

# The Making of the 2003 EU Emissions Trading Directive: An Ultra-Quick Process due to Entrepreneurial Proficiency?

Jørgen Wettestad\*

Against the backdrop of the June 2003 political agreement between the European Parliament and the EU Council on a greenhouse gas emissions trading (GHG ET) system, the ET Directive was formally adopted in October 2003 (Directive 2003/87/EC).<sup>1</sup> It means in effect that the Union's climate policy strategy is near to completing its about turn. Throughout most of the 1990s, the EU had been the leading skeptic in global climate diplomacy to emissions trading, favoring instead coordinated policies and measures.<sup>2</sup> On the basis of the ET Directive, which outlines a cap-and-trade scheme for large industrial emitters from 2005, the EU stands forth as the major frontrunner in the development of an international market place for emissions trading.<sup>3</sup> According to the EU Commissioner for the Environment, Margot Wallström, the scheme "represents a major innovation for environmental policy in Europe . . . [and] will be an important cornerstone in our strategy to reduce emissions in the most cost-effective way."<sup>4</sup> In a similar vein, the *ENDS Report* stated in June 2003 that "the EU emissions trading scheme looks set to be one of the most far-reaching and

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1. EU Commission 2003. In addition, the Council and the European Parliament reached agreement on a directive on the links between the EU ET system and the Kyoto Protocol's flexible mechanisms on 20 April 2004. This was formally adopted by the Council on 13 September 2004. For a good introduction to and overview of emissions trading as a policy instrument, see IEA 2002.
2. Wettestad 2001.
3. Christiansen and Wettestad 2003.
4. European Commission 2001a.

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radical environmental policies for many years,<sup>5</sup> and the scheme has also been characterized as “the new grand policy experiment.”<sup>6</sup>

The process offers intriguing puzzles, both with regard to developments so far and, not least, its effectiveness and likelihood of success. For instance, the very about-turn of the EU “from ET fiend to frontrunner” has attracted some scholarly attention.<sup>7</sup> This article explores other aspects of the EU ET policy-making process. First, given the EU’s earlier resistance to this market-based instrument with no international track record and with US origins, the EU ET process could be termed *an ultra-quick political “pregnancy.”* For instance, the main design of this complex scheme was in place less than two years after the Commission launched its directive proposal in October 2001. In stark contrast, the process of getting an EU energy tax adopted took six years, and even twice as long if we adopt the carbon tax initiative in the early 1990s as the true starting point of this process. Another interesting aspect related to the EU process is the *extraordinarily strong role of the Commission* throughout, with, for instance, the 2003 Directive outcome quite close to the 2001 Commission proposal and arguably only marginally altered by the European Parliament and the Council of Ministers (see table on p. 6). These conundrums may of course be connected. The strong entrepreneurial role of the Commission may explain much of the velocity of the process.

Hence, section one will start with an overview of the decision-making process. Based on a summary of the milestones of the process, why is it meaningful to characterize it as “ultra-quick”?

In section two, we review likely explanations for this speediness. First, remaining with the pregnancy metaphor, any experienced physician would inquire into *the pregnancy’s date of conception*. Had the EU actually been pregnant with this idea for some time when talks about emissions trading picked up speed in 1998; could it be that the process in reality started when the EU started to develop climate policy back in the early 1990s? If so, it would mean that developing an EU ET scheme was a less malign collaborative problem than one might have assumed.<sup>8</sup> Second, could it be that *a particularly resourceful “midwife” helped shorten the “pregnancy”*? This of course refers to the seemingly dominant role of the Commission indicated above. Could it be that a unified and strong Commission provided the entrepreneurial substance needed to install this complex system in record time, hence contributing to the sort of problem-solving capacity sorely lacking in other international contexts?<sup>9</sup> Third, it is common knowledge that *external impulses and shocks* can speed up decision-making pro-

5. ENDS Report 2003, 18.

6. Kruger and Pizer 2004, 1.

7. See, for example, Christiansen and Wettstad 2003; and Damro and Luaces Mendes 2003.

8. Arild Underdal proposes two central perspectives for understanding the effectiveness of policy-making processes: central problem characteristics versus problem-solving capacity. See Underdal 2002.

9. Underdal 2002; and Miles et al. 2002.

cesses (and, unfortunately, pregnancies too). Such impulses and shocks imply interaction, linkages and learning in relation to bodies, actors and processes outside of the EU.<sup>10</sup> Among other things, it would be pertinent here to consider whether the US withdrawal from the Kyoto Protocol process in March 2001<sup>11</sup> opened a window of opportunity for the EU to take over the reins of global climate leadership, and spurred the development of internal EU climate policy.

Finally, section three sums up central findings. A central thesis of the article is that the speed and character of the process cannot be understood without taking all three explanatory perspectives into account separately and in conjunction. To close, we offer some brief reflections on implications for the future effectiveness of the system. Does an “ultra-quick pregnancy” mean a prematurely born “baby”?

### 1. The Making of the EU Emissions Trading Directive—Was it Really Ultra-Quick?

Let us first take a quick look at the shaping of the ET Directive and important milestones in that connection. The first positive ET signals from Environment Commissioner Bjerregaard could be noted in June 1998, at which point she said that “we have to get involved in emissions trading [ . . . ] we cannot let others dictate the rules.”<sup>12</sup> The climate change communication published that same month stated moreover that “the Community could set up its own internal trading regime by 2005.”<sup>13</sup> The first EU document to draft a possible EU system was the 1999 Communication on Kyoto implementation.<sup>14</sup> Not very much was said about ET here, though it was noted that although a broad and comprehensive system was the ideal in order to maximize the cost-effectiveness of the system, it was more feasible to start with large emitters or a single sector. Quite naturally, the connection to the two other main flexibility mechanisms in the Kyoto Protocol, i.e. the Joint Implementation (JI) and the Clean Development Mechanism (CDM), was briefly commented upon.<sup>15</sup> It was noted that the CDM could start as early as 2000.<sup>16</sup>

Nevertheless, it was really the 2000 ET Green Paper that started to put meat on the EU ET scheme bone.<sup>17</sup> The Green Paper outlined several options with regard to the bindingness of the system, including a more flexible “opt-in” clause for the genuinely interested Member States and “opt-out” clauses for certain sectors. With regard to the allocation of “allowances” (i.e. the quantity of

10. See, for example, Rosendal 2001; Stokke 2001; and Oberthur and Gehring 2003.

11. The Kyoto Protocol was adopted in 1997 under the United Nations Framework Convention on Climate Change (UNFCCC). See, for example, Grubb et al. 1999; and Oberthur and Ott 1999.

12. International Environment Reporter 1998, 609.

13. European Commission 1998, 609.

14. European Commission 1999.

15. Ibid, 16–18.

16. Ibid, 17.

17. European Commission 2000.

greenhouse gas emissions assigned to each participant in the system), an implicit plea was made for a centralized setting of the national ceilings or “caps.”<sup>18</sup> A more decentralized approach would require “detailed and tight guidelines on how allocations are made in individual sectors and companies, and close scrutiny of every single case.”<sup>19</sup> The Paper also indicated on the distribution of allowances and method of allocation that it saw auctioning as the technically preferable method and that “free allocation should not be an easy option.”<sup>20</sup>

That said, a comprehensive draft did not emerge until the Commission’s Directive proposal of October 2001.<sup>21</sup> This proposal was defined as an “environmental measure” and hence based on Article 175 (1) of the EU Treaty, which meant adoption by a qualified majority in the Council and co-decision with the European Parliament.<sup>22</sup> The proposal suggested a basically mandatory system, starting with a limited number of sectors and carbon dioxide (CO<sub>2</sub>) emissions only; allocation of allowances by grandfathering, with the 1997 Burden Sharing Agreement as the foundation; a penalty for non-compliance of 50 Euro (or twice the average market price) per ton CO<sub>2</sub> emitted above allocated quantity; and the inclusion of JI and CDM credits “not foreseen,” but to be further addressed in a subsequent directive. However, it should already here be noted that although a mandatory character was envisaged for the system, national control over cap setting gave it a fundamentally decentralized character compared to the US sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) trading systems.<sup>23</sup> Synergies with the 1996 Integrated Pollution Prevention and Control (IPPC) Directive were particularly emphasized and explored, as was compatibility with the process of liberalizing energy markets.

According to the co-decision procedure, the next step in the decision-making process was the First Reading discussion in the European Parliament. This process took place in the fall of 2002 and ended with the adoption of more than 80 amendments. Among the most important changes suggested by the Parliament was a considerable broadening of the scope of the scheme. Parliament also wanted to see more sectors included, among them the chemical industry and aluminum plants, along with coverage of all the main six greenhouse gases.<sup>24</sup>

The time had now come for the Council of Environmental Ministers to

18. Cf. the statement that “If the Community were to agree on the quantity of emissions of the trading sectors in each Member State, possible distorting allocations to individual sectors or companies would be significantly limited” (European Commission 2000, 18).

19. *Ibid.*, 18.

20. “Allowances” is the same concept as “assigned amount units” (AAUs) under the Kyoto Protocol. However, AAUs can also stem from Joint Implementation and Clean Development Mechanism projects.

21. European Commission 2001b.

22. In contrast, the carbon/energy tax proposals had been put forward under the consultation procedure (now Article 175(2)), which requires unanimity in the Council.

23. See Kruger and Pizer 2004.

24. Europe Environment 2002.

discuss and adopt a Common Position on the ET proposal. This discussion took place in December 2002. The Council chose to uphold the body of the Commission's design put forward a year earlier. EU Environment Commissioner Margot Wallstrøm was "extremely pleased" that the architecture and main design of the European Commission's proposal had remained in place.<sup>25</sup> Still, some minor changes were introduced. These included an option for Member States to allow installations within industrial sectors to form trading pools; a limited right for Member States to exempt ("opt out") individual installations or industry sectors in the period up to 2008 (but with a right of veto for the Commission); an opening for an extension of the system to other sectors and other gases from 2008 (but also with a Commission veto right); and a possibility for Member States to auction up to 10 percent of allowances from 2008.<sup>26</sup>

The next step in the procedure was a Second Reading in the European Parliament. When the Parliament started this second reading process in the spring of 2003, it was in an atmosphere of some political urgency. For instance, the Parliament's ET Rapporteur Moreira da Silva stated on 22 May: "If we postpone a decision it will create enormous problems for national authorities and companies."<sup>27</sup> Despite his urgings, however, the Parliament's Environment Committee re-tabled 25 of the amendments put forward in the First Reading process and identified five really key issues for this final phase. Among them were a national ceiling for allowances; opt-outs only for installations, not sectors; and a revision of the Directive in 2006 to include other sectors such as transport.<sup>28</sup>

The tension was now building up. Would the EU bodies agree—or would they end up as they often do, in additional and prolonged negotiations in a formal Conciliation Committee?<sup>29</sup> The breakthrough then took place on 25 June 2003. In this final agreement struck between the Parliament and the Council, some limited concessions were obtained by the Parliament. First and foremost, there was an opt-out limitation during the initial phase of the system for installations rather than whole sectors.<sup>30</sup> But the basic architecture of the final system retained essentially the Commission's October 2001 proposal and the Council's December 2002 Common Position. Table 1 summarizes the steps of the process.<sup>31</sup>

Summing up, although the system's first tentative pillars were implemented in 1999 and 2000, its main design was in place less than two years after the Commission tabled its initial October 2001 proposal. As noted, given the

25. *ENDS Daily* 2002.

26. *Euractiv* 2002.

27. Reuters/Planet Ark 2003.

28. *Euractiv* 2003a.

29. If the Council and Parliament fail to reach an agreement after the second reading in the Parliament, a Conciliation Committee (with equal Parliament and Council representation) is established to come to a final agreement.

30. *Euractiv* 2003b.

31. The design dimensions are roughly lifted from Christiansen and Wettestad 2003.

**Table 1**  
Shaping the Design of EU ET: The Milestones

	Communication on Kyoto implementation. May 1999	Green Paper March 2000	Directive proposal Oct. 2001	EP First Reading Oct. 2002	Council Common Position Dec. 2002	EP Environment Committee Second Reading Spring 2003	Final agreement Council-EP June 2003
Bindingness	Not addressed	Several options outlined; incl. 'opt-in' and 'opt-out'	<i>Mandatory system with caps unspecified</i>	Mandatory system; with limited rights to exempt individual installations	Mandatory system, with rights to exempt activities and installations, unless vetoed by Comm.	Basically similar to First Reading national ceiling for allowances	<i>Mandatory system, with rights to exempt installations, unless vetoed by Comm.</i>
Scope	In principle broad, but most feasible to start with large emitters or a single sector	Start with small number of sectors and sources—the LCP and IPPC 'population'—CO <sub>2</sub> only	<i>Start with limited number of sectors covered by IPPC—CO<sub>2</sub> only 4–5000 installations</i>	Broader scope of sectors, incl. chemicals and aluminum plants—and all six gases	Same as Comm. 2001 proposal + voluntary 'pooling' option. Other sectors and gases included from 2008 on.	Similar to First Reading + a revision in 2006 to include other sectors such as transport	<i>Start with limited number of sectors covered by IPPC—CO<sub>2</sub> only. + optional inclusion of other sectors and gases</i>
Allocation mechanism	'Transparent, non-distortionary and based on objective yardstick'	Auctioning technically preferable; 'free allocation should not be easy option'	<i>Grandfathering—but review in June 2006 Foundation: Burden Sharing Agreement</i>	Grandfathering mainly—but 15% auctioning in the 2005–2012 period	Grandfathering until 2008—then a possibility for 10% auctioning	Grandfathering until 2008—then 5% auctioning	<i>Grandfathering mainly—but 5% auctioning up to 2008 and 10% thereafter</i>

**Table 1 Continued**

	Communication on Kyoto implementation. May 1999	Green Paper March 2000	Directive proposal Oct. 2001	EP First Reading Oct. 2002	Council Common Position Dec. 2002	EP Environment Committee Second Reading Spring 2003	Final agreement Council-EP June 2003
Compliance mechanism	Not addressed	Should be strict, cf. US sulphur	<i>Penalty: either 50 € or twice the average market price</i>	Penalty: either 50 € or twice the average market price—'whichever is higher'	Penalty: 40 € up to 2008; 100 € after	Same as Common Position	<i>Penalty: 40 € up to 2008; 100 € after</i>
External links	Compatibility between CDM, JI and ET emphasized	Little addressed	<i>The inclusion of JI and CDM credits 'not foreseen'—but to be addressed in subsequent directive.</i>	No credits from projects involving carbon sinks and nuclear energy	Links to JI and CDM 'desirable'	Use of JI and CDM should be 'limited'	<i>Use of JI and CDM 'supplemental to domestic action'</i>
Internal links	Not addressed	Energy taxes, environmental agreements and ET should be complementary ET to be introduced within context of IPPC and LCP.	<i>Synergy with IPPC emphasized and explored. Compatibility with liberalization of energy markets.</i>	Not addressed	Not commented upon	Not addressed	Not addressed

EU's earlier resistance to emissions trading in the Kyoto negotiations, the rapidity of the process does lend support to our fast-tracking hypothesis.<sup>32</sup> It is appropriate now to explore factors and perspectives that might shed light on how and why the process went so smoothly.

## 2. Shedding Light on the Speedy Decision-Making Process: An Early Start; A Clever Entrepreneur—Or External Impulses?

### 2.1 *A Clandestine Start? The Maturity of Emissions Trading as an Issue within the EU by 1998*

The initial regulatory focus in EU climate policy in the early 1990s was geared on getting a carbon tax adopted. Emissions trading had been aired and discussed first in academic and policy circles as a promising instrument, in light of the high complexity of the climate change issue.<sup>33</sup> Efforts to get a carbon tax adopted had failed thus far because, as a fiscal matter, it required unanimity in the Council of Ministers. Such an agreement was impossible to obtain; Member States from North and South within the EU had various sorts of difficulties with the tax, their opposition fuelled moreover by intense industrial lobbying.<sup>34</sup> When the carbon tax was dressed up as an energy tax in 1997, the policy-makers probably hoped it had leveled many of the bumps in the road. This hope waned fast, as key European industries and Member States such as the UK and Spain continued to mount vociferous opposition. Moreover, the other main elements of EU climate policy—i.e. the SAVE energy efficiency program and the ALTENER renewables program—remained weak and inadequate.<sup>35</sup>

Hence, by 1998, the EU had a serious climate policy hangover. Within the global context of the UNFCCC, in Kyoto in December 1997, the Union had undertaken to reduce greenhouse gases by 8 percent between 2008 and 2012, this being the most ambitious reduction target within the group of main OECD actors.<sup>36</sup> This was again based on the EU-internal target-sharing agreement, preliminarily adopted in March 1997 and revised and formally adopted in June 1998.<sup>37</sup> Although the target-sharing agreement clarified the Member States' basic separate responsibilities in this context, the need for effective *common* EU policies in the field of climate policy was becoming increasingly pressing.

If the EU's failure to adopt effective climate policies can be seen as a "push" factor paving the way for an EU emissions trading system, then the development of other policies and processes from the mid 1990s could be seen as

32. Interviews carried out in May 2004 in Brussels with central participants in and observers of this process lent further support to this assessment. See complete list of interviews at the end of this article.

33. For example, Grubb 1989; Hansen and Roland 1990; Victor 1991; and OECD 1992.

34. Skjærseth 1993; and Wettestad 2000.

35. Wettestad 2001; and Hasselknippe and Christiansen 2003.

36. The US agreed to a 7% reduction target and Japan a 6% target.

37. Ringius 1997; and Wettestad 2001.

“pull” factors in favor of trading. One such policy was the developing IPPC permission system. The Directive on Integrated Pollution Prevention and Control (IPPC) was adopted in September 1996 (96/61/EC).<sup>38</sup> It tied in with an increasing realization that earlier legislation operating along medium-specific lines (e.g. air, water etc.) were failing to address the important linkages between various policy options and the “wholeness” of the environment.<sup>39</sup> In essence, without a comprehensive approach, stricter requirements on emissions to water could easily lead to dangerous substances being incinerated and ending up as air pollution instead.

Hence, the IPPC Directive required six categories of industries to be authorized in order to attain “a high level of protection of the environment as a whole”: energy; production and processing of metals; minerals; chemicals; waste management; and “others” such as pulp and paper. The basic technology requirement to be reflected in IPPC permits was “Best Available Technology” (BAT). Article 2 of the IPPC Directive defined “pollution” in a broad sense, but did not explicitly include greenhouse gases. The Directive was of course not designed with emissions trading in mind, but as the EU trading idea started to develop, appreciation of the potential synergies with the IPPC permits which were to be issued from 1999 on probably spread rapidly.<sup>40</sup> In essence, the IPPC permission system could be amended to include greenhouse gases and form the regulatory blueprint for issuing GHG trading permits.<sup>41</sup>

Another “pull” factor may have been the drive for an EU energy policy deregulation which started in the mid-1990s. In June 1996, proposals for electricity sector liberalization within the framework of an Internal Energy Market were agreed at EU level.<sup>42</sup> Since the deregulation drive aimed to bring down energy prices, there were worries that lower prices would be detrimental to the stimulation of energy efficiency aimed at in the environmental and climate

38. The formal compliance and application deadline for new plants was 30 October 1999. Applications for existing plants were to take place by October 2007.

39. Haigh 2004.

40. However, it is clear is that there were also potential compatibility problems and the Commission issued a Non-Paper on this relationship in January 2002 (EU Commission 2002). Other contributions discussing the relationship between IPPC and ET are for example, Fernandez Armenteros 2002. Moreover, as pointed out by one of the reviewers of this manuscript, ironically, although the IPPC provides the permitting framework for the EU ETS, its underlying regulatory philosophy is quite different. It is built on a BAT technology mandate approach as opposed to a performance based standard (with trading) that does not mandate any one technology.

41. In the Commission’s 2001 proposal, it is explicitly stated that “the sectoral coverage of this Directive builds upon the framework of regulation arising from the IPPC Directive” (European Commission 2001, 10). Hence, this means that the IPPC link may also have had restricting elements. In the EU Commission’s Non-Paper (EU Commission 2002b), it is noted that “for administrative simplicity, Article 8 of the EU emissions trading proposal would allow Member States to combine the permitting procedure for greenhouse gas emissions trading with that for the IPPC Directive” (p. 2).

42. Collier 1998. The EU energy liberalization strategy is basically laid down in two directives: 96/92/EC concerning common rules for the internal market in electricity and 98/30/EC, concerning common rules for the internal market in gas. See Hasselknippe and Christiansen 2003, 27.

policy context. The initial hope was that a carbon tax could help counteract such negative externalities of deregulation.<sup>43</sup> However, as the prospects for such a tax continued to look gloomy in 1997/98, it is possible that EU policy-makers increasingly came to see ET as a (pricing) instrument which could stimulate *both* energy policy deregulation and achieve energy efficiency and climate policy goals.<sup>44</sup>

Yet another “pull” factor can be found within the industrial camp. As indicated, EU industries were almost unanimously highly critical of the EU carbon or energy tax initiatives, but market-based ET was another matter. By 1998, several major oil companies had started to warm to the idea of emissions trading as a central instrument of climate policy. British Petroleum (BP) started an internal pilot GHG emissions trading system in September 1998, which they extended to all BP business units in 2000 and 2001. Shell followed suit in 2000.<sup>45</sup> Hence, from 1998, industry started to gain important experience with the ET instrument. But how about the environmental NGOs (ENGOs), then? In the immediate post-Kyoto phase they were mainly concerned with the possibility of a Russian sale of “hot air” and how polluters could “buy themselves out” instead of dealing effectively with their own emissions.<sup>46</sup> It seems like the ENGOs’ more positive stance towards ET did not become evident before 1999/2000.<sup>47</sup>

In summary, the perspective of an early, largely hidden emissions trading “pregnancy period” within the EU seems to have relevance. This section has identified which push and pull factors most likely ameliorated the initial problems surrounding internal EU emissions trading. As a central push factor, the lack of progress in the adoption of a carbon tax and other effective common EU climate policy instruments placed an untried instrument such as emissions trading in a new perspective. Other forces pulling in the same direction included the available permitting approach already being established through the IPPC system; the possibility of balancing the negative price incentives for energy efficiency brought about by energy liberalization; and the positive attitudes to trading and emerging experiences among central industrial actors. However, although the EU institutional setting may have been more prepared for emissions trading than one might have expected, there was a clear need for strong entrepreneurial leadership and smooth institutional collaboration to develop a full-fledged EU policy.

43. *Ibid.*, 97.

44. This needs to be further verified by interviews with centrally placed Commission officials. However, due to the high decision-making speed described in this article, these officials were unavailable for interviews during the author’s visit to Brussels in May 2004.

45. BP 2004; and Skjærseth and Skodvin 2003, 55.

46. See Chasek 1998; and Zapfel and Vainio 2002, 6.

47. For instance the Climate Network Europe’s ET position paper published in 2000 had a sobering tone, cf. “Emissions trading is a useful potential part of a European Climate Change Programme, but not the most important. As the “sexiest” item on the agenda, it should not be allowed to divert attention away from vital common and coordinated policies and measures (CCPMs)” (Climate Network Europe 2000, 1).

## 2.2 The Commission as a Proficient Entrepreneur, Bolstering the EU's Problem-Solving Capacity?

The process overview in section one indicates that the 2003 outcome bore a striking resemblance to the Commission's 2001 proposal. If we study this process more closely, could it be that the Commission acted as a strong, independent entrepreneurial actor pushing the process along and speeding up the pregnancy?<sup>48</sup> In fact, certain characteristics of the emissions trading issue, i.e. its high uncertainty and complexity, may have provided the basis for the Commission to exert particularly strong "instrumental" leadership.<sup>49</sup> This would also fit with Andrew Moravcsik's claim that the Commission's entrepreneurial role is most prominent when there is domestic uncertainty and disagreement—implying that the Member States' positions in these cases tend to be less fixed or strong and the field more open for supranational entrepreneurs.<sup>50</sup> An alternative interpretation of the striking resemblance between the 2003 outcome and the 2001 proposal could be that the Commission was very sensitive to the preferences of the Member States in putting together the 2001 proposal, and was *given* a good deal of room for maneuver in the subsequent process by the Council and the Parliament. These perspectives are not totally contradictory though; they could very well to some extent be pursued in combination.

Let us go back to the beginning of the process. Who exactly came up with the EU emissions trading idea? Even if the Commission is the formal EU agenda-setter,<sup>51</sup> EU (environmental) policy is often seen as largely shaped and initiated by the domestic policy of one or more dominant EU states or green frontrunners who attempt to level the European regulatory playing field and increase the institutional match between domestic policy design/ambitions and EU policy.<sup>52</sup> When the Commission started talking about the necessity of EU ET

48. The paradigm underlying such a perspective would be the multi-level governance (MLG) paradigm, advanced for instance in Marks, Hooghe and Blank 1996; and Marks and Hooghe 2001. As stated by Marks and Hooghe 2001, 3, "according to the multi-level governance model . . . supranational institutions—above all, the European Parliament, the European Commission, and the European Court—have *independent* influence in policy-making that cannot be derived from their role as agents of national executives" (my italics).

49. According to Arild Underdal (1994, 187, 188), "While coercion basically comes down to imposing one actor's preferences on some other(s) or preventing others from doing so to other actors, instrumental leadership is essentially a matter of finding means to achieve common ends . . . To the extent that negotiations involve searching, learning, and innovation, there is . . . scope for instrumental leadership."

50. More specifically, Moravcsik (1999, 811) hypothesizes that the conditions for a supranational entrepreneur such as the Commission to wield effective influence (i.e. privileged access to information and/or high transactions costs) are exceedingly rare in the EU: "They arise only where particular domestic, not international, coordination problems exist—such as the mobilization of bureaucracies and multinational business around the Single European Act in the mid-1980s."

51. As summed up by Marks and Hooghe 2001, 12, "The European Commission alone has the formal powers to initiate and draft legislation, which includes the right to amend and withdraw its proposal at any stage in the process, and it is the think tank for new policies (Article 221 TEC, ex-155)."

52. See Andersen and Liefferink 1997.

in June 1998, was it against a backdrop of domestic ET plans in central EU Member States such as Germany, France or the UK? With regard to the two former, the case is simple and clear; both Germany and France were ET skeptics at that point in time.<sup>53</sup>

But what about the UK, which has been pictured as something of an ET domestic frontrunner? It is clear that the ET idea was being floated and discussed. However, a consultation paper on the role of economic instruments in meeting UK climate targets, chaired by Sir Colin Marshall, concluded that a tax would be easier to administer than an ET system.<sup>54</sup> Hence, no clear decisions had been made with regard to an UK ET system at this stage. So what about other EU ET frontrunner states, such as Denmark? Legislation was drafted and discussed in May 1998. But the Bill on CO<sub>2</sub> quotas for electricity production was not adopted until the end of May 1999.<sup>55</sup>

Interviews with various participants in and observers of the EU process indicate that central Commission officials within the DG Environment (DG ENV) personally pushed the trading option.<sup>56</sup> Jos Delbeke had sorely experienced the carbon tax failure and was skeptical to voluntary agreements. Peter Zapfel joined the Commission in January 1998 and had studied ET in the US. Moreover, the Commission had gotten the message back both from legal advisors and EU working groups that an additional instrument was needed in order to exert control over the further EU climate policy process and pull the EU together. ET was identified as the instrument that could do that.

Let us then take a step forward in time. A natural stop along the line is the Commission's 2001 proposal. The proposed emissions trading design was outlined in section one. But what inspired and shaped the Commission's proposed ET design of October 2001? At this point in time, the trading systems of several Member states were either up and running or in the pipeline. As noted, the Danish system started in May 1999, and the UK system took shape during 2001, with a formal start in March 2002.<sup>57</sup> Moreover, as noted in section 2.2., several industry systems were also up and running. According to Zapfel and Vainio,<sup>58</sup> "the implementation of the BP pilot (scheme) and the extension to cover all the 150 business units world-wide as of January 2000 constituted increasingly powerful drivers in the discussion."

In addition, following the launch of the ET Green Paper in March 2000, a first round of extensive consultation had been carried out. *ENDS Daily* reported a "mixed response," with clashing EU governments and business actors.<sup>59</sup> Comments received by the Commission ran to over 700 pages. Governments gener-

53. See Jordan et al. 2003, 207.

54. *ENDS* 1998, 39.

55. Mortensen 2003. According to Zapfel and Vainio (2002, 9), the Danish system was hardly noticed outside particularly interested and informed circles.

56. Interviews in Brussels February 2002 and May 2004. See complete list at the end of the article.

57. *ENDS Daily* 2002.

58. Zapfel and Vainio 2002, 9.

59. *ENDS Daily* 2001a.

ally emphasized administrative simplicity and practicability, but were split on the issue of allocation by grandfathering or auctioning.<sup>60</sup> Still, the Commission's overall approach was met with general approval.<sup>61</sup> ET was also a central discussion item in the multi-stakeholder European Climate Change Programme. Moreover, further consultation meetings were held in September 2001.<sup>62</sup> All in all, lessons were being learned and positions formed on which the Commission was able to draw in the preparations for the 2001 proposal.

But what about the internal coherence of the Commission itself? It has been maintained that the most difficult part of EU decision-making is getting a proposal adopted within the Commission.<sup>63</sup> Was the Commission unusually united in this case, adopting a strongly entrepreneurial role in the decision-making process? Unity is, of course, a relative thing and total agreement is hardly to be expected in a body consisting of 23 members (i.e. Directorates). In this case, there was clearly some internal disagreement. For instance, in June 2001, *ENDS Daily* reported that Environment Commissioner Wallström had shelved a plan for a trading scheme in time for the climate conference due to take place in Bonn the following month. Industry pressure had allegedly led several commissioners, including DG Enterprise Commissioner Erkki Liikanen and DG Competition Commissioner Mario Monti, to block the proposals. Industry particularly opposed the mandatory character of the scheme suggested by DG ENV. The Energy and Transport Directorate was also skeptical.<sup>64</sup>

However, after that, the impression is one of a declining disagreement within the Commission, related to all of the push and pull factors discussed in the previous section, and the US pull-out of the global process (see next section).<sup>65</sup> As a particularly important development, DG Competition changed its position, fearing opt-outs and increased flexibility. According to Brussels insiders, DG Competition's support to DG ENV served to isolate DG Enterprise and was hence very instrumental.<sup>66</sup> Moreover, in contrast to command-and-control approaches and even the taxation instrument, the very nature of emissions trading as a market-based policy instrument and its potential for reconciling EU economic and environmental goals probably made it comparatively easy for the DG ENV to "sell" the ET idea to other DGs.

How controversial was the Commission's proposal in other parts of the EU system? If other bodies and actors basically agreed with the Commission, it may explain the powerful stance of the Commission and the speeded-up deci-

60. According to *ENDS Daily* (2001a), Austria, Denmark, Finland and Sweden all came out in favor of auctioning as the main allocation mechanism.

61. *Ibid.*

62. European Commission 2001, 2.

63. Interview with Frazer Goodwin, former DG ENV, now Transport and Environment, June 2003.

64. *ENDS Daily* 2001b. Interviews in Brussels February 2002 and May 2004.

65. This view was supported in the string of interviews with various participants in the EU policy-making process conducted in May 2004. However, as noted in footnote 44, central Commission officials were unavailable at this point in time.

66. Interviews in Brussels, May 2004.

sion-making process. With regard to the Council and the Member States, it can be noted that the Environment Council discussed the matter in October 2001 (right after the Commission's proposal had been put forward) and concluded that "the Council is appreciative to the Commission for presenting a proposal for a framework Directive for an EU greenhouse gas emissions trading scheme."<sup>67</sup> This indicated a fundamentally friendly attitude to this initiative, probably also related to the lack of realistic alternatives. Moreover, the Commission's proposal postponed most of the difficult and important discussion about the level of the national caps to the follow-up process, instead managing to focus the discussion in the EU bodies on the arguably less important issue of allocation method. This may have been one of several, clever entrepreneurial moves made by the Commission.

But several Member States, among them such heavy-weights as Germany and the UK, were critical of aspects of the Commission's design. For instance, when the Environment Ministers discussed the trading scheme further in December 2001, the UK opposed it being mandatory from the outset, and received support from Germany, among others, who was worried that compulsory participation would clash with its national energy efficiency agreements with industry.<sup>68</sup> According to the Belgian environment minister, opposition to the scheme being mandatory from the start was sufficient to form a blocking minority.<sup>69</sup>

Turning to the European Parliament, the overall situation there was similar to the Council's: a positive general attitude, though with a number of more specific concerns and disagreements with the Commission's proposal. As may be recalled, although the EP tabled over 80 amendments in the First Reading process, the impression is that only a minority was taken on board. In the light of the EP's generally enhanced position in the EU system and its successful stance in other major EU processes, how come the EP was only moderately successful in this particular case?<sup>70</sup> It could have had something to do with the complex nature of the emissions trading issue, with a number of sub-issues and design dimensions.<sup>71</sup> It seems that the Parliament failed to find *focal points* in the ET process until the very last phase. For long, the Members of Parliament had numerous suggestions, but with limited coherence and direction.

67. Press release, 2378th Environment Council meeting, Luxembourg, 29 October 2001, available at <http://ue.eu.int/Newsroom/> (accessed 28 February 2002).

68. *ENDS Report* 2001, 49. According to Haigh (2004, 3), also Finland, Greece, Italy and Luxembourg were opposed to a mandatory scheme.

69. *ENDS Daily*, 2001c.

70. According to Tsebelis and Barrett (2001, 372), "the empowering of the Parliament as a legislator is a key institutional development in the modern history of European integration." They also maintain that "by and large, the institutional modifications introduced by the SEA and the Maastricht and Amsterdam Treaties had the intended effect of reducing the Commission's role and increasing the Parliament's" (p. 387). For a wider view, see for instance Nugent 1999, chapter 9.

71. According to Wurzel (2002, 71), the Parliament generally suffers from a "technological deficit."

Finally, if we turn to the concluding phase of the process in the spring of 2003, although some Member State opposition lingered on, it was not united. For instance, the UK's concerns about the system were quite different from the German ones, and at this stage of the game, the heat was clearly being turned up. The EU's reputation as a capable policy-maker was increasingly at stake. As noted by the *ENDS Report*, "MEPs, the European Commission and Member States are all keen to thrash out a compromise—not least because any formal amendments from the Parliament would trigger the conciliation procedure, jeopardizing the planned 2005 start for trading."<sup>72</sup> It can be assumed that this contributed additional political weight to the Commission's suggested design and the Council's largely similar Common Position.

To close then, there are good reasons to believe that the Commission's entrepreneurial role is most prominent in cases of considerable complexity, hemmed in by domestic uncertainties and disagreements. How do the various bits and pieces of information collated here fit in with this claim? The fact that very few governments had clear ET plans and positions in 1998 clearly fits the hypothesis. And with regard to Germany, splits were emerging between the governmental position (rather positive) and the industrial position (quite negative) towards the end of 2002.<sup>73</sup> That said, there were supranational factors to the process which could further explain the Commission's strong entrepreneurial position and the EU's high problem-solving capacity in this case. For instance, even though it was not complete, there was a high level of internal coherence in the Commission. There was also a relative weakness of the European Parliament as an "argumentative" EU actor, related partly to the complex character of the trading issue and a lack of clear-cut focal points for lobbying—and, over time, the increasing need to have an ET scheme quickly adopted. Finally, there was the overall positive attitude of the Council.<sup>74</sup> All of these factors served to enhance the position of the Commission as a strong entrepreneur, speeding up the decision-making process. But why was it so important to have an EU trading scheme quickly adopted?

### 2.3 External Impulses and Windows of Opportunity

With regard to external influences on the development of the EU trading scheme, there are at least two different perspectives with successive analytical relevance: there is a learning perspective whose relevance mainly plays out in

72. *ENDS Report* 2003, 18. As noted in section 2.3, the 2005 start is also related to the need to show "demonstrable progress" by 2005 put forward in Article 3.2. in the Kyoto Protocol.

73. For example, Reuters/Planetark 2002.

74. Hence, as emphasized by a reviewer of this manuscript, it was in the interests of a majority of the Member States to have an ET system established quickly. However, in order to turn this collaborative potential into practice, the Commission's entrepreneurial role was in my view essential.

the period before 2001, and a “system shock”/window of opportunity perspective of relevance to the post-2001 events.

Turning first to the transnational learning perspective, the policy learning which took place during the preparations for and negotiations on the Kyoto Protocol in 1996/97 should not be forgotten.<sup>75</sup> Although the EU official view on ET was relatively unforthcoming in this phase, further learning as to the pros and cons of this instrument inevitably took place. Moreover, it was a fact that ET was included in the Kyoto Protocol and in some way the EU just had to “get on with it” too. This was also seen as a precondition for moving towards ratification of the Protocol in the US.<sup>76</sup>

Commentators have pointed out in addition that the US experience of sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) emissions trading proved an important factor in the EU’s policy about-turn around 1998. It involved both an active involvement of US experts in discussions with the EU Commission, who hired economists with detailed knowledge of US emissions trading.<sup>77</sup> No doubt this gave the Commission a head start and a power boost with regard to the trading issue within the EU system. It is also likely that the US SO<sub>2</sub> trading experiences facilitated the Commission’s task of coming up with a complete trading design proposal in the fall of 2001.

It is interesting to note how US influence on European actors in this early phase operated along various pathways. According to Zapfel and Vainio,<sup>78</sup> “a major factor in the [BP’s] decision to embark on this [i.e. the ET] route was the lobbying of BP by the US environmental pressure group Environmental Defense, the most active supporter of emissions trading on the environmental side in the United States for many years.”

However, in the wake of the US March 2001 decision to pull out of the Kyoto Protocol, the position as the global emissions trading pilot and climate policy entrepreneur suddenly became vacant. With such a big potential buyer of global allowances out of the game, the prospective prices for allowances looked far more promising from an EU perspective.<sup>79</sup> The challenge and opportunity were taken on by the EU through a two-pronged strategy,<sup>80</sup> the one prong being its diplomatic bid to try to save the Kyoto Protocol. According to Hovi et al.,<sup>81</sup> “it

75. Regarding the transnational learning perspective, see for example, Haas 1990; Young and Osherenko 1993; and Hasenclever et al. 1997.

76. Zapfel and Vainio 2002, 6.

77. See Zapfel and Vainio 2002; and Christiansen and Wettstad 2003, 6–7. This learning process may have increased the information asymmetries within the EU about the emissions trading instrument and hence empowered the Commission. As noted by Marks and Hooghe (2001, 11), principal (i.e. national) control over an agent (such as the Commission) may be weakened if the agent has access to information or skills that are not available to the principal.

78. Zapfel and Vainio 2002, 8.

79. As noted by IEA (2002, 15), “Other countries, particularly EU members and Japan, may now buy the credits cheaply and so fulfill their Kyoto commitments at a far lower price than otherwise.”

80. Hovi et al. 2003, 18.

81. Hovi et al. 2003, 19.

seems fair to conclude that had it not been for the EU, the Kyoto Protocol might have been dead." In part it took the form of setting a good example by developing EU internal climate policy. Ratification of the Kyoto Protocol is part of this, but it can be argued that the successful establishment of a pilot GHG ET scheme soon became the potential jewel in the crown for EU climate policy. It should also be recalled that Article 3.2. in the Kyoto Protocol calls for "demonstrable progress" by 2005. But to claim the jewel for its crown by 2005, the Commission would have to ensure the EU process was up and running as soon and as effectively as possible.

Moreover, as has been pointed out by Cass,<sup>82</sup> the very framing of the trading issue started to change within the EU; from ET being an illegitimate American attempt to shirk domestic responsibilities to a legitimate strategy to salvage the Kyoto Protocol without American participation. This was a crucial contribution to winning both skeptical ENGOs, Commission Directorates, Member States and Members of the European Parliament over in this matter.<sup>83</sup> As noted by Brussels insiders, "the huge luck the Commission had was Bush's withdrawal . . . It united the EU in an extraordinary way."<sup>84</sup>

### 3. Winding Up: Multi-Level Governance and its Requirements

Let us first sum up some main findings. In order to shed some explanatory light on the EU's remarkably rapid ET policy-making process, all three perspectives scrutinized in the previous sections seem to contribute important elements. First, we identified several "push" and "pull" factors in EU environmental and climate policy developments prior to the 1998 turning-point, which indicate that the emissions trading issue was more mature than originally thought. As a main pushing factor, there was the EU's post-Kyoto climate policy hangover. The projections for Member States' emissions were worrying, while no effective common climate policies had been adopted. The carbon/energy tax was still blocked and programs for energy efficiency and renewables were timid. With regard to pull factors, the 1996 IPPC Directive offered an already available permitting approach of potential use also in the trading context, and the possibility to counter the negative price incentives for energy efficiency brought about by energy liberalization and the positive attitudes to and experience with emissions trading among central industrial actors may have pulled EU decision-makers towards the trading option. All these factors meant that the EU system was more ripe and ready for emissions trading in 1998 than immediately apparent.

Second, the Commission played an "extra strong" entrepreneurial role throughout the process, which of course speeded up the process. The Commission got a head start as only a few Member States had seriously discussed domestic ET systems in the first years of the EU ET process, and acquired trading

82. Cass 2004.

83. Interviews in Brussels, May 2004.

84. Ibid.

expertise from American experts. Moreover, related to both the internal push and pull factors and global developments, the Commission developed into a quite unified body. The Commission also made clever entrepreneurial moves, such as subtracting the potentially totally damaging issue of the level of national emission caps from the decision-making process early on. Within the Council, the same push and pull factors probably contrived to bring about a generally positive attitude to the ET initiative and the Commission's proposed design of 2001. Although central Member States such as Germany and the UK had objections to the Commission's proposal, their objections had a quite different domestic base and did not represent a unified opposition. The European Parliament, an increasingly powerful co-legislator in the EU system, was also positive to the trading instrument. Nor did it manage to find simple and powerful focal points for lobbying in the complex ET "jungle."

Third, in the initial phase of the process, Kyoto negotiation experiences and US trading experiences and experts provided lessons on emissions trading within the EU system. When the US pulled out of the Kyoto process in March 2001, it left the EU as the main global climate change player, allowing the EU to up the ante in its ET process. This "global heat" strengthened the Commission's hand further and, more specifically, no doubt led to the swiftly achieved final agreement between the Parliament and the Council in June 2003. The combination of a strong Commission and fundamentally positive other EU bodies gave the EU as a whole a high problem-solving capacity in this case.

What lessons can be drawn from the EU's high policy-making tempo in this context, and can it jeopardize the future success and effectiveness of the system? Could high decision-making speeds lead to an inadequately developed system? Could for instance central stakeholders and target groups not have been adequately consulted and/or not given adequate time to get acquainted with the trading instrument, and central externalities for existing policies and affected sectors not taken into consideration? This raises the more general question of what is really a "normal" and "adequate" political "pregnancy" for a complex, multi-level body such as the EU? The answer is not clear cut. We may assume that in order to consult adequately with central stakeholders and target groups and allow sufficient learning, a certain minimum timeframe is necessary. The intrinsic complexity of the issue area in question and existing knowledge of the workings of policy instrument to be adopted are probably central conditioning factors. The more complex and multi-level the issue and the less experience there is of the policy instrument, the longer the process will have to be to achieve adequate output. So far, it is clear that several rounds of consultation were carried out and several mechanisms of stakeholder involvement utilized. The relationship with other environmental and climate policies has been discussed in several documents. However, a nagging question remains: will it be enough, given the high complexity and novelty of the emissions trading instrument?

Recent developments certainly confirm the impression of an almost break-neck decision-making speed and bureaucratic capacity pushed to the limits. For instance, only the UK complied with the 31 December 2003 deadline for formal transposition of the ET Directive, the 14 others failed to make this deadline.<sup>85</sup> The process of producing initial national allocation plans (NAPs) had a formal deadline of 31 March 2004. This process is very important in fleshing out the general design principles agreed to in the ET Directive. Not surprisingly, then, this crucial process has also experienced delays. For instance, by July 2004, five countries had issued draft NAPs but not submitted them to the EU, and three countries had not even published a plan.<sup>86</sup> By early October, only eight NAPs have been finally approved by the Commission.<sup>87</sup> The submitted NAPs have been criticized for being too generous in terms of handing out allowances and hence the necessary scarcity required for the system to work properly could be in danger. Moreover, a company survey carried out by consulting firm Ernst & Young in mid-2004 found many companies within the European Union unprepared for trading and also found high skepticism with regard to a timely start and well-functioning system.<sup>88</sup>

So the need for a proficient policy entrepreneur may be more urgent than ever, as the stakes really *are* high. The successful start and development of an EU emissions trading system could be something of a catalytic event for global progress in the issue area of climate change. It is quite possible that the EU system could form the blueprint for the future development of a global trading system.

### Relevant Interviews

- Jorge Moreira Da Silva, European Parliament, 11 February 2002.
- Rob Bradley, Climate Action Network (CAN), 11 February 2002; and 26 May 2004.
- Christian Egenhofer, Centre for European Policy Studies (CEPS), 12 February 2002.
- Henning Arp, European Commission, DG Environment, 12 February 2002.
- Peter Zapfel, European Commission, DG Environment, 13 February 2002.
- Frazer Goodwin, Transport & Environment, 18 June 2003.
- Per Stiansen, Norwegian Ministry of the Environment, 16 January 2004.

85. Bloomberg 2004.

86. These five were Belgium, Czech Republic, France, Italy and Spain. Member States that had not published a draft were Greece, Hungary and Poland. Point Carbon 2004a.

87. These eight are Austria, Denmark, Germany, the Netherlands, Ireland, Slovenia, Sweden, and the UK. Point Carbon 2004b.

88. Ernst & Young 2004.

- Trygve Hallingstad, Norwegian Ministry of the Environment (Brussels representative), 26 May 2004.
- Ulf Bjornholm-Ottosen, Swedish Delegation to the EU, 16 May 2004.
- Terhi Lehtonen, European Parliament, 27 May 2004.
- Sabina Magnano, European Parliament, 27 May 2004.
- Mike Wriglesworth, International Emissions Trading Association (IETA), 27 May 2004.
- Frank Brannvoll/Jenny Schulz, Storaenso, 27 May 2004.
- John Scowcroft, Eurelectric, 28 May 2004.
- Håvard Vaggen Malvik/Kåre Rudsar, European Commission, DG for Energy and Transport, 28 May 2004.

## References

- Andersen, Michael Schou, and Duncan Liefferink, eds. 1997. *European Environmental policy—The pioneers*. Manchester: Manchester University Press.
- Andresen, Steinar, and Shardul Agrawala. 2001. US Climate Policy: Evolution and Future Prospects. *Energy and Environment* 12 (2&3): 117–139.
- Bloomberg. 2004. EU States Fail to Meet Deadline for Emissions-Trading Laws. 6 February 2004. Available at [http://www.bloomberg.com/news/index\\_eu\\_am.html](http://www.bloomberg.com/news/index_eu_am.html).
- BP. 2004. Emissions Trading. Available at BP home page, <http://www.bp.com/sectiongenericarticle.do?categoryId=2011563&contentId=2016953>.
- Cass, Loren R. 2004. Issue Framing and Preference Change: The Evolution of the European Union Position on International Emissions Trading. Paper prepared for the International Studies Association Conference in Montreal, March.
- Chasek, Pamela, ed. 1998. European Union Views on International Greenhouse Gas Emissions Trading. Working Paper 3, Environmental Policy Studies, Columbia University, 18 May 1998.
- Christiansen, Atle C., and Jørgen Wettestad. 2003. The EU as a Frontrunner on Greenhouse Gas Emissions Trading: How did it Happen and will the EU succeed? *Climate Policy* 3 (1): 3–18.
- Climate Network Europe. 2000. Emissions trading in the EU. October 2000. Available at <http://www.climnet.org/resources/resources.htm>.
- Collier, Ute, ed. 1998. *Deregulation in the European Union—Environmental Perspectives*. London: Routledge.
- Damro, Chad, and Pilar Luaces Mendez. 2003. Emissions Trading at Kyoto: From EU Resistance to Union Innovation. *Environmental Politics* 12 (2): 71–94.
- ENDS Report. 1998. Business Faces Mix of Instruments to Curb Greenhouse Gas Emissions. June 1998, no. 281: 39.
- \_\_\_\_\_. 2001. Ministers Argue Over Emissions Trading, Agree Sulphur Rules. December 2001, no. 323: 49.
- \_\_\_\_\_. 2003. Debate on EU Emissions Trading Steps into Overdrive. June 2003, no. 341: 18–22.
- ENDS Daily. 2001a. Mixed Response to EU Carbon Commerce Plan. 31 January 2001.
- \_\_\_\_\_. 2001b. EU Emission Trading Scheme Delayed. 29 June 2001.
- \_\_\_\_\_. 2001c. EU States Divided Over Climate Emission Trading. 13 December 2001.

- ENDS Daily*. 2002. Ministers Agree EU Climate Gas Trading Scheme. 9 December 2002.
- Ernst & Young. 2004. The European Union Emissions Trading Scheme—A Challenge for Industry or just an Illusion? Rotterdam: Ernst & Young, July.
- Euractiv*. 2002. Ministers Reach Deal On Greenhouse Gas Emissions Trading. 10 December.
- \_\_\_\_\_. 2003a. Greenhouse Gas Trading: Meps Hope to Avoid Conciliation. 12 June.
- \_\_\_\_\_. 2003b. EP and Member States find Compromise on Greenhouse Gas Emissions Trading. 23 June.
- \_\_\_\_\_. 2003c. EU Prepares to Implement Kyoto Flexible Mechanisms. 24 July.
- Europe Environment. 2002. European Parliament Endorses Emission Permit Scheme. No. 620, 18 October: 14.
- European Commission. 1998. Commission Communication to the Council and the Parliament. Climate Change—Towards an EU Post-Kyoto Strategy. COM (1998) 353, Brussels.
- \_\_\_\_\_. 1999. Commission Communication to the Council and the Parliament. Preparing for Implementation of the Kyoto Protocol. COM (1999) 230, Brussels.
- \_\_\_\_\_. 2000. Green Paper on Greenhouse Gas Emissions Trading within the European Union. COM (2000)87 final, Brussels.
- \_\_\_\_\_. 2001a. Commission Proposes Ratification of Kyoto Protocol and Emissions Trading System. Press Release 23 Oct 2001.
- \_\_\_\_\_. 2001b. Proposal for a Directive of the European Parliament and of the Council establishing a framework for greenhouse gas emissions trading within the European Community and amending Council Directive 96/61/EC. COM(2001) 581, Brussels.
- \_\_\_\_\_. 2002. Non-Paper on Synergies between the EU Emissions Trading proposal and the IPPC Directive. 22 January 2002, DG ENV E.1, Brussels.
- \_\_\_\_\_. 2003. Proposal for a Directive of the European Parliament and of the Council amending the Directive establishing a framework for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms. COM(2003) 403, Brussels.
- European Council. 2003. Council 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.
- Fernandez Armenteros, Mercedes. 2002. Synergies between the Emissions Trading Proposal and the IPPC Directive. *Elni Review* 2: 13–17.
- Grubb, Michael. 1989. *The Greenhouse Effect: Negotiating Targets*. London: The Royal Institute of International Affairs.
- Grubb, Michael, Christian Vrolijk, and Duncan Brack. 1999. *The Kyoto Protocol. A Guide and Assessment*. London: The Royal Institute of International Affairs.
- Haas, Peter M. 1990. Obtaining International Environmental Protection through Epistemic Consensus. *Millennium* 19 (3): 347–363.
- Haigh, Nigel, ed. 2004. *Manual of Environmental Policy: The EC and Britain*. London: Longman/IEEP.
- Hansen, Stein, and Kjell Roland. 1990. European Climate Change Cooperation—A Role for Emission Trading? ECON Report 4/90, ECON, Oslo.

- Hasenclever, Andreas, Peter Mayer, and Volker Rittberger. 1997. *Theories of International Regimes*. Cambridge: Cambridge University Press.
- Hasselknippe, Henrik, and Atle C. Christiansen. 2003. Energy Taxation in Europe: Current Status, Driving Forces, and Future Prospects. Final report, FNI, Oslo, November.
- Hovi, Jon, Tora Skodvin, and Steinar Andresen. 2003. The Persistence of the Kyoto Protocol: Why Other Annex I Countries Move on Without the United States. *Global Environmental Politics* 3 (4): 1–23.
- IEA. 2002. *International Emission Trading—From Concept to Reality*. Paris: The International Energy Agency.
- International Environment Reporter. 1998. EU Agrees on Burden-Sharing Plan for Emission Cuts under Kyoto Protocol. 24 June 1998: 608–609.
- Jordan, Andrew, Rudi Wurzel, and Anthony Zito. 2003. ‘New’ Instruments of Environmental Governance: Patterns and Pathways of Change, and ‘Comparative Conclusions’. *Environmental Politics*, Special Issue on “New’ Instruments of Environmental Governance? National Experiences and Prospects, 12 (1): 1–27; 201–225.
- Kruger, Joseph, and William A. Pizer. 2004. The EU Emissions Trading Directive: Opportunities and Potential Pitfalls. Report, Resources for the Future, Washington DC.
- Marks, Gary, and Lisbet Hooghe. 2001. *Multi-Level Governance and European Integration*. Lanham, MD: Rowman and Littlefield.
- Marks, Gary, Lisbet Hooghe, and Kermit Blank. 1996. European Integration from the 1980s: State Centric vs Multi-Level Governance. *Journal of Common Market Studies* 34 (3): 341–378.
- Miles, Edward L., Arild Underdal, Steinar Andresen, Jørgen Wettestad, Jon B. Skjærseth, and Elaine M. Carlin. 2002. *Environmental Regime Effectiveness—Confronting Theory with Evidence*. Cambridge, MA: MIT Press.
- Moravcsik, Andrew. 1998. *The Choice for Europe*. Ithaca, NY: Cornell University Press.
- \_\_\_\_\_. 1999. Theory and Method in the Study of International Negotiation: A Rejoinder to Oran Young. *International Organization* 53 (4): 811–815.
- Mortensen, Bent. 2003. CO<sub>2</sub> quotas for Electricity Production. The Danish Experiment. Paper presented at NORFA seminar on ‘Legal Issues Related to National Implementation of the Kyoto Protocol, University of Oslo, Department of Public and International Law, 13–15 March 2003.
- Nugent, Neill. 1999. *The Government and Politics of the European Union*. London: Macmillan Press.
- Oberthur, Sebastian, and Herman Ott. 1999. *The Kyoto Protocol. International Climate Policy for the 21<sup>st</sup> Century*. Berlin: Springer Verlag.
- Oberthur, Sebastian, and Thomas Gehring. 2003. Investigating Institutional Interaction: Toward a Systematic Analysis. Paper for the 2003 International Studies Association Annual Convention, Portland, Oregon, Feb-March.
- OECD. 1992. *Climate Change: Designing a Tradeable Permit System*. Paris: OECD.
- Point Carbon. 2004a. Carbon Market Watch. 25 June. Available at <http://www.pointcarbon.com>.
- \_\_\_\_\_. 2004b. Carbon Market Watch. 24 September. Available at <http://www.pointcarbon.com>.
- Reuters/Planet Ark. 2002. German Power Firms Want Emissions Trade Exemptions. 9 December.

- \_\_\_\_\_. 2003. EU Assembly To Push For Greenhouse Gas Trading Deal. 22 May.
- Ringius, Lasse. 1997. Differentiation, Leaders and Fairness: Negotiating Climate Commitments in the European Community. Center for International Climate and Environmental Research, CICERO, University of Oslo, Report No 8, 1997.
- Rosendal, Guri K. 2001. Impacts of Overlapping International Regimes: The Case of Biodiversity. *Global Governance* 7 (1): 95–117.
- Skjærseth Jon B. 1993. The Climate Policy of the EC: Too Hot to Handle? EED Report 1993/2, The Fridtjof Nansen Institute, Oslo.
- Skjærseth, Jon B., and Tora Skodvin. 2003. *Climate Change and the Oil Industry—Common Problem, Varying Strategies*. Manchester: Manchester University Press.
- Stokke, Olav S., ed. 2001. *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes*. Oxford: Oxford University Press.
- Tsebelis, George, and Gary Garrett. 2001. The Institutional Foundations of Intergovernmentalism and Supranationalism in the European Union. *International Organization* 55 (2): 357–390.
- Underdal, Arild. 1994. Leadership Theory—Rediscovering the Arts of Management. In *International Multilateral Negotiation*, edited by I.W. Zartman, 178–197. San Francisco, CA: Jossey-Bass.
- Underdal, Arild. 2002. One Question, Two Answers. In *Environmental Regime Effectiveness—Confronting Theory with Evidence*, edited by Edward L. Miles, Arild Underdal, Steinar Andresen, Jørgen Wettestad, Jon B. Skjærseth, and Elaine M. Carlin, 3–47. Cambridge, MA: MIT Press.
- Victor, David G. 1991. Limits of Market-Based Strategies for Slowing Global Warming: The Case of Tradeable Permits. *Policy Sciences* 24 (3): 199–222.
- Wettestad, Jørgen. 2000. The Complicated Development of EU Climate Policy. In *Climate Change and European Leadership*, edited by Michael Grubb and Joyeeta Gupta, 25–47. Dordrecht: Kluwer Academic Publishers.
- \_\_\_\_\_. 2001. The Ambiguous Prospects for EU Climate Policy—A Summary of Options. *Energy and Environment* 12 (2&3): 139–167.
- \_\_\_\_\_. 2002. *Clearing the Air—European Advances in Tackling Acid Rain and Atmospheric Pollution*. Aldershot: Ashgate.
- Wurzel, Rudi. 2002. *Environmental Policy-making in Britain, Germany and the European Union*. Manchester: Manchester University Press.
- Young, Oran R., and Gail Osherenko, eds. 1993. *Polar Politics: Creating International Environmental Regimes*. Ithaca, NY: Cornell University Press.
- Zapfel, Peter, and Matti Vainio. 2002. Pathways to European Greenhouse Gas Emissions Trading History and Misconceptions. Nota de Lavoro 85.2002, FEEM, Milan.