

Views of the Sustainable Energy and Economy Network of the Institute for Policy Studies

on

**Various approaches, including opportunities for using markets,
to enhance the cost-effectiveness of, and to promote, mitigation
actions, bearing in mind different circumstances of developed
and developing countries (AWG-LCA)
related to the matters referred to in paragraphs 83 and 84 of
decision [-/CP.17]**

5 March 2012

Experience with existing approaches : the Clean Development Mechanism

A Zero Sum Game

The performance of the Clean Development Mechanism has been extremely poor. As an offset mechanism it would, in an ideal scenario, only be a zero-sum game, resulting in a shift in emissions rather than a reduction in emissions. Thus, from the outset, the role that it can play in any effort to reduce greenhouse gas emissions is limited.

In the less than ideal, real-world scenario, the CDM has been further undermined by the non-additionality of many of the credits issued,¹ which has actually led to increased emissions. Offset projects are sold on the basis that they are “additional” to “what would otherwise have happened.” In reality, establishing “additionality” is fraught with problems, with some studies deeming the range of justifiable assumptions to be so large as to make any control on their objectivity nearly impossible. Additionality is difficult to prove or disprove, since it is a counter-factual; it requires knowing what would have happened. It has been shown, however, that the schemes claiming to destroy refrigerant gases (HFC-23) have actually encouraged more gases to be produced, only to then destroy these gases again and accrue the profit from the surplus credits.² These HFC-23 credits account for around half of the CDM credits issued to date.

A recently leaked US cable reported from a meeting in Delhi that “all interlocutors conceded that all Indian projects fail to meet the additionality in investment criteria and none should qualify for carbon credits.”³ These interlocutors included the Chair of the national CDM authority, as well as some of the country’s largest project developers and “verifiers” (private consultants who are meant to check these claims).

Offsets are slowing needed transformation in developed countries

Furthermore, the ability of developed country parties to purchase offset credits from outside of their collective cap has further reduced the need to start implementing transformational changes toward low-carbon societies in developed countries and has led to the continued reliance upon and lock-in of

polluting technologies. Since the CDM takes a short-term view, as most market-based instruments do, it only supports incremental improvements in developing countries instead of more transformational changes⁴ and also locks in polluting technologies in developing countries as well.

Human Rights Abuses

In addition to these environmental concerns, the CDM has failed to achieve its sustainable development objectives.⁵ A number of CDM projects have been associated with inadequate stakeholder consultations as well as human rights abuses. For example, the CDM has supported land grabs surrounding hydropower plants and monoculture plantations. In one notorious recent example, a project developer in Honduras is reported to have killed 23 farmers who tried to recover land which they say was illegally sold to a palm oil plantation that was seeking to join the CDM project.⁶ Although these concerns were brought to the CDM Executive Board, the “Aguan Biogas” project was nevertheless approved on the grounds that a “stakeholder consultation” conducted three years previously had found no cause for concern.

Cheap emissions cuts mean higher costs for developing countries later

The CDM is designed to make the cheapest cuts in emissions first, rather than those that are most socially just or environmentally effective. For example, the mechanism has denied people who make a living from waste-picking by replacing their recycling efforts with toxic incinerators, or simply by burning off excess methane gas into the atmosphere. Because the CDM first focuses on acquiring negative- or low-cost abatement opportunities in developing countries, this leads to higher costs down the road for these countries when they will need to make their own mitigation contributions and the cheap credits will all have been taken.

Inadequate consultations

There have been significant problems with the “governance” of the CDM.⁷ The CDM Executive Board, which decides on whether or not to register projects, is unable to make assessments on projects’ social benefits, for example (as the Aguan Biogas case in Honduras makes clear). Local consultations are often a token effort – in several instances, these are announced in obscure places in non-native languages. Their purpose is to tick a box to allow the project to move forward, not to really involve communities.

Conflict of Interest

There is also a “revolving door” in CDM governance between project developers, emissions verifiers and government officials in frequently overlapping and rotating roles that significantly undermine their independence. For example, the task of “verifying” projects is farmed out to private companies, who are paid by the project developers whose work they are supposed to judge – this creates a clear conflict of interest (similar to that played by the ratings agencies in the 2008 financial crisis).

There are a variety of more fundamental concerns that extend beyond issues of governance, however. The CDM involves a trade in a commodity - “carbon” - that is invented by government fiat. Governments and regional bodies set key variables of supply and demand, and they are key buyers, project hosts and (in the case of the CDM) also regulators. These create conflicting interests and opportunities for “market distorting” behaviour that are hard-wired into the architecture of carbon markets.

Thirdly, there are considerable problems of corruption, fraud and gaming.⁸ A lot of these are not unique to carbon markets, but are made easier by the fact that carbon markets create a significant volume of an intangible asset (it is a trade based on claimed “reductions” - no real goods change hands). Interpol has pointed out the money laundering risks stemming from this trade in an intangible asset, for instance.

Subsidizing business as usual

Various claims have been made that the CDM stimulates (or, in the currently fashionable jargon, “leverages”) considerable investment. But the proportion of revenue that accrues to projects from the CDM are too small a proportion of total costs, and too unpredictable, to make a determining difference in investment decisions. The uncertainties surrounding the price of carbon and issuance mean that if a project were not financially viable without revenue from the sale of offset credits, investors would generally find it too risky to undertake it in the first place. Consistently low offset prices as a result of an oversupply of allowances (in the main European carbon market) and regulatory uncertainty have also cooled investor interest. As a result, the CDM more typically subsidizes projects that would have happened anyway, rather than stimulating new projects.

Delay in remuneration, little money for local communities

A further factor compounding the lack of genuine investment incentives is that CDM revenue comes only at the end of the process – when credits are issued – rather than up-front. In practice, this is usually corrected by “forward selling” credits on the derivatives market, but the resulting financial architecture of “forward-selling” risks greater financial uncertainty in the carbon market (the underlying asset is unclear and uncertain – thus it is considered “sub-prime carbon”). The financial firms and energy companies doing the buying have the cards stacked in their favour when it comes to negotiating prices (they generally have greater expertise in these trades), and thus the local communities lose out with paltry revenues.

Heavy industries benefit most; LDCs, Sub-Saharan Africa the least

The carbon market was set up to help industrialized countries (and companies based in these countries) to reduce the cost of emissions reductions by outsourcing them. This is more or less how it has worked so far – with the cheapest reductions found in large projects that deploy existing technologies. The largest global investors direct their efforts to the most profitable projects. Economies of scale invariably point to the larger projects, and since offsets represent “avoided emissions”, these involve heavy industries or power sector projects in countries where grid energy already register significant greenhouse gas emissions. Such project opportunities rarely exist in Least Developed Countries, or much of Sub-Saharan Africa, which are not dirty enough nor do they consume enough to compete successfully within the CDM. The potential exceptions to this rule in LDCs and sub-Saharan Africa are projects related to the extractive industries. A new market mechanism could exacerbate this concentration of crediting towards large projects in middle-income countries

In terms of geographical scope, over 80 percent of registered CDM projects (and almost 86 percent of credits issued) are in the Asia-Pacific region, based on September 2011 figures. By contrast, Africa hosts 1.9 percent of projects, issuing 1.3 percent of credits. These regional figures mask significant discrepancies between countries as well as regions. China has dominated the CDM since its inception, and currently accounts for over 45 percent of projects and 57 percent of credits issued. By way of comparison, sub-Saharan Africa (excluding South Africa) hosts just 31 projects, amounting to 0.9 percent of the total projects globally and 0.005 percent of credits issued to date.⁹

Views on a “new market-based mechanism”

It is worth recalling that the COP17 decision “*defines*” a new market-based mechanism – it does not “*establish*” one. A further decision would be needed at COP18 to establish such a mechanism. Such a decision may only be taken in the context of a balanced package which sees significant progress on mitigation commitments from industrialized countries.

Based on our concerns with the performance of the CDM in its current form and general concerns about a baseline-and-credit mechanism, we would like to offer some additional views on the new

market mechanism “defined” by the Decision.

In terms of market mechanisms moving forward, our preference in terms of simplicity, meaningful, transformational greenhouse gas emissions reductions, and avoided corruption is a feed-in tariff approach. This is rooted in an analysis of energy access inequalities, noting that electricity for the poorest people (whether sourced from renewables or fossil fuels) is often too expensive – which can lead to a favouring of coal-power, in particular, on the grounds that it is often the cheapest source. Carbon trading (like other forms of carbon pricing) attempt to “level up” the price of coal to that of renewables. Tariq Banuri (as director of UNDESA) and others argued that the opposite approach is needed - time-limited price guarantees for renewables, subsidised by international public climate finance. This would help to scale-up the deployment of renewables, reducing their costs per unit of energy by speeding up the technology learning curve, with the aim of bringing renewable prices down to the level of fossil fuels. It is crucial that, unlike with the CDM, such pricing is front-loaded to support investment, rather than linked to a promise of future payments priced by a volatile market.¹⁰

Environmental concerns with sectoral trading

Sectoral crediting –the practice of international carbon trading between sectors in developed countries that are below a baseline and developing countries—is flawed. It is impossible to accurately predict future emissions. The “additionality” problems of the CDM are not resolved by sectoral crediting – and risk being worsened by its extension to entire sectors of an economy.

Another problem that remains unresolved in sectoral trading is the locking in of surplus emissions (via over-allocation, or via reduced production in times of economic recession in industrialized countries).

Since sectoral crediting is likely to be much larger in scope than the current CDM, the risk of issuing non-additional credits and thus allowing global emissions to further increase is much larger. When designing sectoral baselines as intensity-based baselines, that risk is further amplified by the impossibility of knowing future output and the possible creation of perverse incentives to increase (or delay decreasing) output in order to increase credit generation.

Avoided responsibility for developed countries

New market mechanisms are designed to help industrialized country governments and companies avoid meeting their greenhouse gas emissions obligations at source. The mechanisms would allow Annex I countries to count the lowest-cost abatement opportunities (“low hanging fruit”) towards their own targets at the expense of developing countries, delaying domestic action to reduce industrialized country emissions at source. There is also a significant risk that such measures will be used to double-count the financial contribution toward emissions reduction measures undertaken in developing countries as meeting climate finance obligations.

Beyond Offsetting?

New market mechanisms claim to address the lack of additionality by moving “beyond offsetting.” They would require developing country Parties to significantly alter their emissions compared to a claimed trajectory *before* any credits are issued. The gap between the “business as usual” baseline and the start of crediting would partially compensate for the scheme’s environmental failings, but *at the cost of pushing additional burdens onto developing country Parties* (which would be expected to meet the gap between the business as usual threshold and the crediting baseline with their own resources).

The move “beyond” offsetting does not eliminate offsetting or any of the other key problems associated with the CDM, including its role in exacerbating land grabs, local environmental and social conflicts. In covering whole economic sectors instead of individual projects, sectoral crediting would *increase* the overall volume of carbon offsets generated; in fact, that is one of its main goals.

Locking-in polluting technologies

Another problem specific to sectoral approaches is the definition of sectoral boundaries, which could have a major impact on activities within the sector. For example, if sectoral boundaries for the power sector were defined in a way that did not include emissions associated with extraction, processing and transport of fuel (regardless of whether extracted locally or imported) for coal, oil, gas and nuclear power generation or the emissions associated with the flooding and maintaining of the reservoirs of large hydro generation, these activities would appear to be less greenhouse gas-intensive than their actual complete life-cycle emissions reveal, resulting in an inappropriate support of dirty technologies. This is also very likely to lead to the lock-in of old and polluting technologies (which, as discussed, is also a general concern with most market based approaches) by incentivizing incremental improvements of existing technologies over transformational change.

Furthermore, due to the inherent technology neutrality of sectoral approaches, such mechanisms would effectively provide subsidies to socially undesirable technologies, such as nuclear or fossil fuel based power generation (with or without CCS) or large hydropower generation, as long as they represent a marginal improvement over currently employed technologies. This presents an additional risk of technological lock-in in developing countries' infrastructure for decades, making future emission decreases both harder and more costly to achieve.

Misplaced Incentives

Sectoral approaches also suffer from a discrepancy in terms of which actors are targeted by the incentives of such approaches: while credits generated under such approaches would be issued to national, supranational or regional entities (such as developing country governments) the actual implementation of emissions reductions would have to be performed by individual installations. Thus, the actors that would have to implement the reductions would not directly be incentivized by these approaches. While the incentives created by the CDM in relation to private sector decisions are compromised by various uncertainties (in the registration and issuance processes, in the number of credits the developer will receive, and in the value of those credits), those uncertainties would be even greater as and when credits were generated on a sectoral scale. Before sectoral crediting yielded any credits, individual actors would need to put emission reduction efforts into place without knowing whether any credits would be issued (and thus revenues earned) as a result of the performance of the entire sector. Second, given that the incentives of sectoral approaches are mainly targeted at governments (or similar regional, national or supranational entities), it is not clear that purely financial incentives are sufficient to change behaviour within a country.

Sectoral approaches, if established, would require very detailed and accurate emissions data in the countries and sectors covered. It is questionable whether any but a very few sectors in a very few developing countries would be currently able to provide such data. Data uncertainties further exacerbate the risk that sectoral approaches could result in the issuance of credits that do not represent actual emission reductions. Furthermore, this data requirement also means that it will be even harder for developing countries currently not able to participate in the CDM to participate in such schemes in the future, thus further skewing the geographical distribution of participation.

Demand exceeding supply

Scaling up carbon markets in the absence of tough Annex I commitments would most likely collapse the price of offset credits. "New market mechanisms" were first tabled when the USA was planning a federal cap and trade market, which was expected to lead to an almost tenfold increase in demand for carbon offsets compared to current levels (where the majority of demand is from the EU ETS). Following the failure to pass a US federal scheme in 2010, there have also been delays and a downscaling of expectations for emissions trading schemes in Canada, Japan and South Korea. The EU has not exercised the option to raise its reduction target to 30 percent by 2020, and the effects of

the recession and over-allocation of emissions credits mean a likely surplus in emissions credits that could reach up to 2.4 billion allowances between 2013 and 2020.¹¹

Conclusion

The decision in paragraph 83 of [-/CP.17] “defines” a new market-based mechanism – it does not “establish” one, which would require a further decision at COP18. Such a decision, in turn, should only be made in the context of a balanced package which sees significant progress on industrialized country mitigation commitments.

New market-based mechanisms are being proposed to prevent Annex I countries from meeting their emissions reduction commitments at source. These mechanisms would allow industrialized countries to lay claim to the lowest-cost abatement opportunities in the global South, and open the way to double-counting emissions reductions as climate finance contributions.

The potential introduction of new market-based mechanisms in the context of a declining global trade in carbon throws this problem into sharp focus. If the new mechanism were to deliver significant quantities of credits in a market with limited demand for them, the price of carbon would likely continue to collapse. Introducing new markets in a context of unambitious climate action by industrialized (Annex I) countries would, in turn, undermine both climate change mitigation efforts and flows of climate finance.

The new mechanisms claim to move “beyond offsetting” by requiring developing country Parties to significantly alter their emissions trajectory *before* any credits are issued. Although this is presented as a measure to improve environmental integrity, it actually pushes an additional burden of responsibility for climate change mitigation onto developing countries.

Applying the precautionary principle would mandate the exclusion of offsetting mechanisms until a climate agreement is reached that is able to reduce greenhouse gas emissions to a level that would have an extremely strong likelihood of limiting global warming to less than at least 2°C, if not 1.5°C— which many scientists suggest is actually the upper limit of warming we should try to avoid. Policies that are much more effective than offsetting include: the implementation of regulations that ban undesirable technologies, such as coal-fired or nuclear power plants, or that mandate all methane be captured from waste dumps, and that ensure gas flaring and fugitive emissions from gas drilling ceases; the support for publicly funded research and development; and the removal of all subsidies for undesirable activities and replacement with an initial subsidy for proven measures such as a feed-in tariff for renewable energy. For example, direct investment in improving the infrastructure of mass public transit would likely result in much higher emissions reductions than any offsetting mechanism, but it would also require more support than “myopic” market-based approaches are able to offer. Other approaches would be likely to include a mix of both market-based approaches (eg. feed-in tariffs or a carbon fee and dividend approach) and non-market based ones (eg. financial transaction taxes, improvements in regulation).

To conclude, the precautionary principle and experience from the CDM together suggests that any baseline- and credit-based market mechanisms must be rejected unless credible efforts are made to resolve the problems outlined above. In particular, sectoral crediting approaches risk elevating the problems observed with CDM to a much larger scale while also introducing additional new risks. The foremost mitigation objective of any future climate regime must be the support of the decarbonization of developed countries’ economies and support for low-carbon development in developing countries. Any mechanisms under such a regime, including any market-based mechanisms, must be thoroughly scrutinized to assess whether they support rather than weaken or neutralize these main mitigation objectives.

For further details, queries or references, contact Oscar Reyes, oscar@ips-dc.org

- 1 The overall design flaws of the CDM, wherein crediting is based on a hypothetical and thus unknowable future, also make it impossible to precisely ascertain how many CDM credits are non-additional. However, studies estimate the non-additional portion to be quite substantial. Schneider estimated that 40% of CDM projects are non-additional, while Sutter and Parreño suggest that half of all projects are non-additional. Haya suggests that the majority of CERs issued are fake. See L. (2007) "Is the CDM Fulfilling its Environmental and Sustainable Development Objectives? An Evaluation of the CDM and Options for Improvement", Report prepared for WWF, Öko-Institut; Sutter, C. and J. C. Parreño (2007) Does the current Clean Development Mechanism (CDM) deliver its sustainable development claim? An analysis of officially registered CDM projects, *Climatic Change*, 84(1): 75 – 90; Haya, B. (2009) *Measuring Emissions Against an Alternative Future: Fundamental Flaws in the Structure of the Kyoto Protocol's Clean Development Mechanism*, Energy and Resources Group Working Paper ERG09-001, University of California, Berkeley.
- 2 Schneider, L. (2011) "Perverse incentives under the CDM: an evaluation of HFC-23 destruction projects" *Climate Policy* 11(2): 851–864
- 3 US Consulate Mumbai (2008) Carbon credits sufficient but not necessary for sustaining clean energy projects of major Indian business groups, <http://wikileaks.org/cable/2008/07/08MUMBAI340.html>
- 4 The profit-seeking motive that is, by design, the main driver of market-based mechanisms, is likely to favour incremental, inexpensive improvement of polluting (but lucrative) activities over more substantial changes in the underlying activities. Examples from the CDM include providing support to coal-fired power plants rather than renewable energy or energy efficiency projects, as well as the flaring of landfill gases instead of supporting better waste management practices.
- 5 For more examples, see Gilbertson, T. and Reyes, O. (2009) *Carbon Trading: how it works and why it fails*, Dag Hammarskjöld Foundation, chapter 4, <http://www.dhf.uu.se/publications/critical-currents/carbon-trading-%E2%80%93-how-it-works-and-why-it-fails/>
- 6 Neslen, A. (2011) "Carbon credits tarnished by human rights 'disgrace'," *Euractiv* 3 October, <http://www.euractiv.com/climate-environment/carbon-credits-tarnished-human-rights-disgrace-news-508068>
- 7 Newell, P. and Phillips, J (2011) *Governing clean development: what have we learnt?* University of East Anglia, <http://www.uea.ac.uk/dev/gcd/PolicyBriefing003>
- 8 Chan, M. (2010) 'Ten ways to game the carbon market', Friends of the Earth USA, <http://www.scribd.com/doc/37899455/10-Ways-to-Game-the-Carbon-Markets-Web>
- 9 Figures from UNEP/Risoe CDM Pipeline, September 2011, <http://cdmpipeline.org/>
- 10 See Swedish Society for Nature Conservation (2009) A Green Energy Revolution for Climate and Development, SSNC, http://www.naturskyddsforeningen.se/upload/Foreningsdokument/Klimat/Knackfragor/GER_feed-in-tariff_compilation.pdf
- 11 Point Carbon (2012b) 'EU draft reveals vast CO2 market surplus', <http://www.commodities-now.com/commodities-now-news/environmental-markets/9708-eu-draft-reveals-vast-co2-market-surplus.html>