

Use of External Units in the European Union Emissions Trading System Post-2012

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Summary

The European Union's Emission Trading System (EU ETS) is one of the key pillars of its climate protection strategy. One of the compliance options available to installation operators is to use Certified Emission Reductions (CERs) from Clean Development Mechanism (CDM) projects carried out in developing countries and Emission Reduction Units (ERUs) from Joint Implementation (JI) projects carried out between industrialised countries.

The EU is currently discussing a revision of the EU ETS for the period after 2012, including significant revisions to the rules on the use of CDM and JI. There are various issues that are being hotly debated. These are in particular quantitative limits on the use of offsets, the eligibility of project types, quality criteria for projects and the introduction of Domestic Offset Projects (DOPs).

On quantitative limits, business organisations demand an increase of the CDM/JI entitlements, citing the reduction of compliance costs and resulting increase of their competitiveness this would bring as well as technology and monetary transfer to the host countries. By contrast, environmental organisations argue that the current proposal allows for the heavy use of external credits already, which would prevent the remodelling of the EU economy and endanger the EU's 2°C target. Governments are broadly in favour of increasing the CDM/JI entitlement and European Parliament's environment committee has also come out in favour of an ample access to CDM/JI. However, the debate is skewed by proposals being measured against the current CDM/JI entitlement for the period 2008-2012, which is very generous, especially in the case of Germany, where the current entitlement is four times the required reduction. The current entitlements should therefore not be used as a yardstick to evaluate the proposed future entitlements.

Apart from the question of entitlements one also has to consider where CDM/JI credits are supposed to come from post-2012. According to the IPCC, reaching the EU's 2°C target requires a 25-40% reduction below 1990 levels in Annex I countries and in addition a 15-30% deviation from the baseline in non-Annex I countries by 2020. That is, credit transfers from non-Annex I to Annex I should only occur if the non-Annex I range is overachieved. Given current emissions trends, a 15-30% deviation from baseline in non-Annex I is highly ambitious, though. It is therefore not at all clear where and how such "surplus reductions", which could then be used via the CDM to offset Annex I emissions, are supposed to be generated. The EU debate should therefore be put into the overall post-2012 context and the EU should give consideration to how both a 25-40% reduction in Annex I and a 15-30% deviation from baseline in non-Annex I can be achieved.

The discussion about eligible project activities largely focuses on the inclusion of land use, land-use change and forestry (LULUCF) projects. There has for a long time been a fierce controversy about this pro-

ject type. Supporters argue that deforestation is a major source of emissions and that sink projects can also bring about many other ecological and socio-economic benefits. Opponents fear that forestry projects could draw attention away from the cause of climate change, that is, fossil-based energy systems and infrastructures. They also point out that biomass sequestration of carbon is not equivalent to the avoidance or reduction of emissions since a tonne of emissions avoided will never enter the atmosphere whereas carbon stored in biomass might at any time be re-released into the atmosphere. There are also technical problems with quantifying the sequestration of carbon.

There is also a quantity aspect through the ongoing discussion about including avoided deforestation in the carbon market in the post-2012 regime. Deforestation emissions account for about 20% of global CO₂ emissions. Discussions revolve around the aim to halve deforestation emissions by 2020. Achieving this reduction through the CDM or other carbon market instruments would thus imply a massive additional supply in the market, which could seriously destabilise the demand-supply ratio. It therefore seems recommendable to continue the exclusion of forestry credits from the EU ETS.

The debate about quality criteria basically pits concerns that the integrity of the EU ETS might be undermined by bad projects against demands for maximum flexibility and concerns that the EU would be acting in bad faith if it tried to “redefine” rules that have already been agreed at the UN level. Nevertheless, concerns about the integrity of especially the CDM are very valid. There have been strong doubts about the additionality of many projects that have already been registered and the CDM’s contribution to sustainable development has also been severely questioned.

The EU should actively discuss which standards external credits should meet in order to safeguard the environmental integrity of the EU ETS, taking into account non-governmental initiatives such as the CDM Gold Standard and others. At the first instance the resulting EU position should be fed into the ongoing negotiation processes at the UN level. Ideally, these will lead to a revision of the global CDM framework that will sufficiently address the concerns that have been raised and the EU’s requirements. Depending on the outcome of the UN negotiations, the possibility to define additional requirements at the EU level should however not be ruled out ex ante.

Several aspects appear relevant regarding the inclusion of DOPs in the EU ETS. The rationale given by the European Commission is that the inclusion of DOPs would widen the scope of the EU ETS and amplify its price signal to other sectors. Another reason proponents of DOPs give is an alleged discrimination of domestic project developers in JI, which would be resolved by the introduction of DOPs.

However, creating a new Community mechanism would require substantial administrative costs to develop and implement the legislation and approval structures. Moreover, it is not clear what emission reduction potential DOPs could actually mobilise, in particular in the already highly regulated EU-15 countries. The current experience from JI is not very encouraging. It is therefore not clear that the introduction of DOPs would actually yield any palpable benefits.

1 Introduction

The European Union's Emission Trading System (EU ETS) is one of the key pillars of its climate protection strategy. In total, the about 10,500 installations covered across the 27 Member States account for about 41% of Community-wide greenhouse gas (GHG) emissions (Commission of the European Communities 2008b: 13). One of the compliance options available to installation operators is to use Certified Emission Reductions (CERs) from Clean Development Mechanism (CDM) projects carried out in developing countries and Emission Reduction Units (ERUs) from Joint Implementation (JI) projects carried out between industrialised countries.

On 23 January 2008 the European Commission released a proposal for a "Directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system to the Community" (Commission of the European Communities 2008a). The Commission proposal includes a significant revision of the rules for the use of CDM and JI inside the EU ETS. The project mechanisms have in recent years been subject to substantial criticism regarding their environmental integrity. Their future use inside the EU ETS has therefore attracted significant controversy. Questions that are hotly debated are whether and to what extent domestic emission reductions inside the EU should have priority vis-à-vis purchasing emission reductions in other countries via CDM/JI, which project types should be eligible for use in the EU ETS, quality criteria for projects and the introduction of Domestic Offset Projects (DOPs).

This paper aims to lay out the controversial issues and derive policy recommendations on the best way forward. To establish the basis for the discussion, the paper first briefly outlines the basic functioning of the CDM/JI market and the current rules regarding the use of CDM/JI inside the EU ETS. Next, the paper explains the relevant parts of the European Commission's revision proposal as well as the amendments to the Commission proposal agreed by the Environment Committee of the European Parliament. The paper then summarises the positions of the active state and non-state actors which are weighing in on the debate. The final section then analyses these issues in detail, considers the facts and arguments put forward and on this basis derives recommendations for the future design of the ETS link to project mechanisms.

2 The Market for CDM/JI-Generated Carbon Credits

The opportunities to use CDM/JI-generated emission certificates (carbon credits) in Germany and other EU Member States are largely driven by national and EU legislation. There are three main options available:

- Responding to demand generated by the EU Emissions Trading Scheme
- Responding to demand created under the carbon acquisition programmes run by the various EU Member States
- Voluntary demand from private agents

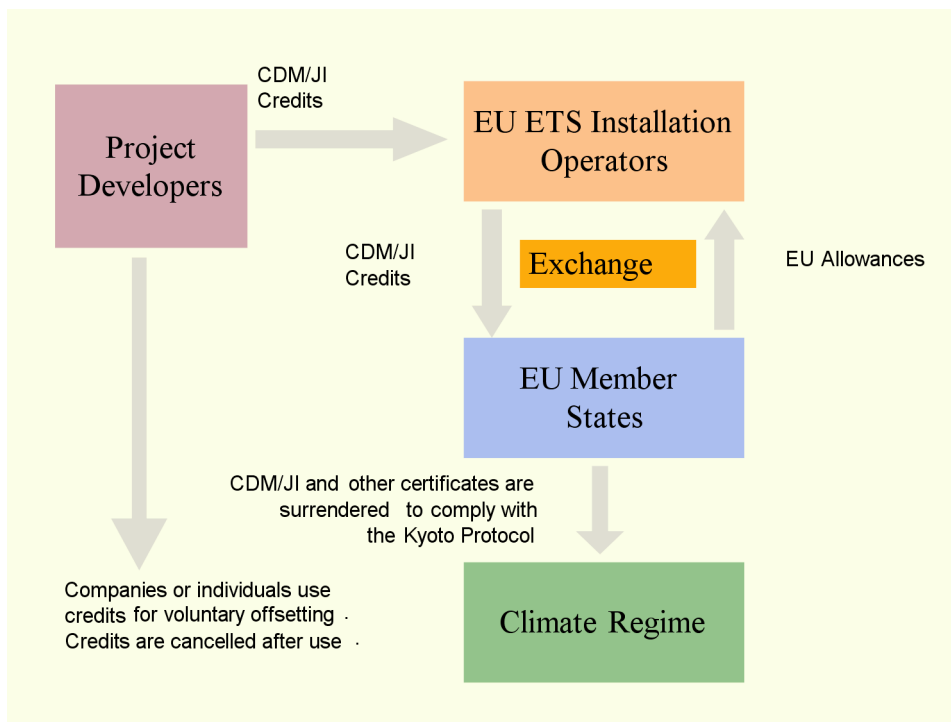


Figure 1: The market for CDM/JI

2.1 Demand Generated by the EU Emissions Trading System

Most non-state demand for CERs and ERUs is generated by the caps placed on industrial emissions in the EU ETS. Under the EU Linking Directive (transposed in Germany’s Project-Based Mechanisms Act (Pro-MechG)), carbon credits generated from CDM/JI projects may be used in the EU Emissions Trading Scheme as follows:

- CDM/JI project developers complete their respective project cycles and receive a quantity of CERs or ERUs.
- CDM/JI project developers sell their carbon credits to operators of industrial installations or combustion facilities that must participate in the EU ETS. Project developers and operators of facilities covered by the ETS may be identical.
- These operators request that the CERs or ERUs be exchanged for EU allowances by surrendering their CERs/ERUs to the competent national emissions trading authority in their own EU Member State. Technically speaking, operators receive the corresponding number of EU allowances but must immediately use them to prove they are in possession of EU allowances.
- If operators are in a position to substitute more CERs/ERUs than the EU allowances needed to meet their obligations, they may use the remaining EU allowances to meet subsequent obligations under the EU ETS; alternatively, they may sell their EU allowances to other market players.
- An EU Member State which exchanges CERs/ERUs for EU allowances can use the CERs/ERUs to comply with their Kyoto Protocol commitments.

Interested businesses can generate emission reduction certificates from their own CDM and JI projects, purchase CERs and ERUs on the carbon market, or use a carbon acquisition programme to obtain carbon credits. One such programme is the KfW Carbon Fund, which is designed not to generate credits for states obligated to reduce their emissions under the Kyoto Protocol, but for businesses participating in the EU ETS.

2.2 Demand from EU Member States

Independent of the ETS, the EU Member States may create opportunities to use CERs and ERUs at national level. The simplest method involves direct purchase of emission reduction certificates by the state and many such programmes have already been implemented.

Another option would be to allow CERs and ERUs to be counted towards obligations under other policy instruments (e.g. voluntary agreements, eco-tax). While this avenue is being pursued in Japan, none of the EU Member States is considering such action at present. That is, private businesses outside the EU ETS have no opportunity to use CDM/JI for complying with climate policy obligations.

2.3 Voluntary Demand from Private Agents

In addition to the two demand segments outlined earlier, a third is emerging in which no state intervention occurs whatsoever. This involves voluntary offsetting, which is as yet unregulated at international, EU or national level. Voluntary offsetting means to take an optional amount of the greenhouse gas (GHG) emissions a company or individual has caused and avoid or reduce the same amount of emissions at a different place, for example through CDM/JI projects.

As the chart above shows, the main feature of this demand segment is that the CERs and ERUs purchased by private agents are not used by the state to comply with Kyoto commitments. Rather, the private agents cancel them voluntarily.

3 Current Regulations on the Use of CDM/JI in the EU ETS

In the negotiations on the Linking Directive several issues were controversial which have now come back on the agenda. These are in particular quantitative limits on the use of CDM/JI, the eligibility of certain project types and qualitative limits. The following therefore briefly details the background of these issues and the current regulations in the Linking Directive.

3.1 Quantitative Limitations

When the concept of emissions trading was introduced in the United Nations climate negotiations, the EU's attitude was for a long time rather reserved. The EU held that use of the flexible mechanisms should not become a substitute for domestic emission reductions but only be "supplemental". The main aim of the Kyoto Protocol was supposed to be changing domestic emission behaviour and starting long-term changes of the fossil-based energy infrastructure. The EU therefore demanded that each country should achieve at least 50% of its Kyoto target domestically (EU 1999a; EU 1999b). However, the EU negotiators were not successful in achieving a consensus on the definition of such a "concrete ceiling" at UN level. Instead, countries agreed only on a non-specific formulation according to which use of the mechanisms should be supplemental to domestic action.

This gave rise to the question whether the EU should at least limit its own use of CDM and JI. Positions were diverse. While the Commission's position was that the inflow of CERs and ERUs should be regulated, especially business argued that a cap would be contradictory to the objective of flexibility and cost-effectiveness. Moreover, the resulting uncertainty about the convertibility of credits would discourage the implementation of projects and thus their contribution to sustainable development of the host countries. NGOs were generally sceptical about the use of CDM and JI and therefore argued that there should be a strict limit to ensure that meaningful domestic action does take place. Most Member States followed the line of business and were also in favour of removing the cap altogether, but the European Parliament firmly insisted on a concrete ceiling (Langrock / Sterk 2004: 9f).

Negotiations between the Commission, Parliament and Council finally agreed a double ceiling:

- First ceiling: EU member states were required to stipulate their total nationally planned use of CDM/JI in their National Allocation Plans (NAPs). The Linking Directive also demands that this limit should be in line with the supplementarity principle.
- Second ceiling: As a subtotal of this first ceiling, operators covered by the EU ETS may use CERs and ERUs only up to a certain percentage of the amount of EU Allowances they have been allocated. This percentage was not harmonised but determined individually by each Member State.

Implementation by the Member States has led to a wide divergence in the allowed use of CDM and JI, ranging from 0% in the case of Estonia up to 22% in the case of Germany, as illustrated in the table below Table 1: CDM/JI Limits in 2008-2012 (adapted from Commission of the European Communities 2007).. The total amount of allowed CERs and ERUs EU-wide is about 1,400 Megatonnes (Mt) CO₂-eq. for the five years 2008-2012, a yearly average of about 280 Mt CO₂-eq.

Member State	JI/CDM limit 2008-2012 in % ^[1]	JI/CDM limit 2008-2012 in Mt CO ₂ -eq.
Austria	10	3.105
Belgium	8.4	5.334
Bulgaria	12.55	5.30865
Cyprus	10	0,548
Czech Rep.	10	8.68
Denmark	17.01	4.16745
Estonia	0	0
Finland	10	3.8
France	13.5	18.62
Germany	20 ^[2]	90
Greece	9	6.22
Hungary	10	2.83
Ireland	10	2.23
Italy	14.99	29.35
Latvia	10	0.34
Lithuania	20	1.76
Luxembourg	10	0.25
Malta	Tbd	Tbd
Netherlands	10	8.98
Poland	10	21.48
Portugal	10	3.56
Romania	10	7.59
Slovakia	7	2.41
Slovenia	15.76	1.31
Spain	ca. 20	30.86
Sweden	10	2.48
UK	8	20.46
Total		281.6637

Table 1: CDM/JI Limits in 2008-2012 (adapted from Commission of the European Communities 2007).

[1] The JI/CDM limit is expressed as a percentage of the member state's cap and indicates the maximum extent to which companies may surrender JI or CDM credits instead of EU ETS allowances to cover their emissions.

[2] The German national allocation law contains a figure of 22 %, which relates to the allowances allocated free of charge, rather than the total cap.

By contrast, the cap in the EU ETS represents a reduction of only approximately 130 Mt CO₂-eq. relative to 2005 emissions (Commission of the European Communities 2008a: 10). That is, in the extreme case the allowed use of CDM/JI would allow emissions in the EU ETS to increase by 150 Mt CO₂-eq. compared to 2005, rather than be reduced. This is rather not in line with the EU's original position on complementarity that at a maximum half of the required reduction should be covered through the flexible mechanisms. In the case of Germany the cap for 2008-2012 is 21 Mt CO₂-eq. below 2005 levels while CDM/JI may be used up

to 90 Mt CO₂-eq. per year. That is, the current German CDM/JI entitlement is four times the required reduction.

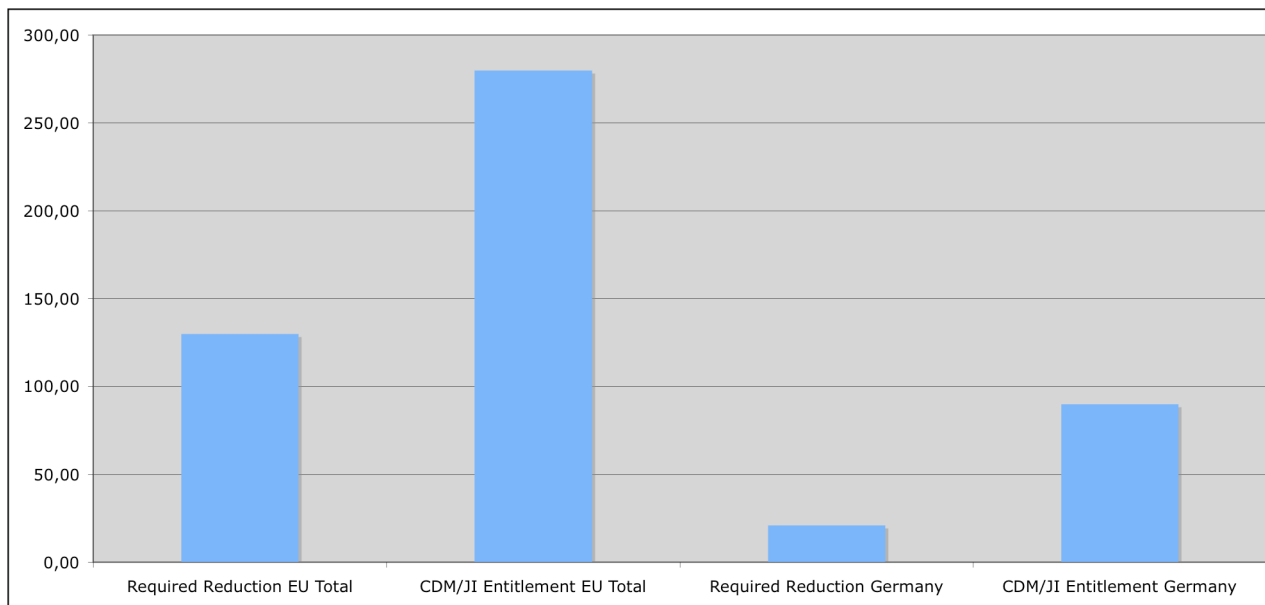


Figure 2: EU ETS Required Reduction and CDM/JI Entitlements in 2008-2012

3.2 Eligibility of Project Types and Quality Criteria

A further controversial issue was the inclusion of credits from land use, land-use change and forestry (LULUCF, so-called “sink” projects) and hydropower projects and whether the EU should impose additional quality criteria on projects, that is criteria in addition to those agreed at the United Nations (UN).

The EU had historically been sceptical towards sink projects. Apart from methodological problems in quantifying sinks the EU was afraid that governments would rely heavily on the use of sinks instead of reducing emissions. The EU also noted that sinks offer at best a temporary reprieve since the carbon stored in plants is re-released into the atmosphere when the plants die (EU 2000: 4-8). A further issue is that, to account for the non-permanence of the storage, sink projects in the CDM receive only temporary credits, which expire at the end of the project duration or when the carbon storage is reversed (e.g. by a forest fire) and then need to be replaced with other trading units. Sink CERs are therefore not fully comparable to other CERs or EUAs. The inclusion of sinks would therefore have required provisions to take account of this difference.

The European Commission had therefore proposed to exclude sinks, which was supported by non-governmental organisations (NGOs) (CAN Europe, Greenpeace and WWF 2003). By contrast, many EU Member States had in the meantime come to support sinks and business interests rejected any restriction of the flexibility in the EU ETS (Europaia and OGP 2003). The final Linking Directive excluded sinks for the time being but mandated the Commission to consider their inclusion in the future.

Hydropower projects attracted controversy because of their potential negative ecological and socio-economic impacts, such as displacement of the local population. NGOs therefore demanded that projects should follow the guidelines developed by the World Commission on Dams (WCD) (CAN Europe, Greenpace and WWF 2003). Opinions among the Member States were divided while the European Parliament was also in favour of a WCD requirement. As the final result, the Linking Directive requires that hydropower projects with a generating capacity of more than 20 MW need to “respect” international criteria and guidelines, including those by the WCD.

Some NGOs had also voiced the idea that only projects complying with the “CDM Gold Standard” should be eligible in the EU ETS. The Gold Standard was developed by a panel of international experts on the initiative of the World Wide Fund for Nature (WWF) and comprises a set of quality criteria that go beyond those agreed at the UN. The idea to require Gold Standard compliance in the EU ETS did not have much traction, however.

4 The Commission Proposal of 23 January 2008

The following section outlines the key parts of the Commission’s proposal on the future use of CDM/JI inside the EU ETS as well as the reasons given by the Commission for its proposals.

The EU has adopted a two-part commitment regarding its future emission reductions after the expiry of the Kyoto Protocol’s first commitment period in 2012:

- First, the EU has unilaterally committed itself to a reduction of its GHG emissions of at least 20% by 2020 compared to 1990 levels irrespective of whether there is a new international agreement on climate change for the period after 2012.
- Second, in the event that there is an international post-2012 agreement that includes commitments by other developed countries to comparable emission reductions and contributions of economically more advanced developing countries according to their capabilities and responsibilities, the EU is willing to commit to a 30% reduction compared to 1990.

The Commission has proposed a differentiated treatment of CDM/JI according to which of these two scenarios actually comes to pass.

4.1 The 20% Case

Concerning the **extent of the use** of CERs and ERUs in the absence of a future international agreement on climate change, the proposed Article 11a limits the allowed level of CER/ERU use to leftover amounts from the period 2008 to 2012.

The future limit on the use of CDM/JI would thus depend on the extent to which companies make use of the carry-over possibility. This extent is basically impossible to predict. As an illustration of the possible impact, two extreme cases are considered:

At the one end of the possible spectrum, companies might carry over their whole entitlement from 2008-2012, i.e. 1,400 Mt CO₂-eq., to the 2013-2020 period. If spread equally across the eight years of the period, this would amount to 175 Mt CO₂-eq. per year. Such an approach might be attractive if companies expect that EUA prices will rise significantly in the future. The Commission has calculated that in this case 45% of the ETS reduction required in the 20% case between 2008 and 2012 could be covered by CDM/JI (Commission of the European Communities 2008c).

Table 3: ETS Reduction Effort and CDM/JI Entitlement in the 20% Case (Commission of the European Communities 2008c)

Year	Real emissions at the start of the period (= 2005 emissions)	Annual cap	Annual reduction effort
2008	2176.85	2083	93.85
2009	2176.85	2083	93.85
2010	2176.85	2083	93.85
2011	2176.85	2083	93.85
2012	2176.85	2083	93.85
2013	2176.85	1974	202.85
2014	2176.85	1937	239.85
2015	2176.85	1901	275.85
2016	2176.85	1865	311.85
2017	2176.85	1829	347.85
2018	2176.85	1792	384.85
2019	2176.85	1756	420.85
2020	2176.85	1720	456.85
Total reduction effort			3110.05
JI/CDM access (abs.)			1400
JI/CDM access (in % of total reduction effort)			45.0%

At the other end of the spectrum, the whole entitlement for the period 2008-2012 may already be used up in that period. Since CERs and ERUs are cheaper than EUAs, companies have an incentive to fill their accounts with CERs/ERUs and thereby “free up” EUAs, which they can then sell to other companies at a profit. In particular German companies have significant arbitrage opportunities due to the very generous CDM/JI entitlement of 90 Mt CO₂-eq. per year.

That is, in the 20% case the potential access to CDM/JI might range from zero to almost half of the reduction required compared to 2005 emissions. In practice, the amount of carryover would probably lie somewhere in between.

As for the **allowed types of credits**, Article 11a establishes the following:

- First, credits from CDM and JI projects that have been established before 2013 could be used, provided that the credits come from project types which were accepted by all Member States in the Community scheme during the period 2008 to 2012. This would include CERs/ERUs issued for reductions that are achieved from 2013 onwards by such projects.
- Second, CERs from new projects started from 2013 onwards in Least Developed Countries (LDCs) could be used. However, this exchange would be possible only until the host countries have ratified an agreement with the Community or until 2020, whichever is earlier.
- Third, if the conclusion of an international agreement on climate change is delayed, it would be possible to conclude agreements with third countries and then allow the use of credits from projects or other emission reducing activities from these countries. Such agreements could provide for project activities from renewable energy or energy efficiency technologies which promote technological transfer and sustainable development.

The reasons for the Commission's proposed amendments are laid down in its explanatory memorandum (Commission of the European Communities 2008a: 2-11), the recital of the proposed directive, as well as in the Commission's impact assessment (Commission of the European Communities 2008b).

On limiting CER/ERU use to the remainder of the amount of CERs/ERUs allowed in the second trading period, the Commission states that in case no international agreement on climate change can be concluded, allowing further use of credits would decrease the pressure to make real domestic changes in the EU. On the one hand, this would make it more difficult for the EU to achieve its aim of increased renewable energy use and emission reductions. Also, delaying domestic reductions would raise future domestic abatement costs. On the other hand, domestic emission reductions are recognised to be important for the credibility of the EU in the negotiations of an international agreement (Commission of the European Communities 2008a: 10, 17; Commission of the European Communities 2008b: 137f., 141). In addition, the Commission states that the flexibility needed for the development of an international agreement also had to be considered. Extensive use of offset credits could hinder large-emitting developing countries from making commitments under an international agreement because they could benefit from offset projects without taking own measures to reduce GHG emissions (Commission of the European Communities 2008b: 137f.). That is, the CDM is to be used as a carrot for the participation of developing countries in a post-2012 agreement. The Commission proposes to keep demand for CDM credits low as long as there is no international agreement, and increase the demand if an international agreement is reached.

Furthermore, the Commission states that since the current allowed use of CDM/JI is much higher than the required reduction (280 vs. 130 Mt CO₂-eq.), only few domestic reductions would take place if all credits allowed were in fact used in the current phase. This would obstruct the achievement of the EU's overall emission targets for 2020. The Commission therefore wants to create an alternative possibility, namely the carryover of the allowed amount into the period 2013-2020 (Commission of the European Communities 2008a: 10). In addition, by giving a signal that credits will also have value after 2012 even if there is no new

international agreement, the Commission hopes to stimulate project development and a higher supply of credits (Commission of the European Communities 2008b: 154).

Regarding the special provision for LDCs, the Commission opines that the needs of these countries should be given particular priority since they are the most vulnerable to but least responsible for climate change. The Commission therefore wants to trigger additional investments in LDCs by granting a privileged access to their CERs (Commission of the European Communities 2008a: 18).

The provision on possible agreements with third countries in case an international agreement is delayed aims to provide continuity to JI projects. Since ERUs are generated by converting the host countries' Assigned Amount Units (AAUs), ERUs can only continue to be generated after 2012 if a new international climate change agreement is put in place. The Commission therefore aims to create the possibility for projects that generated ERUs until 2012 to continue to be recognised inside the EU ETS even in case a new international agreement is delayed (Commission of the European Communities 2008a: 18). The Commission proposal restricts these projects to renewable energy and energy efficiency technologies promoting technological transfer and sustainable development in order to serve the EU's environmental goals and to guarantee high quality projects stimulating both development in the host countries and innovation in European countries (Commission of the European Communities 2008a: 10f.).

The provision to apply the carryover to project types which were accepted by all Member States during the second trading period would exclude land use, land-use change and forestry (LULUCF) projects. As justification, the Commission states that emissions from agriculture and forestry cannot be monitored, reported and verified with the necessary degree of accuracy. It emphasises that the accuracy of monitoring, reporting and verification is the basis for the functioning, credibility and integrity of the EU ETS, constituting a good reputation and acceptance inside and outside the EU ETS (Commission of the European Communities 2008a: 4, 6).

4.2 The 30% case

Other provisions are proposed for the event that a "satisfactory" international agreement is concluded. In this case, the Commission proposes to increase the access to external credits equally to the rise in the overall emission reduction target (e.g. from 20% to 30%) (Commission of the European Communities 2008a: 10, 17). The further use of CERs, ERUs or other credits is suggested to be allowed up to half of the additional emission reduction taking place compared to the 20% case (Article 28, Paragraph 3). In addition, the Commission proposes to only accept CERs from third countries which have ratified the agreement (Article 11a, Paragraph 7). Furthermore, the Commission would be allowed to adopt measures permitting operators to use project types other than the ones referred to in Article 11a as discussed above or to use other mechanisms created under the international agreement (Article 28, Paragraph 4).

According to Höhne and Ellermann (2008: 11), allowing half of the additional effort compared to the 20% case to be covered by CDM and JI would amount to an annual entitlement of 122 Mt CO₂-eq, which would be added to the carryover from the period 2008-2012. That is, the entitlement could range between zero plus 122 Mt CO₂-eq. and 175 plus 122 Mt CO₂-eq. The following table illustrates the amounts available for the 20% and 30% cases according to the Commission proposal.

Table 4: Minimum and Maximum Available CDM/JI Entitlements According to the Commission Proposal (Mt CO₂-eq./a)

	20%		30%	
	Minimum	Maximum	Minimum	Maximum
COM EU total entitlement	0	175	0+122=122	175+122=297
Current Entitlement		280		

The Commission gives various reasons for its proposals. Concerning the extended level of credits allowed in the event of an international agreement, it argues an increase in the use of offset credits would be needed to avoid “excessively high compliance costs” (Commission of the European Communities 2008b: 139). In the event of an international agreement, the Commission proposes to restrict acceptance to CERs from countries who have accepted that agreement in order to prevent “free-riding” (Commission of the European Communities 2008a: 18). This should encourage developing countries and transition economies to support an international agreement, while leading to losses among investors from countries not supporting the international agreement (Commission of the European Communities 2008b: 156, 158).

4.3 The Introduction of Domestic Offset Projects

In addition to the use of CDM and JI, the Commission proposes to create a new mechanism for projects taking place inside the EU (Article 24a). These projects would receive allowances for reducing GHG emissions in non-ETS sectors. Such a mechanism is commonly referred to as Domestic Offset Projects (DOPs). However, DOPs would only be allowed if an inclusion of the respective sector in the EU ETS was not possible. In addition, DOPs must not result in double-counting of emission reductions, nor impede other policy measures designed to reduce emissions not covered by the EU ETS. “Double counting” refers to the problem that, without regulation, for example a project reducing electricity consumption in households could result in a) the issuance of credits to the project and b) reduced emissions in the EU ETS and hence the freeing up of EU allowances. That is, the reduction would be counted twice.

The Commission justifies the introduction of DOPs by stating that this would widen the scope of the EU ETS and amplify its price signal to other sectors. Furthermore, flexibility, certainty and liquidity in the carbon market would increase, reducing price volatility and adding to cost efficiency. The document recognises, however, that the use of DOPs carries environmental risks, would raise administrative costs and lower the transparency and simplicity of the EU ETS. Moreover, JI projects are noticed to be a strong competition for DOPs (Commission of the European Communities 2008b: 150-152).

5 Amendments Suggested by the Environment Committee

The European Parliament's Committee on the Environment, Public Health and Food Safety (ENVI), which has the lead for the Parliament in the negotiations with the Commission and the Council, consolidated its position on 7 October. It agreed on proposing various amendments to the Commission's proposal.

As for the **extent of the use** of CERs and ERUs, ENVI went in principle with the Commission proposal but added for the 20% case that operators whose use of CDM/JI in 2008-2012 was lower than 6.5% of their 2005 emissions and who did not carry over entitlements would be allowed to use CDM/JI up to 4% of their 2005 emissions. This is supposed to represent 40% of their required reductions (ENVI 2008a: 24).

For the EU as a whole, 4% of 2005 verified emissions amount to an entitlement of about 85 Mt CO₂-eq. per year. In the 30% case, again half of the additional effort, that is 122 Mt CO₂-eq., would be added.

Table 5: Minimum and Maximum Available CDM/JI Entitlements According to the Commission and ENVI Proposals (Mt CO₂-eq./a)

	20%		30%	
	Minimum	Maximum	Minimum	Maximum
COM EU total entitlement	0	175	0+122=122	175+122=297
ENVI EU total entitlement	85		85+122=207	
Current Entitlement	280			

Evidently, both the Commission and the ENVI proposal would offer only a limited access to CDM/JI compared to the current period's 280 Mt CO₂-eq. per year. But as pointed out in section 3.1, the current entitlement is significantly above the required reduction. The current entitlement is therefore arguably not an appropriate yardstick to evaluate the proposed future entitlements against.

As for the **allowed types of credits**, ENVI has voted in favour of a limited access to sink credits, though only in case there is an international agreement on climate change. According to its proposal, operators would then be allowed to use sink credits for up to 5% of their required reduction, as a sub-total of the total allowed use of CDM/JI (ENVI 2008a: 29f).

To improve the quality of CDM/JI, a preliminary report by ENVI rapporteur Avril Doyle had emphasised the importance of a "Gold Standard" (ENVI 2008b: 10, 26-28). In the final version of 7 October, "Gold Standard" is substituted by "high quality", and high quality defined as CERs and ERUs that "represent real, veri-

fiable, additional and permanent emission reductions from projects with clear sustainable development benefits and no significant negative environmental or social impacts”. In addition, credits should be acceptable for all emission trading systems, in particular a federal US ETS (ENVI 2008a: 24f).

6 Positions of Interest Groups

There are various issues in the Commission proposal that are being hotly debated. These are in particular the quantitative limits on the use of offsets, the eligibility of project types, quality criteria for projects and the introduction of DOPs. In this debate there is a sharp division between business interests on the one hand and environmental organisations on the other, with national and EU government bodies generally in between and trade unions supporting some of the environmental organisations’ demands. While business interests support broader access to credits from offset projects of any kind, environmental organisations wish further restrictions in their use and call for the application of quality criteria. The following section gives a brief account of the controversial issues and the arguments put forward by all sides.

6.1 Quantitative Limits on the Use of Offset Projects

The business organisations claim that the use of CERs and ERUs should not be “unduly restricted” (EUROCHAMBRES 2008: 8) and call for increased access to credits from the CDM and JI. Some business organisations reject any kind of limit to the use of CDM/JI at all. One reason is the methodology determining the allowed CDM and JI use in the period 2008-2012, which has led to a differentiation between member states and companies. With the Commission proposal, this differentiation would be carried forward to the next phase (EURELECTRIC 2008: 6). Other reasons given are alleged negative effects on the EU ETS in general and the fact that GHG emission reductions have the same climate effect no matter where achieved (VCI 2008: 7).

Other business organisations accept a limit to the use of CDM/JI credits in general, acknowledging the principle of “common but differentiated responsibility” (e.g. BUSINESSEUROPE 2008: 5) or respecting the concept of complementarity (Europa 2008: 3). However, they argue that the ones proposed were too severe. Business organisations state that increasing the use of CERs and ERUs would improve the cost efficiency and flexibility of the ETS while promoting technology and monetary transfer to facilitate GHG reductions (e.g. AmCham EU 2008: 3; BUSINESSEUROPE 2008: 5; EUROCHAMBRES 2008: 10f; Europa 2008: 3). Furthermore, they argue that the lower prices resulting from CDM/JI use would reduce the carbon migration risk (BUSINESSEUROPE 2008: 5). Finally, they state that increased CDM/JI use would have a positive impact on the establishment of an international agreement (e.g. AmCham EU 2008: 3; BUSINESSEUROPE 2008: 5).

In opposition to this, environmental organisations argue that the current proposal allows for the heavy use of external credits already, which would weaken the EU’s GHG emissions reduction target and endanger the EU’s target to stay below the 2°C tipping point (CAN Europe, FOEE, Greenpeace, WWF and Oxfam International 2008c; Germanwatch 2008). This is because GHG reductions by the CDM are at best a zero-sum

game. Since CDM reductions are equalled by the permission to emit the same amount of CO₂-eq. in industrialised countries they do not actually result in overall emission reductions (e.g. WWF 2008c: 1). Furthermore, their additionality is questioned (see below) which means that the use of external credits would actually result in an increase in global GHG emissions.

Environmental organisations criticise that using credits from offset projects would delay domestic reductions as well as the remodelling of high-carbon to low-carbon societies (e.g. WWF 2008a: 3). They call for offset projects to be in addition to and not part of domestic emission reduction targets (e.g. CAN Europe, FOEE, Greenpeace, WWF and Oxfam International 2008c). In their opinion, the EU's emission reduction target should be set for at least -30% by 2020 compared to 1990 levels with the use of external credits on top. They claim only strong domestic action would ensure the EU's international credibility and influence international negotiations concerning a global post 2012 agreement positively (e.g. CAN Europe, FOEE, Greenpeace and WWF 2008: 2, 4).

Governments of different EU countries and some EU bodies seem to be in favour of broader access to credits from CDM/JI projects in comparison to the Commission's proposed amendments. Thus, Austria, Italy as well as the Committee on Industry, Research and Energy (ITRE) of the European Parliament suggested to erase the restriction of proposed Article 11a to only allow CERs/ERUs to the extent that their levels allowed for the period 2008 to 2012 have not been used up (Council of the European Union 2008: 20; ITRE 2008b: 18). The Czech Republic, the Netherlands and Sweden proposed that in addition to the amounts proposed by the Commission, installation operators could use an amount corresponding to the difference between 20% of the amount of allowances allocated for the period 2008 to 2012 and the levels of CER/ERU use allowed to them by their Member States in that period (Council of the European Union 2008: 20). That is, they propose to level out the current differences in allowed CDM/JI use.

ITRE has proposed to raise the cap for the use of credits from CDM/JI to 35% of the GHG emission reductions required in the period 2008 to 2020 (ITRE 2008b: 20); Germany's environment ministry and the UK even propose to set this cap at 50% for the period 2013 to 2020 (BMU / IGM 2008: 7; PointCarbon 2008). Concerned about energy intensive industries, Austria, the Czech Republic, Portugal and Sweden favour extra access to the use of CERs/ERUs for certain sectors or sub-sectors in the event of carbon leakage (Council of the European Union 2008: 18).

Moreover, the proposed cap set upon the approval of a future international agreement on climate change is also being questioned. The Netherlands suggested the use of CERs/ERUs to be differentiated by country in the case of a future international agreement (Council of the European Union 2008: 34).

6.2 Eligibility of Project Types

Other discussions are concerned with the exclusion of different sectors and project types from the EU ETS.

While some business organisations oppose regulation which excludes internationally accepted CDM/JI projects in general (BUSINESSEUROPE 2008: 5) others, accompanied by ITRE, directly propose to include forestry activities even in the absence of an international agreement (EUROCHAMBRES 2008: 11; ITRE 2008a: 32; ITRE 2008b: 20, 24f.). Governments from different EU countries also speak up for the inclusion of LULUCF projects. Thus, Belgium, Spain, Finland, France, Italy, Latvia, the Netherlands, Sweden, Poland,

Portugal, Denmark and Romania have opposed the Commission's proposal to only include project types which have been accepted by all Member States. Most of them instead propose language referring only to the decisions taken at UN level, which would include LULUCF projects (Council of the European Union 2008: 20, 29).

This is criticised by environmental organisations who recall that forest projects entail a high risk of an abrupt release of large amounts of GHG emissions in extreme weather (WWF 2008a: 6) as well as a significant liability risk within a company trading system because of questions concerning the permanence of biological sinks, which is the reason for which these projects had been excluded from the first and second phase of the EU ETS (e.g. CAN Europe, FOEE, Greenpeace, WWF and Oxfam International 2008a: 5). They therefore claim that credits from forestry projects should not be accepted (e.g. WWF 2008a: 6). Generally, environmental organisations ask for all external credits to come from projects at least meeting the "CDM Gold Standard" NGOs have developed. Under this standard only renewable energy and end-use energy efficiency projects are eligible (WWF 2008c: 6).

6.3 Quality Criteria for CDM/JI Projects

Another hotly debated issue centres on quality criteria for offset projects. Quoting recent reports by the Öko-Institut, International Rivers and Stanford University, the environmental organisations are highly concerned that many projects generating emission reduction credits under the CDM would have taken place anyway (i.e. in the absence of the carbon markets) and are therefore non-additional. This questions the environmental integrity of credits from CDM projects as these non-additional projects not only inflate emission caps in the EU ETS, leading to reduced pressure for emission reductions within the EU, but also result in an increase in global emissions as the credits used to offset emissions within the EU do not actually represent real emission reductions (e.g. WWF 2008c: 4).

Moreover, CDM projects – especially large hydro and industrial gas projects – are criticised by environmental organisations for the lack of sustainable development benefits they produce (CAN Europe, FOEE, Greenpeace and WWF 2008: 2; WWF 2008c: 5f.). Though there usually are criteria for sustainable development set at the national level in host countries, NGOs claim that these are often overlooked as there is strong competition in attracting CDM projects. Furthermore, environmental organisations complain that while for large hydro projects compliance with the guidelines of the World Commission on Dams is requested by the EU, implementation is poor. This leads to CDM projects having negative environmental and social impacts (disruption of river systems, flooding of fertile land and biodiversity hotspots, forcible resettlements) (e.g. WWF 2008c: 5f.). Projects destroying industrial gases on the other side are criticised for being end-of-pipe technologies without sustainable development benefits or a contribution to the remodelling of high carbon societies. For HFC-23, an industrial gas which brings more return from CDM credits than from sales of the product it is a by-product of, environmental organisations suggest that instead of generating large amounts of CERs, HFC-23 should rather be tackled by paying producers directly for the extra cost of installing the gas destruction technology (e.g. WWF 2008c: 5f.).

Environmental organisations therefore stress the introduction of strict environmental, social and additionality criteria to be at least equivalent to the "CDM Gold Standard" (e.g. WWF 2008a: 3). This would increase the assurance that projects are additional and feature a sustainable development benefit and thereby support the

EU's credibility in helping developing countries to tackle mitigation (e.g. CAN Europe, FOEE, Greenpeace, WWF and Oxfam International 2008c).

The European Trade Union Confederation (ETUC) also shows concerns about social and environmental quality criteria. It suggests systematic approval for CDM/JI projects to be set at the national level with evaluation criteria determined at EU level to ensure a level playing field across Europe. Criteria should include the OECD's guidelines for multinationals, the eight basic conventions of the International Labour Organisation (ILO), ILO Convention 155 on Occupational Health and Safety and ILO Convention 169 on Indigenous and Tribal Peoples, furthermore social sustainability (covering employment, equity and access to essential services) and the involvement of the trade union organisations in the project approval procedure (ETUC 2008: 4f.).

Business organisations seem to have hardly commented this part of the debate. Some, however, explicitly reject further restrictions on the use of CDM projects in general and claim the EU must not redefine the quality of projects approved under an international regime (BUSINESSEUROPE 2008: 5).

6.4 Introduction of Domestic Offset Projects

While business organisations welcome the Commission's proposal introducing the possibility to use credits from DOPs and suggest carbon sinks to be included (EUROCHAMBRES 2008: 11), environmental organisations strongly oppose the inclusion of DOPs in the EU ETS. They claim their use would inflate the cap and thus alleviate the pressure to reduce emissions inside the EU ETS (e.g. CAN Europe, FOEE, Greenpeace, WWF and Oxfam International 2008b: 5, 7). This way, the GHG emission reductions potential of the EU ETS as well as the EU's climate and energy policies in the non-EU ETS sectors would be diluted (WWF 2008a: 5). Furthermore, environmental organisations emphasise the risk of a double-counting of emission reductions DOPs entail (WWF 2008a: 5). Another problem NGOs point to is the lack of good compliance and enforcement rules for sectors outside the ETS which could make it impossible to guarantee that only real emission reductions are credited (CAN Europe, FOEE, Greenpeace, WWF and Oxfam International 2008a: 5; CAN Europe, FOEE, Greenpeace, WWF and Oxfam International 2008b: 5). On top of this, some environmental organisations argue that if sectors are able to generate DOPs, they may be suitable for inclusion in the EU ETS and should therefore be considered for full inclusion like other sectors (WWF 2008a: 5).

While some EU governments generally welcome DOPs but say they need further modifications concerning monitoring, reporting, verification and double counting (Finland, France, Hungary, Ireland, Portugal), others share the environmental organisations' doubts about the need for DOPs, their administrative costs and their risks of distorting the CO₂ price and double counting (Belgium, Denmark, United Kingdom, Italy) (Council of the European Union 2008: 29). To tackle the problem of inflating the cap by allowing DOPs, the United Kingdom has suggested that the use of credits from DOPs should be balanced by a cut in the use of CERs/ERUs (Council of the European Union 2008: 29). Furthermore, Belgium, Spain and the United Kingdom have asked for the possibility for a Member State to refuse to authorise DOPs on its own territory (Council of the European Union 2008: 30).

7 Discussion and Recommendations

7.1 Quantitative Limits on the Use of Offset Projects

The discussion on quantitative limits has several aspects. On the one hand business organisations demand an increase of the CDM/JI entitlements, citing the reduction of compliance costs and resulting increase of their competitiveness this would bring as well as technology and monetary transfer to the host countries. On the other hand, environmental organisations argue that the current proposal allows for the heavy use of external credits already, which would prevent the remodelling of the EU economy and endanger the EU's 2°C target. Governments are broadly in favour of increasing the CDM/JI entitlement.

As shown above, both the Commission and the ENVI proposals would offer only a limited access to CDM/JI compared to the current period's 280 Mt CO₂-eq. per year. But as also pointed out, the current entitlement is significantly above the required reduction. It is therefore arguably not an appropriate yardstick to evaluate the proposed future entitlements against.

Apart from the question of entitlements one also has to consider where CDM/JI credits are supposed to come from post-2012. For this, the use of CDM and JI needs to be seen in the context of the international post-2012 regime and the current state of climate science. The EU has stated as its overall aim that the average global temperature increase compared to pre-industrial levels should be contained at 2°C. The lowest stabilisation scenario assessed by the IPCC so far is a stabilisation of atmospheric GHG concentrations at 445-490 ppm CO₂-eq., which would lead to an average temperature increase of 2.0 to 2.4°C.

Table 6: Global Pathways Towards Stabilisation (Table 5.1 of IPCC 2007)

Category	CO ₂ concentration at stabilisation (2005 = 379 ppm) ^b	CO ₂ -equivalent concentration at stabilisation including GHGs and aerosols (2005=375 ppm) ^b	Peaking year for CO ₂ emissions ^{a,c}	Change in global CO ₂ emissions in 2050 (percent of 2000 emissions) ^{a,c}	Global average temperature increase above pre-industrial at equilibrium, using 'best estimate' climate sensitivity ^{d,e}
	ppm	ppm	year	percent	°C
I	350 – 400	445 – 490	2000 – 2015	-85 to -50	2.0 – 2.4
II	400 – 440	490 – 535	2000 – 2020	-60 to -30	2.4 – 2.8
III	440 – 485	535 – 590	2010 – 2030	-30 to +5	2.8 – 3.2
IV	485 – 570	590 – 710	2020 – 2060	+10 to +60	3.2 – 4.0
V	570 – 660	710 – 855	2050 – 2080	+25 to +85	4.0 – 4.9
VI	660 – 790	855 – 1130	2060 – 2090	+90 to +140	4.9 – 6.1

In addition, the IPCC has stated that stabilisation at 450 ppm requires on the one hand reductions by industrialised countries in the range of 25-40% compared to 1990 levels. On the other hand and in addition to this reduction in industrialised countries, a “substantial deviation” from business-as-usual in Southern countries is required (IPCC 2007: 776). The IPCC report did not quantify the “substantial deviation” necessary. A recent paper by den Elzen and Höhne (2008), the authors of the IPCC ranges table, quantifies this “substantial deviation” at 15% to 30% below baseline, which yields the following updated version of the IPCC ranges table.

Table 7: Necessary Change in Emissions by 2020 for Different Stabilisation Levels (Höhne and Ellermann 2008)

Scenario category	Global average temperature increase	Annex I	Non-Annex I
I: 450ppmCO ₂ eq	2.0 - 2.4°C	-25% to -40% below 1990	<ul style="list-style-type: none"> Substantial deviation from baseline in Latin America, Middle East, East Asia and Centrally-Planned Asia Non-Annex I total: -15% to -30% below baseline
III: 550ppmCO ₂ eq	2.8 - 3.2°C	-10% to -30% below 1990	<ul style="list-style-type: none"> Deviation from baseline in Latin America and Middle East, East Asia Non-Annex I total: 0% to -20% below baseline
IV: 650ppmCO ₂ eq	3.2 - 4.0°C	0% to -25% below 1990	<ul style="list-style-type: none"> Non-Annex I total: 10% above to 10% below baseline

Den Elzen and Höhne (2008) also clarify that in order to achieve the 2°C target, both ranges, for Annex I and for non-Annex I, need to be achieved. That is, credit transfers from non-Annex I to Annex I should only occur if the non-Annex I range is overachieved.

A recent project by Ecofys and the Wuppertal Institute analysed the reduction potential in six major emerging economies, Brazil, China, India, Mexico, South Africa and South Korea. Four different emissions scenarios were calculated:

- The business as usual (BAU) scenario: Development according to current trends without any additional climate change measures
- The 'no regrets' scenario: Mitigation options that involve no direct costs or with favourable cost-benefit ratios, e.g. energy efficiency measures.
- The co-benefit scenario: Low-cost mitigation options that offer additional benefits such as improved air quality.
- The ambitious scenario: Technically practicable mitigation options up to a price of around USD 100/t CO₂. As no detailed economic analysis was conducted, the costs could be below this amount depending on the assumptions worked on.

The study found that all six countries possess massive mitigation potential: In the business as usual scenario, the combined emissions of all six countries in 2020 amount to 18.4 Gt CO₂-eq. This compares with 16.8 Gt in the ‘no regrets’ scenario, 15.6 Gt in the ‘co-benefit scenario’, and as little as 12.6 Gt in the ambitious scenario – more than 30 percent lower than BAU emissions.

Furthermore, the study estimated the emission reductions that would be needed to keep the global average temperature rise below 2° Celsius, as aimed for by the EU. The estimate initially assumed that the industrialised nations will reduce their domestic emissions by 30 percent by 2020 compared with 1990 levels, i.e. without purchasing emission reduction units from non-Annex I countries. In this case, to stop an overall rise in global emissions during the coming decade, as called for by the IPCC, nearly all the ‘ambitious’ potential would have to be mobilised in the emerging economies. In all other scenarios, global emissions would continue to rise (Höhne et al. 2008: 128-130). These figures match with the IPCC figures of 25-40% below 1990 levels for Annex I and 15-30% below baseline for non-Annex I countries as outlined above.

What this illustrates is that there is sufficient emission reduction potential to halt the global rise in GHG emissions. But it also illustrates that if the 2°C target is taken seriously, there is hardly any “surplus” emission reduction potential in non-Annex that could be traded to Annex I via the CDM or similar mechanisms.

Based on the above the following conclusions can be drawn:

- The 20% and 30% targets committed to by the EU are only compatible with the 2°C target if the other Annex I countries commit to quantitatively comparable reductions and in addition very ambitious emission reductions take place in non-Annex I.
- Emission reductions achieved through the CDM in non-Annex I contribute to the 25-40% reduction in Annex I, not to the “substantial deviation” required in non-Annex I.
- That is, ecologically speaking, CDM offsets should only come from non-Annex I reductions that are surplus to the necessary “substantial deviation” in non-Annex I.
- Given current emissions trends, a 15-30% deviation from baseline in non-Annex I is highly ambitious. It is therefore not at all clear where and how “surplus reductions”, which could then be used via the CDM to offset Annex I emissions, are supposed to be generated.
- The EU debate should therefore be put into the overall post-2012 context and the EU should give consideration to how both a 25-40% reduction in Annex I and a 15-30% deviation from baseline in non-Annex I can be achieved.

7.2 Eligibility of Project Types

The discussion about eligible project activities largely focuses on the inclusion of LULUCF projects. There has for a long time been a fierce controversy about sink projects (for an overview of the debate see Langrock, Sterk and Wiehler 2003). Their supporters argue that deforestation is a major source of emissions and that sink projects can also bring about many other ecological and socio-economic benefits. But while their opponents would agree that there is a case for good forestry projects, they do not at all agree that they should be used to offset emissions. First, it is feared that this could draw attention away from the cause of climate change, that is, fossil-based energy systems and infrastructures. Second, the sequestration of carbon is not equivalent to the avoidance or reduction of emissions since a tonne of emissions avoided will never enter the

atmosphere whereas carbon stored in biomass might at any time be re-released into the atmosphere. Sinks therefore offer only a temporary respite whereas what's needed is lasting emission reductions. There are also technical problems with quantifying the sequestration of carbon.

From the authors' point of view the coupling of fossil fuel and industrial emissions and forestry in the Kyoto Protocol and afterwards is indeed rather unfortunate. In the future, they should be decoupled by dealing with them in distinct instruments, as has for example been proposed by the German Advisory Council on Global Change (WBGU 2003b).

The necessity to keep forestry and fossil fuel/industrial sources apart is becoming even more acute in the context of the ongoing discussions about Reducing Emissions from Deforestation and Forest Degradation (REDD). Deforestation emissions account for about 20% of global CO₂ emissions. Discussions revolve around the aim to halve deforestation emissions by 2020. Achieving this reduction through the CDM or other carbon market instruments would imply a massive additional supply in the market, which could seriously destabilise the demand-supply ratio.

ENVI's proposal to allow only a 5% use of forestry credits would provide only a limited safeguard against such a market disturbance. If carbon prices in other markets are driven down by a massive forestry supply, actors in these markets will have an incentive to leverage the price differential to the EU ETS by using forestry credits for their own compliance and selling other credits into the EU ETS until prices are equalised.

Moreover, here as well it bears pointing out that reducing emissions from deforestation is part of the "substantial deviation from baseline" in non-Annex I that is required on top of a 25-40% reduction in Annex I, as outlined in section **Fehler! Verweisquelle konnte nicht gefunden werden.**

Finally, the issue of non-permanence is also very valid. Carbon stored in plants may at any time be released into the atmosphere while fossil fuel and industrial emission reductions are permanent. Achieving equivalency therefore requires complex mechanisms such as the temporary credits created under the CDM or insurance mechanism, which create significant transaction costs.

It therefore seems recommendable to continue the exclusion of forestry credits from the EU ETS.

7.3 Quality Criteria for CDM/JI Projects

The debate about quality criteria basically pits concerns that the integrity of the EU ETS might be undermined by bad projects against demands for maximum flexibility and concerns that the EU would be acting in bad faith if it tried to "redefine" rules that have already been agreed at the UN level.

Nevertheless, concerns about the integrity of especially the CDM are very valid. There have been strong doubts about the additionality of many projects that have already been registered. Moreover, the problem is a fundamental one since additionality testing is based on assumptions about what would have happened in the future under "normal" conditions, which is by definition hypothetical. Given the significant size the mechanism has in the meantime reached, the CDM thus threatens to undermine the ecological effectiveness of the Kyoto Protocol as a whole. As to sustainability, the assessment of a project's contribution lies solely with the host countries and the national procedures do not necessarily provide space for local stakeholders to be meaningfully involved. Also, the CDM gives a monetary value only to a project's emission reduction but not

to other environmental or social benefits it may deliver (see e.g. Michaelowa and Purohit 2007, Olsen 2007, Schneider 2007, Sterk 2008, Wara 2008).

The CDM Executive Board has over the years significantly strengthened the regulatory basis for additionality testing as well as its own capacity to assess projects. In 2006, it established a Registration and Issuance Team, which assesses the documentation of each request for registration. Moreover, in 2007 the UNFCCC secretariat started to assess each project in addition to the RIT. The Executive Board is currently working on a Validation and Verification Manual (VVM) to further improve its guidance on how validators should assess projects. The quality of the CDM is also one of the issues at the centre of the post-2012 negotiations.

In addition to this public quality steering, there are various non-governmental initiatives that seek to develop quality standards for CDM/JI projects. Arguably the most important of these initiatives is the establishment by environmental organisations of the CDM Gold Standard. The Wuppertal Institute has analysed the genesis of this set of criteria and indicators and tried to judge its quality. The analysis concludes that the Gold Standard is a good and viable set of criteria and indicators, which has been derived from a multitude of sources and benefited from the work of many distinguished researchers and significant parts of which have already been tested in practice. The Gold Standard actually takes up many of the positions put forward (unsuccessfully) by the EU in the negotiations of the Marrakesh Accords, for example regarding transparent stakeholder consultations or environmental impact assessments (Langrock and Sterk 2003).

The EU should actively discuss which standards external credits should meet in order to safeguard the environmental integrity of the EU ETS, taking into account non-governmental initiatives such as the CDM Gold Standard and others. At the first instance the resulting EU position should be fed into the ongoing negotiation processes at the UN level. Ideally, these will lead to a revision of the global CDM framework that will sufficiently address the concerns that have been raised and the EU's requirements. In this case it would arguably not be necessary to impose additional requirements at EU level.

The experience from the negotiation of the Marrakesh Accords suggests, however, that the EU will have to make concessions on its demands for project quality. Depending on the outcome of the UN negotiations, the possibility to define additional requirements at the EU level should therefore not be ruled out *ex ante*.

7.4 Introduction of Domestic Offset Projects

Several aspects appear relevant regarding the inclusion of DOPs in the EU ETS. Fears about a potential double counting of emission reductions, first in DOPs and then in the EU ETS, may be overstated. The same problem already exists with regard to JI projects inside the EU and has been regulated in the Linking Directive.

The rationale given by the European Commission is that the inclusion of DOPs would widen the scope of the EU ETS and amplify its price signal to other sectors. That is, the Commission hopes that the inclusion of DOPs could mobilise additional activities. Another reason proponents of DOPs is an alleged discrimination of domestic project developers in JI: While foreign investors can implement JI projects in, for example Germany, German project developers cannot. To circumvent this problem they need to include a foreign project participant, even if this is only *pro forma*. The introduction of DOPs would solve this problem.

However, the same effect could in principle be achieved by allowing unilateral JI. And as the Commission notes, the international and national approval processes for JI are already in place, while creating a new Community mechanism would require substantial administrative costs to develop and implement the legislation and approval structures (Commission of the European Communities 2008b: 151f).

Moreover, it is not clear what emission reduction potential DOPs could actually mobilise, in particular in the already highly regulated EU-15 countries. The high amount of already existing regulations also means that assessing whether a project is actually additional is highly complex. In Germany, proposals for domestic JI projects have so far taken up inordinate amounts of the capacity of the German Emissions Trading Authority, with only few approved projects being the result.

It is therefore not clear that the introduction of DOPs would actually yield any palpable benefits.

The introduction of DOPs should arguably also be evaluated against the background of the emerging global carbon market. Most industrialised countries outside the EU, in particular Australia, Canada, the EU, Japan, New Zealand, Norway, Switzerland, and the USA, are considering or already actively pursuing the introduction of domestic company-level emission trading systems. In this context, most of these countries are also discussing the introduction of DOP schemes, each of which would have its own national standards.

This development appears problematic against the background of the EU's ambition to link the EU ETS to these other emission trading systems. Linking the EU ETS to another ETS which has a DOP system with its own rules would open the possibility for an inflow of trading units that result from projects which would not be allowed to take place in the EU. Such an inflow would happen irrespective of whether the EU formally recognised the foreign DOPs or not. If the EU did not recognise them, companies in the other scheme could simply use them for domestic compliance purposes, thus free up 'regular' domestic allowances and sell them to the EU ETS. That is, a EU decision to, for example, link to a US emission trading system but not recognise US DOPs could easily be circumvented (Sterk and Schüle 2008).

To prevent a further fragmentation of the emissions trading market and achieve a uniform international standard, it might therefore be preferable to amend the Kyoto rules to allow for unilateral JI projects instead of establishing diverging homegrown DOP systems in almost all Annex I countries.

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