

Origins and Development of the EU ETS

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Abstract The successful creation of the European Union Emissions Trading Scheme (EU ETS) was not inevitable. Countries such as Canada and Japan which might be thought to have a less complex and more cohesive cultural and institutional context failed to do so. Europe succeeded for a number of reasons: with a Single Market for the economy, the logic of a single market for environment is inexorable; the European Commission—which had failed in its earlier efforts to introduce a carbon energy tax—made the case for trading with great skill and persistence, on the basis of qualified majority voting, which meant no country had a veto; the UK and Denmark initiated their own national schemes, and there was a serious risk of balkanising the market with up to 27 different schemes, with the losses of scale and scope this would entail; meeting the Union’s Kyoto commitments required a substantive pan European response, and EU ETS was the most credible and effective way of doing so. The European Parliament and Environmental Non Governmental Organisations played a constructive role, pushing for more auctioning of allowances and less of them, allocated centrally. Free allocation managed by Member States (MS) was a necessary condition to achieve the support needed, so they failed to achieve these objectives in the initial phase, but they characterize the Commission’s proposals post 2012.

Keywords European Union Emissions Trading Scheme · History · Single market

1 Introduction

In a context of which Nietzsche would have approved, the European Union Emissions Trading Scheme (EU ETS) grew out of failure. He admonishes us to:

Examine the lives of the best and most fruitful people and peoples and ask yourselves whether a tree that is supposed to grow to a proud height can dispense with bad

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weather and storms; whether misfortune and external resistance, some kinds of hatred, jealousy, stubbornness, mistrust, hardness, avarice, and violence do not belong among the favourable conditions without which any great growth even of virtue is scarcely possible.

The sapling that became EU ETS was a product of two failures; first, the European Commission failed in its initiative to introduce an effective EU-wide carbon energy tax in the nineties. Secondly, the Commission fought unsuccessfully against the inclusion of trading as a flexible instrument in the Kyoto Protocol in 1997. In this chapter, we recount how these apparent set backs were followed by the successful creation of an EU-wide market in carbon dioxide. We touch on the carbon tax proposal and its demise, before turning to the evolution of the trading scheme. Policy of the scale and ambition evinced by the EU ETS inevitably evokes resistance; the case for the status quo always has its loyal and often passionate adherents. Change is a product of many forces, including: an enabling legislative and institutional context; an international context and sense of crisis that stimulates and supports action; an intellectual framework and experience that provides the animating idea and evidence to support action; effective political and bureaucratic leadership. This is a story that combines the mundane and the dramatic, with a number of twists and turns, where success was never inevitable or pre-ordained. It is notable that neither of the other two large rich country ratifiers of the Kyoto Protocol—Canada and Japan—implemented a trading scheme.

The telling has been enormously facilitated by the work of others who have addressed the EU ETS story, notably an important recent book by [Skjaereth and Wettstad \(2008\)](#) called *EU Emissions Trading—Initiation, Decision-making and Implementation* which does what it says on the tin—gives a detailed recounting of the process from initiation to implementation. Another important source is [Lefevere \(2005\)](#) who had a ring side seat, and indeed who was in the ring himself as both consultant and later Commission official. A third key source is a volume edited by [Delbeke \(2006\)](#) who led the Commission team throughout the process. Interrogation of the literature is essential, but I also had the privilege of being a sporadically engaged participant observer myself at Member State level in Ireland, and from time to time in the European Commission, the European Environment Agency and European Parliament. And so there has been a sort of osmosis underway over the years that informs my view. Some of the key actions discussed here, and their implications, are summarised sequentially in Appendix A.

2 Failure and Precursor—The Carbon Energy Tax Proposal and the Flexible Mechanisms in the Kyoto Protocol

The European Commission proposed an EU-wide carbon energy tax in 1992,¹ with the Commission effort led by Jos Delbeke and Matthias Mors. Opposition to the proposal came from two powerful sources. Some nations regard Member State autonomy in regard to taxing as a core value, not to be compromised even if the environment would benefit. The view is that this power is so central to management of the economy that if it is foregone, autonomy will have been comprised. While the carbon energy tax was presented correctly as a special case, it was regarded by some as the thin edge of the wedge, to be followed inevitably by other taxing initiatives that would incrementally leak fiscal autonomy to the Commission. Because fiscal measures require unanimity—any Member State can veto the initiative—this strong ideological opposition proved impossible to overcome. The main industry lobbies,

¹ COM (1992) 226.

represented most clearly by UNICE, the main representative of industry at EU level, also opposed the tax, with consistent and persistent case making at Member State and EU levels.² While there was some subsequent harmonisation as regards the minimum rate of taxes and excise duties applicable to energy products, these mostly codified what was already in place at Member State level, and had no carbon or greenhouse gas specific features. The opposition proved too strong; the carbon energy tax proposal was formally withdrawn in 1997.

The Kyoto Protocol was signed in December 1997. Three features characterised the European Union negotiating position; a commitment to mandatory caps on emissions by developed countries, an undifferentiated target of minus 15%, and antipathy to emissions trading as a mechanism for achieving these targets, the latter on the basis that some participants whose caps included ‘hot air’ would benefit without making an effort and the overall objective of constraining emissions would be compromised. Caps were agreed, but neither the 15% reduction nor the undifferentiated target was achieved, and, at the insistence of the US delegation led by then Vice President Al Gore, emissions trading between countries was included as a flexible measure, together with the Clean Development Mechanism (CDM) and Joint Implementation. Of some significance for later developments, in the Kyoto negotiations UNICE supported the use of emissions trading as a means of meeting targets. This position was predicated on the proposition that the US would be a participant, and informed by the fact that British Petroleum (BP) had introduced an internal company trading scheme with some success, and the company via UNICE supported the introduction of a wider scheme. The negotiating team felt that they had failed to achieve most of what they aimed for, and shortly after Kyoto most moved on to other assignments. Jos Delbeke was invited to take on the climate change portfolio; six months after opposing emissions trading, the Commission embraced it: as the Psalmist puts it: “the stone which the builders rejected had become the corner stone.”

At subsequent COP meetings in Buenos Aires and Marrakech, Japan opposed any enforcement mechanisms that would give the UN the power to take legal sanctions against a party to the Protocol for not complying with its targets. This convinced the Commission that if trading was to be successful in the first instance, it would have to be ‘domestic’ in the sense of being internal to the Union, which could ensure that the Commission and ultimately the European Court would guarantee the integrity of what was proposed.

3 Legislative and Institutional Context

The Single European Act, 1986 is a fundamental building block of the Union. It made the single market a reality, by guaranteeing free movement of goods, people and capital, and providing the legislative and institutional support to ensure that these provisions were implemented. It gave reality to what had heretofore been largely a rhetorical ‘common market.’ Two Directorates—Competition and the Internal Market—were empowered in this regard. As we shall see later, these proved crucial in enabling the emissions trading scheme to overcome opposition within the Commission from the Enterprise Directorate. It also created a separate chapter in the Treaty on environment that created Community competence based on qualified majority voting—article 175(1). Co-decision—whereby the European Parliament was given important new powers, was enabled in the subsequent Maastricht (1993) (which

² Some industry interests at this time proposed emissions trading as a preferable option to taxation, a position that proved of relevance later on.

also enabled the Euro) and Amsterdam Treaties, which substantially enhanced the role of the European Parliament in the legislative process.

Where qualified majority voting applies, each Member State has a number of votes based roughly on population but weighted in favour of smaller Member States. Co-decision refers to the role of the directly elected European Parliament in enacting European legislation; it gave the Parliament a statutory role in the assessment and approval of environmental initiatives. Attention was also given to the polluter pays principle and the requirement to carry out an analysis of costs and benefits of environmental measures (Delbeke 2006). This provided the statutory basis for subsequent action on mobilising the market to address climate change. The creation of the single market also highlighted the need to address environmental challenges that transcended national frontiers on a community wide basis, and to do so in a cost effective manner that integrated economy and environment, a direction recommended by a Commission Task Force on the environment and the single market that reported in 1990.

As regards policy formulation, development and implementation, there are three key institutions within the Union. The first is the European Commission, which is organised into a number of Directorates General, of which one is Environment. It is often incompletely described as the bureaucracy of the Union. It is that, but much more. It has singular right to initiate legislation, it is the fulcrum which levers the various other actors towards decision, it provides the evidence and analytical ballast to drive an agenda forward, and it also has responsibility to ensure implementation, including where necessary taking delinquent Member States to court.

There were a few reasons why the Commission embraced emissions trading.³ The Commission took legal advice on its ability to ratify the Kyoto protocol alongside Member States. The advice received was that the Commission had to show itself capable of contributing to achieving the commitments, and EU ETS was central to being able to make the case for meeting that test.

Further, EU ETS provided several levers to the Commission in establishing its leading role in climate change policy, which role was previously lacking. This is shown most clearly in the progression in the area of National Allocation Plans (NAPs). Initially, there was almost total Member State freedom within the loose framework provided by Annex III. However, the Commission has incrementally limited this freedom to the extent that, in Phase III, Directorate General Environment (DG ENV) feels empowered to pull in the draw strings squeezing to the extent that harmonised allocation will be achieved.

The effects of EU ETS are felt beyond the sectors it covers, extending into the uncovered sectors where MS have the most freedom of action in devising and implementing their strategies. This is because, in order to draw up a NAP that would pass scrutiny in the EU process that Directorate General Environment (DG ENV) leads, the NAP had to be shown to be part of an overall national strategy capable of meeting overall MS commitments. Where no such strategy existed, it had to be devised. This may have been rudimentary in the early stages, but increasingly strategies have to be comprehensive and coherent, able to pass an ever-closer scrutiny that EU climate change policy requires. The logic of inclusiveness—covering both the trading and non-trading sectors—has now been formalised in the Commission's proposal to provide legally binding caps for the non-trading schemes from 2013.⁴

The second key actor is the Council of Ministers, comprising representatives of the Member States, who in the case of emissions trading are typically the Ministers for Environment. They are a key decision-making hub; nothing can be enacted without their approval.

³ Personal Communication, Michael Wigglesworth, formerly British Petroleum (BP).

⁴ See: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52008PC0017:EN:NOT>.

However, as noted above, this does not mean that each Member State has a veto. The qualified majority mechanism means that decisions can be taken without unanimity. Although it cannot initiate legislation, it can request the Commission to examine an issue and come forward with proposals.

The third key player is the European Parliament (EP), which is directly elected every 5 years, and it transacts its business through Committees, the most relevant for this analysis being the Committee on the Environment, Public Health and Food Safety, with 60 members. Its role is central, but rather baroque.⁵ Under the co-decision procedure, the EP has the right to propose amendments to a Commission proposal, over a period of two Readings. The Parliament can veto the adoption of the whole proposal if it thinks that its amendments have not been sufficiently taken into account in the final text. Amendments are proposed through readings. It can only then adopt amendments not accepted by the Commission on the second reading with the support of an absolute majority of its component members.

The Commission is arguably the first amongst equals in this triumvirate, for the following reasons: It is permanent—Members of Parliament and government Ministers come and go, but the Commission endures. It commands the agenda and information. As regards the latter, it is now required to conduct impact assessments (IA) of policy choices, which involves examining the choices available, and tracing their impact on the economy, environment and society as an aid to decision-making; steering this process involves both learning and associated accretion of influence.⁶ It is the hub in a wheel of spokes, where the Parliament and the Council must perforce at times represent the rim.

But three legged races are awkward affairs at the best of times. Getting over the line in reasonable time and good order requires all three parties to have mutual respect and to collaborate. There are other actors who provide input that can be influential. These include the European Environment Agency (EEA) whose brief is to provide high quality information in a timely fashion to support the policy process. A report on whether progress is adequate or not in the climate change arena can be influential in driving policy. The Committee of the Regions and the Economic and Social Committee are groupings independent of the European Parliament that have the right of input and commentary. In Brussels, one finds a constellation of economic interest groups and lobbies of a scale and sophistication that matches those of Washington DC. It is their job to influence, and at times they can be very effective. In regard to climate change policy, key actors are UNICE, which represents business and industry, and more specialised sectoral lobbies including CEFIC (chemical industry) and Cembureau (Cement). Environmental NGOs that are engaged and influential include the Foundation for International Environmental Law and Development (FIELD), Climate Action Network and World Wildlife Fund (WWF). And of course these all have their analogues in the Member States.

4 International Context and Sense of Crisis—The Role of the Kyoto Protocol

The European Union was an early proponent of quantitative restriction on greenhouse gas emissions, arguing in 1992 at the Rio summit for binding reduction targets, in the context of achieving a stabilisation target, thereby, perhaps unconsciously, setting the stage for a quantity management policy instrument. But it was and is the Kyoto Protocol which has shaped

⁵ See: http://ec.europa.eu/codecision/index_en.htm for description of the process.

⁶ See: Communication from the Commission on Impact Assessment COM (2002) 276 Final, available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2002:0276:FIN:EN:PDF>.

much of the effort, in a variety of fashions, even though the Commission from the outset made it clear that the EU ETS was a ‘domestic scheme’ that should proceed independent of what happened with the Protocol. The Kyoto Protocol was directly salient in that it provided (a) a quantitative target—8% reduction from 1990 emissions for EU 15, (b) the flexible mechanisms including emissions trading as enablers to meet the target and (c) the impetus for the burden sharing agreement in June 1998 whereby each of the then 15 member states were given a legally binding target. It provided a sense of urgency about making progress that would otherwise have been muted, and much of the case making for action in general, and in regard to emissions trading in particular, was linked to the Kyoto target. And associated with this Kyoto induced urgency was the view that Europe should lead. The Commissioner for Environment Ritt Bjerregaard is quoted in June 1998 as saying: We have to get involved in emissions trading. . . we cannot let others dictate the rules.’ (Skjaereth and Wettstad 2008, p. 36).

But the Kyoto-EU ETS link moved to centre stage after the rejection of Kyoto in March 2001 by President Bush. This was not unexpected; in July 1997, 5 months before the Protocol was agreed in Kyoto, the US Senate voted 95-0 against any Treaty that would exempt developing countries from legally binding commitments and imply higher energy costs, particularly on petrol. (Byrd Hagel Resolution). The implications for ratification of the Protocol were daunting. To come into effect required ratification by 55 Parties accounting for at least 55% of 1990 emissions. Since the US at the time contributed 34% of 1990 emissions, it meant that all the major players—Japan, Canada, Russia—had to ratify if it was to succeed. The US decision animated a ‘save Kyoto’ campaign by the Union and the Member States which was in a sense a coming of age. It required the Union to take leadership at the various meetings of the Conference of the Parties (COP) to the protocol so as to facilitate continuing engagement and support from others, notably Japan and Canada.⁷ Russia was the final domino that needed to fall if the Kyoto protocol was to come into effect. On October 2004 it was approved by the Duma, with Union support for Russian membership of the World Trade Organisation as the *quid pro quo*, and the Protocol came into effect. Throughout this process, the EU ETS moved to centre stage as the core evidence that the European Union could be innovative, courageous and effective in ensuring that its own performance matched its rhetoric. Progress was further animated by the publication in 2002 of the European Environment Agency’s greenhouse gas inventory, showing unsatisfactory progress over 1990–2000 (EEA 2002).⁸

So Kyoto set the EU ETS rocket in place, but it was President Bush and his administration that lit the fuse that finally drove it to orbit.

5 The Intellectual and Experiential Platform

An important precursor condition for action was the development of the intellectual platform in the theory and applied literature in regard to emissions trading, giving it status as a policy instrument. Ronald Coase (Coase 1960) in his famous ‘The Problem of Social Cost’ article provided a trenchant argument that assignment of suitably defined property rights, would allow for the use of environmental endowments to negotiate and trade their way to the economically efficient outcome. And the correction for market failure could be achieved without recourse to the use of external cost internalising taxes, as advocated by Pigou (1920). Coase was awarded the Nobel Prize for Economics in 1991, and this—the ultimate intellectual

⁷ See: <http://unfccc.int/documentation/decisions/items/2964.php> for details on relevant COPs.

⁸ See: http://reports.eea.europa.eu/technical_report_2002_75/en.

accolade in the field—provided further validation for the general approach. This theoretical frame was given more explicit expression as a way of creating an emissions market by Crocker (1966) and Dales (1968), but still using hypothetical cases to illustrate the potential. They made the case that fixing the quantity of emissions, allocating quotas to the emitters such that the sum of these did not exceed the overall envelope, then allowing price to emerge as the product of trades would allocate abatement automatically to those market participants who could abate at least cost. In addition, the price signal would create a continuing incentive to innovate thereby yielding dynamic efficiency, and the approach hewed to the ‘polluter pays principle’ by automatically rewarding those who reduced emissions, and penalising those who did the contrary. But it was the application of these ideas in the US, and the careful documentation of this experience, that has provided the meat in the analytical sandwich, and nourished the development of the instrument in Europe.⁹

Tietenberg (2006) provides an excellent summary of US experience, which in essence was learning by doing, often emerging as a pragmatic response to situations where flexibility was required, all other options were inoperable and desperation became the mother of invention. Initial efforts were broadly unsuccessful, as markets were thin, limiting liquidity, restrictions on trading were routine, participation was restricted, banking and borrowing was either not allowed or highly restricted. But what it took to make such markets work soon emerged, lessons were learned—albeit somewhat fitfully at times, and successes were recorded. The core criteria defining success were political and administrative feasibility, and the achievement of the environmental target at lower costs than the alternatives—environmental efficiency and cost effectiveness. Dynamic efficiency—the innovation dividend—has received less attention. The flagship of the US emissions trading family is the Acid Rain programme, whereby substantial reductions in sulphur dioxide emissions by power stations was achieved at costs that were substantially below the likely alternative policies. The evolution of this programme, its design characteristics and economic and environmental performance was meticulously documented by Ellerman et al. (2000) and this achievement provides a template for our analysis of the EU ETS. This experience and the associated analyses provided European economists with insights to apply to the European situation, and provided officials in both the Member States and in the Commission with a body of literature and people to interrogate and to learn from. Information was generously provided by both the research and analytical community and the practitioners in USEPA and elsewhere.

The OECD was typically prescient in identifying emissions trading as an emerging instrument—see OECD (1989) and Opschoor and Vos (1989)—and began to distil the key lessons and identify design issues in 1992—see OECD (1992).

Klaassen (1997) is credited with providing the first comprehensive review of the potential for using emissions trading to deal with the problem of climate change in the EU. Klaassen envisaged two principal tasks for the EU with respect to the use of emissions trading: to develop and implement international trading schemes (among Member States, EU-wide and possibly wider) and to facilitate the use of national emissions trading schemes by Member States. The European intellectual platform evolved quickly, and much of it crystallised or found expression via the Concerted Action on Market Based Instruments (CAMBI) which operated from 1996 to 1998 and then the Concerted Action on Tradable Emission Permits (CATEP) both led by the author from UCD Dublin. These brought together in a rolling series of workshops leading scholars from around the world. Each workshop typically combined

⁹ There is an extensive literature—see for example Kaplow and Shavell (2002) and Pizer (1999)—arguing the merits of taxation over emissions trading as a policy instrument for climate change, focused on taking into account both the potential long-term damages of climate change, and the costs of GHG control. However, as noted earlier, taxation was not available as a policy instrument at European Union level.

both invited speakers and a choice of submitted papers, which were all available on the web. Policy practitioners and other stakeholders were also often involved. From these workshops, a series of Policy Briefs focused on conveying key insights from research for the policy process were produced and widely disseminated,¹⁰ and a series of books were published in partnership with Edward Elgar.

A book edited in this series by [Sorrell and Skea \(1999\)](#) brought together the key emerging insights about emissions trading, including theory, design and application related to the European context. Of course there was and is by no means unanimity about the merits of emissions trading amongst the academic community—to have such would be very alarming. Many economists regard an appropriate carbon tax with recycling as the first best option for addressing climate change, and therefore regard emissions trading with misgivings. Some are so committed to tax that in its absence they act like a jilted lover, who prefers chastity to the embrace of an inferior. Others recognise the power of emissions trading, but only if allowances are auctioned, and the revenues recycled. Still others accept the fact that emissions trading with free allocation is perhaps the third best—albeit with significant distributional and dynamic efficiency implications—but that having a price that signals scarcity of the capacity of the planet to absorb more greenhouse gasses is a fundamental achievement. All three strands were vigorously represented in our workshops.

Keynes as always has the *mot juste* to capture the idea.

The ideas of economists, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back. I am sure that the power of vested interests is vastly exaggerated, compared with the gradual encroachment of ideas.

Emissions trading as an idea is a product in part of talented academic scribblers. Europe has had its share of madmen in authority, but this time, it was the quiet achievers who embraced the idea.

These intellectual rivulets fed intermittently but persistently into the stream of ideas that eventually shapes policy choices and in effect gave emissions trading a sort of parity of esteem with taxes and charges in the environmental policy cannon.

6 The Emergence of Emissions Trading in the European Union¹¹

The Commission team that had developed and promoted the carbon energy tax was led by Jos Delbeke, and they remained committed to an EU wide mobilisation of markets to address environmental dysfunction, and specifically to tackle the issue of climate change.¹²

¹⁰ These are all available at: <http://www.ucd.ie/gpep/gpepinfo/publications/index.html>.

¹¹ The legislative history, including key preparatory studies, can be accessed at: http://ec.europa.eu/environment/climat/emission/history_en.htm and details are also available at http://www.carbonexpo.com/wEnglisch/carbonexpo2/img/dokumente/040316_Hintergrundinformation_e_Carbon_Expo.pdf.

¹² The Commission team which drove the development, enactment and implementation of EU ETS included: Jos Delbeke, then Head of Unit—he steered the study of the Single market and the environment in 1990, lead the attempt to introduce the carbon energy tax, served as staff member at the International Monetary Fund before joining the Commission in 1986—economist. He was awarded the Outstanding Achievement Award by the European Association of Environmental and Resource Economists (EAERE) in 2005 for his

It understood the realities driving Member State and interest group opposition to the tax, and its resolve and resilience had been tested and tempered in the European policy furnace.

A key decision which enabled the emergence of trading was the burden sharing agreement of June 1998, whereby each of the then 15 Member States agreed a national target, the sum of which amounted to the overall Kyoto target of 1990 emissions minus 8%,¹³ and these were subsequently made legally binding. Also in June 1998 the Commission issued “Climate Change—towards An EU Post Kyoto Strategy”¹⁴ in which it stated that the Community *could* set up its own internal trading scheme by 2005, which would give practical familiarity and even a leading edge to the Union in using the instrument. It was also recognised that the US was likely to embrace emissions trading as a key policy instrument if and when it addressed climate change seriously, and compatibility of approach could simultaneously be a useful stimulus to US action and facilitate intercontinental trading. It also provided a potential window to compensate Russia, a reward for ratifying the Protocol.

6.1 Member State Actions

Member States were first to act on the potential that emissions trading seemed to offer. The UK had emerged during the 1990s as the leader in Europe in the mobilisation of markets to address a range of environmental challenges, focused initially on the use of taxes. (In 1993, the Conservatives introduced the Fuel Price Escalator as a way of both raising revenue and discouraging car use on environmental grounds. The escalator, which annually raised petrol prices above the rate of inflation, was set in 1993 at 3% and later increased to 5%. When the Conservatives left office in 1997, the UK had the highest transport fuel costs in the Union, with tax as a proportion of total cost standing at 76.3%.)

Denmark had a long tradition of using environmental taxes, and so was politically and temperamentally disposed to use markets to support environmental objectives. And in fact in both cases, it was enthusiasm by lobby groups to avoid or to mitigate proposals for carbon taxes that drove the support for emissions trading. And it was this early action at Member State level that convinced the Commission and others to move quickly at EU level. Otherwise, Europe would end up with a patchwork of schemes combining lack of scope and scale and probable incompatibilities to make the whole much less than the sum of the parts. The complexity of the UK scheme also reinforced the predisposition to keep the EU design simple.

Footnote 12 continued

work in leading the EU ETS to realisation; Olivia Hartridge co-wrote the rules for the UK emissions trading scheme, before joining the Commission team in 2003, political scientist); Jürgen Lefevere, worked with NGO (Foundation for International Environmental Law and Development) on climate change and energy including Commission Green Paper on emissions trading, before joining Commission in 2003 where he focused on the development of the linking Directive; Damien Meadows worked as legal adviser to the UK Department of Environment, Transport and the Regions, and the UN Climate Change Secretariat, before joining the Commission—responsible for EU ETS implementation and review; Arthur Runge-Metzger, head of ‘Market based instruments including Greenhouse Gas Emissions Trading’ in the Commission since 2003 with earlier focus in the Commission on developing countries—resource economist; Yvon Slingenber, served as member of the Cabinet of Commissioner Wallström—the latter was the Commissioner for Environment 1999–2004—and in the Climate Change Policy Unit, European Commission; Matti Vainio is acting head of the Energy and Environment Unit of the European Commission. He carried out the economic analysis of the EU ETS in 2000–01 and led the Clean Air for Europe programme—economist; Peter Vis, was the main author of the Green Paper on emissions trading, and led the day to day discussions of the Commission proposal tabled in 2001—economist; Peter Zapfel coordinates the EU ETS team, focused earlier in particular on the allocation of allowances—economist.

¹³ Council conclusions of 16–17 June, 1998, Council Doc 9702/98.

¹⁴ COM (1998) 383 Final, 3rd June 1998.

Clement Attlee observed that: *Democracy is government by discussion, but it is only effective if you can stop people talking.* The ability and institutional positioning of the Commission as the agenda setter was crucial in giving coherence and focus to the emerging fissiparous tendencies of policy, and to move from talk to effective action at EU level.

7 The Green Paper

Evidence that emissions trading was moving up the policy agenda was first seen in June of 1998 when the European Commission in its post Kyoto strategy document posited that “*the Community could set up its own internal trading regime by 2005*” (European Commission 1998). And so in 1999 the Commission initiated a process to move the Union from ‘could’ set up a scheme, to ‘would’ do so. In May of that year, the Commission adopted a Communication on climate change that emphasised the need for a ‘sustained policy response.’¹⁵ This was followed less than a year later—in March 2000—by a Green Paper on emissions trading by the Commission.¹⁶ The Green Paper was intended to launch a discussion on the key policy options that needed to be decided upon in order to establish a framework for the implementation of a Community wide trading scheme.

7.1 Key Supporting Documentation

The shape and style of the Green Paper was influenced by three papers commissioned by the European Commission. Some of the economic case for trading was supported by a study by Capros and Manzos (2000), who analysed the incremental costs savings of complying with the Burden Sharing agreement by EU15 using the PRIMES energy system model. They demonstrate how important the policy instrument—in this case trans-EU emissions trading—is in shaping compliance costs, and therefore the viability of particular objectives. If each country meets the national target with no trans-frontier trading, but does so in a cost effective fashion, they estimated the annual compliance costs as amounting to €9 billion—the reference scenario—with savings achieved if energy suppliers trade across frontiers (total annual compliance cost of €7.2 billion), with an estimated price per tonne of CO₂ of €33. They also emphasise how significant the specification of the reference scenario is in determining savings. If Member States individually were not to meet their national targets cost effectively, e.g. if they did so by simply requiring a *pro rata* reduction across all sectors—then the costs of this alternative reference scenario could balloon to €20.5 billion by 2010, and there would be commensurate savings in compliance costs relative to this scenario. Lessons from other trading experience, notably from the US, was compiled in a paper by the Clean Air Policy Center, an organisation with its headquarters in Washington DC that was a key player in the evolution of trading in the US. It was also supported by studies by FIELD, which established some of the legal parameters.¹⁷ Farhana Yasmin led the FIELD work, and subsequently worked with the Commission on drafting the legislation. Jurgen Lefevere worked also for FIELD at this time, and subsequently joined the Commission staff.

¹⁵ Communication from the Commission to the Council and the European Parliament Preparing for the implementation of the Kyoto Protocol. Section 2 of COM (1999) 230, 19 May 1999.

¹⁶ Green Paper on greenhouse gas emissions trading within the European Union, COM (2000) 87 Final, 8th March 2000.

¹⁷ These are available at: http://ec.europa.eu/environment/climat/emission/history_en.htm.

7.2 Some Features of the Green Paper

Although The Green Paper did ask: “Should there be a common emissions trading scheme within the European Community for certain sectors in the interest of fair competition, maximum transparency and legal certainty for companies?” the tone and tenor of the paper assumed that the decision to proceed and establish a Community wide emissions trading scheme had already been taken. The focus was on the ‘how’—options for design and implementation. It made the case for a pilot phase beginning in 2005 “to gain experience in its implementation before the international emissions trading scheme starts in 2008,” and suggested that those sectors already covered by command and control regulation via the Large Combustion Plant¹⁸ and Integrated Pollution Prevention and Control Directives¹⁹ could comprise the sectors in the trading scheme. In fact, these sectors—with the exception of chemicals—were those included in the pilot phase. It notes that “the key to limiting the risks of distortion between large point sources and small, and between trading and non trading, is the application of strict policies and measures to non-trading sources, with the possibility for these firms to voluntarily opt-in to the trading system.

A decision has to be made as to what point in the production or consumption chain to allocate allowances and create liability to cover emissions therewith. In the case of greenhouse gas emissions, a distinction is often made between going upstream, where this liability rests with the fossil fuel producers and importers, and downstream, where the consumers of same carry this liability. Implicit in the focus on the power sector and heavy industry was the decision to go downstream. Going upstream would involve including the importers and producers of fossil fuels, and capping emissions at this level. In all Member States, petrol and diesel are subject to high rates of excise duty, amounting to up to €200 per tonne of CO₂ equivalent. This fuel would be included in an upstream scheme, and the view predominated that the additional price rise that would be engendered by an allowance price in the order of €15–30 would have modest effects on consumption and therefore emissions and—more saliently for Ministers of Finance—could create the basis for removing the excise duties on the grounds that not to do so would mean there was ‘double taxation.’ The environmental NGOs also opposed such extension on the logic that it could undermine the level and therefore the environmental effectiveness of excise duties.

The Green Paper emphasised that costs of meeting Kyoto obligations on the part of energy producers and energy intensive industry would be reduced by nearly a fifth (~€1.7 billion annually) compared to a range of national schemes, the importance of consistency with the internal market, and the benefits of scale effects from operating at the level of the EU which will “allow for significant cost savings,” and the fact that the wider and deeper the market, the better it would work, and the larger the cost savings would be achieved—see the [Capros and Manzos \(2000\)](#) analysis above. This positioning was driven in part by the fact that Denmark and the UK were already embarking on national schemes, and if national schemes became the norm, then the internal market could be compromised and the disparate markets would suffer from diseconomies of scale and scope. It also helps explain the urgency and speed with which the Commission acted. A number of small national boats were preparing to leave the harbour and lead emissions trading in probably different and potentially conflicting directions; Speed was of the essence if the dream of creating one big European emissions trading flagship was to be realised.

¹⁸ Directive 88/609/EEC of 24 November 1988, as modified by Directive 94/66/EEC of 15th December 1994.

¹⁹ Council Directive 96/61/EC of 24th September 1996 concerning integrated pollution prevention and control, and in particular Annex I.

There is considerable time devoted to the issue of allowance allocation, comparing free allocation and auctioning, and noting that “how the permits are allocated does not affect the environmental outcome,” but that auction is “technically preferable” because it generates revenues that can be used reduce other taxes or be spent to promote energy efficiency etc., and it avoids the difficult and politically delicate decision about how much to give to each company. Also, state aid and competition complications would be reduced and there are no issues as regards new entrants.²⁰ Respondents were invited to react to these and other issues by September 2000.

7.3 Reactions to the Green Paper

The reactions to the Green Paper are summarised in:

http://ec.europa.eu/environment/climat/emission/history_en.htm. In very broad terms, there was support, but industry was preoccupied about competitiveness, and environmental NGOs were concerned that ambitious targets be set and be met. The position of UNICE is of particular interest. In its response to the carbon energy tax proposals, it had posited emissions trading as an alternative. It had also supported the inclusion of emissions trading in the Kyoto Protocol, but this was on the presupposition that the US would ratify. When it became clear that the US administration would not seek to ratify, the conditions for support had fundamentally changed. Nevertheless, after some internal debate, UNICE decided to support the trading scheme, and this was a key to subsequent progress. At Member State level, the main scepticism was expressed by Germany. German industry had avoided inclusion in the government’s eco tax package introduced in 1998, in exchange for taking on a voluntary agreement, whereby reduction targets were to be met on a phased basis. This arrangement was very comfortable for industry, and there was considerable antagonism against EU ETS which would supersede it. A major effort led by Jos Delbeke to communicate the key features and sell the benefits of trading to German industry, together with a number of other factors—President Bush’s decision in March 2001 not to seek ratification of the Kyoto Protocol triggered enhanced support across Europe for ratification, and EU ETS benefited from this; the German Greens’ strength in government was enhanced after the election in September 2002, and they supported trading; industry outside Germany was broadly in support. These combined to convince the German government not to oppose the trading scheme. While the trading scheme was brought forward under the qualified majority rule, and therefore could in law be approved even with German opposition, in practise an initiative of this import that did not command support of the country which is the largest emitter and the industrial hub of the Union would be seriously compromised. They key *quid pro quos* to secure industry support in Germany and across the EU were agreement that allocation would take place at Member State level (but guided by Commission principles and ultimately approval), and that the allowances would be free. An objective of the German case making was to make the pilot phase voluntary. Some concession was made to this view—shared also by the UK—by inclusion of provisions that allowed opt out and pooling during the pilot phase.

Many Environmental Non Governmental Organisations (ENGOs) and their supporters struggled as phrases like ‘profiting from pollution,’ a ‘Kyoto loophole’ found currency initially. But most came around quickly, for the following reasons:

- The fact that emissions from the major emitting installations across Europe would be transparent, with time series available. In Germany, transparency at firm and installation

²⁰ There is a very interesting literature on the dynamic implications of alternative allocation mixes. See for example Böhlinger and Lange (2005).

level was especially welcomed by the environmental community; the Green Party was sceptical of the voluntary agreement which industry had negotiated at a sectoral level in lieu of the carbon tax, and was open to other instruments that would force transparency.

- The advocacy of DG ENV for EU ETS as essential strategic tool to help keep MS to their commitments.

An effective way of defusing the cost-effectiveness and competitiveness arguments put forward by some in industry and the Member States, where industry typically define losing competitiveness as losing market share and profits, relative to the business as usual.²¹

Most environmental non-governmental organisations operate in association with and under the umbrella of the European Environment Bureau (EEB). However, the EEB defers to Climate Action Network (CAN) in the climate change area. CAN supported trading on the basis that it would be the key mechanism for controlling emissions from industry. The ‘realist’ wing of the Green Party in Germany was particularly helpful in supporting the use of trading as a key mechanism for address industry, which was not much affected by the Green tax reform, and this support had spillover effects on the wider NGO community. The World Wildlife Fund (WWF) maintains an independent presence in the climate change world, and supported the introduction of trading, while the Foundation for International Environmental Law and Development (FIELD) was also supportive.

7.4 From Proposal to Enactment

Following the formal feedback period, and the more informal but perhaps more important interactions between Commission officials and key stakeholders, the draft proposal was submitted in 2001 for formal consideration by the Council of Ministers and the European Parliament.²² The key interactions with the Member States took place prior to drafting the proposal, but continued thereafter. The interface with the European Parliament only crystallised once the Directive was in draft form. The key agent in the parliamentary system is the Rapporteur, who is appointed by the relevant committee (Environment Public Health and Consumer Policy) based on a rotating system, whereby each Party has a ‘turn’; in the case of emissions trading, the nominee was Jorge Moreira da Silva. He became committed to the principle and practise of the trading scheme, and proved skilful at gathering input from key stakeholders within the Parliament and externally, and orchestrating propositions that would not undermine the essence of the Commission proposal and command wide support in Parliament.²³ A key issue for da Silva was the need to secure the support of the Christian Democrat block of German MEPs, who reflected the opposition of German industry to the scheme. With some difficulty, this support was secured, and together with the support of the Socialists, ensured that the Directive would become law.

²¹ This differs from the OECD definition—Competitiveness is the degree to which a nation can, under free trade and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the long-term. This focuses on overall macro economic performance, with the implication that individual companies and entire sectors can atrophy so long as overall performance is satisfactory.

²² *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 96/62/EC.*

²³ See: <http://www.eurits.org/pages/emissionspdfs/Greenhouse%20Gas%20Trading%201R%20Rpt.pdf> for draft report on April 8, 2002.

Following the Commission's publication of its proposal an intense consultation and lobbying process followed with both the Council of Ministers (the Member States) and the European Parliament reviewing the Commission's proposal. The Council of Ministers presented its position on the draft Directive on the 9th of December 2002 after it had gone through a first reading of the European Parliament that October.²⁴ The position of the Council differed from the first reading of the Parliament on several points. While the Council of Ministers strongly favoured free allocation and delegation of allocation to the Member States, the European Parliament supported a more dirigiste process in allocation, and the use of mandatory auctioning for a share of the allocation. The outcome kept allocation as a first and primary responsibility of the Member States, but guided by criteria specified by the Commission, and—most crucially—subject to the approval of the Commission. Auctioning by Member States to a maximum of 5 and 10% of allocations respectively in the pilot and Kyoto phases was provided for. Other areas of difference centred on the following points: Parliament wanted a temporary opt-out only for installations whereas the Council wanted to allow Member States to exclude installations, activities and sectors; the MEPs only wanted the inclusion of the Kyoto mechanisms from 2008, whereas the Council wanted to leave the option open from 2005; the Parliament wanted other sectors (esp. aluminium and chemicals) and other greenhouse gases to have the option to be included from 2005 whereas the Council only wanted this from 2008.

The Parliament presented its amendments based on the Council's position in Spring 2003²⁵ with an amended draft Directive adopted by the European Parliament at its second reading on the 2nd of July 2003 and accepted by the Council of Ministers at its meeting on the 22nd of July 2003. On October 13, 2003 *Directive 2003/87/EC of the European Parliament and the Council of 13 October 2003 establishing a scheme for greenhouse gas emissions trading within the Community and amending Council Directive 96/61/EC* came into effect,²⁶ with trading to commence January 1 2005. As a result of the adoption of the emissions trading Directive by the EU a somewhat paradoxical situation was emerging in the international climate change arena. In a very short space of time emissions trading had evolved from being a non-considered policy option for the EU to become the cornerstone of EU climate policy. Meanwhile the US, for so long the proponent of emissions trading has turned largely to voluntary measures as part of their climate strategy as it continues to refuse to ratify the Kyoto Protocol.²⁷ Considering that it was only in 1997 that trading began moving from being mainly of academic interest to taking centre stage in Europe, progress with adopting this instrument has been remarkable. The EEA describes this situation as one where Europe has gone *from follower to leader* in terms of both understanding and applying this economic based instrument to environmental policy (EEA 2005).

²⁴ The Council Common Position was informally agreed on the 9th December and was formally adopted on the 18th of March 2003. *Council of the European Union: Council's Common Position on the adoption of a Directive establishing a scheme for greenhouse gas emissions allowance trading within the Community and amending Council Directive 96/61/EC of 18 March 2003.*

²⁵ *European Parliament Committee on the Environment, Public Health and Consumer Policy: Draft recommendation for second reading on the Council common position for adopting a European Parliament and Council directive establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, Strasbourg, April 2003.*

²⁶ See: http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_275/l_27520031025en00320046.pdf.

²⁷ It is important to note that while voluntary measures are occurring at Federal level a number of initiatives are taking place at state level to establish emissions trading schemes.

7.5 The Linking Directive

The Commission decided not to include the issue of linking with the project based flexible mechanisms—Clean Development Mechanism and Joint Implementation—in the Directive, but to take it separately. Access to such reductions would allow those in EU ETS to use them as a contribution to meeting their EU ETS obligations. The draft linking directive was proposed in July 2003, just after the EU ETS Directive was agreed.²⁸ It was highly contentious, with maximum access favoured by most industry, on the basis that, by expanding supply, it would reduce the price of allowances. Non-governmental organisations and a few Member States—notably Germany—opposed such linking or argued for highly restrictive conditions and limits, on the basis that to do otherwise would dilute the effectiveness of EU ETS and could lead to a price collapse. An argument in favour was that, by providing fungibility between the emissions trading market and the CDM/JI markets, these markets will be stimulated and the transfers to developing and transition countries will expand.

Wallström, the then European Commissioner for Environment, made the case:

I expect that tomorrow the Commission will propose to open the new market to emission credits gained by companies internationally under the Joint Implementation and Clean Development Mechanism. This will mean that other countries, for example Russia, will benefit from our EU emissions trading market.²⁹

In the event, in the legislation approved, the question of capping access to CDM and Joint Implementation was left to the Member States, and access to such allowances was provided from 2005.

8 Leadership and People Matter

A few individuals were key to both promoting the idea and its execution. The centrality of Jos Delbeke and his Commission team has already been noted. They brought the scars of the history with the failed tax proposal, an interdisciplinary focus combining economics, law and political science, and great skill at meeting the pragmatic need to adapt to pressure but doing so in fashions that did not weaken the essentials, and a fierce determination that this time they would not fail. A key feature of the Directive as approved was its partition into two phases, a pilot phase (2005–2007) and a second or Kyoto phase (2008–2012). This partition grew out of discussions between the Commission and staff responsible for managing the acid rain programme in the US. Drawing on operational US experience Jos Delbeke became convinced of the huge volume of work and associated development of soft ware and skills across 25 (now 27) Member States that was needed to ensure a quality programme, and the need to learn by doing over a defined period. It was also a convenient window to confine the pooling and opt out provisions to the pilot phase. The draft drew heavily on US experience, in part in order to achieve quality design, and in part to provide a window for subsequent hoped for future Trans Atlantic collaboration.

The Director Generals of DG Environment were key advocates and leaders at when it was most needed. Jim Curry was the Director General after the Kyoto Protocol period. He was an economist who understood the logic and salience of the emissions trading idea, and led

²⁸ See: http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2004/l_338/l_33820041113en00180023.pdf for the Directive.

²⁹ <http://www.ens-newswire.com/ens/jul2003/2003-07-22-01.asp>.

and facilitated the change of direction. His successor Catherine Day was also an economist who in her early career worked for the industry lobby group in Ireland and understood the motivations and modalities of interest groups. She also served in Peter Sutherland's Competition cabinet when the Union was making a reality out of the rhetoric of the Single Market, and led the accession process of many new Member States, so she was intellectually favourably disposed to market approaches, and had the practical experience and skills to move the agenda forward. Margot Wallström was Commissioner for Environment over the crucial 1999–2004 period. As a Swede she understood the importance of market signals as animators of environmentally responsible behaviour. To an unusual degree at this level, she brought qualities of charm and persuasiveness that proved very important in securing support first of fellow Commissioners, and then in steering the Directive from concept to reality. It is in the nature of governance that politicians representing industry and enterprise tend to oppose new ideas that are perceived to restrict their scope or impose costs on their constituency. And this was true in the case of the Commission, where Commissioner Liikanen (Enterprise) was antagonistic. In the routine of battles between economic and environmental Ministers, we expect that the former will usually prevail. But, after some initial hesitation and antagonism, the Commissioners for competition and the internal market—Monti and Bolstein respectively—supported EU ETS, —because it was a logical way to proceed if competition inhibiting balkanisation of trading into 27 different jurisdictions with differing coverage and rules were to be avoided. Environment trumped industry because of the long shadow of the Single Market. And the Commission in its penumbra had a number of advisers and supporters who helped move the idea forward.

Political leadership in the Union expresses itself in a number of ways. The heads of government meet every six months hosted by whatever country holds the Presidency. These European Council meetings are important in asserting priorities for the Union. The Presidency rotates every six months amongst the Member States; the incumbent can decide what to prioritise, and then acts often as an honest broker between the key players to find a way forward, typically leading the drafting of new text and proposals for consideration. Commitment and skill are both important in shaping outcomes. Political leadership can also come from the bottom up, as individual Member State governments move ahead of the pack on an issue. The Danish Presidency was timely in that their six months steering the Union occurred at a crucial moment when substantive opposition, notably from Germany, had to be reconciled with the view of the Commission, Parliament and some other member states, and they had the experience, skill and ambition to successfully find a way forward. The Irish Presidency later on prioritised securing agreement on the Linking Directive. The UK was a steady and consistent supporter of trading, even though what the Commission proposed and what was eventually enacted differed substantially from their own scheme. At the level of the European Parliament, Jorge Moreira da Silva as Rapporteur provided the necessary leadership. And, in a less high profile way, Rapporteur Alexander de Roo MEP did the same for the Linking Directive.

Key stakeholder groups in industry were also crucial, none more so than British Petroleum, and their man at the time Mike Wigglesworth; they legitimated emissions trading by creating their own internal scheme, and acted as a behind the scenes supporter which diluted industry opposition.

There is an American baseball expression that says: *Good pitching will cancel out good hitting and vice versa*. The protagonists in the main resisted the temptation to devote their energies to simply cancelling each other, and instead sought and found ways forward. And all were helped by the sense that emissions trading was an idea whose time had come.

9 Some Conclusions and Implications

On January 1st 2005, the European Union Emissions Trading Scheme (EU ETS) was officially launched. With 11,500 participating installations spread across the 27 Member States of the European Union, the EU is the initiator and operator of the World's first and largest international emissions trading scheme. The trading scheme is now the cornerstone of the EU's environmental policy with the principal objective of helping reduce their CO₂ emissions and realise a significant part of their Kyoto targets in a cost-effective fashion. It is estimated that the sources to which the trading scheme applies will account for 45% of CO₂ emissions in 2010, and 30% of total greenhouse gas emissions in that year (European Commission 2005).

In the Union, we are now almost 500 million, living in 27 countries, embracing 23 languages, with per capita GDP in 2005 on a purchasing power parity basis ranging from 32,197 Euro (Ireland) to 7,913 Euro (Bulgaria).³⁰ And it is not always a harmonious club. Sometimes, it seems that Edward Mortimer's view captures our essence: *A nation . . . is a group of people united by a common dislike of their neighbours, and a shared misconception about their ethnic origins.*

Why did we agree? In most countries, the debate was largely confined to industry and its representatives. This meant that agreement at national level involved securing neutrality at least from the key industrial lobbies. Given this context, the following seem to be amongst the key explanations:

- Free allowances—this met the needs of most industrial emitters. The European Parliament did take issue with this policy, but it never achieved traction with other key stakeholders and the general public.
- Fear of the alternative—the counterfactual. The use of carbon taxes and/or regulation (command and control) were variously proposed as alternative means of reducing emissions. Either would be less attractive to much of industry than trading.
- Information flow from the US generally and US business in particular, based on the acid rain experience. The message generally was and remains that business can co-exist and prosper with emissions trading.
- Many Member States, and especially the smaller ones, tend to support the Commission unless there are major strategic regions to do otherwise. This is part of a view that in general collective decisions at EU level are better than individual (large) member states acting unilaterally.
- The 10 new Member States that joined in May 2004 had no choice. A condition of Membership was that they accepted the 'Acquis Communautaire'—the legislative and related endowments and commitments already in place.
- EU ETS was conflated with the Kyoto Protocol in some rhetoric and many minds, so that to support Kyoto was synonymous with support for emissions trading. This linkage was reinforced by the fact that the trading proposal was addressed in the Working Group on flexible instruments established to implement the European Climate Change Programme (ECCP) which in turn was created to help meet Kyoto commitments.

³⁰ Regional GDP per inhabitant in the EU 27, *Eurostat*, 12 February 2008. See: http://epp.eurostat.ec.europa.eu/pls/portal/docs/PAGE/PGP_PRD_CAT_PREREL/PGE_CAT_PREREL_YEAR_2008/PGE_CAT_PREREL_YEAR_2008_MONTH_02/1-12022008-EN-APPDF.

- The use of an obligatory three year Pilot Phase provided a real test of the EU ETS in action, a mechanism for temporarily indulging some Member State preoccupations including opt out and pooling, and a way of identifying weaknesses and correcting for same.
- The dog that didn't bark. There was a surprising lack of overt attention to the fact that, in some jurisdictions, the opportunity cost of free allowances was likely to be passed through in part in the form of higher electricity prices to consumers. There are many possible explanations. For the many supporters of trading, there may have been an unspoken unwillingness to provide a stick to opponents with which to beat the proposal. For utilities that studied the implications, there was an obvious incentive not to draw attention to this prospect. The extent also was dependent on the local institutional and corporate arrangements—in cases where utilities are State owned, and/or where the regulator can and does limit pass through, the distributional and welfare implications were not clear.
- The European Parliament lost the battle, but won the war. It had unsuccessfully advocated for more auctioning, tighter cap, more centralised control, and wider coverage. But all of these features are characteristic of the Commission's proposals for trading post 2012.³¹
- The space created by President Bush's decision not to seek ratification of the Kyoto Protocol or to seek to implement a substantive alternative, and the horror of 9/11 and its tragic aftermaths allowed Europe to become the sun that energised climate change endeavour generally, and in particular in regard to emissions trading.
- The ability to make tradeoffs on the world stage—and in particular to secure Russian agreement to ratify the Kyoto Protocol in exchange for European support for World Trade Organisation (WTO) membership—allowed the Protocol to come into effect which in turn animated the EU ETS process. This is a linkage that only the European Union could plausibly make.
- *I'd rather be lucky than good.* The American baseball player Lefty Gomez expressed an important truth. In regard to timing, people, politics and atmosphere, we were lucky. In addition to the already noted stimulus provided by President Bush's decision, and the high quality of bureaucratic and political leadership, weather also played a role; flooding of the Elbe and Danube rivers in Germany in the summer of 2002 convinced the German public of the reality of climate change, and this converted into increased support for the Green party in the subsequent election, and this in turn led to more German government support for EU ETS.

The importance of the EU ETS to both the EU and the rest of World is nicely summed up by Egenhofer et al. (2006) who note *that emissions trading is one of the crucial pillars upon which both the EU's climate change policy and the (yet to emerge) global regime is expected to rest.*

Appendix A

See Table 1.

³¹ See: Directive to improve and extend the greenhouse gas emission allowance trading system. http://ec.europa.eu/environment/climat/emission/pdf/com_2008_16_en.pdf.

Table 1 Sequence of events in development of the European Union Emissions Trading Scheme (EU ETS) and Linking Directive

Date	Action	Implications
1986	Single European Act	Single Market for the economy makes single market for the environment both feasible and necessary
1990	Publication of "1992" <i>The Environmental Dimension. Task Force Report on the Environment and the Internal Market</i>	This study re-enforced both the significance of the Single Market for environmental policy, and advocated the use of market based instruments
1992	1. Rio Summit—EU argues for quantitative restrictions 2. Commission proposes Community-wide carbon energy tax	Once quantitative restrictions are accepted, then the logic of trading quantities flows therefrom. But the Commission proposes a tax
1997	Carbon energy tax proposal withdrawn	
July	Byrd Hagel resolution in US Senate	The Kyoto Protocol as agreed by US Clinton Administration—7% reduction by 1990—could never be ratified by Congress
December	Kyoto Protocol agreed	Commission disappointed—aimed for greater reductions and opposed emissions trading
1998		
May	1. Council welcomes measures with emphasis on market based instruments 2. Burden sharing agreement	Burden sharing sets quantitative targets for each Member State. Council endorses a market based approach. The logic of trading begins to crystallise
June	1. Commissioner Bjerregaard (Environment) support 2. Commission <i>Communication</i> —post Kyoto strategy—	Commissioner argues for Europe to lead on trading. Commission argues for Community wide approach, with 'demonstrable progress' to be achieved by 2005
1999		
May	<i>Communication</i> —Preparing for Implementation of the Kyoto Protocol	'Best preparation might be to develop our own trading experience'
May	First GHG and energy trading simulations (GETS)	Utilities get experience, and (probably) realise that rent capture is in prospect for some if there is free allocation
June	Council urges Commission to submit further proposals for common measures and Green Paper	Trading is the most obvious 'common measure.' Commission has green light to develop and promote its trading agenda
October	COP Buenos Aires fails to define trading rules	Provides further impetus for Europe to 'do its own thing' as regards trading
2000		
March	Green paper on EU ETS launched	This sets out all the issues and the Commission's preferences, most of which ultimately prevail
March	Support from Green MEP Hiltrud Breyers But only if stringent conditions, monitoring and penalties for non-compliance	This support was helpful in muting the antagonism in some NGO quarters and encouraging the (reluctant) German government
June	European Climate Change Programme launched ^a	This was the main vehicle—via Working Group 1—for progressing discussions and identifying key blockages and opportunities
July	First meeting of ECCP WG1 (flexible instruments)	All key stakeholders engage for the first time
October	German Working Group on emissions trading started	Germany was late in establishing its own domestic group, a reflection of reluctance and divided interests

Table 1 Continued

2001		
January	Commission starts to draft proposal	
March	Bush Administration rejects Kyoto	This triggers major effort to secure sufficient votes to bring Kyoto into effect, and also adds impetus to develop EU ETS
May	Draft proposal complete	
June	European Council determined to meet their commitments under the Kyoto Protocol	See above
September	1. Consultation meetings 2. Germany submits separate paper	German commitment to voluntary agreements with industry inhibits support for trading, especially the obligation to participate in pilot phase
October	EU ETS proposal adopted by the Commission—based on Article 175 (1) which provides for qualified majority	Qualified majority voting meant that no small group of countries could exercise a veto
October	COP Marrakech agrees rules for international trading	Provides further validation for EUETS
December	First debate by Council Free allocation, but ‘large majority preferred that costs be borne by electricity producers	The inconsistency between the enthusiasm for both free allocation and that costs be borne by electricity producers is notable
2002		
February	Netherlands announces plans for domestic scheme	This provides a further impetus for a Europe-wide scheme
March	1. First reading in Legal Affairs Committee 2. Ministers adopt legal instrument obliging Members to ratify Kyoto using qualified majority voting	Parliament action begins, and the use of qualified majority voting is re-emphasised
April	1. Environment Committee of EP meets 2. EEA publishes report showing more progress needed 3. UK domestic trading begins	The evidence on emissions indicates that further action is needed to meet the Kyoto target, and EU ETS is perceived as a key response. The UK move creates an incentive for UK to support opt out and voluntary participation in pilot phase of EU scheme, and is another pressure to get the European scheme implemented before inconsistent national schemes become the norm
May	Burden sharing becomes law EU ratifies Kyoto	These further intensify the logic for EUETS
July	Denmark takes on Presidency	It provides skilful leadership in overcoming pressure from Germany, UK and Finland for voluntary participation in the pilot phase
August	Disastrous flooding in Germany—Elbe and Danube	This both convinced the German public that climate change was ‘real’ and potentially catastrophic, and generated support for the Greens in the general election
September	1. German government re-elected with stronger Green representation 2. Parliament adopts its Plenary position—80 amendments	New German government more sympathetic to trading. European Parliament supportive but wants more auctioning, and more centralisation of allocation
October	German government agrees ET, but with free allocation and pooling	This is the key to progress and finalisation of the Council position

Table 1 Continued

2003		
March	Council Common position adopted Communication from Commission to Parliament	Final effort by Commission to convince Parliament that it had secured some of its key priorities
June	Second Reading by Parliament Environment committee adopts main position Compromise proposals tabled and agreed	This clears the stage for enactment
July	1. Formal adoption by Council of EU ETS Directive 2. Linking Directive proposed Environment Working Group meets	Linking Directive had been 'parked' pending agreement on EU ETS. Now it moves centre stage
October	EU ETS Directive published in Official Journal	EU ETS Directive becomes law
December	Rapporteur Alexander de Roo MEP wants agreement on linkage directive before 2004 elections	The sands of time running out for MEPs adds urgency to the task of agreeing the Linking Directive
2004		
April	Parliament dissolved	
October	1. Russian Duma approves Kyoto Protocol 2. Irish Presidency, Rapporteur and Commission informal agreement on linking directive 3. Linking Directive formally adopted by EP and Council	The <i>quid pro quo</i> for Russian support was EU support for its membership of the World Trade Organisation. Rapid Progress on Linking Directive a product of the Parliament not being too ambitious in pressing its amendments; from proposal to final agreement takes only 12 months
2005	Kyoto Protocol enters into force	

Notes:

EEA is the European Environment Agency. Its primary task is to provide timely and reliable information on environmental performance at country and EU-wide levels

The European Council is the 6 monthly meeting of European Heads of State, where strategies and sometimes targets are agreed

The European Parliament is directly elected, and has the power to amend legislation proposed by the Commission. For environmental legislative proposals, the Committee on Environment, Health etc is the key forum for analysis, and its work and its views are orchestrated by a rapporteur appointed by the Committee

The Council of Ministers comprises the representatives of the Member States. The Council must approve legislation before it can become law

The Presidency operates on a 6 monthly cycle whereby a Member State on a rotating basis takes on the role of helping set priorities for Council, and achieving agreement both within Council and sometimes with Parliament

^a See: <http://ec.europa.eu/environment/climat/eccpl.htm>. Comprised 6 working groups focused respectively on: flexible mechanisms (including trading), energy supply, energy consumption, transport, industry, and research. Most of the work relative to EU ETS took place in WG1

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