

Establishment of market-based mechanisms – submission by OECD/IEA, February 2011

Draft decision -/CP.16 on the outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action invites admitted observer organizations to make submissions to the UNFCCC secretariat, by 21 February 2011, on their views on the establishment of market-based mechanisms to enhance the cost-effectiveness of, and to promote, mitigation actions (paragraphs 80-82). The Organisation for Economic Co-operation and Development (OECD) and the International Energy Agency (IEA) jointly welcome the opportunity to submit views on this important issue.¹

All projections of global greenhouse gas (GHG) emissions demonstrate the need to engage both developed and developing countries in emissions reductions in order to stabilise the climate. The international carbon market is one of several instruments that could support mitigation. New carbon market mechanisms could contribute to the needed efforts in a cost-effective manner, including in developing countries.

Options for new market mechanisms

New broad-based market mechanisms could take a number of different forms which would require different market structures and pose varying challenges. The different options typically fall within the two main categories of crediting and trading, based on either an absolute or intensity-based emissions metric. Table 1 outlines the main characteristics of the different options, which could apply to a policy or programme targeting particular entities or subsectors (which could be a nationally appropriate mitigation action or NAMA) or be established across an entire emitting sector.

Table 1: Definitions and features of scaled-up market mechanisms

| | Crediting | Trading | Monitoring variables |
|-------------------------------|---|--|--|
| Intensity-based target | <i>Ex-post</i> issuance of credits based on GHG performance per unit of output (tonnes of product, megawatt-hour or other indicator of GHG intensity) | Intensity-based trading is difficult as the <i>ex-ante</i> allocation requires a forecast of output levels and <i>ex-post</i> adjustments of total allocation once actual output is observed | Emissions plus output level or other indicator |
| Absolute target | <i>Ex-post</i> issuance of credits based on an absolute quantity of GHG emissions | <i>Ex-ante</i> allocation of allowances to the sector/country | Emissions |
| Binding nature of target | Could be a no-lose/non-binding target | Binding target needed (if <i>ex-ante</i> allowance allocation is pursued) | -- |

¹ This submission has been compiled using published reports of the Climate Change Experts Group (CCXG), formerly known as the Annex I Experts Group (AIXG), for which OECD and IEA provide a joint Secretariat. These papers are available for download at www.oecd.org/env/cc/scalingup

Stimulating mitigation across broad segments of the economy and enhancing cost-effectiveness and technology transfer

New market mechanisms focusing on broad segments or sectors of the economy could provide developing country governments with several significant incentives to increase GHG mitigation actions compared to CDM²:

- Such mechanisms could generate a larger volume of credits and reduce transaction costs, thus increasing carbon market revenues compared to today's CDM;
- It would give the host country government significant flexibility as to what policies to adopt to limit emissions below the agreed baseline, whereas the CDM has some restrictions as to what mitigation actions are eligible³. As a result targeting emission reductions across broad sectors of the economy would become easier;
- Broader-based market mechanisms can help build a stronger case for technology transfer and access, when associated environmental goals imply significant technological change;
- Countries may also receive direct support to build and implement lasting and sustainable domestic policy frameworks to participate in any new scaled-up market mechanism. This would be in addition to revenue from the sale of credits to developed country Parties to assist them in meeting their mitigation targets.

Ensuring a net decrease and/or avoidance of global greenhouse gas emissions

The existing project-based mechanisms act to improve the cost-effectiveness of meeting Annex I countries' mitigation targets but they do not themselves contribute to a net decrease in global GHG emissions. For new market mechanisms to contribute to a net decrease as referred to in the draft decision at COP16, the baseline for crediting in non-Annex I countries would need to be set lower than the business-as-usual (BAU) emission trend in the sector covered by the mechanisms. This would represent a departure from CDM where credits can be generated for any demonstrable reduction beyond BAU. With a new and more ambitious baseline, emissions reductions between BAU and the baseline represent the host country's own contribution to global mitigation. The level of this contribution may need to be negotiated and is therefore more than a technical issue.

² CDM is essentially a project-based crediting mechanism based on absolute emissions although its scope has more recently been expanded to include tightly-defined programmes of activities.

³ For example, mitigation through the use carbon capture and storage (CCS) technology might be made eligible under new market mechanisms, provided that storage sites can demonstrate adherence to environmental safeguards.

In such a case, a process for setting and approving baselines would be needed. Parties could first agree on a rate of departure from a Business-as-Usual (BAU) scenario. Alternatively they could decide to discuss the ambition of the baseline together with a discussion on the sector's BAU trend at a country/sector level.

- An agreement on a systematic, quantified departure from BAU emissions (e.g. $-x\%$ from BAU) would require a process to agree on BAU trends and a separate negotiation on the rate of departure – the value of “x” – from BAU. Another option would be a requirement for low-emission development strategies (LEDS) to model forward projection of emissions, with possible international review. An international body, perhaps under the responsibility of the COP, would be needed to assess BAU trends or LEDS. Sector-specific bodies may be needed to assist this institution on technical aspects of sectors.
- An agreement to negotiate baselines on a case-by-case basis without any guidance from a “deviation” factor or LEDS would imply a more political negotiation, as it is directly about the environmental ambition of the host country. This discussion may take place as Parties conduct international review of LEDS. Sector-specific bodies would be needed in this case as well.

Regardless of the process selected for setting baselines, access to robust and reliable data on emissions and sector production will be a prerequisite. A clear definition of the mechanism boundary, including which individual entities are included, is also important.

Sectoral intensity baselines would probably have to differ from one country to the other

Some sectors share commonalities across regions: the reliance on similar technologies, global markets for products, exposure to an international price for raw materials or output, amongst others. In such cases, a single performance baseline across countries could simplify baseline setting for these sectors. However, in practice, many differences would probably make such an approach impractical: industrial structures (the age and distribution of capital stock), domestic access to raw materials and technologies and regulatory obligations are among factors that would affect the relative performance of countries in any given sector. Thus, a homogenous approach to establishing a baseline (*e.g.* via an agreed methodology), rather than a single common baseline level, could be developed to take such differences into account.

Both political and technical decisions are needed to establish scaled-up market mechanisms

The introduction and implementation of new broad-based market mechanisms in a post-2012 framework would require agreement on underlying principles as well as technical elements. Table 2 summarises some of the main elements that need international agreement.

Table 2: Main principles and requirements for establishing new broad-based market mechanisms

| Principles and requirements | Description and key questions |
|--|--|
| Restrictions on participation in different market mechanisms | Would access to one or the other mechanism (crediting/trading) be restricted on the basis of country categories or circumstances? Would CDM continue to operate in countries/sectors with access to new broad-based mechanism? |
| Requirements for participation | This could be a range of criteria including these categories: <ul style="list-style-type: none"> - <i>Environmental ambition</i> of the baseline (<i>e.g.</i> linked to a low-emission development strategy or a percentage departure from BAU); - <i>Coverage</i> (minimum share of GHG emissions in the country proposed for access to the market mechanism); - <i>Institutional capacity</i> for tracking of performance and units - <i>Similarity of efforts</i> (in the event of competitiveness concerns). |
| Technology and finance | Discussion on sectoral goals and baselines may be accompanied with a discussion on technology access, financing and capacity building needs. |
| Limits on the use of credits | Parties may decide to limit the use of compliance units from new market mechanisms, following the complementarity principle of the Kyoto Protocol mechanisms. |
| Evolution/sunset clause | There could be a time limit to the use, or type, of scaled-up mechanisms, <i>e.g.</i> by certain countries and/or sectors, with countries planning to move towards trading mechanisms over time. |
| Baseline setting | As discussed above, a range of technical elements to set targets <i>ex-ante</i> and assess performance <i>ex-post</i> will be needed, including: <ul style="list-style-type: none"> - A clearly defined <i>boundary</i> (which installations or entities to be covered and monitored); - <i>Minimum data requirements</i>; - <i>Process for baseline setting/approval</i> - <i>Frequency of baseline revisions</i> |

Other more technical features would need to be agreed to make the mechanisms operational, including:

- The length of the crediting period. A longer crediting period provides some certainty and time to implement changes, while a shorter crediting period allows for adjustments of the environmental ambition of baselines;
- Frequency and modalities of credit issuance;
- Trading units, registries and national governance structures. CDM provides good precedence in some areas, whereas others, such as management of crediting in a highly heterogeneous sector, may require significant capacity building;
- Interaction with CDM. The draft COP decision states that new mechanisms should build on the existing Kyoto mechanisms. Clarity is therefore needed on fungibility of credits as well as how existing CDM projects are accounted to avoid double counting of reductions if they fall within the (sector) boundary of new market mechanisms;

- Liability/penalty rules for non-compliance. This is relevant in the case of trading mechanisms with *ex ante* allocation of units.

Implementing scaled-up market mechanisms will also face domestic challenges

Unlike the CDM, agreement on a baseline for a sector or policy does not necessarily provide immediate incentives for mitigation action. These incentives depend on how the scaled-up crediting mechanism is implemented at a domestic level – which is likely to vary country-by-country. An entity that invests to reduce emissions below an agreed country baseline would not necessarily have any guarantee of receiving credits, as these would be issued on the basis of the country’s *overall* performance.

Therefore, to be effective, a broad-based *crediting* mechanism requires government to introduce policy instruments to move the sources of emissions to a lower-emissions pathway. In the case of an absolute baseline (a fixed quantity of emissions), and a *trading-based* mechanism, the country could implement a domestic emissions trading system. – this is also the logical solution for sector/NAMA-based trading. It would directly link entities’ performance to the carbon market and its price signal. At this stage though, few developing countries have expressed an interest in implementing cap-and-trade.

An intensity baseline makes it more difficult to link individual investment to the carbon price signal, as explained above. The government needs to introduce a mix of policy instruments to guide GHG sources in the sector in the right direction. A range of policy tools, with a more or less direct link to the carbon market, could be adopted by governments to reach NAMAs or sectoral goals, some examples include:

Baseline-and-crediting at entity level: Such a system will not put entities under an aggregate cap, but would allow them to generate credits by reducing their emissions below an intensity baseline level. To implement the system, the national sector baseline would have to be translated into a series of entity-specific baselines. This would ensure that installations could be more certain to be rewarded for investments they make, but may only be feasible with a limited number of individual players in the sector at stake.

Subsidies and regulatory approaches: A range of policies from subsidies to performance targets at installation level could be adopted to encourage changes needed to outperform the baseline or target. Mandated performance standards for new (and possibly old) installations could also improve the sector/NAMA performance below the baseline. Some of the possible carbon revenues, if the country performs below the baseline, could be used to finance some of the government programmes; they could also be used to reward entities out-performing targets.⁴

⁴ Experience shows that policy packages for GHG reductions, even in the presence of a carbon market instrument, can be useful in delivering structural changes (see renewable energy policy support, end-use efficiency policy, etc.)

Priorities and issues for establishing new market mechanisms

Establishing new market mechanisms is a complex task and represents only one step towards a more cost-effective international climate change policy regime. New market mechanisms are not an end in themselves; the end is, rather, their ability to deliver scaled-up global GHG mitigation cost-effectively. In addition to the issues outlined above, there are other important questions to consider before moving forward with new market mechanisms.

- *Extent of the international framework:* In establishing new market mechanisms there are different options, and a choice to be made, in terms of what is agreed internationally and what is decided and developed outside the international framework. As an example, in the Kyoto Protocol there is a distinction between the MRV framework related to CDM and to international emissions trading. Both Articles 12 and 17 provide only a rudimentary framework for CDM and emissions trading, respectively. A much more detailed MRV framework, as well as a process for approving the environmental goal on a project-by-project basis, was later established internationally for CDM in the Marrakesh Accords. For emissions trading under Article 17, a specific MRV system was developed by EU countries as they devolved their AAUs to industrial entities in order to enhance intra-EU trading.
- *Market readiness:* Increasing the understanding of the role market mechanisms in GHG mitigation efforts could serve as a stepping stone for advancing the development of new market mechanisms. Market readiness also involves establishing the necessary technical, policy and institutional frameworks for a country to be able to employ market mechanisms. Part of this process may also involve capacity building and technical assistance in data collection and verification feeding into the baseline setting process.
- *Sector-specific solutions:* The characteristics of a sector in a specific country will also define what is most practical, and will therefore influence the role, design and effectiveness of scaled-up mechanisms. Many of the issues summarised above need to be addressed by looking at specific sectors and country policies, and not in general terms.
- *Timing and transition:* New market mechanisms will take time to become effective, in light of their underlying data requirements and baseline setting process. The time lag between their announcement and their operation may throw uncertainty on CDM. Parties to the UNFCCC should give an early signal to investors on the future treatment of CDM going forward, if new market mechanisms are introduced, and particularly in the event of a gap between Kyoto Protocol commitment periods.
- *Demonstration activities:* As scaling-up market approaches raises new challenges, pilot activities may be a useful first step along the lines of Activities Implemented Jointly (AIJ) launched at COP 1 and, more recently, for REDD demonstration activities promoted at COP 13. Pilot activities need not be initiated directly through the UNFCCC (as was undertaken with AIJ), but could be independent pilot activities which are reported back to the UNFCCC.
- *Supply and demand balance:* The creation of new market mechanisms to expand the supply of credits should be accompanied by ambitious mitigation goals to establish the demand for credits.