

CLIMATE FINANCE AFRICA

Briefing Paper Series

Carbon trading in Africa

The argument that carbon trading offers real benefits to the poor in Africa is simply not credible. What is puzzling is the persistence of the proponents of carbon markets, who continue to cling onto these ideas in the face of mounting evidence that carbon trading does not deliver results commensurate to the effort invested in it... Fundamental inequality is behind the climate problem, and the search for solutions must involve industrialised societies making fundamental structural changes to their lifestyles, energy practices, and their production and consumption systems.

– Dr. Yacob Mulugetta, Senior Energy & Climate Specialist, United Nations Economic Commission for Africa¹

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Brief



On the north coast of Egypt, Africa's largest fertiliser factory generates more carbon offsets than the rest of the continent combined, yielding an estimated US\$25 million profit in 2010.² These offsets were then sold to five coal-fired power stations on the Rhine, Germany's industrial heartland, helping them to avoid cutting their own pollution levels by over three million metric tons.³

The fact that such a high proportion of Africa's credits comes from one factory also tells another story. Africa is marginal to the carbon market, and the carbon market has been irrelevant to the continent's efforts to tackle climate change.

The story of the Abu Qir factory is a snapshot of how the carbon offset market under the UN's Clean Development Mechanism (CDM) has worked to date. Most credits are generated by industrial gas-reduction projects, using cheap end-of-pipe technologies that generate far more money from the sale of carbon credits than they cost to buy and run. The largest buyers of these credits, in turn, are European energy producers keen to extend the lifespan of their coal-based power plants.

The fact that such a high proportion of Africa's credits comes from one factory also tells another story. Africa is marginal to the carbon market, and the carbon market has been irrelevant to the continent's efforts to tackle climate change. This briefing looks at how this has happened, and at the potential impacts of efforts to extend the carbon market in Africa.

I. WHAT IS CARBON TRADING?

Carbon trading comes in two main varieties: 'cap and trade' and 'offsetting'. Under cap and trade schemes, governments or intergovernmental bodies set an overall legal limit on greenhouse gas (GHG) emissions in a certain time period ('a cap') and then grant industries licences to pollute ('carbon permits' or 'emissions allowances'). Companies that do not meet their cap can buy permits from others that have a surplus ('a trade'). In theory, this provides a cheap and efficient means to limit GHG reductions within an ever-tightening cap. In practice, it has rewarded major polluters with windfall profits, while undermining efforts to reduce pollution and achieve a more equitable and sustainable economy. The

European Union (EU) Emissions Trading System (ETS), created in response to the Kyoto Protocol, is the largest such scheme. It drives 97 per cent of the global trade in carbon, according to a recent World Bank survey.⁴

Offsets are created when a company supposedly removes or reduces carbon. It receives credits for this activity, which can be sold to polluters that want permission to emit more carbon. One activity is supposed to 'compensate' for the other. The CDM, created as part of the Kyoto Protocol, is the largest offsetting scheme with almost 3 400 registered projects in the global South as of September 2011, with almost the same number awaiting approval.⁵ Based on current prices and predictions, the credits generated by approved schemes will be worth between \$20 billion and \$33 billion by 2012.⁶

With carbon markets driven primarily by commercial interests, over two-thirds of these CDM credits have been awarded for simple changes to reduce HFC-23 (a refrigerant gas) and N₂O (produced when making fertilisers, synthetic fibres and explosives). The manufacturing facilities that generate these gases are not generally found in Africa, except for a handful of such facilities in South Africa and Egypt.

Outside of the UN system, there are a number of 'voluntary offset' schemes. Many of these give consumers in the global North a means to make a payment to assuage their guilt about consumption, and companies the chance to present a green face to the public.⁷ Increasingly, this 'voluntary' market is being used as a testing ground for new types of projects, particularly those involving agriculture and forests that have not yet been accepted as part of the CDM. To this end, the Voluntary Carbon Standard (a system of self-regulation initiative by the International Emissions Trading Association, the main lobby group representing carbon traders) has re-branded itself as the Verified Carbon Standard.

2. CARBON TRADING IN INTERNATIONAL CLIMATE NEGOTIATIONS

The Kyoto Protocol of 1997 was innovative for two main reasons: it saw 38 industrialised countries commit to reducing their GHG emissions by 2012 to a level 5,2 per cent lower than those of 1990; and it saw the creation of a number of 'flexible mechanisms' (most notably, the

CDM) that allowed GHG emissions to be traded between countries and companies. These two proposals were closely connected at the time of the negotiations: the US delegation put carbon trading on the table as a means to avoid having to make reductions in its emissions domestically.⁸

Although Kyoto did not die in Durban, an agreement was made that reduces the Protocol to a zombie-like state.

The US withdrew from the Kyoto Protocol altogether four years later and now, 15 years on, the system of binding emissions reductions that it established is itself under threat. A dispute about power and equity lies at the heart of the international climate debate

Who should take on responsibility for reducing GHG emissions, and can states be held to account if they backtrack on their commitments? These are far from theoretical considerations, given the US abandonment of Kyoto. At the UN Climate Change Conference (COP17) in Durban, it was followed down this path by Canada, which was certain to miss its Kyoto targets and formally withdrew from the treaty on the day following the conference, 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 2012.⁹ 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.¹⁰ 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 – 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.¹¹

Faced with such an uncertain market, the EU has guaranteed that it will continue to accept UN offset credits in its ETS until at least 2020. In international negotiations, it

is pushing for new ‘sectoral’ market mechanisms, which would gradually displace the CDM in most middle-income countries, where most projects are concentrated at present. It is also changing its ETS rules so that credits from CDM projects registered after 2013 will only be accepted if they originate in least developed countries (LDCs). The impact of this second measure is more dramatic than it sounds: up until 2020, credits from LDCs are anticipated to remain less than five per cent of the market.¹²

Also at a bilateral level, Japan has consolidated its rejection of the Kyoto Protocol in Cancún with the creation of a 130 billion yen (\$1,7 billion) fund to promote Japanese technology exports in return for voluntary carbon credits that Japan would purchase.¹³ Its initial projects 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 included these proposals in the UNFCCC negotiations on new market mechanisms, but the fund will exist irrespective of their outcome.¹⁴

It is likely that this and other systems running parallel to the CDM, including the Verified Carbon Standard (VCS) and other voluntary ‘standards’, will play an increasing role in a fragmented market.

3. DOES CARBON OFFSETTING WORK?

Carbon offsetting is often presented as reducing GHG emissions, but this is not the case. It is designed only to move reductions from one place to another – allowing companies and governments in the global North (‘Annex 1’) to buy credits from projects in the global South. In other words, offsetting is an ‘avoided responsibility mechanism’ that delays action to reduce Annex 1 emissions at source.

...five recently approved ‘supercritical’ coal plants could receive almost 70 million offset credits (potentially worth over \$900 million), over seven times the number so far issued to projects in the whole of Africa.¹⁷

A second argument raised in favour of offsetting is that it secures investments in Southern countries for the development of a cleaner energy infrastructure. This rests

on the claim that offset projects are ‘additional’ to what ‘would otherwise have happened’. Proving such claims is virtually impossible, with the CDM process encouraging technical experts ‘to undertake a relentless search for far-fetched equivalences among the most distant activities. Calculations may be devised that make diverting Nigerian methane from flaring to productive use “the same as” shutting down a Nebraska coal-fired power plant.’¹⁵ In reality, such complex processes cannot be compared and the system is easily manipulated. For example, a recently leaked US cable reported from a meeting with the Chair of the national CDM authority, as well as some of the country’s largest verifiers and project developers, that ‘all interlocutors conceded that all Indian projects fail to meet the additionality in investment criteria and none should qualify for carbon credits.’¹⁶

The CDM’s definition of ‘clean’ technology is also highly contentious, with credits going to controversial projects ranging from new coal-fired power stations to biofuel plantations. For example, five recently approved ‘super-critical’ coal plants could receive almost 70 million offset credits (potentially worth over \$900 million), over seven times the number so far issued to projects in the whole of Africa.¹⁷ These projects are not only subsidising fossil fuel dependence in the global South – with European power producers as the largest users of credits, it is likely that they will be delaying a transition away from coal power in the EU as well.

... a similar story of inefficiency can be found in the case of Sasol in South Africa, which spent just \$700 000 on the catalyst to reduce its N₂O emissions, but has already gained an estimated \$10 million in carbon credits as a result.²¹

A third argument in favour of the CDM is that it is an effective means of ‘technology transfer’. This is true to a limited extent, although plenty of devils lie in the details. In 2008, the UNFCCC attempted to measure the extent of CDM-related transfers by looking at how many companies reported ‘the use of equipment or knowledge not previously available in the host country for the CDM project’.¹⁸ Industrial gas projects came out particularly well in this study. However, it has been clearly shown that, in the case of HFC-23 destruction, a straightforward pre-existing technology was transferred in a massively inefficient manner, potentially generating €4,6 billion (\$6,3 billion) in offset credits for installing filters in 17 industrial

sites at a cost to the companies of less than €100 million (\$138 million).¹⁹ The overall result, moreover, was that the CDM created a perverse incentive to increase the production of HFC-23 in order to gain more offset credits.²⁰

Although such projects do not exist in Africa, a similar story of inefficiency can be found in the case of Sasol in South Africa, which spent just \$700 000 on the catalyst to reduce its N₂O emissions, but has already gained an estimated \$10 million in carbon credits as a result.²¹

Direct payments and/or regulations would have proven far more ‘efficient’ than offsetting these cases. In fact, there is mounting evidence that the CDM has ‘provided incentives to retard the process of creating developing countries’ policy in order to preserve credit eligibility’.²² Less regulation can mean more offset credits, which is an incentive to delay passing environmental measures.

More fundamentally, the concept of ‘technology transfer’ offers only a limited perspective on how and where technologies develop and spread, since the term ‘[carries] the connotation... of moving Northern technology into a “technology-deprived” area in the South. In practice, this typically plays out in the degradation, skewing or destruction of one set of technologies in favour of another.’²³

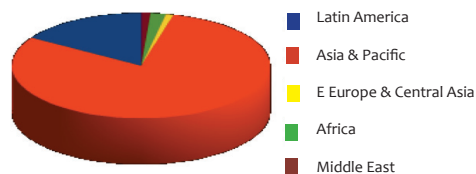
For example, a CDM ‘run of the river’ hydropower project on the Bhilangana river in India has displaced the established, low-carbon irrigation system developed by local villagers.²⁴ Even in cases where the displacement is not so stark, the import of technology by private actors has a tendency to ‘crowd out’ domestic industry development.²⁵

4. CARBON TRADING IN AFRICA: THE STORY SO FAR

The carbon markets’ prospects for Africa have long been heralded by the World Bank, amongst others, but precious little of the money arrives on the ground.²⁶ The ‘value’ of the global carbon market in 2010 was \$142 billion. The vast majority of this figure relates to financial transactions and speculation on allowances issued by the EU ETS.²⁷ By contrast, the World Bank officially claims that \$1,5 billion of this figure corresponds to the value of credits issued by CDM projects.²⁸ However, the real figure for 2010 may be closer to \$300 million.²⁹ The Bank has also

indicated that the figures for 2011 will show a further decline.³⁰

CDM projects by region



Source: CDM Pipeline September 2011

Very little of this money goes to Africa, where there are currently just 66 registered CDM projects (1,9 per cent of the global total).

Credits worth \$107 million have been issued to projects in Africa to date, with almost three-quarters of these (\$78 million) going to a single project: Abu Qir fertilizer company in Egypt.³¹

Of these CDM projects, 31 are in sub-Saharan Africa (excluding South Africa), amounting to 0,9 per cent of the total projects globally and just 0,005 per cent of credits issued to date. Credits worth \$107 million have been issued to projects in Africa to date, with almost three-quarters of these (\$78 million) going to a single project: Abu Qir fertilizer company in Egypt.³¹ Two further N₂O projects in South Africa account for most of the rest, with Sasol gaining credits worth almost \$10 million.³²

African carbon market: credits issued



Source: CDM Pipeline September 2011

Only two projects in sub-Saharan Africa (in Tanzania and Nigeria) have issued 37 000 carbon credits to date. Most of these credits have gone to a landfill gas project on the Mtoni Dumpsite in Dar Es Salaam, Tanzania (worth up to \$420 000). But the project has been beset with problems: the majority of the methane from the dump continues to pollute the local atmosphere, while the Italian company running the project has shelved any plans to generate power from the site and is attempting simply to flare (burn off) methane instead. There is also evidence

of considerable local soil contamination continuing to leach from the site.³³

Of the CDM projects already registered, but yet to issue any carbon credits, the largest projects relate to 'gas utilisation' in the Niger Delta. The first of these at Kwale, a site run by the Nigerian Agip Oil Company (a joint venture between the Italian state oil company Eni and its Nigerian counterpart), expects to receive around 15 million credits by the end of 2016. The Pan Ocean Gas Utilization Project, the second such scheme to be registered, is the largest registered CDM project in Africa. It expects to receive over 26 million credits by 2020. Shell and Chevron currently have similar projects under development.

Gas flaring in CDM

There can be few clearer examples of the perverse incentives that the CDM puts in place than those currently registered in the Niger Delta. The projects claim to stop gas flaring, yet this activity has already been judged to be illegal by the Nigerian High Court. As such, they will reward companies for their failure to abide by the law. Furthermore, while the projects claim to be tackling gas flaring, an analysis of the gases they will process suggests that the figures are being manipulated, and that the registered projects will process large quantities of liquefied natural gas (LNG) and other gases that were not associated with crude oil production in the first place.³⁴ In other words, these projects might be more accurately characterised as subsidising the expansion of fossil fuel exploitation in the Niger Delta. This, in turn, fits into a circular structure. In the case of Kwale, Eni's Nigerian subsidiary is locking in fossil fuel dependence, and gains credits for this activity, then sells these to Eni in Italy. These credits will then be surrendered within the EU ETS, enabling Eni to avoid reducing emissions from its oil refineries in Italy. The Pan Ocean project forms part of a similar fossil fuel cycle, with many of the anticipated credits already purchased by Vattenfall, one of the largest operators of coal-fired power plants in Europe.

African CDM projects in the pipeline

Looking ahead, 112 new projects in Africa are seeking approval to join the CDM, 24 of which are in South Africa, with another 16 located in Kenya. Projects related to the processing of municipal waste in landfills are set to become the most numerous – with 13 proposed projects in the pipeline, alongside 16 already registered – although the largest number of credits are likely to remain those related to oil industry gas flaring.

The waste projects mostly involve the ‘capture’ of methane from municipal solid waste. In the process, however, the CDM creates a perverse incentive for landfills to remain open – in order to burn off some of the methane, and thereby generate carbon credits. This, in turn, diverts efforts away from more sustainable policies, including the separation of organic waste to reduce the amount of methane produced in the first place, and recycling policies. The ‘baselines’ for issuing CDM credits from these projects also ignore the role played by wastepickers in creating a ‘de facto’ recycling system.³⁵ Methane capture projects enclose dumps, displacing wastepickers from their livelihoods.

Displacement and the miscalculation of baselines are also a feature of hydropower projects, another growing category within the CDM. Such projects could fall foul of the fact that sub-Saharan Africa is largely powered by hydroelectric dams already, which are considered to be zero emitting.³⁶ However, as the example of the Bujugali dam in Uganda (currently awaiting approval) makes clear, the comparisons used in calculating CDM baselines relate not to existing practice but to projections of future use. Project developers routinely maximise the projections, in order to maximise the number of available credits. In the Bujugali case, the project backers assume a scenario in which Uganda will be afflicted by load-shedding, stimulating an increase in the use of diesel generators and the burning of automotive oil.³⁷ This imaginary scenario is projected to continue indefinitely, since the project assumes a steady issuance of credits at a rate of 900 000 per year until 2019 (with the option of claiming project credits for a total of 21 years).³⁸ Needless to say, that is unlikely. The financial ‘additionality’ of the project is equally suspect, given that engineering for the controversial new dam was 91 per cent complete and procurement was 99 per cent complete at the time of its application.³⁹

Expanding agriculture and forestry offsets

Advocates for increasing the use of CDM in sub-Saharan Africa have identified agriculture and forestry as the sectors with the greatest potential.⁴⁰ To date, afforestation/ reforestation currently accounts for just 29 of the 3 395 registered projects (five in Africa), with a further 32 such projects (including 22 in Africa) under consideration. Only one agriculture project is currently seeking approval. No credits have yet been issued for any of these projects.

The definition of ‘reforestation’ can be broad. The largest of these projects, currently seeking approval in Ghana, would replace existing grasslands with large-scale biodiesel monoculture plantations. The project has been initiated by Natural African Diesel, a South African company, which expects to receive over 40 million certified emissions reductions (CERs) by 2030, and hopes that it will continue to receive credits for its plantations of jatropha and maringa at rates of two to three million per year until 2058. However, the biodiesel industry in Ghana has been widely criticised for engaging in land grabs which displace the local population, undermine food security, and fail to assess the threat that jatropha poses to water supplies.

... a series of new activities dubbed ‘forest management’ could be included beyond the one per cent limit. Under current definitions, these activities could include monoculture plantations and commercial logging.⁴¹

The slow pace in developing such projects to date is partly accounted for by the availability of cheaper options, and partly by the restrictions placed on the use of such credits. Such projects are currently only entitled to issue tCERs (the ‘t’ stands for temporary) or ICERs (‘I’ for long-term), but these have proven unpopular with carbon traders, and the prices remain low.

The UNFCCC currently caps the use of Land Use, Land Use Change and Forestry (LULUCF) credits at one per cent of base year emissions, meaning that industrialised countries face a limit on how many they can buy. The EU ETS, which drives the vast majority of the demand for offsets, currently excludes LULUCF credits altogether and intends to continue to do so (until at least 2020, the end of the ‘third phase’ of its emissions trading scheme). And, finally, such projects can only be developed on land that was not forested before in 1990. However, a series of new activities dubbed ‘forest management’ could be included beyond the one per cent limit. Under current definitions, these activities could include monoculture plantations and commercial logging.⁴¹

Beyond this, a range of agricultural activities could be included in the CDM under the rubric of ‘soil management’. This could theoretically give support for small-scale, agro-ecological farming – with simple techniques such as adding compost, manure and crop residues enriching the

fertility of the soil, increasing yields and improving the soil's capacity to store carbon.⁴² However, the costs of measuring such activities with the accuracy required to generate offset credits are likely to be prohibitive. This would leave little money in the hands of farmers, as the Kenya Agricultural Carbon Project clearly illustrates (see box), and could result in farmers losing 'autonomy and control' over farming systems.⁴³

Agricultural projects typically fetch far lower-than-average prices for offset credits – around \$4/ton. By comparison, the associated 'transaction costs' typically exceed \$1/ton.⁴⁴ As a result, the cards are stacked in favour of industrial agribusiness projects, which have better 'economies of scale'. It is noteworthy that the same or similar soil management methodologies being sold as beneficial for smallholders could also be used to increase large-scale 'biochar' projects.⁴⁵

The creation of new agricultural carbon markets will be a major focus of the World Bank in the run up to COP17, as part of its 'action programme for climate smart agriculture'. It is working closely with the South African government, which recently hosted an African Ministerial Conference on Climate-Smart Agriculture, and which hopes to launch an agricultural work programme as one of the flagship achievements of the Durban COP.⁴⁶ It is vital that this should explicitly exclude carbon markets.

Kenyan Agricultural Carbon Project

The World Bank is heavily promoting the Kenyan Agricultural Carbon Project, claiming that it offers a 'triple win' for mitigation, adaptation and food security. The aim of the project, coordinated by Swedish non-governmental organisation (NGO) Vi Agroforestry, is to provide training to local farmers in sustainable land management practices. This has been paid for by the Swedish International Development Cooperation Agency (SIDA), raising questions as to what the carbon market funding adds. Once the project has been running for some years, it hopes to generate carbon credits. The World Bank's BioCarbon Fund is contracted to buy 150 000 of these credits at a price of \$4 each, and has an option to purchase further credits at an undetermined price.

The directly funded project may bring benefits, although its introduction into the carbon market offers few benefits to the farmers, and poses significant risks. The World Bank is using the project to develop a method for counting soil carbon emissions under the un-regulated VCS. It hopes that this voluntary scheme will become the model

for credits accepted by the UNFCCC at a later date, and claims that the exclusion of agricultural soil carbon from the CDM 'constitutes a barrier for small holder farmers in Africa, and other regions, for accessing emerging carbon markets and from benefiting from significant payments for emission reductions'.⁴⁷

The World Bank anticipates that the project will generate almost \$2,5 million worth of carbon credits. Yet over \$1 million of this will go to 'transaction costs,' which include consultants' fees for devising the project, and monitoring emissions. This would leave just over \$1,4 million for the farmers, which works out at little more than \$1 per year for the 60 000 farmers involved. In other words, the revenue from carbon credits mainly pays for the counting of carbon. The credits will then be sold on to polluters in industrialised countries, helping them to carry on polluting while 'greenwashing' their image, and providing new commodities for financial speculation, but doing little to benefit the local farmers.

Reducing Emissions from Deforestation and forest Degradation

Reducing Emissions from Deforestation and Forest Degradation (REDD+) puts a cash value on forests on the assumption that this will result in their preservation and, in turn, a 'carbon saving'. Although there is continued debate on funding models in international climate negotiations, and most REDD money to date has been provided by the Norwegian sovereign wealth fund (and the aid budgets of other industrialised country governments), the 'jump-starting' of a forest carbon market is a key element in the creation of the scheme.⁴⁸ This is reflected in the design of the pilot projects already underway. For example, the Institute for Global Environmental Strategies has created a REDD+ database with details of 25 projects. Of these, 21 consider the generation of carbon credits as integral to the project financing, three are considering selling offsets at a later date if a forest carbon market emerges, and only one (directly funded by the Japanese International Cooperation Agency) had not yet considered offsetting.⁴⁹

Yet the existence of considerable forested areas – including the world's second-largest forest in the Congo Basin – does not in itself guarantee a significant flow of REDD money.

It is sometimes argued that REDD, alongside the inclusion of afforestation/reforestation of the CDM, would significantly benefit Africa on the grounds that these sectors account for 'over 60% of Africa's mitigation potential'.⁵⁰ Yet the existence of considerable forested areas – including the world's second-largest forest in the Congo Basin – does not in itself guarantee a significant flow of REDD money. Historical deforestation rates have been far higher in Brazil, Indonesia or Malaysia, which may be (perversely) rewarded by REDD for having deforested more rapidly than their African counterparts unless a 'correction factor' is built into the scheme.⁵¹ Alternatively, the 'baselines' for REDD could be set so high that payments will be triggered for increases in deforestation, as is the case with a recent agreement between Norway and Guyana.⁵²

There are serious concerns, too, about who will benefit from REDD, and at what environmental cost. With many Indigenous Peoples and forest-based communities having few formal titles to their land, REDD is likely to fuel property speculation, and dispossess local populations.⁵³ These risks are exacerbated by the inclusion of plantations in the current UNFCCC definition of what constitutes a forest.⁵⁴ Furthermore, in common with the CDM, the complex accounting procedures involved in commodifying forests tend to divert resources from forestry initiatives to carbon counting. While direct estimates for REDD are not yet available, it is reasonable to assume that this would be comparable with the CDM, where only 30 per cent of financing goes towards the project itself, with the rest absorbed by consultancy fees and taxes.⁵⁵ Finally, the combination of significant uncertainties in forest carbon accounting and weak governance structures, such as those in the Congo Basin, signals a capacity for large-scale fraud, and the siphoning off of funds by elite interests.⁵⁶

Carbon capture and storage

One final element in the expansion of carbon markets relates to an agreement at COP17 to make 'carbon dioxide capture and storage in geological formations' eligible as a basis for CDM projects, confirming a provisional decision made in Cancún in 2010.⁵⁷ This is likely to provide an additional stimulus to the oil industry, with carbon capture and storage (CCS) technology largely derived from 'enhanced oil recovery,' a technique to extract more oil from fields reaching the end of their lifespan. Indeed, a project in Abu Dhabi that could be the first to seek CDM registration would operate in precisely this way.⁵⁸ The project would claim 'reductions' of emissions of up to

800,000 tonnes of CO₂ 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 CO₂ 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.

Some of the earliest projects to claim eligibility could also be in South Africa, where Sasol is looking at the possibility for its gas-to-liquids/coal-to-liquids plants; and in Algeria, where BP, Sonatrach and Statoil run In Salah, world's largest onshore CCS demonstration project on their gas fields.⁵⁹ The project owners of the In Salah project submitted a methodology for the project to the CDM Executive Board, although the Board has not considered the project in advance of a political decision on whether to allow CCS into the CDM.⁶⁰ The In Salah project was also presented as a model for CCS in the CDM at a recent UNFCCC workshop in Abu Dhabi in September 2011.⁶¹

Assessments vary as to the impact of CCS inclusion on 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.⁶² 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.⁶³

The Cancún decision catalogued a series of risks posed by CCS: including concerns that CO₂ storage is not permanent and could leak from underground geological formations; public health risks posed by CO₂ 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'.⁶⁴ Most of these concerns remain unaddressed, although the legal liability question was resolved in favour of making the 'host Party' responsible.⁶⁵

Carbon funds and capacity building

There are numerous carbon funds and capacity-building

initiatives designed to support the development and expansion of carbon markets in Africa. The implicit analysis behind the creation of these funds is that the CDM is failing in Africa because there are too few projects, and that this can be remedied by increasing the capacity of project developers and host country governments. In fact, as we have seen, the CDM has made few inroads in Africa for more straightforward economic reasons.

Such project opportunities are relatively rare in Africa, and when they do exist they are concentrated around a few ‘hot spots’– oil extraction in the Niger Delta, plus heavy industry and the power sector in South Africa and Egypt.

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 registers significant GHG emissions. Such project opportunities are relatively rare in Africa, and when they do exist they are concentrated around a few ‘hot spots’– oil extraction in the Niger Delta, plus heavy industry and the power sector in South Africa and Egypt. These imbalances are set to continue, irrespective of the efforts of the new funds. In addition to creating regional imbalances, this tends to direct money towards industries that are among the most socially contested and damaging in terms of local environmental impacts. These same dynamics, if extended to agriculture, would also be likely to favour agribusiness over small farmers. Such funds and initiatives divert scarce public resources away from tackling climate change, and establish an offset infrastructure that contributes to delays in action by industrialised countries.

World Bank carbon funds

The World Bank Group is the largest promoter of CDM projects in Africa to date, and is involved in developing 26 of the 171 projects that are currently registered or awaiting approval. By comparison, the second-largest project developer in the continent is EcoSecurities, a subsidiary of the investment bank JP Morgan, with nine projects.⁶⁶

World Bank CDM projects in Africa

Fund	Projects
Prototype Carbon Fund	2
BioCarbon Fund	7
Community Development Carbon Fund	8
Italian Carbon Fund	2
Danish Carbon Fund	2
Spanish Carbon Fund	4
Carbon Partnership Facility	2*
Total	27

* multiple sites.

Source : World Bank Carbon Finance Unit⁶⁷

The Bank’s investments are mostly geared towards kick-starting different aspects of the carbon market on the continent. These investments are in a significant number of landfill projects, including large landfill gas-recovery and flaring projects in Egypt, South Africa and Tunisia. It is notable that these and similar projects generate credits for the European market under conditions that would be illegal under the EU’s own waste management rules.⁶⁸

The BioCarbon Fund is backing six forestry projects, which include the creation of large acacia plantations in Niger and the Democratic Republic of Congo (DRC), as well as the Kenya agricultural carbon project profiled above.⁶⁹ The Bank formally launched its ‘Next Generation BioCarbon Fund’ at COP17, which will allocate a further \$75 million to creating new soil carbon, agriculture, reforestation and REDD projects.⁷⁰

The World Bank also used the Durban climate conference to launch its Carbon Initiative for Development (CI-Dev), targeting the expansion of the carbon market in LDCs. The new Fund expects to spend \$10 million on capacity building, and a further \$50 million in providing upfront financing to get projects off the ground. It expects to raise a further \$70 million from selling carbon credits to the private sector and governments.⁷¹

The bank is diversifying away from its project-based approach towards a more programmatic approach to carbon market funding. Two of the Bank’s newer funds, the Carbon Partnership Facility (CPF) and the new Partner-

ship for Market Readiness, are supporting a ‘programmatic’ CDM proposal that will bundle together projects on 12 waste dumps and in Morocco.⁷² The CPF is also backing the development of a large new wind energy programme in Egypt. This is part of a far larger programme that aims to stimulate energy exports to the EU, which is led by the World Bank’s Clean Technology Fund (to the tune of \$150 million in loans), the European Investment Bank, and EU bilateral aid.

The World Bank’s Forest Carbon Partnership Facility has programmes planned or already underway in 15 African countries.⁷³ This capacity-building phase will be followed by larger project investments through the Bank’s Forest Investment Program (FIP), which includes three African countries (DRC, Ghana and Burkino Faso) among the eight selected for pilot programmes.⁷⁴ Donor countries have so far pledged \$578 million to the FIP, although less than \$7 million has yet been dispersed.⁷⁵

The International Finance Corporation (IFC), the private sector arm of the World Bank, also has a series of carbon market investments, most notably its €150 million (\$205 million) Post-2012 Carbon Fund, the main purpose of which appears to be to bail out the Bank’s failing carbon projects in light of falling carbon prices and uncertainty about the fate of the CDM after 2012.⁷⁶ Similar funds have been set up by the IBRD (Umbrella Carbon Fund tranche 2, €105 million),⁷⁷ and the European Investment Bank (€125 million).⁷⁸ These funds have not yet announced where they will buy credits, although it was reported in April 2011 that the IFC Fund may purchase credits from projects in Kenya.⁷⁹

African carbon funds

A similar fund, explicitly targeting investments on the continent, is the African Development Bank’s (AfDB) African Carbon Facility. It promises to buy post-2012 credits in order to ‘maintain private sector confidence’ in the ailing carbon market, as well as to provide debt financing for the development of new projects.⁸⁰

The AfDB is also offering an African Carbon Support Programme, which was launched in November 2010. This is supported by the Fund for African Private Sector Assistance, a joint initiative of Japan, Austria and the AfDB to promote private sector development. The aim is to support potential project developers throughout the whole CDM process, from formulating the original project idea through to advice on credit sales.⁸¹

The running of the programme has been outsourced to Carbon Limits, the Norwegian consultancy which developed the Pan Ocean Gas Utilization Project (see above). Its initial projects include the Olkaria Geothermal Expansion Project in Kenya, which is also backed by the World Bank’s Community Development Carbon Fund. It is also looking to develop the CDM as an additional funding source for two projects funded by the World Bank’s Clean Technology Fund: a concentrate solar power plant in Morocco, and Eskom’s wind farm project in South Africa.⁸² A further stated objective of the programme is to encourage the AfDB to consider CDM financing routinely in its project financing cycle.⁸³

The other major carbon fund targeting the continent is the African Carbon Asset Development Facility (ACAD), a joint initiative between the United Nations Environment Programme (UNEP), Standard Bank of South Africa, and the German Federal Environment Ministry. The ACAD provides technical support and small grants (around €50 000 each) for project developers, as well as training to encourage local banks and investors to engage in carbon markets.⁸⁴ It is currently working on developing 15 CDM projects.⁸⁵

UNEP is also behind a programme called CD4CDM (Capacity Development for the Clean Development Mechanism), funded by the Dutch government and the EU, which has provided technical and financial assistance in establishing CDM projects in nine African countries to date.⁸⁶ This is part of the broader ‘capacity enhancement programme’ envisaged as part of the Multilateral Environment Agreements between the EU and African, Caribbean and Pacific countries.⁸⁷

Sub-regional and bilateral funds

There are also several carbon market initiatives at a sub-regional level, although these tend to be small in scale. The Common Market for Eastern and Southern Africa (COMESA) is keen to promote the expansion of agricultural and forest carbon markets, and launched the African Bio-Carbon Initiative to further this aim in December 2008.⁸⁸ This was followed, in 2010, by the creation of a COMESA carbon fund to invest in agricultural, forestry and land-use (AFOLU) projects in the region, which is hosted by the Kenya-based Preferential Trade Area Bank, COMESA’s financial arm.⁸⁹ The COMESA official responsible for the scheme initially claimed a goal of \$1 billion in financing, although there is little sign that it has received any significant investments to date beyond the \$4 million that the Norwegian Agency for Development Coopera-

tion (NORAD) paid to start up the Fund.⁹⁰

The Southern African Development Community (SADC) has developed a regional carbon facility which has an initial focus on developing carbon offset projects from cleaner cooking stoves, with initial projects planned or underway in Mozambique, Malawi, Tanzania and Zambia. While these projects may have merits in their own right, the money that goes to rural households is likely to be minimal, while the credits will contribute to continued industrial and power sector pollution in the EU. The initial project was supported by GIZ, the German Agency for International Cooperation, although it is now run by two private carbon developers.⁹¹

Finally, a range of bilateral funding mechanisms have emerged to support the growth of the carbon market in Africa. One of the largest of these programmes is the Swedish Energy Agency's 'Institutional Support for Capacity Building Programme for CDM' programme.⁹² The programme has offered 'capacity building' for potential project owners, financial and legal institutions, and governmental agencies in Kenya, Tanzania and Uganda, and is also backing the creation of new CDM projects, which the Swedish government will then use to offset its emissions.

NORAD has run a similar capacity-building programme in Tanzania, Uganda and Angola, also aimed at stimulating new projects that can subsequently be used to offset the country's emissions.⁹³ On a much larger scale, the Norwegian government is also providing REDD funding, which includes a \$250 million Low Carbon Development Strategy in Guyana (which has continued to see deforestation increase since the project started in 2009), and an \$80 million climate and forest partnership with Tanzania.⁹⁴

5. CONCLUSION

The considerable efforts of the World Bank, regional development banks, UN agencies, sub-regional blocks and bilateral funders to expand the carbon market in Africa are misguided and destined to fail.

The CDM is not failing Africa because there is too little opportunity to create offsets, but because it is diverting scarce public resources away from directly addressing climate change, and towards projects that are often highly polluting and socially harmful. The main purpose of carbon offsets is to help industrialised countries to delay reducing emissions at source. The CDM is an avoided

responsibility mechanism, which counts claimed reductions in developing countries as equivalent to actual cuts in industrialised countries.

Although the continent may see an increase in the overall number of projects, its share of the overall market is not likely to alter significantly, and Africa will remain on the margins of the global carbon market. By 2020, the largest number of CDM credits produced across the continent will be related to extractive industries, most notably the oil sector in Nigeria. Such projects tend to lock in fossil fuel dependence rather than facilitating a transition to more sustainable development paths.

The main explanation for the carbon market's relative lack of interest in Africa is economic. The largest investors in carbon trading are financial services companies (including banks) and energy companies from the EU. These project developers look for the most profitable projects, which are invariably large-scale (because of economies of scale). To generate significant volumes of credits, a project will typically be located somewhere that high emissions are already the norm. This is not the case for most of sub-Saharan Africa, and capacity-building schemes and public-supported carbon funds are not going to change that. Regional imbalances, and a bias in favour large projects, are an inherent problem of leaving the market to decide the priorities and direction of climate financing.

This is a particular issue today, with the global carbon market facing a severe crisis. Proposed emissions trading schemes in the US, Japan, and Canada have stalled indefinitely; new markets in Australia and South Korea face significant delays; and climate justice activists have successfully blocked the start of a planned scheme in California. Trading has become ever more concentrated around the EU ETS, which could well see carbon permit prices drop to zero if the 27-country bloc adopts stricter guidelines on energy efficiency.⁹⁵ Overall carbon-trading volumes were lower in 2010 than in the previous year. 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, which is expected to see a surplus of up to 1,2 billion permits and credits carried over to its third phase, which begins in 2013.⁹⁶

Against this backdrop, the CDM continues to decline, with fewer credits purchased from new projects than at

any time since the Protocol came into force in 2005.⁹⁷ The price of credits is falling, and they are now ‘the world’s worst performing commodity’.⁹⁸ Instead of pushing for Africa’s inclusion in this failing market, policy makers and institutions should be looking to more effective and just forms of financing – whether financial transaction taxes, special drawing rights, redirecting fossil-fuel producer subsidies or taxes on aviation. To address mitigation needs, meanwhile, the first step remains the adoption of higher, binding emission targets by industrialised countries.

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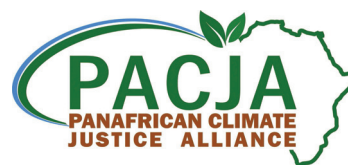
7. ABOUT THIS BRIEF

This document has been produced by Pan African Climate Justice Alliance, PACJA, in partnership with the Institute for Security Studies, ISS. This is part of a series of four policy and technical briefs for engagement by African decision makers, negotiators and civil society during COP17 and beyond. Contributors include Janet Redman, Oscar Reyes, Trusha Reddy, Mithika Mwenda, and Michele Maynard. This is a live rather than a static document. PACJA together with the ISS will therefore continue to update it accordingly. The opinions expressed do not necessarily reflect those of the ISS or PACJA. Authors contribute in their personal capacity.



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This brief was made possible through funding provided to the Institute for Security Studies by the Hanns Seidel Foundation. In addition, general Institute funding is provided by the governments of Denmark, the Netherlands, Norway and Sweden.



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This brief was made possible through funding provided to the Panafrican Climate Justice Alliance (PACJA) including:

