



# Carbon markets after Durban

Oscar Reyes

abstract

The carbon market is in crisis, with offset prices crashing to all-time lows and carbon branded the 'world's worst performing commodity'. Yet, as traders withdraw from the market, climate negotiators at COP17 have agreed to expand the scope of the Clean Development Mechanism (CDM) and create 'new market mechanisms'. This article examines the record of the CDM and the Durban decision to keep it alive in the absence of binding emissions reduction targets. It then examines the reasons behind the creation of 'new market mechanisms', arguing that these are locked into international negotiations by a mix of interest, ideology and institutional inertia, as well as being consistent with broader attempts to redefine the international climate regime.

International carbon trading stood on the brink of collapse at the United Nations Climate Change Conference (COP17). On the eve of the Durban talks, the markets crashed to their lowest ever level, with a massive oversupply of emissions allowances exacerbated by a worsening financial crisis in Europe, which drives the majority of the global trade in carbon. Alongside this decline in prices, investor interest had also dried up in the Clean Development Mechanism (CDM), the main UN-administered carbon offsetting scheme. In 2011 it was reported that the number of credits generated by new CDM projects had declined for a fourth successive year, with the scheme shrinking to levels not seen since the Kyoto Protocol came into force in 2005 (World Bank, 2011: 9).

At COP17 itself, however, the fact that carbon had slipped to the status of the 'world's worst performing commodity' did little to deter policy-makers from deciding on various ways to further expand the carbon market (Wynn and Chestney, 2011). This paper sets out the context for these decisions and their likely impact, and is arranged in five parts.

First, it offers a brief account of the record of the CDM to date, finding that it has exacerbated inequalities in how the responsibility for addressing greenhouse gases are distributed globally while at the same time failing to reduce emissions. Second, it surveys the outcomes of COP17 in relation to existing carbon markets. The decision to keep the Kyoto Protocol alive, but in a zombie-like existence without confirmed emissions reductions targets, means that the CDM can continue. It also opened the possibility for expanding that scheme, notably through an agreement to make Carbon Capture and Storage (CCS) projects eligible for offset credits.

Progress on the creation of 'new market-based mechanisms' in Durban is of potentially greater long-term significance and forms the basis of the third section of this paper. It outlines plans for the creation of a new mechanism under the UNFCCC, which would allow for the continuation of the markets even if (as most industrialised countries are demanding) the Kyoto Protocol is formally superseded by any agreement resulting from the Durban Platform for Enhanced Action, the new round of negotiations for a post-2020 treaty that was the major outcome of COP17 (UNFCCC, 2011a). If Japan, New Zealand and the USA get their way, this new mechanism would be joined by a series of bilaterally agreed carbon markets whose existence and rules (except for reporting purposes) are unchecked by the UN process. In short, the Durban agreements offer two clear paths to how the architecture of international carbon markets is likely to be redrawn in the coming years.

Fourth, the paper looks at projections on the supply of and demand for emissions allowances from existing and planned carbon market mechanisms. The evidence clearly shows that there is an oversupply of emissions allowances and that measures to expand carbon markets would worsen this problem – keeping carbon prices low for the medium to long term and so undermining the purported rationale of the scheme.

In the fifth and final section, an analysis is offered of the apparent disjunction between the Durban outcomes and the collapsing carbon market. It argues that the development of 'new market mechanisms' remains locked into international negotiations by a mix of interest, ideology and institutional inertia. The emergence of bilateral market mechanisms is also shown to be consistent with broader attempts to redefine the international climate regime away from globally binding targets and towards a voluntary 'pledge and review' system.

# The CDM in perspective: unequal and ineffective

The Durban conference was billed as make or break time for the Kyoto Protocol, currently the only legally-binding international treaty on greenhouse gas emissions. That treaty, signed in 1997, set reduction targets for industrialised countries, while at the same time creating carbon markets that offered these countries an escape hatch from domestic action to reduce emissions through the creation of a system of carbon offsetting (principally through the CDM). This arrangement places inequality at the heart of the international climate regime, since it allows industrialised countries to avoid making their fair share of emissions reductions.

There are two further, damaging distributional effects. First, the CDM is designed to make the cheapest cuts in emissions first, rather than those that are most socially just or environmentally effective. This has led to a series of well documented inequalities and, in some cases, human rights abuses. 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 (Neslen, 2011). These concerns were brought to the CDM Executive Board, which decides on whether to register projects, but no action was taken on the grounds that the issues had not been raised by the time of the 'stakeholder consultation',

which took place three years before the 'Aguan Biogas' project was eventually registered. With such weak and poorly applied rules, it is perhaps unsurprising that no project has ever been rejected on the grounds of human rights violations.

Second, the global distribution of offset projects under the CDM is highly skewed towards more industrialised developing countries. As of October 2011, 45 per cent of projects (generating 57 per cent of credits) were in China, compared to 0.9 per cent of projects (and 0.005 per cent of credits issued) in sub-Saharan Africa (excluding South Africa) (UNEP Risoe, 2011). The imbalances are mainly explained by economies of scale favouring large industries and power stations and the fact that poorer countries already tend to have low emissions levels, and are a problem inherent to leaving the market to decide the priorities and direction of climate financing.

The record of the CDM in terms of its effect on greenhouse gas emissions is similarly woeful. Offsetting via the CDM was designed to offer industrialised countries (and companies based in them) greater flexibility in meeting their new commitments, while theoretically keeping the same net benefit. As the World Bank puts it, 'greenhouse gases mix uniformly in the atmosphere, which makes it possible to reduce carbon emissions at any point on Earth and have the same effect' (World Bank, 2005: 5). An emissions reduction in one place came to be viewed as 'equivalent' to, and thus exchangeable with, a cut or a compensatory measure elsewhere.

As should be clear from this description, the system of offsetting does not actually reduce emissions, but merely moves reductions to where it is cheapest to make them, which normally means a shift from Northern to Southern countries. But even the accounting firms, financial analysts, brokers and carbon consultants involved in devising these projects often admit privately that no ways exist to demonstrate that it is carbon finance that makes the project possible (Lohmann, 2005). Researcher Dan Welch sums up the difficulty: 'Offsets are an imaginary commodity created by deducting what you hope happens from what you guess would have happened' (Welch, 2007).

Since carbon offsets replace a requirement to verify emissions reductions in one location with a set of stories about what would have happened in an imagined future elsewhere, the net result tends to be an increase in greenhouse gas emissions. It has been shown, for example, that projects claiming to destroy refrigerant gases (HFC-23) have actually encouraged more of these gases to be produced, only to then destroy them again and accrue the profit from the surplus credits (Schneider, 2011). HFC-23 projects 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' (US Consulate Mumbai, 2008). 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).

The CDM has also been accused of locking in fossil fuel dependency, with a large and growing number of offset credits being granted for building coal-fired power stations on

the grounds that these would pollute at a slightly slower rate than those they are replacing. For example, just five 'supercritical' coal plants registered under the CDM could receive over seven times the number of credits issued across the whole of Africa (based on October 2011 figures). Coal mines, oil fields and refineries, Liquified Natural Gas (LNG) production and gas power stations are also major beneficiaries of a scheme that locks in fossil-fuel dependency.

# From Kyoto to Durban: Killing the targets, expanding the markets

The failings of the CDM are now widely acknowledged, but there was little formal recognition of this fact in Durban. A 'Policy Dialogue' was launched, whose terms of reference notes that 'Criticisms of the CDM are prevalent, including allegations that some projects lack environmental integrity or, in extreme cases, have been the scene of environmental and human rights abuses' (UNFCCC, 2011b). But the composition of the panel is heavily stacked in favour of supporters of the scheme (UNFCCC, 2011c), while the agreements taken in Durban further entrench the carbon market system that Kyoto unleashed.

At the core of the Durban debate lay a struggle about power and equity: who should take on responsibility for reducing greenhouse gas emissions and can states be held to account if they backtrack on their commitments? These were far from abstract considerations: the USA wrote carbon markets into the 1997 Kyoto Protocol but then famously failed to ratify that treaty (Gilbertson and Reyes, 2009). In Durban, it was followed down this path by Canada, which was certain to miss its Kyoto targets and formally withdrew from the treaty following COP17, as well as Japan and Russia, which have clearly stated that they will not lodge new commitments under the Protocol after its first commitment period ends in 2012 (UNFCCC, 2011a: 6). These countries came to Durban to 'kill Kyoto', their aim being to replace the regime of internationally-binding emissions reductions targets with a set of voluntary pledges, while at the same time keeping hold of the carbon markets.

Although Kyoto did not die in Durban, an agreement was made that reduces the Protocol to a zombie-like state. The current industrialised country reduction targets expire in 2012, with no guarantee that new targets will be legally adopted at the subsequent COP in Qatar (Horner, 2011). The Durban agreements kept Kyoto's carbon trading mechanisms alive — a 'remarkable and unexpectedly positive outcome' according to lobbyists from the International Emissions Trading Association (IETA, 2011) — although they did little to revive the ailing markets themselves, which crashed to their lowest ever levels at the start of the talks and look likely to remain on life support as the next phase of the financial crisis unfolds.

At the same time, the Durban deal drove more nails into the coffin of binding emissions targets. There remain at least five degrees of legal separation between the reduction pledges 'taken note' of in Durban and industrialised countries honouring their treaty obligations to lodge new reduction targets by the end of 2012. New Zealand and Australia have attached significant conditions to their adopting new reduction

commitments and were at the forefront of pushing new loopholes on how land-use, land-use change and forestry (LULUCF) are accounted for. Despite pulling out of the Kyoto Protocol, Russia insisted on keeping hold of its additional assigned amount units (AAUs), the massive surplus of 'hot air' emissions units (as they became known) resulting from the fact that 1990 is taken as the baseline for Kyoto calculations, and does not factor in the reductions that were locked in by the industrial collapse in former Soviet countries in the 1990s. The European Union (represented by Poland, which held the bloc's rotating Presidency) also lobbied to preserve the surplus AAUs as part of any future agreement (Kartha, 2011). The scale of these loopholes is such that they could negate all current industrialised country pledges and allow them to continue with business-as-usual (Kollmuss, 2011).

# Carbon capture and storage in CDM

In addition to the loopholes in overall emissions accounting, the Durban conference agreed to make 'carbon dioxide capture and storage in geological formations' eligible as a basis for CDM projects, confirming a provisional decision made at COP16 in 2010 (UNFCCC, 2011d). The early adoption of carbon capture and storage (CCS) is likely to include subsidising 'enhanced oil recovery', a technique to extract more oil from fields reaching the end of their lifespan on which much of the technology underlying CCS is based. Indeed, a project in Abu Dhabi that could be the first to seek CDM registration would operate in precisely this way (Point Carbon, 2012a). The project would claim 'reductions' of emissions of up to 800,000 tonnes of CO<sub>2</sub> per year from an Emirates steel plant, with the captured gases pumped 50 km to increase production at the Abu Dhabi National Oil Company's Rumaitha oilfield. But the far larger volume of CO<sub>2</sub> released into the atmosphere through the extraction and burning of more oil would not be factored into the project's calculations. As has been seen with other CDM methodologies, the 'lock in' effect of subsidising a fossil-fuel-based energy model is not considered relevant to how offset 'reductions' are calculated.

Assessments vary as to the impact of the inclusion of CCS in the CDM. An International Energy Agency report found that 'Widespread uptake of just the short-term CCS opportunities could more than double the current CDM portfolio... [and] could in theory dominate the CDM portfolio in the long-term', causing prices to collapse as the market is flooded with credits (Philibert et al., 2007). Other studies have suggested that CCS could amount to between four and 19 per cent of the supply of CDM offset credits by 2020, which would still exacerbate the oversupply problem (Bakker et al., 2011: 30).

The Cancún decision catalogued a series of risks posed by CCS: including concerns that CO<sub>2</sub> storage is not permanent and could leak from underground geological formations; public health risks posed by CO<sub>2</sub> storage; water contamination and other local environmental threats; the need for 'adequate provision for restoration of damaged ecosystems and full compensation for affected communities in the event of a release of carbon dioxide'; and the question of legal liabilities in the case of leaks or 'damage to the environment, property or public health' (UNFCCC, 2010). Most of these concerns remain unaddressed, although the legal liability question was resolved in favour of making the 'host Party' responsible (UNFCCC, 2011d: 6).

## **New Market Mechanisms**

While keeping the CDM alive, COP17 also discussed a series of 'new market mechanisms'. Although these were not established in Durban, the deal paved a legal path for two parallel developments. A new marked-based mechanism was 'defined' under the United Nations Framework Convention on Climate Change (UNFCCC, 2011e). This terminology is a legal compromise lacking the legal force to 'establish' the new market, but it is worth noting that article 12 of the Kyoto Protocol used the same phrasing to call the CDM into existence (UNFCCC, 1997). The European Commission is the main proponent of this new mechanism.

At the same time, Japan, New Zealand, Australia and the US want to see offset credits generated from markets outside the UNFCCC eligible toward their mitigation commitments. This is a bit like 'pledge and review' – countries would define their own markets, offset rules and accounting mechanisms and then simply report these, rather than operating in accordance with mechanisms defined by the UNFCCC.

## Sectoral crediting and related approaches

The new mechanism under the Convention is most likely to take the form of sectoral crediting, sectoral trading, NAMA crediting or some combination of all three. Sectoral crediting would issue 'credits' for reductions in pollution relative to a projected baseline after an agreed time period. This baseline (sometimes referred to as a 'crediting threshold') is expected to be considerably below the claimed 'business as usual' emissions scenario. If this target is not met, no credits are issued but no penalty is incurred – as a result, it is sometimes called a 'no lose' target. Sectoral crediting is similar to the CDM, but applied to whole economic sectors rather than on a project-by-project basis.

Sectoral trading would issue 'permits' relative to a binding emissions target set in advance. It is likely to involve a country-level target, in relation to which installations (eg. steel plants) will each receive an allocation. These targets are mandatory. If an installation misses its target, it would have to purchase extra permits from other companies within the scheme or from abroad. Sectoral trading is very similar to the European Union Emissions Trading System (EU ETS), although it would most likely apply to fewer sectors at the outset.

Although the precise list of sectors is not yet fixed, scoping studies by intergovernmental agencies (eg. OECD and IEA) and by Parties generally mention manufacturing sectors exposed to international competition – including steel, cement and lime, pulp and paper, aluminium and 'upstream' oil- and gas-production emissions (eg. from gas venting and flaring) – as well as the power sector. Such mechanisms may also include economic sub-sectors, such as public transport.

The EU has been the leading proponent of sectoral crediting and sectoral trading. It argues that these would amount to a decisive move 'beyond offsetting' and presents them as a means to improve environmental integrity: whereas offsets simply move claimed reductions from rich industrialised countries to developing countries, the new

mechanisms would require developing countries to significantly alter their emissions trajectory before any credits are issued (Hungary and the European Commission, 2011: 54; Lazarowicz, 2009: 61). This would push an additional burden of responsibility onto developing countries, however. At the same time, the overall scale of offsetting would increase, since the new mechanisms would apply more broadly.

NAMA crediting is an approach that envisages some proportion of Nationally Appropriate Mitigation Actions (NAMAs) to be supported by the sale of carbon credits. These proposals are very similar to sectoral crediting, with countries receiving or issuing credits for emissions reductions considerably below a 'business as usual' scenario. It would cover some or all elements coved by a developing country NAMA, although it may use standardised assumptions to approximate the impact of particular policies, rather than attempting to measure emissions on a sectoral basis. South Korea has been the leading proponent of this approach.

#### The rise of bilateral markets

In parallel to the development of a new mechanism, a work programme was agreed in Durban to discuss the means by which bilateral or unilateral market mechanisms could be counted towards emissions reduction targets under a new post-2020 climate regime. This system would allow countries to 'design, establish and implement' their own trading schemes and count the results towards global targets as long as a few common principles or accounting norms were adhered to (Government of Japan, 2011). This forms part of a broader 'regime change' agenda in international climate negotiations, seeking to downgrade the role of the UN process in decision making and offering a far more decentralised governance structure.

Japan has already created a 'bilateral offset' scheme, with a 130 billion yen (\$1.7 billion) fund to promote Japanese technology exports in return for voluntary carbon credits that Japan would purchase (Young, 2011). Its initial projects are expected to include coal and nuclear power plants in Indonesia and Vietnam and a carbon capture and storage project in Indonesia – at odds with the CDM, which currently excludes both. Japan has already conducted feasibility studies for bilateral crediting in Thailand, Laos and Indonesia and it launched a tender process for bilateral offset projects in April 2011 (De Septibus and Tuerk, 2011: 16).

A proposed carbon trading scheme in California, USA, would also accept bilaterally defined credits. The Californian cap and trade scheme would allow up to 8 per cent of allowances for compliance with its target to come from offsets, but specifies that these must be issued and/or verified by the California Air Resources Board (De Septibus and Tuerk, 2011: 18).

## Reducing Emissions from Deforestation and forest Degradation (REDD)

Many of the same dynamics underpinning the debate on 'new market mechanisms' could be found in discussions on REDD in Durban. Although the conference did not formally resolve key financing questions, 'Intense and controversial discussions were had over the role of carbon trading versus non-market approaches to financing REDD; the potential use of offsets; and the need to further explore the impacts of different

finance sources and consider performance metrics beyond carbon' (Dooley and Horner, 2012: 2). Late in the conference, Australia (backed by Japan, Norway and the US) even attempted to insert text into the Durban agreements that would allow REDD+ offsets for national mitigation commitments to be developed outside the UNFCCC – although this was rebuffed (Dooley and Horner, 2012: 2). REDD+ schemes nevertheless continue to be conceived of as the basis for a forest carbon market, as they have been from the outset (Heal and Conrad, 2005).

# Scaling up the oversupply of emission allowances

The common denominator of all of the carbon market measures announced at Durban was the continued expansion of trading mechanisms – an apparently surprising move in the context of a collapsing market. Various rationales have been offered for this 'scaling up'. In February 2011, a UNFCCC Secretariat summary on new market mechanisms suggested that the key point was 'to broaden the scope of mitigation' (UNFCCC, 2011a: 7). In the context of this debate, it is frequently claimed that the Kyoto Protocol's flexible mechanisms, most notably the CDM, are unable to achieve the levels of emissions reductions needed to stop runaway climate change.

This is undoubtedly the case, although not necessarily for the reasons put forward by proponents of expanding carbon markets. For example, Richard Baron of the International Energy Agency (IEA) points out that the CDM encompasses fewer than 1.5 gigatonnes of carbon dioxide (GtCO<sub>2</sub>) (and claims it will enable 400–600 megatonnes of CO<sub>2</sub> 'reductions') produced in the electricity sector in developing countries, out of a total of 60 GtCO<sub>2</sub> that the sector will produce in the 2000–2012 period that he analyses. Electricity generation alone has seen an 8 percent annual increase in CO<sub>2</sub> emissions. On this basis, Baron concludes that the CDM is 'structurally unlikely to deliver needed mitigation' and that new mechanisms are therefore required (Baron, 2010).

Fundamental questions of equity are overlooked here. While the rise in emissions in developing countries is noted as a potentially alarming trend by the IEA, the historical and present emissions of industrialised countries are not addressed. In detaching emissions trajectories from a broader view of global emissions, the implication is clearly made that climate mitigation actions should be targeted on developing countries. This fails to deal with the underlying structural factors contributing to an increase in emissions in these countries – which include export-led development models that have seen a significant proportion of emissions rise as a reflection of outsourced emissions from Annex I countries (Peters et al., 2011).

The distribution of responsibility for climate action is directly tied to the context in which new market mechanisms are being proposed. 'Scaling up' markets in developing countries is conceived as a means to draw non-Annex I countries into engaging in more widespread mitigation actions. Such proposals assume a 'high-ambition' world in which industrialised countries take bold actions to cut their emissions domestically. Yet, Durban failed to offer anything new in the way of mitigation targets, with the final agreement merely seeking to 'clarify' pledges made at COP16 in Cancún. However, a

report by the United Nations Environment Programme found that there is a 'gigatonne gap' of 6 to 11 Gt CO<sub>2</sub> between these pledges and what is needed to keep global warming below 2 degrees, a temperature target which itself is now widely considered to be insufficient (UNEP, 2010).

Scaled up carbon markets are also proposed with the aim of pushing an increasing proportion of climate financing through the carbon market. Such a conclusion was, for example, reached by the UNFCCC Secretariat when looking at the 'investment and financial flows' associated with climate change mitigation. In 2007, it estimated that \$90–100 billion per year would need to be invested in developing countries by 2030 (UNFCCC, 2007). The value of the carbon market accounts for only a fraction of that figure, on which basis the report concluded that it 'would have to be significantly expanded to address needs for additional investment and financial flows' (UNFCCC, 2007: 6).

In the current context of collapsing carbon prices, however, it is hard to avoid the conclusion that expanding the market – including through the creation of new market mechanisms – would simply exacerbate the problem of an overproduction of emissions allowances. As the IEA pointed out in January 2010,

Current estimates show that the supply of credits through scaled-up market mechanisms could be significantly larger than demand... Some observers point to the risk of market flooding, resulting in lower carbon prices and slower mitigation efforts in Annex I countries. (Aasrud et al., 2010: 118)

These risks continue to increase. In the immediate aftermath of the Copenhagen conference (COP15), Bloomberg New Energy Finance, a major carbon market consultancy, estimated that demand for international offsets would reach 4,280 MtCO<sub>2</sub> over the eight-year period from 2012 to 2019, equivalent to an average of 530 MtCO<sub>2</sub> per year (Turner, 2010: 96). By way of comparison, Bloomberg estimated the supply of international offsets from existing CDM and Joint Implementation (JI) schemes ranges from 2,480 MtCO<sub>2</sub> (310 Mt/yr) to 4,460 MtCO<sub>2</sub> (560 Mt/yr).

Fast forward eighteen months and the estimated demand for carbon credits has fallen even further. The World Bank's *State and Trends of the Carbon Market 2011* estimates a demand of between 2,920 MtCO<sub>2</sub> and 3,910 MtCO<sub>2</sub> of offset credits for the 2013 to 2020 period (World Bank, 2011: 63, 66). The higher end of this spectrum assumes an upward adjustment of the EU's emissions reduction target from 20 to 30 per cent (compared to 1990 levels) and that none of the large surplus of 'hot air' AAUs will be rolled over for use in the post-2012 period – a scenario that the Durban agreements have made less likely. The Bank's figures, moreover, reflect a 'maximum theoretical demand' (World Bank, 2011: 66).

By comparison, the World Bank estimates that 2,500 MtCO<sub>2</sub> offsets will be generated, with 50 to 70 percent of these coming from CDM projects registered before 2012 (World Bank, 2011: 67). The reduction in the projected supply of credits factors in the impact of new restrictions imposed by the EU in the third phase of its ETS, which begins in 2013. The EU ETS will restrict the use of CDM credits to those issued by projects registered prior to 2013, with the exception of projects undertaken in Least

Developed Countries (LDCs). It will also disallow the use of credits from hydrofluorocarbon (HFC) and nitrous oxide (N<sub>2</sub>O) industrial gas projects, which account for 67 per cent of the total issued to date (World Bank, 2011: 48). This reflects the stated strategy of the EU for the future of the global carbon market: restricting the CDM to LDCs and developing new market mechanisms in its place to draw middle-income countries into cap and trade schemes related to binding emissions targets. With 97 percent of demand for carbon credits primarily driven by its ETS, the EU can, to a significant extent, force through its position on the future of carbon markets by means of domestic rule changes, irrespective of international climate negotiations (World Bank, 2011: 9).

Comparing these supply-and-demand projections shows that even with the EU's rule changes factored in, the World Bank's 'optimistic' estimate still leaves just 400–1,400 MtCO<sub>2</sub> of demand that is unmet by the existing CDM in the 2013 to 2020 period – at the low end, just 50 MtCO<sub>2</sub> per year. By way of comparison, the emissions from the largest single power plant within the EU ETS (Elektrownia Bełchatów in Poland) are currently almost 90 MtCO<sub>2</sub>e per year (European Commission, 2011).

New market mechanisms could lock in a surplus of permits in the longer term. Although the World Bank does not estimate their scale, an IEA/OECD study estimates that sectoral crediting in the power sector alone could amount to 465 MtCO<sub>2</sub> annually (Baron et al., 2009b: 16). Other studies cited by the IEA and OECD project a potential supply of 110–560 MtCO<sub>2</sub> annually for a multi-country power sector scheme including China, India, South Africa, South Korea, Mexico, Indonesia and Thailand; 154–767 MtCO<sub>2</sub> annually if it were to cover only the power sector in China; an additional 460–720 MtCO<sub>2</sub> annually if the cement sector in China, Mexico and Brazil were to fall under a sectoral crediting scheme; and 1 GtCO<sub>2</sub> if the iron and steel sectors in non-Annex I countries were to do likewise (Baron et al., 2009b: 16).

Serious questions therefore need to be raised about the potential demand for the credits generated by new and scaled-up market mechanisms. Without additional restrictions on the use of carbon credits, it is likely that the creation of new market mechanisms would create a surplus of credits that could reinforce the collapse in the price of carbon – further undermining the purported rationale of the scheme.

## The Carbon Market zombies stumble on

New market-based mechanisms and an expanded CDM are presented as a means to 'scale up' mitigation actions in the global South. However, increasing the size of carbon markets is not the same as reducing emissions. The evidence of the CDM to date suggests that offsetting *increases* rather than reduces greenhouse gas emissions. New mechanisms risk 'scaling up' these failings, while the growth of bilateralism brings new challenges.

The introduction of new markets in the context of declining global trade in carbon throws this into sharp focus. If new mechanisms start delivering 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.

Another effect of scaling up new market mechanisms, however, is to help industrialized country governments and corporations to delay meaningful domestic action to reduce their greenhouse gas emissions. This is consistent with the corporate competitiveness concerns that guide much of the climate policy pursued by industrialised countries. A by-product of this policy approach is to shift environmental and fiscal responsibility for tackling climate change towards middle-income countries in particular and countries in the global South more generally.

The markets themselves seem rather less keen than governments on these new initiatives, however. With EU economies slipping into a potentially deeper financial crisis exacerbated by austerity measures, production is expected to flat-line — reducing demand for permits and credits from the utilities and industrial producers covered by the ETS. These 'compliance' buyers already hold a significant surplus of permits, which a leaked European Commission report suggests could reach up to 2.4 billion between 2013 and 2020 (Point Carbon, 2012b). At the same time, EU measures to limit industrial offset credits after April 2013 have led to their dumping onto the international market, precipitating a price collapse (Wynn and Chestney, 2011). As we have shown, the overproduction of emissions allowances looks likely to remain a problem, further undermining the environmental integrity of the scheme and begging the question: why are governments and international financial institutions still pushing for new markets?

Part of the answer rests with institutional inertia — 'new market mechanisms' were initially tabled when the USA was planning a federal cap and trade market, which could have led to an almost tenfold increase in demand compared to the EU ETS. The delays and downscaling of expectations for cap and trade schemes in other industrialised countries are, in part, a response to the failure of legislation on climate change in the U.S. Whereas carbon markets emerged as a 'plan B' for governments and corporations looking to avoid restructuring their power production or industrial base, the 'plan A' of not legislating on climate change at all has also regained ground (driven on by a climate-sceptic Right in the USA, Australia, Canada and Japan, in particular).

The push for a new carbon market mechanism under the Convention, by contrast, is being driven by the EU. It is worth noting that the negotiating agenda on new market mechanisms is largely controlled by DG Climate Action, whose lead officials and official negotiators made their careers off the back of promoting the EU ETS – and who are unlikely to easily give up on the idea.<sup>1</sup>

The ideological commitment to carbon markets also retains a strong grip. Against a growing body of evidence, the proponents of trading continue to present it as the theoretically optimum means to put a price on carbon and to suggest that such pricing

<sup>1</sup> DG Climate Action Director-General Jos Delbeke; Head of Policy Coordination Peter Zapfel; and Commissioner Hedegaard's Chef de Cabinet Peter Vis were key figures in the 'policy network' that promoted the creation of the EU ETS (Braun, 2009).

**ephemera 12(1/2): 19-32** notes

should be central to action on climate change. This is sometimes allied to the view that new programmatic and sectoral carbon market instruments will serve as 'stepping stones' to a global cap and trade system (European Commission, 2010; Lazarowicz, 2009).

The less rosy-eyed among them may realise that such a system would entail a patchwork of rules, triggering a race to the bottom in terms of environmental safeguards – although if they do, they are not yet saying so. In fact, Durban saw a renewed push for the extension of existing carbon markets alongside an increased emphasis on the private sector in climate finance. This must be seen in the context of a broader expansion from 'carbon' towards broader biodiversity markets, which may continue through to the Rio+20 summit in June 2012.

A final piece of the explanatory jigsaw relates to efforts to expand international carbon markets outside of the UNFCCC framework, which should be seen within the broader framework of attempts to reduce the international climate regime to a mere 'reporting' of targets which are based on unilateral or bilaterally entered commitments, rather than multilateral agreements. Although this strips the system of the logic of emissions reductions that was used to insert flexible mechanisms into the Kyoto Protocol, it offers a means for the carbon market zombie to stumble on.

#### references

- Aasrud, A., R. Baron, B. Buchner and J. Ellis (2010) 'Scaled-up market mechanisms: What is needed to move forward?', in A. Kramer (ed.) *Greenhouse gas market report 2010. Post Copenhagen and climate policy: Where global emissions trading goes from here.* Geneva: IETA.
- Bakker, S., T. Mikunda and R. Rivera Tinoco (2011) 'Potential impacts of CCS on the CDM', *CATO-2* [http://www.co2-cato.nl/cato-download/2013/20110420\_110421\_CATO2-WP2\_3-D01-D02-v2011 02 16-Impact-of-CCS-on].
- Baron, R., B. Buchner and J. Ellis (2009) Sectoral approaches and the carbon market. Paris: IEA/OECD.
- Baron, R. (2010) 'Proposals for sectoral crediting, sectoral trading and national appropriate mitigations actions in international negotiations', EPRI Greenhouse Gas Emissions Offset Policy Dialogue Workshop 7: Sectoral and International Crediting Mechanisms, Washington DC, 25 February [http://www.iea.org/speech/2010/baron\_washington.pdf]
- Braun, M. (2009) 'The evolution of emissions trading in the European Union the role of policy networks, knowledge and policy entrepreneurs', *Accounting, Organizations and Society*, 34(3-4): 499–534.
- De Septibus, J., and A. Tuerk (2011) 'New Market Mechanisms post-2012: Institutional options and governance challenges when establishing a sectoral crediting mechanism', NCCR/ Swiss National Science Foundation Working Paper 2011/55.
- Dooley, K. and K. Horner (2012) 'Durban aimed to save the market, not the climate', *Forest Watch* 167 Special Report, January [http://www.fern.org/sites/fern.org/files/Durban%20update.pdf].
- European Commission (2010) 'Linking the E.U. ETS to other emissions trading systems and incentives for international credits' [http://ec.europa.eu/clima/policies/ets/linking\_en.htm].
- European Commission (2011) '2010 Compliance Data', [http://ec.europa.eu/clima/policies/ets/registries/docs/compliance\_2010\_en.xls].
- Gilbertson, T. and O. Reyes (2009) *Carbon trading: How it works and why it fails*. Uppsala: Dag Hammarskjöld Foundation.
- Government of Japan (2011) 'Submission by Japan on new market-based mechanisms to enhance the cost-effectiveness of, and to promote, mitigation actions'

- [http://unfccc.int/files/meetings/ad\_hoc\_working\_groups/lca/application/pdf/jp\_submission\_new\_mkt s.pdf].
- Heal, G. and K. Conrad (2005) 'A solution to climate change in the world's rainforests', *Financial Times*, 29 November.
- Horner, K. (2011) 'The Durban Deal An initial analysis of the outcomes' [http://www.foe.org/news/archives/2011-12-the-durban-deal---an-initial-analysis-of-the-outcome].
- Hungary and the European Commission on behalf of the European Union and its Member States (2011) 'New market-based mechanisms to enhance the cost-effectiveness of, and to promote, mitigation actions', 21 March [http://unfccc.int/resource/docs/2011/awglca14/eng/misc02.pdf].
- IETA (2011) 'The consequences of the Durban COP for the carbon market and climate finance', [http://www.ieta.org/the-consequences-of-the-durban-cop-for-the-carbon-market-and-climate-finance].
- Kartha, S. (2011) 'Q&A: Sivan Kartha on the Durban climate deal' [http://www.sei-international.org/news-archive/2207].
- Kollmuss, A. (2011) 'A new look at loopholes', *CDM Watch Policy Brief*, December [http://unfccc4.meta-fusion.com/kongresse/cop17/pdf/Briefing%20Paper%20on%20Loopholes-2-Dec-11.pdf].
- Lazarowicz, M. (2009) Global carbon trading: A framework for reducing emissions. London: The Stationary Office.
- Lohmann, L. (2005) 'Marketing and making carbon dumps: Commodification, calculation and counterfactuals in climate change mitigation', *Science as Culture* 14(3): 203-235.
- 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].
- Peters, G., J. Minx, C.L. Weber and O. Edenhofer (2011) 'Growth in emission transfers via international trade from 1990 to 2008', *Proceedings of the National Academy of Sciences* 108(21): 8903-8908.
- Philibert, C., J. Ellis and J. Podkanski (2007) 'Carbon capture and storage in the CDM' *OECD/IEA*, December [http://www.iea.org/papers/2007/CCS\_in\_CDM.pdf].
- Point Carbon (2012a) 'Masdar eyes CDM for carbon capture project' [http://www.pointcarbon.com/news/1.1725479].
- Point Carbon (2012b) 'EU draft reveals vast CO<sub>2</sub> market surplus' [http://www.commodities-now.com/commodities-now-news/environmental-markets/9708-eu-draft-reveals-vast-co2-market-surplus.html].
- Schneider, L. (2011) 'Perverse incentives under the CDM: an evaluation of HFC-23 destruction projects', *Climate Policy*, 11(2): 851-864.
- Turner, G. (2010) 'Copenhagen and the implications for supply and demand dynamics in the global carbon market', in A. Kramer (ed.) Greenhouse gas market report 2010. *Post Copenhagen and climate policy: Where global emissions trading goes from here*. Geneva: IETA.
- UNEP (2010) The emissions gap report: Are the Copenhagen Accord pledges sufficient to limit global warming to 2°C or 1.5°C? Nairobi: UNEP
- UNEP Risoe (2011) 'CDM/JI Pipeline Analysis and Database, 1 October' [http://www.cdmpipeline.org].
- UNFCCC (1997) 'Kyoto Protocol to the United Nations Framework Convention on Climate Change' [http://unfccc.int/essential background/kyoto protocol/items/1678.php].
- UNFCCC (2007) Investment and financial flows to address climate change Bonn: UNFCCC [http://unfccc.int/files/cooperation\_and\_support/financial\_mechanism/application/pdf/background\_paper.pdf].
- UNFCCC (2010) 'Carbon dioxide capture and storage in geological formations as clean development mechanism project activities' [http://unfccc.int/files/meetings/cop\_16/application/pdf/cop16\_cmp\_ccs.pdf].
- UNFCCC (2011a) 'Establishment of an ad hoc working group on the Durban platform for enhanced action, 11 December

- [http://unfccc.int/files/meetings/durban\_nov\_2011/decisions/application/pdf/cop17\_durbanplatform.p df].
- UNFCCC (2011b) 'Input to the high-level panel for the CDM policy dialogue. Background paper by the secretariat', 22 December [http://www.cdmpolicydialogue.org/background/CDM\_policy\_background.pdf#page=1].
- UNFCCC (2011c) 'CDM policy dialogue: Panel members' [http://www.cdmpolicydialogue.org/panel].
- UNFCCC (2011d) 'Modalities and procedures for carbon dioxide capture and storage in geological formations as clean development mechanism project activities' [http://unfccc.int/files/meetings/durban\_nov\_2011/decisions/application/pdf/cmp7\_carbon\_storage\_.p df]. http://www.cdmpolicydialogue.org/background/CDM\_policy\_background.pdf page=1].
- UNFCCC (2011e) 'Report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention',
  - [http://unfccc.int/files/meetings/durban\_nov\_2011/decisions/application/pdf/cop17\_lcaoutcome.pdf].
- 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].
- Welch, D. (2007) 'A buyer's guide to offsets', Ethical Consumer, May/June.
- World Bank (2005) Community development carbon fund annual report 2004. Washington: World Bank.
- World Bank (2011) State and trends of the carbon market 2011. Washington: World Bank Group.
- Wynn, G. and N. Chestney (2011) 'Carbon offsets near record low, worst performing commodity', *Reuters*, 8 August [http://www.businessgreen.com/bg/news/1935223/report-japan-promises-usd16bn-clean-tech-exports-investment].
- Young, T. (2011) 'Japan promises \$1.6bn clean tech exports investment', *Business Green*, 6 January [http://www.businessgreen.com/bg/news/1935223/report-japan-promises-usd16bn-clean-tech-exports-investment].

#### the author

Oscar Reyes is an Associate Fellow of the Institute for Policy Studies, and a freelance consultant specialising in carbon markets and climate finance. His recent work includes *Power to the people?* (on the World Bank's Clean Technology Fund) and the co-authored *Carbon Trading: How It Works And Why It Fails*. He provides research and advice on the economics and politics of climate change to various organisations, including Corporate Europe Observatory, Earthlife Africa and Friends of the Earth UK. He is also environment editor of *Red Pepper*, a magazine that he previously edited. Email: oscar@ips-dc.org

0.1