

**COMPLETION OF THE EU EMISSIONS
TRADING SCHEME IN THE
EMERGING GLOBAL CLIMATE REGIME**

COMPLETION OF THE EU EMISSIONS TRADING SCHEME IN THE EMERGING GLOBAL CLIMATE REGIME

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This report is based on discussions in the CEPS Task Force on the Emerging EU Emissions Trading Framework in the Global Arena, which ran from January 2003 until January 2004. Participants in the CEPS Task Force included senior executives from a broad range of industries – including energy production and supply companies, energy-intensive industries and service companies – and representatives from business associations and non-governmental environmental organisations. A full list of members and invited guests and speakers appears in the Annex.

The members of the Task Force engaged in extensive debates in the course of several meetings and submitted comments on earlier drafts of this report. Its contents contain the general tone and direction of the discussion, but its recommendations do not necessarily reflect a full common position reached among all members of the Task Force, nor do they necessarily represent the views of the institutions to which the members belong.

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PREFACE

The EU emissions trading scheme (EU ETS) is due to begin operation in January 2005. It will be a key instrument in addressing the EU's goals on climate change. But there remain a number of open questions. These include pending EU legislation and guidelines as well as consistency of implementation across member states. Finally, the EU ETS raises questions on the emerging international climate change regime.

This CEPS Task Force should be seen in conjunction with the earlier one which published its report on the EU ETS in October 2002. It met five times from January 2003 to January 2004. Members came from a broad range of backgrounds, including industry, business associations, environmental organisations and other stakeholders. Using presentations and data from Task Force members and invited speakers, the group addressed a range of outstanding issues which are helpful in advancing the collective understanding. But, for the purposes of this report, the group decided to focus on the linking directive. This emerged as a key issue and one on which legislation is imminent.

The principal conclusions and recommendations are contained in the Executive Summary. The full analysis follows in the main body of the text.

We welcome the opportunity to contribute to the resolution of these issues. There is widespread recognition of the merits of emissions trading. The EU has the opportunity to demonstrate constructive and pragmatic leadership and a willingness to provide an adaptive and inclusive response in pursuit of the common goal.

I want to thank the members of the Working Party for their active and positive contributions, which proved to be one of the key values of this exercise. Although all members endorse the general content of the report, this should not be construed to mean that each member subscribes to every sentence of the text.

Charles Nicholson
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COMPLETION OF THE EU EMISSIONS TRADING SCHEME IN THE EMERGING GLOBAL CLIMATE REGIME

REPORT OF A CEPS TASK FORCE

EXECUTIVE SUMMARY

This CEPS report examines recent policies related to the completion of the EU emissions trading scheme (EU ETS), with a particular focus on the pending decision to link joint implementation (JI) and the clean development mechanism (CDM) to the EU ETS – the so-called ‘linking directive’. The analysis covers all the controversial issues associated with the linking directive, including the international implications as well as the business impact. The principal themes of the analysis include: timing, economic effects, project development and kick-starting the project mechanisms, ratification and entry into force of the Kyoto Protocol, project quality (including qualitative restrictions), complementarity (including quantitative restrictions), linking with other national emissions trading regimes and international implications. The report is divided into three parts. First, it sketches the arguments for and against linkage. Second, it identifies a set of conditions to be applied to achieve a stable balance between conflicting interests. Finally, it identifies priorities for action.

I. Key messages

1. By linking non-EU credits to the EU ETS via the linking directive, the EU is taking a significant step towards establishing an international emissions trading market, which could become an important building block in the global climate regime. In order to be effective, the directive must strike the right balance between environmental and economic objectives, i.e. ensuring measurable and permanent reductions first in the EU and ‘supplemental’, while striving for cost-effectiveness and accommodating potential competitiveness effects on European industry.
2. It should be reiterated that both the linking directive and the EU ETS are a ‘domestic policy and measure’ in the Kyoto Protocol context. They do not affect either EU member states’ or other Parties’ rights and obligations under the Marrakech Accords. Nevertheless, there is an important link to the developing global climate regime in that agreement with the EU’s main partners within the Kyoto Protocol framework will be crucial for further international developments. The EU, which after enlargement will represent 25 out of the 38 Kyoto Protocol Annex B countries, bears major responsibility for achieving progress in the international negotiations with its partners.
3. The EU chose emissions trading as a policy instrument *inter alia* because of its expected advantages in terms of environmental effectiveness and economic efficiency. The linking directive is a logical consequence, because it aims at further reducing compliance costs. At the same time, however, the directive strives both to meet the EU’s commitment to complementarity, and to prevent the substitution of proper EU abatement efforts with reductions from questionable sources.
4. The proposed linking directive attempts to achieve a balance between environmental and economic objectives. Environmental objectives include complementarity, measurable and permanent reductions, co-benefits, incentives to businesses undertaking projects, effects on technology transfer and the contribution to sustainable development and ultimately the extent to which incentives for developing countries to accept progressively firmer commitments are created. Economic objectives include the contribution to innovation and market opportunities for EU companies but also to reducing compliance costs, minimising the effects on the competitiveness of EU industry and the contribution. One way of

addressing this balance is the introduction of qualitative and quantitative restrictions. Qualitative restrictions aim at ensuring real reductions through sound projects, while quantitative restrictions seek to address the supplementarity objective.

5. It is reasonable to assume that at least until 2012 the overall effect of linking on EU allowance prices will be limited by a shortage of projects. Consequently, the linking directive has only a modest potential to address concerns of competitiveness both through direct and indirect effects of the EU ETS. In the longer term, however, when more projects are available, it will become more important to ensure that flows of credits from good projects are not hampered. Conversely, measures to ensure continuing domestic action through the ETS will also gain in importance.
6. *Qualitative restrictions* relate to considerations regarding project type and reflect both concerns about potential problems of environmentally and socially damaging projects, as well as the desire to promote technologies seen as more beneficial in terms of sustainable development and technology transfer.
7. As a result, the EU is considering restrictions on nuclear facilities, sinks and large hydro projects. Restrictions are based on the Marrakech Accord (i.e. nuclear), perceived problems with permanence (i.e. sinks) and the fear of environmental and social damage (i.e. large hydro projects). Technically, this would not seem to restrict project development in these sectors, since buyers will still exist outside the ETS and volumes are expected to be low. At the same time, there will most likely be no global environmental effect. However, the perception of risk and the smaller long-term market for project types excluded from the ETS would be likely to discourage development of such projects and lower the price of credits generated from them. They may also influence the position of the EU's main Kyoto Protocol partners, which might not want to be seen as accepting credits from projects yielding lower environmental effects.
8. *Quantitative restrictions*: During the negotiations on the Kyoto Protocol and the Marrakech Accords, the EU was a firm proponent of the obligation to use JI and CDM in a supplemental way. As a result, the EU is considering a hard ceiling or a reference cap on these projects, i.e. upon reaching an EU ceiling, a review procedure would be triggered. Such a ceiling could be regarded as a safeguard against unexpected, and at present unlikely, floods of cheap credits into the EU, notably from projects abating non-CO₂ gases. On the other hand, a hard ceiling may create rigidity in an emerging (carbon) market. A reference cap will reduce this risk, but it creates uncertainty in the market. Finally, due to the fact that marginal avoidance costs in countries that are likely to host CDM and JI projects are lower than in the EU, exclusion of or restrictions on the project mechanisms could lead to somewhat higher allowance prices.
9. Quantitative restrictions can be applied at EU, member state or entity level. If done at EU or member state level, companies will have a strong incentive to over-invest in outside credits early in order to avoid the cut-off. The fungibility of credits in the ETS means that in terms of total credit volume, an entity-level cap is equivalent to one set at EU level. This avoids these distortionary effects, although it may slightly increase transaction costs for companies and add rigidity.
10. Linking to other national emissions trading schemes is more complex, thereby increasing transaction costs. Since no such schemes currently exist, however, this is hard to predict with any certainty.
11. EU domestic offset projects, which capture reductions outside the covered trading sector, can bring both environmental and economic effects, but they raise many technical problems, e.g., double-counting. They are also likely to increase the complexity of the EU ETS.

II. Recommendations

A. The EU context

1. The linking directive must help kick-start the Kyoto Protocol project mechanisms, which would be beneficial for both sustainable development and the Kyoto Protocol regime. One approach would be to allow CDM credits to be used for compliance with targets under the first period of the EU ETS from 2005. That would also address the issue of uncertainty stemming from the slow progress in international developments.
2. There is a need to bring short- and long-term objectives into line. Measures that might be necessary to achieve short-term objectives (e.g. avoiding an initial flood of cheap credits) must not be allowed to stand in the way of harnessing the forces of global carbon markets.
3. Any Certified Emissions Reductions (CERs) redeemed during the 2005-07 period must be cancelled in order to avoid their use in member state registries during the Kyoto commitment period, which would effectively constitute 'double-counting', e.g. for the use of companies during 2005-07 and by member states thereafter.
4. The EU should not make the linking directive conditional on the issue of ratification and the coming into force of the Kyoto Protocol.
 - a) Linking JI/CDM to the EU ETS provides a form of insurance that the EU will go ahead with the Kyoto Protocol in any case.
 - b) The EU could convey the message that non-ratification likely means missing out on investment to other parties that have ratified.

B. The international context

1. The EU, which after enlargement will represent 25 out of the 38 Kyoto Protocol Annex B countries, will need to be aware of its growing responsibility for achieving progress in the international negotiations with its partners.
2. As the frontrunner in the negotiations, the EU should act in a way designed to foster the progressive completion of a comprehensive global climate regime. This includes achieving real reductions, demonstrating that environmental objectives can be achieved by cost-effective measures and engaging in effective cooperation with countries both inside and outside the Kyoto Protocol.
3. The EU should consider the effects of potential complications of restrictions on project eligibility going beyond the Marrakech Accords on the possibility to link with other national emissions trading schemes.
4. Although the EU has the prerogative to set its own rules as long as they do not violate international agreements such as the Marrakech Accords, it should ensure effective consultation with its international partners, to position itself for future negotiations.

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REPORT OF A CEPS TASK FORCE

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1. Introduction

With the adoption of the EU emissions trading scheme (EU ETS) in October 2003,¹ the EU has laid the foundation for its strategy to reduce greenhouse gas (GHG) emissions, particularly from energy and industry sectors, and to meet the Kyoto Protocol targets. Member states – old and new – assisted by the European Commission are busy implementing the EU ETS. At the same time, the European Commission has tabled additional proposals to complete the existing framework. The most important initiative is the proposed amendment to link Joint Implementation (JI) and the Clean Development Mechanisms (CDM) to the EU emissions trading framework, the so-called ‘linking directive’. Other initiatives include the revision of the EC monitoring mechanism of Community CO₂ and other greenhouse gas emissions, a proposed regulation on fluorinated greenhouse gases and a proposal for a registry regulation.

The sectors not covered by the EU ETS are supposed to be subject to other policies that have been adopted or are currently being discussed to ensure a comparable effort. Legislative initiatives include, for example, directives to promote renewable energy and to introduce energy taxation, a voluntary commitment by the car industry to reduce specific CO₂ emissions of new car fleets by 25%, a directive on energy efficiency in buildings, the promotion of combined heat and power (CHP) and most recently, a proposal for rules to ensure that member states increase their energy efficiency by 1% annually. In addition, there are numerous actions in a number of areas such as the energy star programme for office equipment, the green light programme (to increase energy efficiency in lighting) or the clean urban transport initiative, which in one way or the other are closely linked to EU climate change policy.

Despite the focus on domestic action, EU climate change policy with the EU ETS as its cornerstone cannot be regarded in isolation of international developments. Although the EU has pledged to implement its Kyoto Protocol commitments unilaterally – in case the Kyoto Protocol does not enter into force – it is strongly affected by international uncertainty. Russia, whose ratification is indispensable to bring the Kyoto Protocol into force, has neither ratified nor given a firm date for when it may do so. But even if and when Russia ratifies, there are still questions on the long-term future of the Kyoto Protocol. In the longer term, observance of the Kyoto Protocol or any other international climate change agreement without the re-engagement of the US and full engagement of developing countries will be economically harmful to certain sectors in the EU and other countries that have implemented reduction commitments but not achieved the environmental benefits that had been envisaged, by leaving the biggest emitters out. Thus, contrary to the original assumption (i.e. after the signature of the Kyoto Protocol or prior to COP 6 at The Hague), major uncertainty regarding international developments will most likely remain.

¹ Directive 2003/97/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/EC, Official Journal of the European Union, 25 October 2003.

This CEPS report focuses on the issues associated with the linking directive. It analyses the different open issues both as to their potential effects within the EU and their possible international implications.

Following this introduction, section 2 briefly sketches international developments and the implications for EU climate change policy. The third section concentrates on the linking directive and analyses the potential environmental and economic effects of the current proposal with a particular focus on the external implications.

The report is preceded by an Executive Summary including Key Messages and Recommendations, which present the main findings of the report.

2. The EU ETS and the Future International Climate Regime

With the adoption of the EU ETS, the EU has lived up to its pledges to assume a global leadership role in climate change and to implement policies to reduce greenhouse gas emissions – unilaterally if needed. It is clear however that unilateral climate change policy is not an option for the long term, for both environmental and economic reasons. Hence, domestic EU climate change policy will need to be judged on the basis of inter alia the extent to which it addresses EU competitiveness issues and how it contributes to the development of the international climate change regime.

More than 120 countries have ratified the Kyoto Protocol. The parties to the Protocol are the EU and most other European countries, notably including the new member states, Japan, Canada and many developing countries. The Protocol's entry into force, however, depends on Russian ratification, which remains uncertain. Another uncertainty is the future US position. The current administration of President Bush is firm in its rejection of the Kyoto Protocol. At the same time, however, the administration has accepted that climate change represents a significant potential threat to the world and that "the changes are mostly due to human activities".² There have also been a number of recent initiatives in the US Congress, notably the McCain-Lieberman bill, and local, state and regional initiatives, all of which make it very difficult to predict how the US situation may evolve.

Finally, possibly the most difficult question is the future commitments of the developing countries. There is a solid body of research³ in the area, but politically the issue is on ice. All questions of course relate to the future of the Kyoto Protocol and whether it will enter into force. And even assuming that the Kyoto Protocol enters into force, there might be difficult discussions with existing signatories, such as Japan and Canada. Negotiations for the second commitment period will be a new round based on consensus.

² Both the 2002 Climate Change Action report by the Environmental Protection Agency (EPA) to the UNFCCC secretariat and a report by the National Research Council (2001) acknowledge that climate change is a potential threat and that human activity is the principal culprit. The former report quotes from page 5 of the report by the National Research Council: "Greenhouse gases are accumulating in earth's atmosphere as a result of human activities causing global mean temperature ... to rise. ... the changes we observed are likely due mostly to human activities. ... the best scientific information indicates that if GHG concentrations continue to increase, changes are likely to occur." The White House (2001) has acknowledged the precautionary principle in the context of the *clear skies initiative*: "We must address the issue of global climate change ... while these uncertainties remain, we can begin now to address the human factors that contribute to climate change. Wise action now is an insurance policy against future risks". In that same statement, President George W. Bush also acknowledged that the US is the world's largest emitter of GHG from human activity and assumed "the responsibility to reduce our emissions".

³ For a comprehensive analysis, see IEA (2002).

In the present situation the EU has assumed a position of leadership in reducing emissions. It is now up to the EU to demonstrate that it is serious about the environmental outcome (environmental effectiveness) and is not merely paying lip service. In addition, the EU should attempt to show that climate policies can be implemented in a cost-effective way (economic efficiency) with minimal effect on competitiveness. And finally, the EU has a responsibility towards the future creation of the international climate regime whether it takes the form of the Kyoto Protocol or any other treaty. The success of an EU emissions trading regime will also be judged by the extent to which it can foster the relationship with non-EU countries, notably other actual or would-be 'Kyoto-land' members such as Japan, Canada and Russia, as well as entice the US to become engaged in climate change activities. This necessitates strict consistency on the part of the EU in developing its approach to the international process. It also touches upon the emerging global carbon markets. Linking of national ET schemes as envisaged by Article 25 of the ETS directive may be one way to advance the international regime. Another issue is the role the EU can play in supporting the development of the Kyoto Protocol's project mechanisms against a background of uncertainty.

3. The Linking Directive

From the outset, the European Commission has held that linking JI and CDM to the EU ETS, which is referred to as the 'linking directive', would be addressed, although in separate legislation. The linking directive has been expected to boost the JI/CDM mechanisms by creating a direct link to the EU ETS, giving private investors an incentive to engage in JI and CDM and promoting technology transfer and investments in JI and CDM host countries in order to support their sustainable development. Without this link, there would be less private investment in JI/CDM. On 23 July 2003, the European Commission (2003a) formally published its proposal for amending the EU emissions trading directive and linking. The proposal raises a number of issues, which we have grouped into two categories: *timing* and *substance*.

Timing relates to the question of whether CDM credits should be allowed already in 2005 or only in 2008. Under the rules of the Kyoto Protocol and the Marrakech Accords, JI credits will only be available as of 2008. Arguments in favour of 2005 have been based on grounds that the earlier date would reduce costs and boost CDM in the light of the uncertainty surrounding the international regime. Arguments for a later date (i.e. 2008) relate mainly to the uncertainty stemming from an incomplete set of international rules and their effects on the functioning of the market. Some have argued that the use of JI should be reserved as an incentive for ratification of the Kyoto Protocol. In addition, there is a host of practical aspects to consider. The first priority of the EU and its member states has been to ensure proper implementation of the EU ET directive and to ensure sufficient progress in the remaining legislation on, for example the monitoring mechanism, the registry or industrial gases. There were also queries on whether there would be sufficient credits available in 2005 to make linking relevant in practice.

Questions on *substance* broadly relate to two issues: complementarity (i.e. how much of the abatement should be done domestically and how much in non-EU countries) and project type and quality (e.g. should certain project types be banned or other quality criteria applied).

The first relates to the relationship between economic efficiency (i.e. 'delivering an efficient market') and environmental effectiveness (i.e. 'achieving environmental objectives').⁴ The EU ETS is first and foremost a 'domestic policy and measure' in the Kyoto Protocol framework. As a result, there have been concerns about opening up the EU Emissions Trading Scheme (ETS) to non-EU credits and thereby farming out reductions. There are also worries that credits from the

⁴ This topic has been analysed in greater detail in chapter 3 of the previous CEPS Task Force Report on greenhouse gas emissions trading (see Egenhofer & Legge, 2002).

linking directive might be accumulated by member states when participating in international emissions trading under the Kyoto Protocol. On the other hand, due to the fact that marginal avoidance costs in countries that are expected to host CDM and JI projects are most likely to be lower than in the EU, exclusion of the project mechanism could lead to somewhat higher allowances prices. The extended impact assessment on the linking directive, for example, states that unlimited use of JI and CDM credits could halve the expected allowance price to €13 per tonne of CO₂, thereby saving the enlarged EU €700 million.⁵

The concerns regarding project type reflect both potential problems with environmentally and socially damaging projects, as well as the desire to promote technologies seen as more beneficial in terms of sustainable development and technology transfer. In particular, the EU has argued repeatedly in international negotiations that sinks provide neither technology transfer nor reliable climate benefits, and that large hydroelectric dams, unless they meet the criteria of the World Commission on Dams, often entail unacceptable social and environmental impacts. Therefore, it seems a logical extension of EU policy to aim at excluding such project types from the ETS.

Although Europe's main Kyoto Protocol partners have expressed concern over what they sometimes call 'an EU tendency to renegotiate the Kyoto Protocol', these concerns in fact do not actually entail any change in the EU position relative to the Marrakech Accords.

3.1 The proposed JI/CDM linking directive

The core element of the linking directive is to recognise JI and CDM credits as being equivalent to EU emissions allowances for their use within the EU Emissions Trading Scheme (ETS). To this end, JI and CDM credits, respectively Emissions Reduction Units (ERUs) and Certified Emissions Reductions (CERs), will be converted⁶ into EU allowances (EUAs).

The main features of the proposed directive are the following:

- *Qualitative restrictions.* The proposed amending Directive excludes sinks and nuclear facilities from the list of project activities (Art. 11bis, paragraph 3).
- *Quantitative restrictions.* The proposed directive has opted for a reference cap instead of a fixed cap. According to Art. 11bis, paragraph 2, the European Commission will review whether there is a need to act when the number of CERs and ERUs reaches 6% of the total quantity of allowances.
- *Timing.* The amending directive currently foresees that JI and CDM credits as outlined in the proposal could be used no earlier than 2008.
- *Eligibility.* Exclusion of JI projects in the covered sector in new member states (Art. 11ter, second paragraph) with a few exceptions.⁷
- *Various other provisions.* These foresee a number of technical requirements that are related either to the Marrakech Accords or EU legislation. They include special

⁵ See European Commission (2003b). The analysis takes into account transaction costs and potential availability of credit. See also Table 1.

⁶ That conversion is done by member states is a logical extension of the fact that allowances are issued through the national allocation plans.

⁷ To avoid double-counting of emissions reductions in the new EU member states, credits from JI projects will not be granted if they are achieved in the sectors covered by the EU ETS. This does not apply for the first commitment period if projects are approved before the end of 2004 or before the new member states enter the EU.

requirements for baseline setting for projects in new member states, requirements on the environmental and social impacts of projects as laid down in the Marrakech Accords and compliance with the regulation on public access to information (Directive 2003/4/EC) and the Strategic Environmental Assessment (SEA) for policies, plans and programmes of Directive 2001/42/EC. Finally, verification is linked to the accreditation by the CDM Executive Board. In parallel to the Kyoto Protocol JI fast track provisions, member states can designate verification bodies that operate within the EU Eco-Management and Audit Scheme (EMAS), a voluntary initiative designed to improve companies' environmental performance (see Art. 4 of Regulation 761/2001/EC).

The central issue around which discussions have revolved is how to tackle the potential tension between environmental and economic objectives. In economic terms, the unhindered use of JI and CDM in the EU ETS is seen to potentially add value in several different ways. Credits can increase flexibility and liquidity in the ETS, thereby increasing its efficiency. At the same time, credits can act as a safety valve (i.e. a safeguard against excessively high allowance prices), thereby reducing potentially negative effects on competitiveness. In turn, all this together can increase the acceptance accorded the scheme by industry. Credits can also be a means to spur new investment in non-EU countries and can thus potentially increase international support for a global climate change regime. On the other hand, there are a number of drawbacks of 'outsourcing'. The EU might not live up to its responsibility to reduce emissions domestically ('supplementarity'). In addition to international legal obligations, there are a number of economic and environmental arguments to be taken into account. Full flexibility risks the possibility that the EU would forfeit environmental co-benefits.⁸ It might also retard technological development ('dynamic efficiency argument'), which would give the EU a first-mover advantage. Furthermore, uncertainties regarding the international market price for credits will undermine the usefulness of the ETS as a tool for pricing carbon in investment decisions for EU companies. Limiting the use of outside credits may help 'hedge' some of this uncertainty.

3.2 Analysis of the proposed linking directive

The proposed directive is currently under discussion in both the Council of Ministers and the European Parliament under the co-decision procedure, whereby both the Council and the Parliament need to reach agreement in either one or two readings.⁹ The following issues will be critical in determining the final shape of the directive.

3.2.1 Timing

Most stakeholders agreed that the initial 2005-07 starting phase of the EU ETS should be kept simple to allow member states to become acquainted with a new instrument. This point was reinforced by the fact that the operation of the EU ETS will depend crucially on the National Allocation Plans (NAPs), which are not due to be adopted before mid-2004. In addition, it was generally assumed that the carbon constraint for industry in the initial phase based on the national allocation would be limited, given that the absolute national limits stemming from the burden-sharing agreement originating from the Kyoto Protocol would not yet apply. Finally, the

⁸ Some mitigation actions might yield extensive benefits in areas outside climate change, which are called co-benefits or ancillary benefits. Typical examples of the benefits of climate change measures include lower local pollution caused by NO_x or SO₂ and reduced congestion and noise from transport. They may also generate double-dividend effects (e.g. lower labour taxes and job creation) or induce technological change. According to the OECD (2002), ancillary benefits have been estimated at anywhere between 30% to over 100% of abatement costs.

⁹ At this moment, there is a good chance that the Council and the European Parliament will agree on a single reading, thereby speeding up the decision-making process.

significance of credits was seen as low, especially since JI credits will only be available as of 2008.

Competitiveness impacts

While it is still true that the carbon constraint for EU industry is likely to remain ‘limited’ – as evidence from national allocation seems to suggest – even a modest carbon constraint may cause competitiveness problems at least in certain specific product markets. This is because of a combination of effects: indirect economic effects as a result of rising power prices¹⁰ and the fact that industry operating in countries without any or a lesser carbon constraint does not face a similar disadvantage. Theoretically, the availability of CDM credits could mitigate such effects, at least to a degree, but this will depend on the number of projects available, which is difficult to project. Thus, the theoretical possibility of CDM significantly reducing compliance costs may not actually materialise because of a lack of projects.

Project development

Nevertheless, allowing CDM credits for compliance as of 2005 is most likely to have a positive effect on the *development* of projects, which has always been an objective of the EU. An important point is that any CERs redeemed during the 2005-07 period must be cancelled, to avoid their subsequent use in member state registries during the Kyoto commitment period, which would be an effective ‘double-counting’, that is for the use of CERs by companies during 2005-07 and then by the member states thereafter.

Allowing CDM credits to be applied towards compliance in 2005 could also help counteract the decreasing interest shown in CDM (and JI) projects in general resulting from the uncertainty of the international regime. An EU decision in the near future to allow CDM credits into the EU ETS can be expected to kick-start the project mechanisms.

There is evidence that there are too few JI and CDM projects – at least at present – to generate credits that will be usable before the first commitment period.¹¹ This is partly due to a lack of demand (in the absence of firm rules) and a lack of supply (e.g. long project cycle, high transaction costs and a low expected carbon price).¹² While some problems are exogenous and cannot be addressed by the EU alone (e.g. long project cycle or high transaction costs), there are some issues the EU can address. Kick-starting the project mechanisms is likely to boost international efforts – in the absence of certainty on the future of the Kyoto Protocol – to advance procedures to approve projects and certify credits. The result is most likely a speeding up of the development of the international administrative framework for dealing with the project mechanisms as well as a renewed interest in CDM and JI projects.

¹⁰ Further analysis can be found on the website of the CEPS Task Force on the Business Consequences of the Emerging EU ETS (http://www.ceps.be/Article.php?article_id=250).

¹¹ Thus, one could argue that the matter of quantitative restrictions is purely theoretical. Industries are arguing for unrestricted use of the flexible mechanisms on the ground that the restrictions are unnecessary because they have no effect in reality. Conversely, if this is true then a quantitative restriction can be regarded merely as a safeguard against unexpected but very unlikely floods of cheap credits, and is thus not objectionable. Nevertheless, projects abating non-CO₂ gases have at least in principle the potential to generate large volumes of cheap credits; thus, the possibility may not be purely hypothetical.

¹² For evidence on and reasons for the expected shortage of JI and CDM projects, see <http://www.pointcarbon.com/>, <http://www.ieta.org/>, <http://prototypcarbonfund.org/>.

Ratification and entry into force of the Kyoto Protocol

It was argued that the linking directive could be a tool to entice further ratification of the Kyoto Protocol. Therefore, the EU should not allow CDM (and JI) projects to come into effect any earlier than would happen once the Kyoto Protocol comes into force. Thereby, the EU could make the point that those countries interested in benefiting from projects need to ratify. Without ratification, there will be no CDM or JI investments. There is a second line of reasoning, which asserts that the EU should not let there be any doubt as to whether it expects the Kyoto Protocol to enter into force. Linking JI and CDM to the EU ETS might be interpreted as harbouring such doubts, as it could be construed as a step to establish an entity-based emissions trading scheme, which eventually might substitute for the Kyoto Protocol framework. The fear is that Parties might eventually benefit from the project mechanisms without ever having ratified or even needing to ratify the Kyoto Protocol.

A firm commitment on the part of the EU to allow CDM credits as of 2005 and JI by 2008 is likely to be interpreted under most circumstances as a sign of loyalty to the Kyoto Protocol. A precondition, however, is that only projects from those countries that have ratified the Kyoto Protocol would be eligible. Such a move could be taken as an assurance that the EU would go ahead regardless of other countries' decisions on ratification. Incidentally, this would be fully consistent with the political commitment of the Gothenburg European Council and the subsequent EU decision to ratify the Kyoto Protocol, which has made the burden-sharing agreement and the Kyoto Protocol binding targets within the EU. If anything, allowing for linking CDM and JI to the EU ETS would be a powerful sign that the EU is going ahead. The message would be that in the absence of ratification, countries are likely to miss out on opportunities available to other parties that have ratified. The long lead times of JI/CDM projects combined with the fact that there are economies of scales for projects in the same host country,¹³ mean that the negative effects may be more than just temporary and will therefore be a worry for countries that have not ratified.

3.2.2 Qualitative and quantitative restrictions

The proposed qualitative and quantitative restrictions are an attempt to ensure actual and permanent reductions and to cope with complementarity. Qualitative restrictions aim at ensuring a certain environmental benefit while quantitative restrictions are a means to operationalise complementarity. Restrictions are accompanied by transparency provisions. Art. 17bis of the linking directive calls for an environmental assessment and public consultation on the national programmes for the implementation of projects. Art. 30 mandates a review of the impact of project mechanisms on host countries with a special reference to "large hydro-electric power production projects".

Considerations on *qualitative* restrictions are based on the Marrakech Accord (i.e. nuclear), perceived problems with permanence (i.e. sinks) and risks of environmental and social damage (i.e. large hydro, if it does not meet criteria set out by the World Commission on Dams). The objective of *quantitative* restrictions is to operationalise the EU's obligation to use JI and CDM in a supplemental way.

As a result, the EU has been considering the establishment of a hard ceiling or alternatively, a reference cap, i.e. a review if the total amount of CERs and ERUs converted for use in the EU ETS reaches 6% of the total amount of EU allowances. Such a ceiling could be regarded as a

¹³ Scale effects are derived from the experience gained from dealing with host country administrations, performing identical procedures and more generally, by moving up the learning curves that to some extent are linked to host countries.

safeguard against possible but highly unlikely floods of cheap credits into the EU, notably from projects abating non-CO₂ gases. On the other hand, a hard ceiling may create rigidity in an emerging (carbon) market. A reference cap will reduce this risk but creates uncertainty in the market.

The economic effects of quantitative restrictions have been documented by the European Commission (2003b) at least to some extent¹⁴ and are summarised in Table 1. Nevertheless, there has been less discussion on the environmental impact of both quantitative and qualitative restrictions. It should be expected that the environmental effects of restrictions are limited by companies' ability to negotiate between different environmental products, which is a result of the co-existence of the EU and the international system. Two examples below illustrate the complications.

Table 1. The effects of different quantitative boundaries (for enlarged EU)

Scenario description	Overall use of JI/CDM as % of total allowances (2008-12)	Total costs (in €)	Costs savings		Allowance price/tonne of CO ₂ (in €)	CO ₂ equiv. outsourced (through EU ETS in Mt)	Total EU emissions (reference =4,664 Mt)*
			Absolute	in %			
Reference case (no linking)	0%	€2.9 billion	0	0 %	€6	0	0
3% Ceiling	3%	€2.8 billion	€100 million	3.4 %	€0	45 Mt	+ 171 Mt
6% Ceiling	6%	€2.4 billion	€500 million	17.2 %	€4	91 Mt	+208 Mt
Unlimited use of JI/CDM	7%	€2.2 billion	€700 million	24.1%	€3	111 Mt	+ 224 Mt
EU ETS participants + other Kyoto parties use JI/CDM	8%	€2 billion	€900 million	31.1%	€1	128 Mt	+ 128 Mt
Only EU ETS participants use JI/CDM credits	13%	€1.1 billion	€1.8 billion	62.2%	€	192 Mt	+ 192 Mt

* The difference between the sums in this and the previous column is explained by member state use of JI and CDM.

Source: European Commission (2003b) and own calculations.

Example 1. Quantitative restrictions

If we assume that i) the quantitative constraint of for example 6% or 8% is triggered, ii) this 6% constraint is pro-rated per installation allocation and iii) CERs/ERUs are cheaper than EU allowances, then this creates a secondary market in 'conversion rights'. EU allowances are fully fungible within the EU. For example, companies from 'old member states', where the carbon constraint generally is higher, can convert ERUs/CERs into EU allowances through installation accounts in new member states. In new member states, surplus EU allowances and conversion capacity should be available in sufficient volume. For example, if a power company from an old member state that needs to buy EU allowances can find CERs on the open market at lower prices than EU allowances, then it would be rational to purchase those CERs and convert them into EU allowances to the extent possible. However, if this power company exceeds its conversion limit, then it is rational to transfer the CERs to another company (perhaps in an accession state), which would still have spare conversion capacity. That power company would effectively pay a third party a conversion fee to convert the CERs into EU allowances and

¹⁴ The analysis takes into account transaction costs and potential availability of credit.

transfer them back into the company's compliance account. If ERUs/CERs are cheaper than EU allowances, then this conversion will be maximised until either a) their prices equalise or b) 6% of the aggregate of all NAPs have been converted to EU allowances, i.e. the entity ceiling has been converted into a de facto EU-wide ceiling. The net effect consists of transaction costs for companies in the form of the conversion premium.¹⁵ In reality, the 6% reference cap may constitute no more than a safeguard against large volumes of cheap credits, which may or may not be a hypothetical scenario.

On the other hand, the perception of risk and smaller long-term markets for project types excluded from the ETS would be likely to discourage development of such projects and lower the price of credits generated from them. They may also influence the positions of the EU's main Kyoto Protocol partners, which might not want to be seen as accepting credits of lower environmental quality projects.

Example 2. Qualitative restrictions

The EU has proposed qualitative restrictions on nuclear facilities – in line with the Marrakech Accords – sinks and large hydro. Some Annex B countries will not apply the same constraint. Hence, there is scope for non-EU/EEA Annex B companies to swap EU-compliant CERs/ERUs for non-compliant CERs/ERUs. EU-compliant CERs/ERUs will trade at a premium until the price of EU/EEA non-compliant CER/ERUs equals EU allowances plus the conversion rate. *There is only a real constraint when no non-EU company has any more EU-compliant CERs/ERUs left in the registry.* Seen from a global perspective, there will likely be no environmental benefits from additional EU restrictions. The difference between a scenario with EU restrictions and one without is that in the former case all EU-compatible CERs/ERUs will be held in the EU with non-EU companies making a profit (of the conversion premium) to the detriment of EU companies. Thus, the EU will pay for environmentally higher ambitions. But as long as more EU-compatible CERs/ERUs are available worldwide than are needed in the EU as a whole, there will be no net environmental benefit.

Although the global environmental benefits of the qualitative and quantitative restrictions may be somewhat limited through the functioning of the trading market, there are nevertheless a number of indirect effects. Qualitative restrictions are a safeguard against a flood of cheap credits, although such a flood is unlikely. They may also influence market expectations and influence other countries' behaviour. Quantitative restrictions may help the EU to ensure that the ETS becomes a success both in economic and environmental terms by exerting an element of control on the quantity and quality of JI and CDM credits, even if this comes at a price. This analysis also points out that it appears that quantitative restrictions are best adopted, if at all, at EU level rather than at member state or even entity level.

3.2.3 International effects

It should be reiterated that both the linking directive and the EU ETS are a 'domestic policy and measure' in the Kyoto Protocol context and are therefore part of EU domestic measures. The two directives do not affect EU member state rights and obligations to operate in the international emissions trading market, including the one for the Kyoto Protocol's project mechanism. Neither do they affect other Parties' rights and obligations. Legally speaking, therefore, the proposed linking directive cannot amount to a re-negotiation of the Marrakech Accords as has been argued elsewhere. Nevertheless, there are important links to the emerging

¹⁵ The size of the conversion premium will depend on how many operators are in the position to offer conversion services. The larger that number is, the lower the conversion fee should be, and possibly even zero.

international climate regime in that agreement with the EU's main partners within the Kyoto Protocol framework that will be crucial for future progress.

The EU has agreed to follow procedures and decisions established under the Kyoto Protocol and the Marrakech Accords.¹⁶ This *principle* has two advantages. First, it avoids the EU having to set up a parallel institutional framework that would in fact replicate the work of the UNFCCC institutions. Secondly, it places trust in the Kyoto Protocol procedures, in particular the CDM Executive Board and the Article 6 Supervisory Committee. There is a drawback, however: the EU has accepted and is bound by international agreements that it does not control, such as credits for JI/CDM projects. This dilemma is illustrated by the recent agreement reached on sinks in the CDM at COP9¹⁷. Other examples are the procedures for crediting CDM and JI projects. Similarly, the EU is bound by the decision of the Kyoto Protocol and the Marrakech Accords¹⁸ that ERUs can only be issued for compliance in the period after 2008.

This does not however affect the prerogative of any Party to set rules under its own jurisdiction that are in line with the international agreement. This seems to be the case regarding restrictions in the linking directive. The linking directive goes beyond the Marrakech Accord in that it deals effectively with entity trading, a subject not covered by this Accord. Therefore, although the EU restrictions do affect non-EU Parties, they nevertheless do not appear to violate the Marrakech Accord. Nevertheless, the EU should ensure effective consultation with its international partners, to position itself for future negotiations.

3.2.4 Linking with other national emissions trading schemes

The European Commission, member state representatives and Members of the European Parliament have all maintained that linking of different emissions trading schemes would be an important element in the future climate regime.¹⁹ We would therefore want to assess the extent to which the linking directive would facilitate linking.

Article 25 of the EU ETS directive explicitly provides for linking with greenhouse gas emissions trading schemes of Annex B Parties, if the Party in question has ratified the Kyoto Protocol. This does not mean that linking is automatic, however. On the contrary, linking is subject to an international agreement between the European Union and a third country. This means that such an agreement will follow the rules of other international agreements and therefore needs to take into account the political realities within the EU.

There are two reasonable scenarios under which linking would occur. The *first* scenario is that non-EU countries such as Japan and Canada would consider the EU ETS sufficiently attractive to establish a link to it. This would in essence mean a bottom-up creation of a global or at least Kyoto Protocol-wide scheme for entity-based greenhouse gas emissions trading. The entity-based GHG emissions trading scheme would operate alongside the (Party-based) International Emissions Trading (IET) based on Annex B Parties (Article 17 of the Kyoto Protocol). The *second* scenario is that the Kyoto Protocol would never enter into force and that Annex B Parties develop an entity-based trading scheme to implement climate change policy in a cost-effective way.²⁰ Similarly, if IET under the Kyoto Protocol materialises only slowly or not at

¹⁶ The exception is sinks, where the international framework was not yet clear at the time of the proposal. COP9, however, has now reached an agreement on sinks.

¹⁷ For an analysis, see for example the COP9 report by the Pew Center on Global Climate Change (2003).

¹⁸ Decision 16/CP.7 Guidelines for the implementation of Article 6 of the Kyoto Protocol.

¹⁹ This topic has also been analysed in greater detail in chapter 3 of the previous CEPS Task Force Report of October 2002 (see Egenhofer & Legge, 2002).

²⁰ Both scenarios however assume that quantitative ceilings will be applied to entities.

all,²¹ there will be pressure on the EU to offer linkage to other trading schemes. In both cases, linking would be a substitute – at least to some extent – for a top-down emissions trading scheme established by international negotiation.

One of the preconditions for linking with other emissions trading schemes which the EU ETS explicitly offers is an ‘agreed currency’, meaning that the ‘traded units’ are (.....) the same or at least convertible.²² One obvious possibility would be to use the currencies from the Kyoto Protocol such as Assigned Amount Units (AAUs), CERs, ERUs. However, by introducing qualitative restrictions, EU allowances are no longer identical with the Kyoto Protocol units. In case of linking, the issue can be addressed by, for example, negotiations on a joint currency, the introduction of conversion factors or by secondary markets in conversion rights, but these are likely to result in increased transaction costs.

3.2.5 Offset projects

Some interest has been expressed in the Council discussions on the linking directive in linking not only to JI/CDM projects but also to domestic offset projects. Domestic offset projects would be activities that lead to reductions outside the covered sectors of the EU ETS or JI/CDM. Such projects could include measures in the agricultural, transport and household sectors, which are currently not covered by the EU ETS. They are comparable to the idea of a ‘project sector’ in the original UK emissions trading scheme, but which finally was not taken further.

An advantage of EU offset projects is that they would link the non-covered sector to the EU ETS and would therefore gradually integrate other sectors into the scheme. In addition, it would most likely focus on the most cost-effective reduction potentials, thereby reducing compliance costs.

There are a number of drawbacks, however. The first is that domestic offset projects would constitute a new instrument, which would necessitate a separate institutional set-up in the EU. Domestic offsets are best compared with ‘unilateral JI’, a mechanism that is not foreseen in the Kyoto Protocol. Consequently, the UNFCCC institutional infrastructure cannot be used. Such a new mechanism may not even be needed since the opt-in clause of Art. 24 of the EU ETS and the review and further development clauses in Art. 30 provide opportunity for enlargement of sector coverage. Strictly speaking, a broader sector-coverage can also be achieved within the current EU ETS. In certain circumstances, offset projects may entail the risk of double-counting. In theory, double-counting can be avoided but this might only be possible at the expense of complicated procedures, which are likely to increase the complexity and transaction costs. Thus, although offset projects in principle can play a useful role in the EU ETS, they pose difficult practical issues that need to be resolved.

²¹ If IET does not happen, the EU scheme might become the basis for a global scheme.

²² Theoretically such linking could occur if the different schemes met basic minimal harmonisation requirements. In addition to a standardised currency of exchange, this implies harmonised enforcement mechanisms including a common penalty rate and monitoring, reporting and verification rules including a standard registry. Ideally as part of enforcement there should be a common treatment of sinks, possibly based on best practice. See previous CEPS Task Force Report on greenhouse gas emissions trading (Egenhofer & Legge, 2002).

4 Final Remarks

This report has dealt with some of the outstanding issues of the proposed linking directive. It has described and analysed the principal viewpoints that the different stakeholders have raised. This analysis can be found in the main body of the report. The reader will note that the Task Force members have not been able to agree on all issues raised in the report. In these instances, the report has attempted to present both sides of the argument in a balanced way to allow the reader to make his or her own judgment. In this way, we have attempted to provide a useful contribution to an important debate on the future of EU climate change policy.

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