EPI (ibid.:10).

Furthermore, emissions trading can be seen as an integration device that brings in environmental concerns in a more positive manner than traditional command and control policies, as such trading offers more flexibility and possibly even additional profits. Flexibility, for instance, in achieving compliance either by choosing to carry out internal abatement, to buy ETS allowances, or to buy credits from the flexibility mechanisms under the 1997 Kyoto Protocol (i.e. the Clean Development Mechanism and the Joint Implementation). This flexibility also means considerable complexity however, making good coordination and synergistic interaction between these institutional mechanisms at various levels and in various sectors crucially important. If these mechanisms do not interact

smoothly, then corporate and political leaders may become disillusioned with the whole 'business of climate change'.

As there is so far only scattered evidence of the interaction between the ETS and relevant global institutions, this paper seeks to collect and turn these bits and pieces of evidence into a more systematic analysis. Hence, the main questions addressed in this explorative paper are: first, what has been the more specific character of selected, main interactions so far – synergistic/positive or disruptive/problematic? And second, what are the main prospects ahead? The main analytical foundation for this venture is the concepts and analyses carried out in Oberthur and Gehring (2006) and Stokke (2007). As further elaborated in section two, important conceptual prerequisites for good interaction analyses include the clear identification of a 'source' and a 'target' institution, and being open to several different types of interaction, important ones being 'cognitive', 'normative' (through commitment), and 'utilitarian' (through provision of incentives).

It is easy to find anecdotal evidence which may indicate problematic interactions. For instance, in connection with the debate about the possibility of agreeing upon ambitious allocation plans in the ETS, fears have been expressed that the availability and use of relatively cheap Kyoto Protocol Clean Development Mechanism (CDM) credits will reduce the willingness of EU industry to do something about their own emissions (e.g. WWF 2006). Furthermore, in a response to the process of including the sector of aviation in the ETS late in the Kyoto commitment phase, US representatives have claimed that such an inclusion will not be legal according to ICAO rules (e.g. ENDS Daily June 28 2006).

But there are also clear indications of synergistic interactions. For instance, it has been claimed that the establishment of the ETS has led to significantly increased interest in the development of CDM projects than would have been the case without the ETS (e.g. Point Carbon 2007). It has also been argued that the possibility to include CDM credits in the allocation processes under the ETS has increased the willingness of industry to agree to ambitious allocations (Skjærseth/Wetttestad 2008). Furthermore, the ETS has been lauded as a model for an emerging global carbon market under the United Nations Framework Convention on Climate Change (UNFCCC) (Kruger et al 2007), not least inspiring regional trading initiatives in the US.

As indicated, the purpose of this paper is to examine such interactions more closely, both in terms of past events and prospects ahead. In line with Oberthur (2006), some key interactions will be singled out for a more thorough analysis. More specifically, being arguably the best documented cases of interaction so far, three cases will be tentatively explored in the paper. In each of the cases, specific claims/theses extracted from existing debate and literature will form points of departure.

In section three, the interaction between the Kyoto Protocol as source and the ETS as target will be scrutinised. The first and seminal phase, and hence sub-case, of this interaction started quite immediately after the adoption of the Protocol in late 1997. A second phase and sub-case of interaction started in 2004 when the EU states started to develop national allocation plans (NAPs) where bringing in credits/allowances developed under the Clean Development Mechanism (CDM) and (subsequently) Joint Implementation (JI) became one compliance strategy.

In section four the opposite relationship will be more closely examined. i.e. with the ETS as the source and the Kyoto Protocol institutions as targets. This can also be analysed in several phases, with the first phase and sub-case starting after the adoption of the 2003 ET Directive and with the developing ETS possibly leading to a more rapid and extensive CDM development than would otherwise have been the case. A second and separate sub-case of interaction deals with the possible (model) role the ETS plays and may play for an emerging global carbon market under the UNFCCC.

In section five attention will be given to a different type of interaction involving the EU ETS, namely the two-way interaction between the ETS and the International Civil Aviation Organization (ICAO). A first claim and sub-case to be further scrutinised here is that inaction by ICAO has served to speed up the inclusion of aviation within the ETS. The other way around, a second claim and sub-case is that the inclusion of aviation in the ETS could lead to ICAO rising to the challenge and hence speeding up the inclusion of this sector in the global regulatory framework.

Section six will then wind up the paper with a summary of main findings and some reflections on the prospects ahead. Before we delve deeper into these interactions, we need to further clarify the conceptual and analytical framework.

2. ANALYTICAL PERSPECTIVE

As noted, institutional interaction pertains to a cause-effect relationship between two institutions. According to Breitmeier (2000), *interaction will occur if one institution affects the development or performance of another institution.*

As pointed out by Oberthur and Gehring (2006), effects may be beneficial, adverse or neutral for the target institution. 'Beneficial effects will create *synergy* between the two institutions because the policy direction of the target institution is supported by measures originating from the source institution...and adverse effects will result in *disruption* of target institution policies because measures originating from the source institution thwart or undermine the effectiveness of the target institution's own measures, or they force the target institution to adopt unwanted rules' (ibid.: 46).

Furthermore, establishing a clearcut case of interaction requires identification of '1) the source institution and, more specifically, the relevant rules/decision(s) from which influence originates; 2) the target institution and, more specifically, the relevant parts of the institution itself or the issue area governed by it that are subject to the influence of the source institution; 3) a unidirectional causal pathway connecting the two institutions' (ibid.: 27). However, a target institution may respond to the development of new rules within a source institution, even before this new rule is adopted. It is important to prove that the observed changes within the target institution (or the issue area governed by it) could not be expected to have occurred in the absence of the source institution or its relevant parts (ibid.: 28).

Getting adequate proof requires identification of specific and more delimited 'cases' of interaction, as two institutions can be involved in numerous cases of interaction at the same time; an interaction situation may involve more than two institutions; and/or if two institutions coevolve over time, making it useful to analytically divide the interaction into several phases. Furthermore, a causal mechanism of institutional interaction generally consists of three separate stages. As the first step, the source affects the preferences or behavior of relevant actors 'within its own domain' (ibid.: 32). Next, this effect leads to a changes of preferences or behavior of actors 'relevant to the target institution' (ibid.). Finally, 'individual action must produce the effect observed within the target institution or its issue' (ibid.).

With regard to *how* the source may affect preferences or behavior within the target institution, Oberthur and Gehring (ibid.) and Stokke (2007) basically point out three main ways/mechanisms. First, there is a '*cognitive*' pathway, where information, knowledge or ideas produced within the source institution produce changes in the thinking and preferences of actors within the target institution. For instance with regard to the Kyoto Protocol-ETS interaction, is it so that ideas about how to deal with non-compliance in the Kyoto Protocol served as a model for how this aspect of the ETS was developed?

Second, there is a '*normative*' pathway, where *commitments* entered into by some members of the source institution affect the preferences of actors within the target institution. It requires a certain overlap of both the memberships and the issue areas of the interacting institutions. As noted by Oberthur and Gehring (2006: 37), 'interaction through commitment is based on the desire of member states to avoid mutually incompatible obligations, or on their desire to broaden the geographic scope of such obligations'. Again using the Kyoto Protocol-ETS interaction as a possible example, is it so that the commitment of EU Member States to a Kyoto Protocol significantly 'flavoured' by international flexibility mechanisms changed the preferences of EU States that previously were overall highly sceptical towards such flexible mechanisms, and subsequently led to the establishment of the ETS?

Third, as pointed out by Stokke (2007), there is a '*utilitarian*' pathway, where the rules and programs under one institution make problem-solving activity under another institution less costly or more attractive. Once again imagining a Kyoto Protocol-ETS example, could it be that companies included in the ETS have implemented abatement measures that they would not have implemented in the absence of the ETS, and that these abatement measures make it less costly for the EU to comply with its Kyoto Protocol commitment?

As noted in the introduction, in order for emissions trading and climate policies at various levels and in various sectors to optimally contribute to environmental policy integration, coordination and synergies should be maximised through effective 'interplay management' (cf. Oberthur 2008). As outlined by Oberthur, there are in principle four approaches, at various levels: revising the overarching institutional framework; establishing joint management between institutions; unilateral moves by one of the institutions; and loose, uncoordinated management. In the concluding section, we will discuss the relevance of these

various approaches for maximising coordination and synergies in the three main cases addressed in this paper.

On the basis of this conceptual 'roadmap', let us then turn to the first set of identified cases of interaction, with the Kyoto Protocol seen as the source and the EU ETS as the target.

3. HOW THE KYOTO PROTOCOL INITIATED THE ETS AND LATER INCREASED ETS AMBITIOUSNESS: SYNERGISTIC INTERACTION WITH THE ETS?

In Oberthur's (2006) overview list of 24 interactions between the Kyoto Protocol and other international institutions, the Protocol was briefly indicated as a triggering factor for the establishment of the EU ETS; the latter 'expected to result in reductions of GHG emissions' (ibid.: 58). As indicated in the introduction, this interaction seems best analysed by distinguishing two subsequent phases, the first one starting with the adoption of the Kyoto Protocol in 1997, and the second one starting in 2003 with the production of the first ETS National Allocation Plans (NAPs).

3.1. Did the Kyoto Protocol initiate the EU ETS?

As further analysed in Skjærseth and Wettestad (2008), the adoption of the Kyoto Protocol is one of three possible good explanations for why the previously flexible-mechanism sceptic the EU made a turn-about in 1998 and started to develop an internal EU emissions trading system. Rival explanations were, first, that the turn-about could be explained by a more independent Member State change of preferences, or, second, that the turn-about could be explained by a change of position of EU institutions and non-state actors. A main conclusion in our book was that the Kyoto Protocol perspective gained strong empirical support.

Recapitulating some main elements of that analysis, the starting point of the interaction was obviously the adoption of the Kyoto Protocol and not least the fact that a key element of the Protocol was the establishment of three flexible mechanisms: emissions trading, a Clean Development Mechanism (CDM), and a Joint Implementation (JI) mechanism. Was the turn-about of the Commission and subsequently the whole EU from mid-1998 a simple case of interaction by commitment? Not directly. The clause about emissions trading in the Protocol (i.e. Article 17) only stated that 'the Parties included in annex B *may* participate in

emissions trading for the purposes of fulfilling their commitments under Article 3 of this protocol' (my italics). It was furthermore stated that the CoP (Conference of the Parties) was to define the relevant 'principles, modalities, rules and guidelines, in particular for verification, reporting and accountability for emissions trading'. So key elements of the institutional architecture were to be developed at a later stage. In addition, it was stated that trading should be 'supplemental' to domestic actions for the purpose of meeting the Parties' commitments under the Protocol. All in all, the EU's main commitments under the Protocol were undoubtedly, first and foremost, the obligation to reduce greenhouse gas emissions by eight percent by 2008-12, and second, along with other parties, to show demonstrable progress by 2005 (cf. Article 3, annex I).

It can be argued that the development of EU emissions trading was a very natural response to the commitments taken on in Kyoto, not least in light of the failure to establish another possibly effective EU-wide climate policy instrument, namely a carbon tax, and also taking into account the EU's leadership ambitions in global climate policy (e.g. Skjærseth 1994; Wettestad 2000, 2001). So it makes sense to argue that the Kyoto Protocol exerted considerable pressure in the direction of establishing an effective EU-wide climate policy instrument, and in 1998 there was not a wide range of politically feasible instruments to choose from. Choosing emissions trading could reduce the costs of complying with the Kyoto target (Skjærseth/Wettestad 2008).

However, as further analysed in Skjærseth and Wettestad (ibid.), in order to further understand the specific choice of the trading instrument, it is necessary to bring in evidence from the EU institutions perspective, not least the 'inflow' of economists sympathetic towards the trading instrument into the Commission's climate change personnel in 1997/early 1998.

Might it also be relevant to regard this interaction as a cognitive one, i.e. that information about the emissions trading idea was produced within the context of the Kyoto Protocol and subsequently influenced the initiation of the EU ETS? It is clear that EU negotiators learned more about emissions trading through the negotiations on the Kyoto Protocol. Particularly the US was a driving force for bringing in emissions trading and flexibility mechanisms into the discussions about the possible design of the Kyoto Protocol. The US had practical experience with emissions trading brought about by the 1990 establishment of US systems on sulphur dioxide (SO₂) and nitrogen oxides (NO_x) emissions trading (e.g.

Stavins 2003), and was also influential as a leader in the JUSCANNZ group³ (Yamin 2005). So this pathway is also of some relevance.

But how 'deep' was this interaction? As indicated in section two, did the Kyoto Protocol also provide applicable models for more specific ETS design features such as the non-compliance procedures? The answer is no. As noted above, the Kyoto Protocol stated that the more specific rules and procedures for international emissions trading were to be developed at a later stage. The main meetings in this regard did not take place until the summer and fall of 2001 (Bonn in July and, particularly, Marrakech in October). At this stage, the main elements of the EU ETS had been shaped. The ETS Green Paper was put forward in March 2000 and a draft ETS proposal was circulated within the Commission in May 2001. Furthermore, the ETS was directed towards companies, not governments (as the Kyoto system), something which generally reduced the direct model value of clarification of international trading rules. So the Kyoto Protocol did not influence the specific design of the EU ETS to a great degree.

Summing up this interaction, the ETS may be seen as 'nested' in the Kyoto Protocol, and there are functional linkages. The Kyoto Protocol's targets and commitments were important causal factors for moving the EU in the direction of establishing an ETS. But the Protocol's initial trading design ideas were too vague to offer much help in the specific EU ETS design process.

3.2. Have the Kyoto Protocol mechanisms bolstered the environmental ambitiousness of the ETS?

There are at least two sub-claims here, emphasising different dynamics in different phases of this interaction. First, on the one hand, there is the claim, focusing upon the more short-term NAP II decision-making dynamics, that the existence of and possibility of using lower-priced CDM credits to achieve compliance with companies' ETS targets has led countries and companies to agree to more stringent emission caps than they otherwise would have done (Skjærseth/Wettestad 2008). Second, on the other hand, fears have been expressed that the availability and use of such relatively cheap CDM credits will reduce the willingness of EU industry to do something about their own emissions and hence, in a more long-term perspective, lead to less abatement within the EU itself (e.g. WWF 2006).

What is then the starting point of this possible interaction? As indicated above, the CDM was formally established as a part of the Kyoto Protocol in 1997. The

CDM's purpose was defined in Article 12. It was to help Annex I countries to comply with their emission reduction commitments, to assist developing countries to achieve sustainable development, and ultimately contribute to reduced greenhouse gas concentrations in the atmosphere. In order to placate sceptics to the flexibility mechanisms and fears that these mechanisms would allow developed countries to simply 'buy themselves out' of international commitments and continue domestic pollution habits 'undisturbed', Article 6.1d in the Protocol was given a provision that the use of CDM was to be 'supplemental' to domestic actions to reduce emissions.

Due to expectations about the nature and use of the flexibility mechanisms to be clarified at the fourth Conference of the Parties (CoP) in Buenos Aires in November 1998, a lively debate erupted within the EU about the possible use of the flexible mechanisms and the very balance between measures 'at home' in the EU and 'abroad' in the South and East. How to interpret the 'supplemental' concept? As further described in Skjærseth and Wettestad (2008), this debate dominated the EU climate policy agenda during much of 1998 and 1999. In the first main EU document on possible ETS design, i.e. the March 2000 Green Paper, the relationship to the flexibility mechanisms was not specifically touched upon.

When the Commission put forward an ET Directive proposal in October 2001, the main suggestion with regard to the link to the flexibility mechanisms was to decide upon the nature of this link in a separate subsequent proposal, not least due to the fact that the more specific design of the mechanisms remained to be further clarified.⁴ This was also the outcome in the 2003 ET Directive. The negotiation on a linking directive started almost immediately after the ET Directive was adopted in July 2003. As further discussed by Hægstad Flåm (2007), when agreement was reached on the linking directive in April 2004, a main outcome was that CDM credits could be used from the start of the ETS in January 2005, while JI credits were usable from 2008 on. At this point in time, the process of producing the National Allocation Plans (NAPs) for the ETS pilot phase was well underway, as the main formal deadline for the submission of plans in NAP I was the end of March 2004. So as indicated, the main starting point for this interaction can be argued to be summer 2003 and the agreement on the ET Directive, setting in motion the NAP processes.

How, then, did the pilot phase NAPs of key ETS countries and emitters such as Germany, Poland and the UK treat the CDM issue? It was not mentioned at all in

the German and Polish plans. In the UK plan, it was briefly noted that the UK was on course to meet its Kyoto target and no use of the flexible mechanisms was intended (DEFRA 2004: 15). This indicates that countries and companies were quite uncertain with regard to the possible role CDM could play in this phase, which is very understandable as neither the linking directive had been finalised nor the Kyoto Protocol entered into force when the main work on the plans was carried out.

However, from the very start of the NAP II process in late 2005 (i.e. the production of NAPs for the second phase of the ETS, the Kyoto commitment phase 2008-12), it was clear that CDM and JI credits would play a much more prominent role. Now there were formal Kyoto Protocol/EU Burden-sharing Targets to comply with; banking to later commitment periods was allowed; and signals were starting to come from the Commission about tighter allocations ahead. An early element in this latter development was the December 2005 Commission Communication providing NAP II guidance (European Commission 2005a). It was here indicated that if the emissions trading sector was to contribute a proportionate share of the reduction needed in member-states with a gap to close in order to reach the Kyoto target, then the overall cap for the second phase should be 6 per cent lower than in the pilot phase (ibid.: 6). Allocations to any member states that were off-track from their Kyoto target in comparison with actual 2003 emissions should be further tightened.⁵

With regard to the latter, and as an additional criterion that did not apply in the first phase, member states were required to specify a maximum amount of intended government purchase of Kyoto units. Described by the Commission as criterion 12 in Annex III of the ETS Directive (although the Directive initially contained only 11 criteria), the established percentage should be consistent with the state's supplementarity obligations under the Kyoto Protocol and decisions adopted pursuant to the UNFCCC or the Kyoto Protocol (ibid.: 7). As a minimum threshold, installations should be allowed to use JI/CDM credits up to a level of 10 per cent. The practical implications of all these elements were then summed up in specific formulas (ibid.: 7, 10). This was further specified in the Communication accompanying the first round of Commission NAP II decisions in late November 2006 (European Commission 2006a).⁶

How, then, were these signals about the use of CDM and JI implemented by the Member States? Overall, most States signalled that their companies intended to use such credits. For instance, ETS actors from different regions within the EU

such as Poland (East), Germany (North) and Greece (South) initially communicated to the Commission a CDM/JI limit of respectively 25, 12 and 9 per cent.

Did the CDM/JI factor influence Member States and companies to agree to more ambitious allocations than would have been the case if such credits had not been available? The answer is very likely yes. First, for several Member States such as Spain, Italy, and not least the Netherlands (see Lecocq/Ambrosi 2007: 138), the use of CDM/JI constitutes a clearly important element of their compliance strategy, with an indicated annual purchase of at least 19 million tonnes (see e.g. ENDS Report December 2007: 50; Reuters/Planetark February 9 2007). Second, the 'CDM dynamic' was very well and explicitly demonstrated in the case of Germany. As indicated, the suggested German NAP II cap was cut by six per cent in November 2006. This led to a very negative response from Germany, indicating the possibility of taking the Commission to the European Court of Justice. However, this line of action was not chosen. Instead, in January 2007 Germany announced an intention to compensate for the reduced allocation by an increase in the cap on the use of the flexible mechanisms from 12 per cent to 20 per cent. This was reported as accepted by the European Commission in February (Reuters/Planetark February 15 2007).

What is then the more specific nature of this interaction, in Oberthur and Gehring's suggested terms? First, it could possibly be cast as a form of cognitive interaction. As argued above, it seems likely that the preferences of countries and companies within the ETS were influenced by information about the development and future availability of CDM project credits (i.e. CDM outputs). It can be argued that the 'CDM information' softened the opposition of EU countries and companies to more stringent allocations and hence made the whole process of negotiating ETS caps less marked by controversy than it would otherwise have been.

But could it also be cast as a sort of utilitarian interaction? Did the more active involvement of EU countries such as Italy, Spain, the Netherlands and Denmark in developing CDM projects and building up a 'CDM portfolio' affect the ETS preferences and behavior of these countries, for instance in significantly higher reliance of these countries on CDM/JI credits? In NAP II, Spain saw its 'record-high' suggested CDM/JI limit of 47 per cent more than halved by the Commission. Italy sought a 25 per cent limit which was cut down to 15 per cent by the Commission. Denmark sought a 19 per cent limit and got 17. But the

Netherlands signalled a more modest CDM/JI use of 12 per cent and got 10. Germany, which has been little involved in CDM development, landed on a 20 per cent limit. Hence, there is probably a sort of utilitarian dynamic at work, but in order to understand developments more fully, also the cognitive element should be brought into the picture.

Let us then turn to the second and different claim noted in this context, namely that the availability and use of such relatively cheap CDM credits will reduce the willingness of EU industry to do something about their own emissions. As noted, 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 (European Commission 2005a, 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" (European Commission 2006a, p. 3). Nine out of ten proposed NAP II plans were rejected by the Commission in this 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 cut one third of the NAP II CDM plans, more than halving the plans of Ireland, Spain and Poland.

This specified and tougher line taken by the Commission can clearly be seen in light of the mentioned 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.

So what are the more specific prospects ahead for this interaction dynamic? In the Commission's January 2008 proposal for the post-2012 ETS design, due to the present uncertainty about the global post-2012 climate change regime, two main scenarios are indicated (European Commission 2008). In the sort of 'business as usual' scenario, with the EU's '20 per cent GHG reductions by 2020' goal (agreed to in March 2007) and no further global regime progress as key characteristics, only CDM/JI credits which have not been used in the 2008-12 period can be used (or banked for later). No new and additional credits will be allowed into the system. In the more 'optimistic' scenario of global regime progress and an upward adjustment of the EU goal to 30 per cent (and an additional reduction effort), 'the limit on use of JI/CDM credits will be automatically increased up to half of the additional reduction effort' (ibid.: 7). In the first scenario, then, the 'sweetening' effect that the CDM/JI credits arguably have had so far would be reduced. But, on the other hand, it can also be assumed that relatively more abatement will take place within the EU itself. In the latter scenario, CDM/JI may come to play an even more significant role than it has so far.

4. HOW THE ETS HAS INFLUENCED GLOBAL CLIMATE INSTITUTIONS: SYNERGISTIC INTERACTION WITH THE KYOTO PROTOCOL INSTITUTIONS?

4.1. Introduction

As noted by Oberthur and Gehring (2006), two institutions can be involved in numerous cases of interaction at the same time (ibid.: .29). This seems certainly to be relevant in the case of how the ETS interacts with global climate institutions. Several interactions should be analysed here. First, there is the claim that the ETS has speeded up the development of the CDM.

Second, there is the notion that the ETS has functioned and is functioning as a model for the development of global carbon trading. These interactions mainly overlap in time, although it may be argued that the latter has more of a prospective character than the former.

4.2. Has the ETS speeded up the development of CDM and JI projects?

The core of this interaction is the claim that the development and implementation of the ETS has led to greater interest in and enhanced development of the CDM and JI mechanisms than would otherwise have been the case. In order to scrutinise this claim more thoroughly, we need to briefly recapitulate the development of the CDM (e.g. Lecocq/Ambrosi 2007). A main body is the Executive Board, consisting of 10 members and 10 alternates, drawn from all constituencies of parties. The Board held its first meeting in 2002, and it is assisted in its work by various technical panels.

The withdrawal of the US from the Kyoto Protocol in March 2001 meant continued – and arguably increased - uncertainty about the entry into force of the Protocol. This is probably an important factor that explains why CDM project development activity was slow and hesitant in the period up to entry into force of the Protocol in February 2005. The registration of the first CDM project came on November 18 2004 (Point Carbon 2006: 12). By the end of 2004, there were around 600 CDM and JI projects in the Point Carbon database (mainly CDM), and this increased to around 1965 projects in mid-December 2005 (ibid.: 13). However, complaints about inadequate administrative capacity in the CDM EB and its technical panels were heard (Lecocq/Ambrosi 2007: 139). According to the official UNFCCC/CDM web site, by February 2008 there were around 2900 CDM projects in the pipeline, and there were 937 registered projects (UNFCCC/CDM web site, February 2008). According to Point Carbon, 273 final credits have been issued, representing 98 MtCO₂ (i.e. a little less than the 2005 ETS CO₂ emissions of France) (Point Carbon December 12 2007).

Main drivers in this development are the commitments taken on in the Kyoto Protocol and the desire of industrialised countries to develop the cheapest abatement strategies to comply with their commitments. The claim about an ETS ‘amplifying effect’ is then mainly a claim about synergistic utilitarian interaction, i.e. that ETS implementation has led to more interest in and greater efforts devoted to the development of CDM projects than would otherwise have occurred. Generally, this sounds reasonable. As described in section 3.1., the requirement for EU countries to develop NAPs for the sectors involved in the ETS has likely led to a more focused and earlier awareness about compliance strategies both within governments and not least companies than would otherwise have been the case. *Without the ETS, the issue of climate policy*

performance and Kyoto compliance would very likely have remained an issue predominantly worrying some bureaucrats in the environment and foreign ministries.

Is it possible to find more specific evidence about such an effect? According to Point Carbon, of the euro 377 million global market transactions taking place in 2004, CDM in fact contributed the largest segment, contributing 188 of these millions. In 2005, CDM continued to contribute the largest element in terms of volume, but representing a less significant element in economic terms (i.e. euro 1.9 billion out of a total 9.4 billion) (Point Carbon 2006: iii). In 2006, CDM transactions grew to around 3.4 billion euro, out of a total of 22.5 billion euro (where the ETS accounted for over 80% of the value) (Point Carbon 2007: I, 31).

Analysts at Point Carbon furthermore noted in early 2006, after half a year of much higher ETS allowance prices than expected (i.e. between 25-30 euro): 'with increasing prices for EUA delivery it is evident that this has contributed to the demand for project credits' (ibid.: 23-24). Furthermore, they noted that 'prices for both CDM and JI project contracts increased during 2005. *This can mainly be explained by increased demand from EU ETS companies and the numerous carbon funds that became fully operational for purchasing credits*' (ibid.: 24; my emphasis added). Commenting upon the developing market in 2006, not least including the ETS 'market crash' in early May in the wake of publication of 2005 verified emissions data, Point Carbon noted an increasing volume of transaction up to the 'crash' in May and falling transactions afterwards (Point Carbon 2007: 17). Hence, a direct link between ETS and CDM developments could be recorded.

It is possible to find similar statements about a clear link between ETS and CDM developments from other analysts and observers. For instance, in the International Emissions Trading Association's (IETA) 2006 position paper on ETS market functioning, it is stated that 'it is clear that the EU ETS has been *the driving force behind the current extraordinary growth in the CDM market...*' (IETA 2006: 2; my emphasis added). Also in the analysis of CDM development carried out by Lecocq and Ambrosi (2007), the 2004 entering of European companies into the CDM market is credited to the ETS which was about to become operational at that time, and the clarification that CDM credits would become eligible under the ETS (ibid.: 138). They also state that '*the rapid growth of the carbon market is a direct consequence of the entry into force of the EU-ETS (January 1, 2005) and the Kyoto Protocol (February 16, 2005)*' (ibid.: 140; my

emphasis added). According to Ellerman and Buchner (2007), '*the access to external credits provided by the Linking Directive has had an invigorating effect on the CDM and more generally on CO₂-reduction projects in developing countries, especially in China and India.*' (ibid.: 84; my emphasis added).

What are the the main prospects ahead for this interaction dynamic? As indicated above, in the Commission's January 2008 proposal for the post-2012 ETS design, due to the present uncertainty about the global post-2012 climate change regime, two main scenarios are indicated. The first scenario reflects only the EU's independent commitment to reduce its emissions to at least 20% below 1990 levels by 2020. In this scenario, operators will only be able to use CDM/JI credits allocated to them for the period 2008-12 that they have not already used up. This means that no new CDM/JI credits will enter the ETS after 2012. In the second scenario, a 'satisfactory global agreement' to combat climate change post-2012 is reached and the EU reduction ambition is increased to 30% by 2020. In this scenario, the limit on the use of CDM/JI credits will be automatically increased up to half of the additional reduction effort.

Probably referring to the first scenario, the Chairman of the CDM's EB, H.J. Stehr, has stated that any final move by the EU to curtail the use of international carbon credits in line with the draft proposals 'would be a pity for the CDM' (Point Carbon January 24 2008). It is also interesting to note that the price of CDM credits fell by euro 1.50 (i.e. 11%) the day after the launching of the Commission's ETS revision proposal (Point Carbon February 8 2008). However, with regard to the second scenario, analysts have pointed out that the inflow of CDM/JI would be quite extensive, raising the limit up to 8.1% over the period 2008-2020 (Pont Carbon January 25 2008: 7). On balance, however, given that the fate of a global agreement will not be clear before the end of 2009, the current uncertainty about future rules and policy scenarios will probably have a dampening effect on the ETS part of the development of and demand for CDM/JI credits.

4.3. The ETS as a model for global carbon trading?

The core of this interaction is the claim that the ETS has functioned as a model and inspiration for an emerging global carbon market under the UNFCCC, and led to trading initiatives in other regions and countries which would otherwise not have occurred. As global carbon trading between states from 2008 on was inscribed in the Kyoto Protocol and is hence already a reality, the claim here must

more be of a cognitive kind, with the ETS providing experience and inspiration to develop the current rather formalistic state trading system into a more dynamic and active global market place.

In the initial discussions about the EU ETS and its design, the dominant perspective was very much 'reactive', 'inwards' and modest, i.e. the ETS was seen as an important tool for protecting the EU internal market, for achieving Kyoto compliance, and for gaining experience for the coming global emissions trading. The possible role for the ETS as a model for global trading was not mentioned.

For global climate diplomacy, the withdrawal of the US from the Kyoto Protocol in March 2001 was both a surprising development and a potentially hard blow for the development of international climate change policies. However, as further elaborated in Skjærseth and Wettestad (2008), it served to unite the EU 'in an extraordinary way', and made the quick and further development of an EU ETS not only a cornerstone of EU climate policy and follow-up of the Kyoto Protocol, but also a key instrument to save this Protocol. In the following years, climate policy and particularly the Kyoto Protocol issue has continued to be not very popular within the Bush administration. It can be argued that a slight change in the US climate position could be noted in 2007. Some interest about the functioning of the EU ETS could be noted. For instance, key ETS man Jos Delbeke and other ETS experts briefed US Senators in Washington in March 2007 (at the same time as a California delegation visited Brussels, see below). Republican Senator Pete Domenici stated: 'I do not think the majority of US legislators think the EU is doing quite well – but at least you are trying something' (Europolitics Environment March 30 2007).

However, at the regional level in the US, the EU ETS seems to have made more of an impact. The Regional Greenhouse Gas Initiative (RGGI) was launched in August 2006 and decided upon in November, aiming to be put into operation from January 2009. The RGGI comprises seven Northeastern US states, i.e. Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont. California adopted climate change legislation in August 2006, including the establishment of an emissions trading system from 2012. It is clear that the EU ETS has served as a clear inspiration and possible linking partner for these initiatives. For instance, a California delegation visited Brussels in April 2007 to learn about the EU ETS. A delegation member stated: 'we wanted to know what went right with it and what went wrong' (International Environment Reporter April

4 2007). The delegation expressed hope that California could be the first non-European region to link up to the ETS, from 2013 on (Reuters/Planetark March 20 2007). EU officials have, however, stated that no link between the ETS and RGGI and California is probable until 2013 at the earliest (Point Carbon January 22 2007). It can also be noted that in July 2007 Germany and the UK signed a declaration with Florida on climate policy cooperation, including possible future linked carbon markets (Point Carbon July 16 2007).

Also several other global carbon players have initiated the development of domestic trading systems. Australia's most populous state, New South Wales, launched an ETS already in 2003 and in September 2006 other Australian states launched emissions trading plans (EU Energy September 8 2006; see also Point Carbon reports 2006 and 2007).

In October 2007 the International Carbon Action Partnership (ICAP) was launched, with the EU Commission and the EU ETS as somewhat of a cornerstone, but including a range of other partners present: US and Canadian members of the Western Climate Initiative; RGGI representatives; California representatives; EU member states Germany, France, Portugal, the Netherlands and the UK; New Zealand; and Norway (ICAP 2007). The aim of ICAP is to serve as an international forum in which governments and public authorities adopting mandatory GHG emissions cap and trade systems may share and discuss design experiences and best practices. In March 2008, also Japan announced plans to set up a trading system (Point Carbon March 5 2008).

When the European Commission put forward its January 2008 proposal for the ETS 2013-2020 (European Commission 2008), Environment Commissioner Stavros Dimas stated that 'the ETS is going to be the prototype for the world to imitate' (ENDS Daily January 23 2008). The awareness about the global interaction implications of EU ETS design can be discerned in several elements. First and foremost, the costs of frontrunning are addressed by measures to counter 'carbon leakage', i.e. avoiding that EU industries shut down their operations in the EU and move their activities to regions and countries in the world with less significant or no carbon constraints. These measures include a continuation of the handing out of free allowances to certain energy-intensive industries unable to pass on carbon costs.

Furthermore, the idea of binding global sectoral agreements was floated. The promise of a move from the present 20% by 2020 reduction commitment up to a

30% commitment in the case of a 'satisfactory' global agreement can be seen as a 'sweetener' to encourage developed countries that so far have not accepted reduction commitments under the Kyoto Protocol, to do so quickly. The part of this promise which indicates a much more significant and open inflow of CDM and JI credits under such a 30% scenario can be seen as a sweetener to developing countries.

Winding up, Kruger et al (2007: 130) note that 'this experiment with linked systems with 25 EU countries provides a useful laboratory for considering the political, economic and administrative challenges that would be faced by a global trading system, *which will be even more decentralized than the EU ETS but with less oversight*' (ibid.: 130, my emphasis added). Hence, even if it seems clear that the ETS has functioned as a significant inspiration and model for trading globally, there are limits to the lessons which can be directly transferred to the global level. As pointed out by Kruger et al, globally, the very diversity of actors involved will be substantially higher than in the EU. It can also be noted that business players in the ETS have put forward sobering perspectives on the emergence of a truly global carbon market even by 2020. For instance, in February 2008, Nick Campbell of business federation BusinessEurope stated that ' I honestly cannot see a global trading scheme being set up in the near future, for example by 2020' (ENDS Daily February 25 2008).

5. HOW THE ETS WILL JUMPSTART THE INCLUSION OF AVIATION IN GLOBAL CLIMATE POLITICS: DUE TO ICAO INACTION?

Here, it makes sense to see the ETS as both a target and a source. The first claim that can be extracted from existing debate and literature is that inaction by ICAO has served to speed up the inclusion of aviation within the ETS. A second and diametrical claim to investigate further is that the inclusion of aviation in the ETS could lead to ICAO rising to the challenge, speeding up the inclusion of this sector in the global regulatory framework.

5.1. Has ICAO inaction served to speed up the inclusion of aviation within the EU ETS?

The process within ICAO can be summed up in the following manner (Moser 2008). International aviation emissions were not included in the Kyoto Protocol. The Protocol required Annex I Parties to '...pursue limitation or reduction of GHG emissions from aviation working through the International Civil Aviation Organization...' With regard to ICAO, market-based measures had been

discussed there since 1991 and the particular instrument of emissions trading since 1998. At its 2001 Assembly, ICAO endorsed the development of open emissions trading for international aviation. However, the 2004 ICAO Assembly decided *not* to establish a new global legal instrument under ICAO; the Assembly pointed instead to voluntary and national pathways.

The 2007 Assembly then outlined three approaches: technology and standards; operational measures; market-based measures. Furthermore, there was opposition to emissions trading without mutual consent. This was a controversial issue and reservations were expressed on this point from 42 states, including the 27 EU member states. A Group on International Aviation and Climate Change was established, with the mandate to develop an 'aggressive programme'.

Turning then to a very rough sketch of the process within the EU, a first thing to note is that aviation was not included in the 2003 ET Directive. In the preceding decision-making process, particularly the European Parliament (EP) had sought to broaden the scope of the system, but with little success. The main outcome was that the 2003 Directive decided that a review report was to be produced by June 2006, and a consideration for broadening the scope of the system to also include, among others, 'the transport sector' was to be part of this review process (Article 30). Aviation was not mentioned explicitly.

However, the discussion about the possible inclusion of aviation started already in the fall of 2003. Responding to a request from the British airport operator BAA, in October 2003 the then Environment Commissioner Margot Wallstrom expressed cautious support for including European flights in the ETS from 2008 onward. At this point in time, it was also reported that EU environment ministers had asked the Commission to develop proposals to reduce greenhouse gas emissions from aviation in the EU (ENDS Report October 2003). In March 2004, Commission official Jos Delbeke announced that a debate on transport and climate change would be 'kick-started' in early 2005, with aviation emissions as 'a priority' (ENDS Daily March 5 2004). At the aforementioned 2004 ICAO Assembly, it was reported that the EU had 'warded off' a threat to its plans to introduce economic instruments aimed at reducing GHG emissions from the aviation sector. EU moves to include the sector in the ETS were not ruled out (ENDS Daily October 11, 2004).

A draft communication was then leaked to the press in July 2005, indicating the subsequent inclusion in the ETS of all flights departing from any EU airport

(ENDS Daily July 27 2005; International Environment Reporter, July 27 2005). The Communication was put forward in September 2005 (European Commission 2005b). The timing for inclusion of aviation in the ETS was not specified, but it was not ruled out that it could happen from 2008 on. A working group was set up, and a proposal by the end of 2006 was announced. This formal directive proposal was then launched in December 2006 (European Commission 2006b). Key elements were that intra-EU flights were proposed included from 2011 on; to be expanded to all flights arriving in or departing from the EU from 2012 on. It was suggested not applicable to flights arriving from third countries that had comparable measures in place.

The European Parliament then adopted its First Reading position in November 2007. The EP decided to go for a single start date for all flights already in 2011. Furthermore, the Parliament suggested setting the cap at 90% of 2004-6 average annual emissions. When the Council adopted its Common Position in December 2007, the single start date for all flights element was retained, but the date was moved back to 2012. The Council preferred to set the cap at 100% of 2004-6 average annual emissions. A deal was then struck between the Parliament and the Council in July 2008, with aviation to join the ETS from 2012 on and the initial cap set at 97% of 2004-6 average annual emissions as important elements.

Interpreting this interaction, is it then reasonable to posit that ICAO inaction has served to speed up the inclusion of aviation in the ETS? The general impression from skimming through Commission publications and articles from environmental data services is affirmative. For instance, in the Commission's 2005 Communication on the inclusion of aviation in the ETS, it is noted that ICAO's contribution was mainly to improve the understanding of the global impacts of aviation. It is explicitly stated that '*ICAO's 188 member countries have not been able to agree on regulatory standards or emissions charges applicable to CO2 emissions, and an attempt to identify a suitable efficiency indicator for aircraft has failed*' (European Commission 2005b op.cit.: 4; my emphasis added). So 'it is not realistic to expect ICAO to take global decisions on uniform, specific measures to be implemented by all nations' (ibid.: 5). It is hence made clear that this development has been a major driver for EU action in the field.

In the interaction theory framework, it probably makes most sense to interpret this interaction as a sort of 'negative normative interaction'. It was not the commitments of ICAO that set the EU on the course of including aviation in the ETS; rather, it was the *lack* of such commitments. This analytical possibility was

little discussed by Oberthur and Gehring, although it might be said to lie implicit in their conceptual thinking.

5.2. Will the inclusion of aviation in the ETS lead to more ICAO action?

Here the main claim is that the inclusion of aviation in the ETS will stimulate further action within ICAO. Officially, the EU continues to work through ICAO and UNFCCC to develop a global approach to this issue. As noted in the section above, at the ICAO 2007 Assembly, the further development of market-based measures was one of three paths of further action agreed upon. An important upcoming and highly relevant development is the election of a new US president in November 2008. Based on the climate policy profiles of all probable candidates, a change is underway in US federal climate policy. As the US has clearly been the major stumbling block within the ICAO, a possible softening of the US position could open up a window of opportunity for more vigorous ICAO action. In that case, this interaction can probably be understood as a combination of synergistic cognitive and normative forces.

6. WINDING UP: ANOTHER CASE OF 'MORE SYNERGY THAN DISRUPTION'?

Again emphasizing the explorative character of this paper, let us first sum up some main findings with regard to the interactions analysed. First, we discussed how the Kyoto Protocol has affected the ETS. In the first sub-case here, we scrutinized the extent to which the Protocol initiated the turn-about within the EU and the subsequent development of an ETS. The main conclusion was that the Protocol must be seen as a very important causal factor. The Protocol established a legally binding emissions reduction target for the EU, and the EU realized that it had no common policies in place which could deliver such reductions. In addition to the normative pressure, learning about emissions trading, particularly from US experts and negotiators in the course of Protocol negotiations, also mattered. However, as the Protocol far from *required* an ETS and had little to say about its more specific design, it is simply essential to consider internal EU factors – such as the 'inflow' of economists into the Commission's climate change unit – to more fully understand the initiation of the ETS.

A second sub-case discussed the extent to which Kyoto Protocol mechanisms such as the CDM have, on the one hand, bolstered the environmental

ambitiousness of the NAPs, but, on the other hand, also led to less abatement taking place within the EU itself. This interaction started to become relevant in the wake of the 2003 adoption of the ET Directive and the subsequent development of National Allocation Plans (NAPs). Adoption of the Linking Directive in the Spring of 2004 further clarified that credits from CDM projects were to be useable already in the ETS pilot phase (and JI credits from 2008 on). As CDM and JI projects were seen as complex and uncertain, credits from such projects were expected to be priced lower than regular ETS allowances. Hence, as made clearer by applying utilitarian interaction lenses, achieving ETS compliance partly by the use of cheaper CDM credits could lower such compliance costs and hence make EU states and installations willing to take on more ambitious targets than they otherwise would have accepted.

In the ETS pilot phase however, such a perspective had little practical relevance. Even though several EU countries had started to develop CDM programs and projects, progress was slow in moving these projects through the CDM bureaucratic machinery and achieving useable credits. Hence, the CDM factor had little or no influence on the NAP I process. However, as a real scarcity of allowances has become much more realistic in the Kyoto commitment phase, the CDM factor has played a more important role in the NAP II process. The German case is the most obvious example. An important element in Germany's acceptance of a more stringent NAP II cap than it preferred, was that it was given leeway to use significantly more CDM credits.

With regard to the impact on the level of abatement being carried out within the EU itself, it is too early to conclude. It is clear that the Commission's significant cut of a number of NAP II CDM plans has reduced this possible threat to the ETS' environmental integrity. Still, significant uncertainty remains with regard to the actual inflow of CDM/JI credits and the related effects on carbon prices and abatement incentives.

The second main interaction analysed was how the ETS has influenced global climate institutions. The first sub-case discussed whether the ETS has speeded up the development of CDM and JI projects. Although project development has been somewhat slow, there are currently around 940 registered CDM projects and close to 300 final credits have been issued. There seems to be a widely held view among analysts that the establishment of the ETS has led to significantly more interest in the development of CDM projects than would otherwise have been the case. Hence, utilitarian interaction seems to have taken and is taking

place. So it is not surprising that the CDM Chairman in the spring of 2008 expressed worries that a possible EU moratorium on new CDM credits from 2013 will dampen interest in CDM project development.

A second sub-case discussed the extent to which the ETS has functioned as a model for global carbon trading under the UNFCCC. In one sense, global carbon trading is already a reality, as the possibility of such trading between states from 2008 was inscribed in the Kyoto Protocol. So this interaction must be understood as more cognitive, with the ETS providing experience and inspiration to develop the current rather formalistic trading system into a more dynamic and active global market place. US participation is of course essential in such a market place, with the US being the largest developed-country GHG emitter. As we know, the Bush administration has not been very fond of EU climate policy and was little impressed by the ETS. However, regional initiatives in the North-east (RGGI) and West (California) have been far more interested in the ETS, and it seems reasonable to consider the ETS as a significant inspiration for the trading design discussion taking place within these initiatives. Furthermore, it also seems reasonable to assume that the ETS has served as the main model for the discussions on and development of trading systems in countries such as Norway, New Zealand and Japan.

Has the two-way interaction between the ETS and the Kyoto Protocol and its institutions been 'managed well'? As was noted in section 4.2, some recent concern has been expressed by the CDM Chairman about the more restrictive EU position with regard to the further introduction of new CDM and JI credits into the ETS. However, as this contingent position has clearly been carefully worked out by the EU, the limited 'disruptive noises' which have recently been heard in this so far 'synergistic symphony' cannot be described as inadequate interaction management.

The third main interaction addressed was the two-way interaction between the ETS and International Civil Aviation Organization (ICAO). A first sub-case here scrutinized the claim that ICAO inaction prompted the EU to include aviation in the ETS. A quick look at the available evidence indicates that there may be some truth in this. The Kyoto Protocol required parties to pursue the limitation of GHG emissions from aviation by working through ICAO. However, although ICAO has discussed emissions trading since 1998, its 2004 Assembly decided not to establish a global legal instrument. Not long after, the idea about including aviation in the ETS was being floated, and the European Commission put forward

a formal proposal to do so in December 2006. With regard to the second sub-case here, and the somewhat diametrical claim that the inclusion of aviation in the ETS could lead ICAO to rise to the challenge, the probable election of a more climate-friendly president in the US was identified as a possible 'catalytic event' for more vigorous ICAO action in this field.

Might the somewhat disruptive character of the relationship between ICAO and the EU have been 'managed better'? Again, this is far from obvious. There seems to have been no lack of contacts and discussion between the EU and the other members of ICAO. The disruption seems mainly to be a simple matter of political differences, both with regard to perceptions of the challenges raised by climate change and the political responses to these challenges. The room for 'managing away' such differences seems limited.

What is the overall picture emerging with regard to the main character of the interactions between the ETS and the global institutions? The very preliminary analyses carried out in this paper seem to lend further support to one of the main messages in Oberthur and Gehring (2006: 318): 'synergy dominates, but disruption occurs'. However, as very much emphasized by Oberthur and Gehring, there are many cases of interaction out there and getting a deep and comprehensive picture is certainly challenging. For instance, the potential interaction between the ETS and global institutions also involve institutions such as the World Trade Organization, for example related to potential measures introduced by the EU to counter global 'carbon leakage'. This and other potential interactions may turn out to have more of a disruptive character.

Finally, it can certainly be useful to think through the possibilities for deliberate interaction management, but its potential should not be overestimated. Synergies or disruptions often seem to be mere reflections of deeper political agreements or disagreements.

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8. NOTES

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² According to Oran Young, a 'functional' linkage means that substantive problems that two or more institutions address are linked in biophysical or socioeconomic terms. A 'political' linkage means that actors decide to consider two or more arrangements as parts of a larger institutional complex (Young, 1999:50).

³ JUSCANNZ was a coalition of nations in the negotiations on the Kyoto Protocol and included Japan, USA, Canada, Australia, New Zealand, Norway and Iceland.

⁴ CoP-4 in 1998 failed to further define the rules of the game for emissions trading.

⁵ These states should aim for a balanced mix between lowered allocation for second phase; implementing additional measures in the non-trading sector; and 'potentially supplemented' by government purchase of Kyoto unit credits (European Commission 2005a, 6).

⁶ A key statement here was: where a Member-state with a remaining gap to close between its actual emissions and allowed emissions according to the Kyoto target does not substantiate or insufficiently substantiates the intended government purchase of Kyoto units this contravenes criterion 1 (setting a cap consistent with each Member-state's Kyoto Protocol commitment), and as a consequence the intended total quantity of allowances is reduced proportionally (European Commission, 2006a, 7).