

Conference CDM 2.0: What post-2012 mechanism do we need?

15 October 2007, Brussels

Opening Statement

Pedro Barata of the Portuguese Presidency opened the day with the question: What can we do to improve the way CDM works?

There is a need to upscale financial means significantly. There needs to be more countries as buyers and much deeper emissions reductions are necessary. But the question remains: how much can be expected, even with deeper cuts? It depends on the technologies and the sectors in the carbon market. So far CDM investors don't really prioritize sustainable energy efficiency, renewable energy projects. That should change.

At the Bali conference in December the future of the CDM should be discussed. It is important for the EU to start a comprehensive negotiation process as soon as possible, which should result in a post 2012 agreement before the end of 2009. The negotiations should have the following elements:

- Deeper and broader emission reduction targets. How? By Annex 1 Countries and with significant contributions by developing countries;
- The need to develop a global carbon market. It will be discussed in Bali if pilots can be started already with sectoral CDM, possibly in the areas of renewable energy and energy efficiency.

When the elements for the negotiations are clear a work program within the negotiations must be established. At this stage the EU does not have the information to put the ideas on paper.

Considering the post 2012 era, the EU-vision should be that non-Annex 1 Countries should not have the same conditions and obligations as the Annex 1 Countries. The US, Australia, etc. need to take on targets like the EU countries have. In case of the developing countries we need to start working on targets for those countries (but no obligations yet).

Question: Are there any new technologies and mechanisms the EU expert group is working on?

Answer: Carbon capture and storage (CCS) and hydrogen are advanced technologies and as such not yet ready, so it is unlikely they will be included in the CDM.

There might come a new mechanism that deals with avoided deforestation. But there are

still many question marks. Therefore it is not likely an agreement can be reached in Bali. This will be subject of discussions in the next two years.

Session 1 QUO VADIS CDM?

Chair, Andrei Marcu from IETA.

The good news: a project developer's perspective

Agus Sari from EcoSecurities

EcoSecurities is a carbon developer and trader. It grew in two years from 25 to 250 people. Some numbers: at this moment there are about 750 projects registered and about 1350 projects are under validation. Totally there are about 2100 projects in the pipeline, producing more than 2 billion CERs by 2012. Actually most of the projects perform well (85% of expected CERs). The expected production by 2012 reaches more than **4 billion CERs**. The conclusion therefore is that CDM works!

The market is dynamic and maturing. It will grow from 4 billion Euro in 2007 to 40 billion Euro in 2012. The reason is that project developers are smarter and willing to take risks, holding on to CERs rather than forward contracting. This means that prices are going up and trade margins will go down. The costs for a risk-free CER are 7 Euro and for a full-risk CER you pay 15 Euro.

Right now there are about 200 public and private buyers. The largest private buyers are EcoSecurities (151 projects), CAM Sweden (64), World Bank (60). The largest public buyers are the UK (463), Japan (174), The Netherlands (145).

Having presented on a vibrant carbon market, Mr Sari also noted some areas where improvement was needed:

- Large economies dominate the market: China (28%), India (31%) , Brazil (11%) account for 3/4 of the CER market - **Africa is close to nowhere;**
- Industrial emissions projects represent the bulk of CERs. **Decarbonisation is barely supported;**
- Executive Board of the CDM: facilitative or hindrance? There are too few people

involved in the EB, with not enough accountability, questionable relationships with operational entities, and underdeveloped methodologies in the field of geographical distribution.

The EB should be professionalized (eg another layer of full-time Board before the Secretariat). The EB should become publicly accountable. The EB should pay special attention to decarbonisation, small projects (now due to high transaction costs small projects are not attractive, bio fuels (high potential for developing countries)).

Lessons to be learned: room for improvement

Lambert Schneider, Öko-Institut Germany

A key question: has the CDM fulfilled its objectives on environmental integrity and achieving sustainable development?

The current market environment for Designated Operated Entities (DOEs) is highly competitive and procedures are not clearly detailed. The performance is varied and sometimes poor. The EB does not clearly sanction the way DOEs work. *So are we in a race to the bottom?* The UNFCCC makes assessments and advises the EB, which appears to have resulted in an increasing number of projects being rejected, with nearly 10% of proposals in 2007, so far, having been refused. The conclusions that have to be taken in account with regard to the future role of DOEs are:

- the roles need to be clearer;
- the performance should improve;
- the threat of sanctions by EB should be stronger.

Recent actions by UNFCCC include guidance on validation. Further, future options consist of payments of DOEs by the EB through share of proceeds, and stronger liability to replace CERs issued in excess. Until recently the options for validation have been quite limited legally.

The question of additionality arises (do we achieve sustainable development with the

CDM?) For additionality a so called barrier analysis is used:

- barriers are often vague and subjective;
- non-profitability is often claimed as the key barrier;
- barrier of prevailing practice (44%) is sometimes misused;
- 43% of the Project Design Documents do not provide evidence for barriers.

The conclusion is that it is very difficult to say these projects are additional.

On the Investment Analysis:

- there's a varying level of data provided;
- the hurdle rate is not derived transparently;
- no requirement to demonstrate that the project is feasible with CER revenues;
- there are huge differences in sensitivity analysis

The important question remains: HOW additional are CDM projects? Benefits beyond business as usual are questionable for many of the registered projects. Many projects would also have been implemented without CDM registration

Options for improvement:

- accept some non-additional projects;
- ambitious benchmarks (e.g. cement, steel, aluminium industry);
- exclusion of subjective and company-internal barriers;
- mandatory investment analysis for very huge projects;
- clear guidance for small-scale projects. Such guidance should not be too complicated, but is currently too vague;
- specify 'prevailing practice' and 'common practice'. Need to make measurable objectives.

What are the sustainability impacts? There are many analyses, but only one conclusion: so far the CDM has had a low impact on sustainable development! This is the host country DNA's responsibility. Possibly this could be improved by giving sustainability impact a monetary value!

The key message of this session was: **we need to change, if the CDM should be scaled up.** The CDM is not a success yet with regard to its sustainability and environmental integrity. We need more sanctions, guidance and liability for DOEs. We need to improve the additionality assessment. We need to give sustainability impact a monetary value; we need to use sectoral approaches if possible (e.g. electricity). We should not to credit policies (outside sectoral approaches).

The Bad News: a host country NGO perspective

Lester Malgas from South-South-North (SSN) in South Africa

Northern countries don't realize the difficulties the south is facing in implementing CDM projects. Their short-term perspective blinds them to wider issues that the projects imply. The bad news is already summarised in The Durban Declaration: Trouble in the Air. Local communities are displaced and local stakeholder consultations are not carried out. Only realised reductions are recognised and future reductions not, so there is no capital for investment. DNAs are generally slack in evaluating sustainable development aspects of proposed projects, although this varies by country. SSN started their own project development: 'we will design projects that add to sustainable development', with benefits for local communities. The problem with this has been the carbon income is not enough to pay for the investments needed. SSN is now creating a facility to fund energy efficient low- income housing. "The CDM is a tool. Like a hammer. You can use it for good or for bad."

Discussion

Reggie Hernaus from the Ministry of Environment and Housing, The Netherlands.

The CDM is no longer a buyers market: the sellers are getting smarter and the market has developed. A question for the Dutch government is now: Should we still play the leading role in the carbon market or not, now that it is developed?

The answer is: yes. The carbon markets started five year ago in a very insecure world, but the market has developed. We in the Netherlands will continue to use the carbon market as a tool to fight climate change.

A comment from the audience: "a purchase program for CDM doesn't work, it should be a flexible system".

Answer: The Dutch government will no longer put out procurement tenders, but will focus on experimenting with the sectoral approach in the transport, electricity and cement industry in Mexico, together with the private sector. We were amazed that so many cheap reduction possibilities turned up early on in the CDM. We may have to reduce supply by eliminating the cheap reductions. Still, we don't know the market much better than before Kyoto. Also now we don't know what supply will be if we start with sectoral CDM and avoided deforestation. Last week there was a conference in Addis Ababa and there it was clear that many developing countries are really seeking technical assistance, capacity building., not only for their DNAs but also for other stakeholders (companies,

financial sector). South-South collaboration (South Africa, Indonesia etc) is a solution here and will be supported.

Reggie Hernaus: The Dutch government will do best efforts to stimulate CDM projects in sub-Saharan Africa, with the use of FMO (Dutch government related development financing corporation) money. Right now projects are going on in Tanzania and Mozambique. From a cost-effective point of view it may be difficult, but as a government we are in a position where we can do it.

Comment: The CDM should produce major changes. It's about sustainable development and additionality.

Reggie Hernaus: The so called letter of approval is crucial for CDM. There's guidance needed for the non-annex 1 countries on additionality. However, the developing countries refuse to let Northern countries define what sustainable development is for their countries. Stakeholder consultation is the solution. DNAs should take that into account.

More questions:

Should carbon capture and storage (CCS) be accepted in the CDM? Will it not flood the market?

Agus Sari : "There's nothing wrong with CCS in the CDM. Currently there are technical difficulties that have to be overcome".

Question: can CO₂ be stored on a permanent basis? Principally it's not possible, but if you can for a long period of time: can it be considered permanent?

Reggie Hernaus: We cannot do without CCS to get the 30% reduction. But, it's too expensive now for being eligible for CDM.

Question: Should the Gold Standard be used to give value to sustainable development?

Agus Sari: I was one of the architects of the Gold Standard. I don't think GS can be applied beyond voluntary measures. The premium paid is not enough to compensate the risk and DNAs feel that they should determine what sustainable development is.

A closing comment by Andrei Marcu: We have an instrument that seems to work to some extent, but there are a lot of serious concerns. It has mobilized quite a substantial sum of

money. We will be criticising it from different points of view, but if it goes away we will all lose something. We need to find a way to work together and meet in the middle.

Session 2 Expanding the CDM beyond projects

Chair, Lester Malgas from South-South-North

Possibilities for developing country action evolving from the CDM

Niklas Höhne, Ecofys, Germany

From the present available CDM options, which include the regular CDM projects and the programmatic CDM, the CDM could possibly evolve towards a sectoral CDM, a sectoral CDM with no-lose targets towards Binding Sectoral Targets. Possibly this would pass through a policy based CDM for the sector. A transnational sectoral approach would also be possible, but this was outside of the scope of the presentation. In the evolution to a sectoral approach, there would need to be a shift from private entities taking the initiative to increased government involvement. As the government would be receiving the credits they would therefore have to find a way of passing the incentive on to the individual stakeholders. In case of the sectoral CDM the baseline would be the present situation in the country. In the case of sectoral with no-lose targets a baseline could be established below business as usual, established from the average of e.g. the 6 best performing companies in the sector. In this case, the no-lose sector targets would have to be agreed upon by the COP or some other UNFCCC entity, not by the EB of the CDM or a similar body. The advantage of sector no-lose targets is that there always is a net emission reduction, which could still be enhanced by trading allowances of companies performing better than the no-lose targets. It would be the prerogative of the host country to decide how the emission reductions in the sector would have to be achieved. So there are clearly several sectoral approaches possible. They offer the opportunity to scale-up climate-friendly investment in developing countries and broaden participation. The immediate next step would be to start piloting these approaches and collect data.

There are some challenges to answer with this approach. Developing sectoral baselines is time-consuming and data-intensive and hardly possible to do in the present CDM set-up. If implemented such an approach would produce large amounts of credits which would have to be consumed by a much larger than present demand. With more stringent post 2012 targets for Annex 1 countries (and others) this should be possible. To be able to implement it, the approach would also demand more capacity building for developing countries. Ecofys is involved in further developing this approach and collecting data.

Creating a dynamic carbon finance environment

Kate Hampton from Climate Change Capital, UK

The scale of investment in emission reductions is still inadequate: even if primary CDM transactions doubled from US\$ 2.4 billion in 2005 to 4.8 billion in 2006 and will considerably increase in 2007, it will not be enough to cover the estimated US\$ 24 billion needed in 2015 by non-OECD countries (Stern Review). Even this will not be sufficient. It is clear by now that the carbon market works and is able to provide significant investment. Between 2006 and 2007 carbon funds doubled from US\$ 4.6 billion in 40 funds to US\$ 11.8 billion in 58 funds. It has become the most reliable source of co-financing for (some) developing countries. Much of the EU's domestic abatement will occur outside the carbon market, through renewable (RE) energy and energy efficiency (EE) targets and achievement of these is highly significant in terms of price impacts inside the ETS, whereas the difference in price is small between the 20% and 30% targets the EU may adopt. So, assuming that a cap is set to what can be done through the CDM, the ETS will reinforce the RE and EE targets. The CDM is thus not necessarily a threat to domestic abatement but it must evolve to keep adding value in emission terms: evolving baselines and targets. Now, as the CDM has successfully scooped up low cost reductions, carbon financing is moving into more challenging abatement opportunities. Developing countries are a varied group and should be enabled to move at different speeds. Fortunately, carbon finance already provides a variety of options.

Evolution of the CDM

By moving baselines beyond business as usual, the CDM will get more emission reductions per unit invested (see also above: sectoral no-lose targets). Discounting credits where additionality is not clear gives a similar result. Also technology benchmarks or Best Available Technology approach yield similar results. At present data availability is the major barrier to moving towards such approaches, so data gathering should start as soon as possible to avoid delays in reaching agreements for post 2012 rules.

Policy co-financing

Experience with carbon finance makes policy formation easier. The key issue is whether we can design a dynamic system that regulates away the low-hanging fruit. Further evolution of baselines will only be agreed if developing countries that adopt climate-friendly policies are rewarded with greater upfront support and autonomy in managing carbon assets. For instance, providing a share of expected credits in advance would be desirable. China is already using CDM revenue to top up its renewable energy price support mechanism. This is policy co-financing.

Continuity is as important as evolution. The EU has already created some post-2012 value with its unilateral target and commitment to continue the ETS. However, the ‘long tail’ of existing CDM projects would use up expected demand from ETS Phase 3, so the market must believe that other sources of demand will materialise or that the ‘long tail’ will be reduced by regulators. Renewal is an emerging regulatory issue and the EB must be encouraged NOT to take a conservative line during post-2012 negotiations.

Lack of confidence in the CDM is pushing the US towards price caps as an alternative of cost containment. An evolution in carbon finance that provides for a quantifiable contribution to emission reductions from middle income countries will be more acceptable to the US. If US demand was added to EU demand, CDM type investment would at least double, leveraging global action. A note of caution: we’ll have to do everything to have the US accept a CDM-like mechanism.

Bigger? Better? Faster? The challenges of “scaling up”

Jane Ellis of the OECD.

In the end what we want is increased deployment of widely applicable GHG-friendly systems, that contribute to sustainable development, are enhanced by technology transfer and also are additional. This could be achieved in different ways: through a programmatic CDM, sectoral approaches, sustainable development programs and measures (SD-PAMs). However, not all are convinced the best approach is through credits, and other incentives are possible.

To generate credits it is necessary that for a future regime it is defined if sectoral and policy approaches are eligible and to what extent, also to define which countries are to participate, probably also to define a threshold (to avoid flooding the market) and to start adopting baseline definitions. Now these are agreed via approved methodologies, but not yet for other potential scaling-up options (sectoral approaches and SD-PAMs). To generate credits it is also necessary to quantify baselines and methodologies. This requires historical data which are not always available or easy to estimate or project. To establish them are time-consuming and costly processes. China is a good example: high, variable growth makes trends difficult to project. The 10th 5 year plan underestimated the actual electricity production in 2005 by 25%. It will be difficult to negotiate or approve

baselines for all the (sub-)sectors with so much data lacking and without the industry at the table. In a sectoral approach it is also difficult to provide incentives to the industry, because the link between individual performance and credits (under “scaled-up” crediting) is not necessarily direct.

The effects of “scaled-up” crediting are not automatically clear. It will lead to more GHG reductions, but the distribution over sectors and the contribution to sustainable development remain to be seen. The geographical distribution over different countries of the investment remains an additional source of uncertainty. Impacts on competitiveness depends on the baseline levels chosen. There is also a possibility that it will lead to long term impact on countries’ willingness to also undertake non-credit actions.

So scaling-up is potentially promising but there are significant implementation challenges: technical (data, methods), institutional (how to negotiate, govern and in relation to national capacities), in what concerns appropriate incentives, and, politically (competitiveness). The final effects on GHG mitigation and sustainable development, on competitiveness depends on the detailed design that can be reached.

Discussion

The chair phrased three basic discussion items around the issue of expanding or scaling-up: data (availability, reliability), the time left to negotiate and governance and crediting issues.

It is not likely that everything can be regulated in the time remaining until 2012. The more bottom-up the design process is, the more detail you’ll get, but also much time needed. The more you only focus on general issues, the more top-down the final design will be.

It must be noted that the present CDM is at best a zero sum game in terms of emission reductions. However, with evolving baselines or sectoral no-lose targets this would change.

Scaling-up only for a few countries is probably the best option, to experiment and learn. This then would have to start as soon as possible. As it looks now, it is highly unlikely that a CDM-like mechanism could finance all sectors or policies.

There are now more projects for sub-Sahara African countries. Still it would be important

to somehow create a financial mechanism for Africa, either for upfront funding or for investment.

If we want more sustainable development benefits, the voluntary market can be used for experimenting. The question remains what we want with a CDM 2.0: just mitigation or also sustainable development and what should be the balance. In some cases this can go hand in hand, like with renewable energy and energy efficiency.

Session 3 Financing sustainable development: with or without CERs?

Chair, Matthias Düwe, Climate Action Network Europe

Policies for Sustainable Development

Harald Winkler from the University of Cape Town, South Africa

In developing countries mitigation = decarbonisation, i.e. developing while reducing emissions. The project based market mechanism CDM works, but failed to resolve poverty-mitigation conundrum and has had little impact on carbon intensity of growth in developing countries. A bigger shift will be needed in north-south resource transfers. There need to be new mechanisms to tackle head-on trade-off: poverty / development versus mitigation.

The big question is: **what is the place of sustainable development in climate policy and science?**

The IPCC says that changing development paths does matter – climate policy alone won't solve the climate problem. Therefore, a new mechanism is needed, this should be seen as a complement to, not a replacement for the CDM, and other existing mechanisms. One possible approach is the so called SD-PAM: Sustainable Development Policies and Measures. The SD-PAM is a possible new strategic approach to capture the potential under the multilateral framework. It is a more defined sustainable path to meet development objectives, with the goal of meeting the desired future state of development. From that desired goal you look at GHG reductions (co-benefits).

An example from South Africa can give some more insight in how SD-PAM works. The

energy modelling in SA is: energy emissions are 4/5 of total. The combined effect of the policies for SD are: *efficiency* in industry, commerce, and residential; *fuel-switching* and *cleaner fuels*; lower-carbon electricity generation; *bio fuels* for transport. So it saves money (1.5 billion euros) in the total energy system costs PLUS it reduces local air pollutants. SD-PAMs should be additional to binding commitments.

How should the SD-PAMs be financed? The money should partly come from the carbon market, but this would have to be significantly expanded. Partly the money comes from national domestic policies (because it promotes development), assisting investments and financial flows. In addition, there's additional external funding needed for climate change mitigation and adaptation.

In order to fit the SD-PAMs into a post 2012 package, a strategic approach is needed. It's important to build on existing commitments. The commitment to implement SD policies should be based on a development path that results in lowered emissions (so not based on climate target!). Don't work with projects, but with large-scale policies and measures. The pledge should then be formalized (a list of countries e.g. "Annex 3 countries", and/or a register of pledged policies and programmes). Benefits of SD-PAMs should finally be quantified by reliable methodologies.

There are three steps to create international support for SD-PAMs

The first step is to validate the SD-PAMs approach. Another way is to create supportive processes, and the third step is by developing incentives for implementation.

What are the principles of post-2012? We got to demonstrate climate effectiveness. The basic principle should be 'below 2 degrees Celsius'. Also include further contributions from all major economies. Equity is needed. We have to be consistent with development and economic goals. We should harness the market for change. Adaptation has to be addressed, and a final agreement on the UNFCCC should be reached.

Emissions trading will continue for industrialised countries and will generate revenue for technology cooperation, reducing deforestation, adaptation.

Question: Would SD-PAMs work for forests? Here it is not clear how money would be saved.

Answer: Couldn't a mechanism be designed where countries are rewarded for not using "emissions space"? That would be less risky, would not lead to speculation and would have a secure delivery. Besides, it has happened already. But the question remains how

much space for rising emissions from developing countries there is.

Session 4: Concluding Session

Chair, Matthias Düwe, Climate Action Network Europe

Political Context: Looking towards Bali.

Jennifer Morgan, E3G

The challenge is to reduce GHG emissions from the present +/- 25 GtCO₂ to less than half before 2050, to keep within the 2 degrees C temperature rise above pre-industrial levels, beyond which climate impacts become absolutely unacceptable. This can be possible if globally we peak and reduce GHG emissions in the next 10 to 15 years and reduce between 50 and 80% below 1990 levels by 2050. To reach that, industrialised country emissions in 2020 will need to be reduced at least 30% below 1990 levels. Participation of the US and fast growing developing countries in reduction commitments well before 2025 is needed.

If we look at the fast growing developing countries the question is how to meet 6 to 10% growth rates while halving per capita emissions? How much space is left for developing countries to lift populations out of poverty and meet national development goals? Leadership is essential to an effective global deal, and at present the EU is the only credible world leader in climate issues. There are ways a global deal can fail: if we fail to agree, if we fail to agree on enough action and if we fail to agree an effective mechanism for cooperation. Such a mechanism would imply domestic politics are brought in line, would imply enforcement of agreements and the international instruments would have to be effective.

At present the EU and US do not agree and neither are very effective. The developing countries are starting to differentiate themselves from each other. The deal would have to be bigger and broader than before and turn into a shared analysis and shared response approach. It should provide an enticing and ambitious vision and should be fast and big, but also sustainable. There are now a range of processes underway that are competing rather than complementary.

Principles of a post 2012 regime should be:

- Effectiveness, it should maintain global warming within 2 degrees C. To do so, further contributions from all major economies are required.

- It should be based on equity and be consistent with development and economic goals.
- The agreement must be economically efficient, and unleash innovation and shift investment.
- It should address adaptation and it should be under the UNFCCC. Concretely this means: ambitious, deeper absolute mandatory targets for developed countries.
- But also a “fair share” for emerging economies and address at least energy and deforestation.
- Furthermore it implies a carbon market with a global carbon price.
- It should include technology transfer and adaptation also.

The additional costs that will have to be made in none OECD countries is estimated at 69 billion US\$ by 2015 and 294 billion US\$ by 2025. Only about half will come from carbon market funding. Even to mobilise just this a huge effort will be needed, also from the CDM and we must be careful it does not go “backwards”, e.g. avoided deforestation.

Negotiations need to be launched in Bali, starting a dialogue on what is needed concerning technology transfer and cooperation. For adaptation, we need negotiations on what a “fair share” for emerging economies would be. On finance, a CDM review would be important, including options for scaling up or down and phasing out the project based and targeting eventually national cap and trade. Last but not least: increased domestic and international pressure on the Bush administration is essential.

Discussion

There is no reason to wait with the CDM review until 2012. There is already enough experience to review potential.

The US is in favour of cap and trade, but will most likely not accept SD-PAMs. It is not clear what they feel about avoiding deforestation and forest degradation. In general it is not clear what avoiding deforestation would do to the CDM and what it would mean for investments in energy. Transaction costs of avoiding deforestation will be very high. So, in the beginning it would not be wise to go for full fungibility with the existing markets, however, this could be reviewed after a few years, when there is more experience.

Technology transfer should be heavily promoted, including how to fund it and addressing IPR issues. There could be voluntary commitments here from Annex 1 countries.