

The role of the World Bank in carbon finance

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Contents

Executive Summary	2
The role of the World Bank	3
Carbon funds and facilities hosted by the World Bank Group	5
Concerns about effectiveness of emission reductions	7
Concerns about development benefits	9
Conclusions and recommendations	11

Acronyms used

BIC	Bank Information Center
CDCF	Community Development Carbon Fund
CDM	Clean Development Mechanism
CER	Certified Emissions Reduction
CFU	Carbon Finance Unit
CPF	Carbon Partnership Facility
FCPF	Forest Carbon Partnership Facility
GEF	Global Environment Facility
GHG	Greenhouse Gas
IEG	Independent Evaluation Group
IFC	International Financial Corporation
IPS	Institute for Policy Studies
MIGA	Multilateral Investment Guarantee Agency
OECD	Organisation for Economic Cooperation and Development
PCF	Prototype Carbon Fund
REDD	Reducing Emissions from Deforestation and Degradation
UNFCCC	United Nations Framework Convention on Climate Change

Executive Summary

This paper outlines the World Bank's (the Bank hereafter) involvement in the carbon market and reviews concerns about its impacts on greenhouse gas emission reductions and development. First, it introduces the role and aims of the Bank's Carbon Finance Unit and the various funds and facilities that it manages. The Bank has worked to shape the carbon market by reducing risk for other investors, setting social and environmental standards, and developing new types of projects. It is now focusing on promoting national programmes, reducing emissions from deforestation, and large-scale, long-term carbon finance.

The paper then summarises the concerns that have emerged from official evaluations and scrutiny by civil society groups regarding the effectiveness of Bank carbon finance in reducing emissions and generating development benefits, adding new evidence where available.

Concerns include:

- Failure to produce expected emissions reductions;
- Finance supporting heavily polluting industries, including coal power, and as a result delaying the transition to a low-carbon economy;
- Lack of additionality in terms of finance and emission reductions;
- Conflicts between the Bank's carbon-intensive portfolio and its role in carbon finance;
- Very limited finance going to smaller, poorer countries, despite these being an express priority for the Bank;
- Evidence that purported development benefits are not integral to Bank carbon finance, despite the Bank being a development institution;
- Negative social impacts associated with Bank carbon projects and programmes, including conflicts over resource rights and sharing of benefits;
- Major shortcomings on transparency, engagement and accountability, particularly in monitoring whether commitments to community benefits are fulfilled;
- Limited effectiveness in achieving the official Bank goal of transferring and diffusing technologies to developing countries and poor communities.

The role of the World Bank

The World Bank manages 12 carbon funds and facilities, which buy carbon credits from developing and transition countries on behalf of contributing public and private sector entities in OECD countries (see figure 1).¹ So far, the Bank is working in 57 countries and has bought credits in 53 countries for 26 public sector entities (including governments) and 55 companies. It does so within the framework of the CDM or Joint Implementation (see box 1).

The Bank has aimed to act as a facilitator and catalyst for the carbon market by: demonstrating that emission reduction transactions can contribute to development; providing governments and businesses with 'an opportunity to learn by doing' in establishing policies, rules and business processes; and mobilising new public and private resources. In 2005, a revised approach at the Bank placed greater emphasis on: ensuring benefits to smaller, poorer countries; supporting energy infrastructure and technology transfer; and integrating carbon finance into mainstream Bank operations.²

The Bank now represents only a small share of the global carbon market (see figure 2), but continues to play an important role through the signals it sends to other players. These can include expanding the market by investing in riskier projects, setting social and environmental standards, and developing new types of projects. Though the future of the international carbon market is uncertain until a post-2012 global climate agreement is reached, the Bank is pushing to scale up carbon finance over the long-term. It is also eager to package carbon finance with climate finance as well as with funds from the Global Environment Facility (GEF).

Box 1

Carbon credits, CDM and Joint Implementation

A carbon credit is produced when the equivalent of one metric tonne of greenhouse gas emissions (GHGs) is prevented from entering the atmosphere via a coordinated activity, for example the construction of a wind farm or the use of clean technology in industry. This reduction is verified under the Kyoto Protocol's Clean Development Mechanism (CDM) as a Certified Emissions Reduction (CER). The credit is assigned a monetary value dependent on the type and origin of the reduction produced, the risk involved for the buyer and the prevailing market conditions. The price is negotiated between the buyer and seller of the credit.

The CDM and Joint Implementation are based on the principle that lowering GHG emissions can be done at a lower cost in developing or transition countries than in advanced economies. Emission reducing activities and projects can be financed by governments or companies buying the resulting credits, which they can use to meet part of their international obligations to reduce emissions. Host country governments must confirm that the activities will assist their sustainable development. Bank projects are also required to fit with Country Assistance Strategies, Bank documents outlining the type and extent of developmental assistance for recipient countries, which are supposed to be tailored to each country's specific circumstances.

(The system has been criticised for allowing developed countries to continue to emit high levels of GHGs).

Figure 1

The role of the World Bank in carbon finance

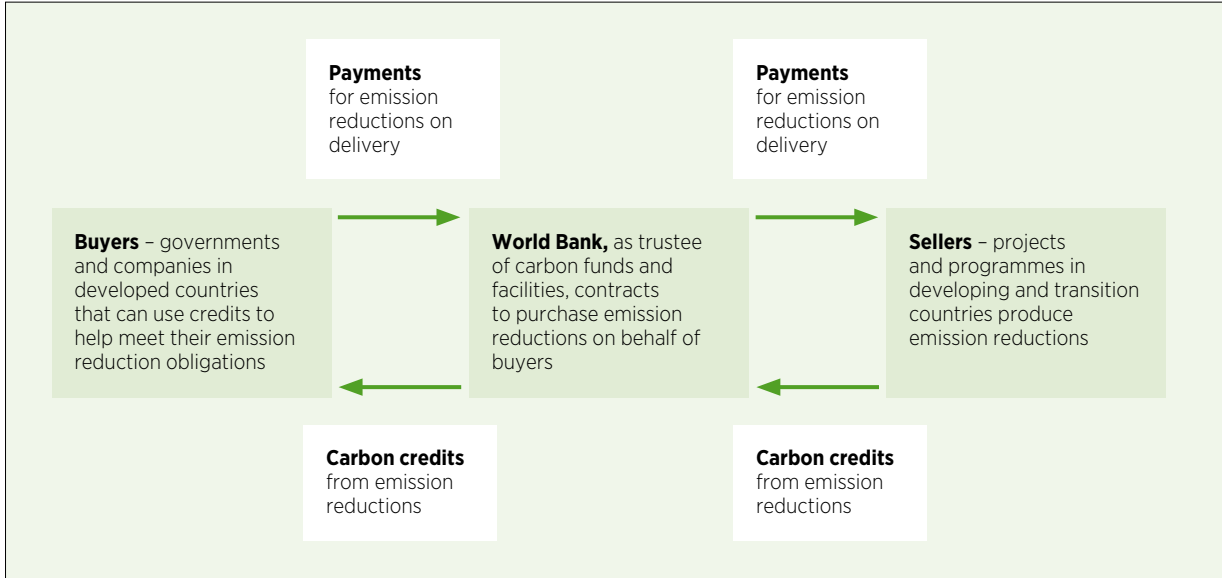
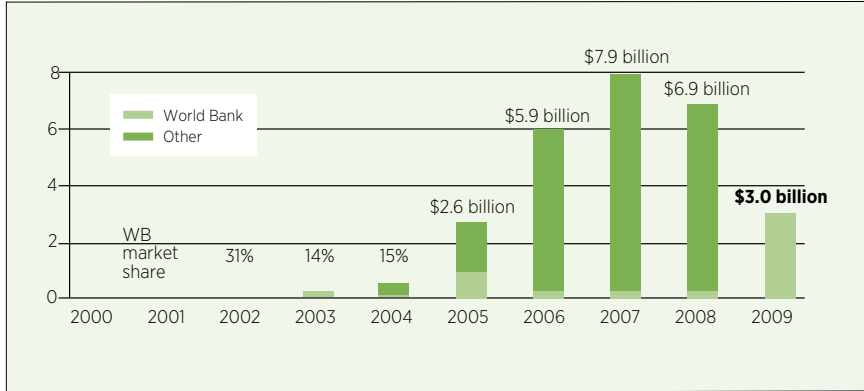


Figure 2

Value of CDM and JI transactions



Source: World Bank (2010) 10 years of experience in carbon finance, pg 11

Carbon funds and facilities hosted by the World Bank Group

By the time the Bank celebrated the tenth anniversary of its 'pioneering' **Prototype Carbon Fund (PCF)** in 2010, its carbon finance portfolio had grown to 12 funds and facilities managing \$2.4 billion, with over 200 active projects.³ **The Community Development Carbon Fund (CDCF)** was launched in 2003. Designed to promote a 'co-benefits approach' to reducing emissions, it initially aimed to finance small-scale projects that also support improvements in local infrastructure and services in the neediest communities, though large-scale projects subsequently became eligible.⁴ For CDCF projects, fund participants pay a premium to support community benefits. The fund has contracted to buy emission reductions worth \$98 million.⁵ In 2004, the Bank moved into forestry and agriculture projects by launching the **BioCarbon Fund**, which has signed emission reductions purchase agreements worth \$21 million.⁶ The CDCF and BioCarbon Fund also offer financial support for project preparation costs and technical assistance, funded by donor contributions.

The Bank is leading efforts to extend carbon finance beyond 2012. It established the **Forest Carbon Partnership Facility (FCPF)** in 2008 to finance reduced emissions from deforestation and forest degradation (REDD) at country-level, rather than just project-by-project. The FCPF comprises a Readiness Fund, to support the development of national strategies and systems, and a Carbon Fund, a public-private partnership that will buy emission reductions after its launch, planned for early 2011. As with the other carbon funds, the Bank acts as trustee, holding the funds and disbursing them according to rules prescribed by the governing Participants Committee. For the FCPF, the Bank also serves as the secretariat, applying its operational policies and making recommendations on funding objectives and criteria, and a delivery partner, providing technical support and conducting due diligence on matters such as fiduciary policies and environmental and social safeguards.

The **Carbon Partnership Facility (CPF)** was launched at the Copenhagen climate summit in 2009 and has been operational since May 2010. Like the FCPF, it is intended eventually to move beyond individual projects to finance large-scale, long-term, programmatic and sector-based approaches. It will target the power sector, energy efficiency, gas flaring, waste management systems and urban development. Subsequently, the CPF may pilot sector-based approaches and other new market instruments. It will purchase emission reductions for

at least eight years after 2012, and potentially much longer, focusing on activities that could be scaled up. Commitments had reached €100 million by May 2010 and the Bank anticipates that the CPF's capital could grow substantially as the regulatory framework for carbon markets beyond 2012 is further developed.

The FCPF and CPF are governed by equal numbers of representatives of buyers and sellers, whereas earlier funds featured only a consultative role for the latter. Country partners, usually host country governments, can participate in the CPF's governing Partnership Committee but do not have voting rights.

The Bank's other carbon finance funds have a narrower remit of serving developed countries looking to secure carbon credits to comply with their emission reduction

Box 2

CPF Buyers and Participants

- Spanish government
- Endesa (Spanish energy company)

CPF seller participants

- Municipal lenders Fonds d'équipement communal, Morocco, and Caixa Federal, Brazil, for national waste management programmes
- Vietnamese ministry of industry and trade, for national small hydropower programme
- Amman Municipality, Jordan, for city-wide approach to carbon finance

CPF host country partners

- China for a regional biogas programme
- Indonesia for a geothermal programme

(Other entities will actually sell the credits)

Donors of \$11m to preparatory CPF Carbon Asset Development Fund

- Spanish government
- Norwegian government
- Italian government
- European Commission

Source: Source: email communication with CPF, October 2010

obligations. Together their projects are worth \$5.2 billion, more than double those of the Prototype, Community Development and Bio-Carbon Funds combined.⁷ The largest in terms of capital is the **Umbrella Carbon Facility**, which comprises five of the other carbon funds and 11 private sector members, with 75 per cent of its \$800 million capital coming from the private sector. The Bank also hosts a number of funds serving carbon credit buyers in particular countries or regions (see box 3).

The International Financial Corporation (IFC), the private sector arm of the World Bank Group, manages two Dutch facilities (see box 3). It also offers a carbon delivery guarantee and advance payments for future reductions to eliminate the risk for buyers of non-delivery of carbon credits. The IFC works with financial intermediaries and municipalities to aggregate carbon credits. The Bank's Multilateral Investment Guarantee Agency (MIGA) also offers guarantees to cover political risks to investments in carbon projects.

In addition, the Bank provides technical assistance through the **CF-Assist programme**, which was established in 2005 to advise and train countries on carbon regulation

and other related issues, help to identify projects and promote investment.⁸

At the United Nations Framework Convention on Climate Change (UNFCCC) conference in Cancun in December 2010 the Bank also announced the new **Partnership for Market Readiness**, a funding partnership to help developing countries establish and participate in carbon markets in order to reach mitigation targets. The Partnership aims to not only equip countries to take part in international CDM markets, but also to use an array of different market instruments, including renewable energy and energy efficiency certification for use in voluntary markets, to help build domestic trading schemes. It also aims to act as a technical forum to help countries develop new market instruments. In order to assist countries create the right structural landscape for these initiatives, the partnership will also focus on capacity building for monitoring, reporting and verification (required under the UNFCCC), and on establishing regulatory frameworks. It is aiming for a total capitalisation of \$100 million and is expected to become operational in early 2011.

Box 3

World Bank carbon funds and facilities

Global	Country / region-specific
Prototype Carbon Fund	Carbon Fund for Europe *
Community Development Carbon Fund	Netherlands European Carbon Facility
BioCarbon Fund	Netherlands CDM Facility
Umbrella Carbon Facility	Danish Carbon Fund
Forest Carbon Partnership Facility	Italian Carbon Fund
Carbon Partnership Facility	Spanish Carbon Fund

*Partnership with European Investment Bank

Concerns about effectiveness of emission reduction

A recent review by the Bank's Independent Evaluation Group (IEG) found that projects do not reliably deliver the expected emission reductions.

Performance in reducing emissions was, on average, worse among the twelve Bank hydropower projects for which formal monitoring information is available, than among other CDM projects. Only one of six of the Bank's large hydro projects met expectations.⁹ Of the other twelve Bank carbon projects for which emission reductions have been disclosed, six produced less than 65 per cent of expected reductions (including two projects where emission reductions were below 10 per cent of the prediction).¹⁰ Civil society groups including Carbon Trade Watch have also raised concerns that full life-cycle emissions associated with carbon projects are not, or cannot, be taken into account – so emissions may rise overall. For example, biomass power projects may receive carbon finance without accounting for emissions from deforestation to establish plantations.¹¹ The Informal Working Group on Interim Finance for REDD, which is composed of nearly all REDD relevant countries, has noted that, “To be effective, the incentive structure must ... have close to global coverage – an incentive that is attractive for one country but not others is likely to lead to international leakage (simply displacing emitting activities to another country) and hence represent an ineffective use of scarce finances.”¹²

Carbon finance can also provide “perverse incentives that make fossil fuel and environmentally polluting industries even more financially competitive”, delaying the transition to a low-carbon economy.

US NGO the Institute for Policy Studies (IPS) has reported instances in which landfills with harmful local impacts were kept open in order to claim carbon credits for capturing waste gases.¹⁴ At a broader level, carbon finance can improve the efficiency and profitability of some of the most polluting industries and energy sources, such as coal power, making renewable energy less competitive in comparison. In 2008, IPS calculated that up to 85 per cent of the Bank's carbon finance (over \$1 billion) involved the coal, chemical, iron and steel industries.¹⁵ Moreover, Bangkok-based NGO Focus on the Global South points out that developing countries can be discouraged from regulating emissions as “CDM benefits are available only for emission reductions that are not legally mandated.”¹⁶

Beyond fossil fuels, Bank financing has often focussed on the biomass industry. The Lages Wood Waste Cogeneration Facility in Brazil receives funding from the PCF, and earns credits by burning wood waste to produce electricity, thus avoiding the methane emissions that would have been produced if the waste had been left to decompose. However, IPS notes that, “as with other projects involving waste from an industry that is a net emitter of carbon, these projects essentially provide a perverse incentive for the pulp and paper and timber industries to increase – not decrease – their operations and their waste.”¹⁷ At the same time the investment does not address the well established link between large tree plantations and environmental damage.

It is far from clear that the World Bank is adding value through many of its carbon finance activities.

The IEG recently reported that the Bank's Carbon Finance Unit (CFU) has failed to follow its own exit strategy of relinquishing its buyer role as the private market developed, and instead has “continued to build up its lower-risk Kyoto-oriented business after that market was already thriving.”¹⁸ To qualify for CDM credits, emission reductions must be shown to be additional to reductions that would have happened anyway, for example because of regulatory requirements. However, the IEG concluded that the late timing and small size of many of the Bank's carbon credit purchases means that they constitute only “a mild additional inducement to investors which, statistically over the set of projects involved, may have contributed to some additional reductions.”¹⁹ For example, Focus on the Global South asserts that the controversial Allain Duhangan hydropower plant in India, which was part-financed by the Italian Carbon Fund and the IFC, was “well underway with or without CDM benefits.”²⁰ The IEG recommends that Bank carbon finance “be redirected away from hydropower [which now accounts for 7 per cent of the portfolio],²¹ where it has a minimal impact on project bankability, to applications where it can have more leverage”, such as guarantees for renewable energy.²²

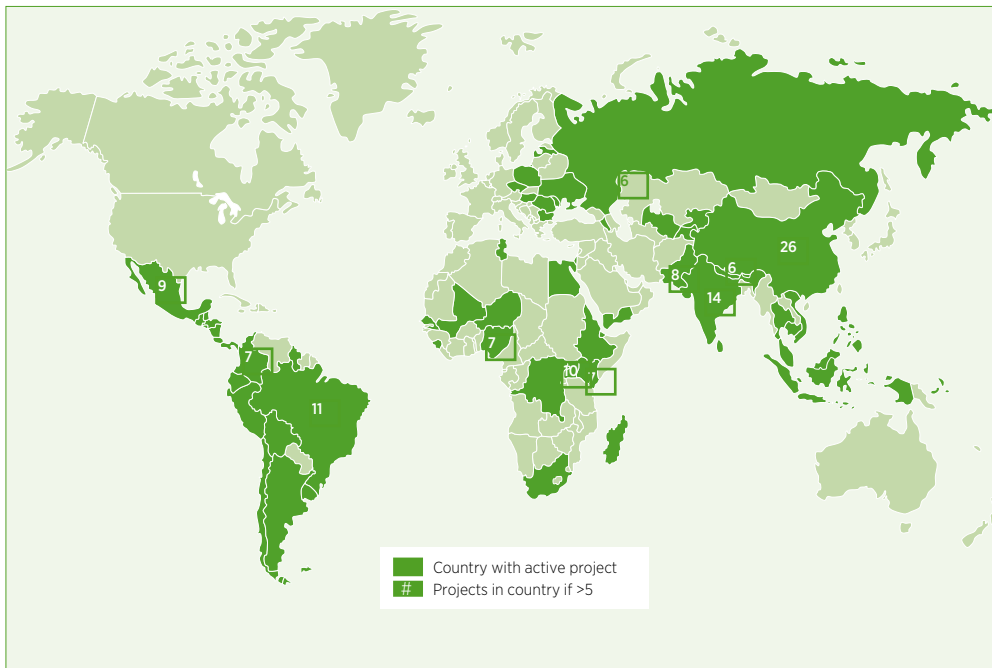
Civil society groups including the Bank Information Center (BIC), which has observer status on the FCPF Participants Committee, have called for the FCPF to “more explicitly explain how the relatively small carbon payments from [its] Carbon Fund will positively contribute to achieving the general objectives of ensuring equitable benefit sharing or promoting large-scale positive incentives for

REDD.”²³ They have also suggested that the anticipated early launch of the Carbon Fund means that “it is unlikely that countries will be prepared to implement REDD at the national level by the time they begin designing proposed emission reduction programmes”, and therefore “the Carbon Fund is likely to focus on sub-national programmes,... potentially undermining the objectives of the [FCPF’s] Readiness Fund to support the development of national... strategies.”²⁴

The carbon intensity of the Bank’s broader portfolio, and its defence of carbon finance for controversial technologies, have provoked charges of conflicting objectives. As early as 1998, the US Treasury Department noted that involvement in carbon finance would “divert needed effort from reforming the Bank’s mainstream power sector portfolio, which has a far greater potential impact on greenhouse gas emissions.”²⁵ In addition, the project overheads that the Bank earns amount to 13 per cent of the value of the transaction on average,²⁶ which

incentivises a prolonged Bank role in the market, larger projects rather than smaller initiatives that might be of greater benefit to poor communities, and resistance to ruling out controversial sources of carbon credits. For example, CPF funding could go to carbon capture and storage, which is a controversial technology and is not yet market-ready.²⁷ In addition, 57 per cent of Bank carbon finance has supported the destruction of HFC-23, a gas by-product of manufacturing refrigerant gas.²⁸ Both are powerful greenhouse gases, but HFC-23 is relatively cheap to destroy and so a highly profitable route to large volumes of carbon credits. This has led to concerns about the diversion of limited carbon finance away from transformative technologies and an investigation by the CDM executive board into claims that manufacturers increased production in order to claim carbon finance.²⁹ However, Bank staff have strongly defended these credits, insisting they are “undisputedly additional.”³⁰

Figure 3
Active World Bank carbon finance projects



Source: World Bank (2010) *10 years of experience in carbon finance*, pg 14

Concerns about development benefits

Only a very small proportion of carbon finance has gone to poorer countries (see figure 3), despite the Bank committing in 2005 to ensure that these countries benefit from carbon market development.³¹ Just 3 per cent of the emission reductions it has purchased are in low-income countries.³² Although more broadly distributed than the overall carbon market, only one-fifth of Bank carbon projects are in Africa.³³ The Bank is calling for reforms to the CDM to alter this balance, including expanding the eligibility of emission reductions from agriculture. It has also blamed the CDM's transaction costs and "too frequent changes to rules, procedures and methodologies,"³⁴ though similar problems affect the Bank-managed FCPF, according to NGO Forest Peoples Programme.³⁵ The Bank acknowledges that "considerable effort is still needed [to build capacity] in some countries and regions, especially in Sub-Saharan Africa and Central Asia, which have not benefited much from the carbon market during the first commitment period of the Kyoto Protocol."³⁶

There are concerns that the purported development benefits are not integral to Bank carbon finance.

A paper commissioned by the Bank to investigate development benefits from 409 CDM projects concluded that "something that becomes apparent fairly soon is how little thought often goes into developing and articulating the [sustainable development] aspects of a project, and how unfamiliar many project developers are with the notion."³⁷ The development benefits of even the Bank's community-focused fund have been called into question, with the CDCF Advisory Group in 2005 registering concern "that project developers and other stakeholders are usually focused on other aspects of project implementation and lack experience – and sometimes appreciation – of the social aims of projects."³⁸ Despite evidence that the "effectiveness is maximized when community benefits are intrinsic to the process of emission reductions",³⁹ a recent official evaluation noted that the majority of CDCF projects now have only indirect benefits that are bolted onto the project itself, such as commitments to improving local healthcare.

Critics have highlighted a number of development risks arising from activities related to carbon markets, in addition to the impacts of polluting projects discussed above. There are concerns about tying developing countries into the carbon market, which has proved highly volatile during the global economic crisis and regulatory uncertainty.⁴⁰ For example, a Bank-sponsored project in India involves J.K. Paper Mills Ltd. contracting small

farmers to provide timber products. By shifting from subsistence agriculture to agro-industrial forestry, IPS argues that "farmers are trading communal land rights and their ability to feed themselves for the whims and price fluctuations of the international carbon market."⁴¹

Forest carbon projects have provoked concerns about finance going to large plantations and agro-forestry, which can have negative impacts on land rights, livelihoods and the environment. Eucalyptus plantations in the Plantar SA project in Brazil, a recipient of FCPF finance in 2002, resulted in local communities being dispossessed of their lands and the use of herbicides that caused water pollution and biodiversity loss.⁴² The Bretton Woods Project has previously asserted that, "Without adequate consultation or prior strengthening of community land tenure rights and forest law enforcement capacity, the FCPF could merely create a new source of revenue for logging companies, governments, and investors without securing genuine long-term reductions in carbon emissions and protection of forest resources from degradation, or equitable benefits for the poor (especially forest-dependent communities)."⁴³ A 2009 review of 25 countries' initial FCPF documents, by the US-based World Resources Institute and the Brazilian Instituto Centro de Vida, found a need for a more systematic, practical approach to issues of governance such as land tenure, law enforcement and transparency.⁴⁴ Failure to address regulatory and enforcement issues relating to the generation of emission reduction credits remains of concern as the FCPF's Carbon Fund approaches its launch, according to a joint statement by four NGOs.⁴⁵ Civil society groups, including the Pan-African Climate Justice Alliance, have also highlighted the lack of clarity regarding how requirements of the FCPF charter, including on safeguards and indigenous rights, will be fulfilled, particularly as the Bank attempts to widen the range of delivery partners for the fund.⁴⁶

Bank carbon finance falls short of the transparency and engagement standards that are vital for accountability, learning and setting standards for other actors.

Inadequate consultation, particularly with communities and national-level civil society, has been repeatedly criticised and has led to problems in implementation.⁴⁷ Tenure and resource disputes forced a BioCarbon Fund-sponsored reforestation project in Guangxi, China to suspend implementation in 10 per cent of affected communal lands. The disputed land had been classified as unused and barren on the basis of a survey of less than 1 per cent of affected households⁴⁸

In a joint statement focusing on the FCPF, BIC and other NGOs expressed concerns about the “trend ... towards decision-making processes that are non-transparent and unaccountable.”⁴⁹ Clear criteria have not been set out for assessing whether countries have made “sufficient progress” to move to selling credits.⁵⁰ BIC’s observer to the FCPF has reported that country proposals are moving forward without sufficient scrutiny.⁵¹ In addition, NGO the Forest Peoples Programme has raised concerns about “the repeated reworking of FCPF rules, criteria and templates leading to confusion, ambiguity and apparent retro-fitting of these rules, in violation of transparency and due process standards.”⁵² Transparency is weak across the funds. Up to date information on projects and the development of new funds is not publicly available. Purchase agreements, including the price paid for emission reductions, are confidential. IPS argues that, as a result, the distribution of revenues and liabilities may be unclear.⁵³ Under the CDCF, community benefit plans, which set out indirect benefits from projects, are not disclosed, though the Bank says they will start to be published “in the coming months”.⁵⁴

With the exception of CDCF projects, monitoring focuses exclusively on emission reductions. For the other funds, there is no means of verifying whether planned development benefits, such as jobs or access to energy, are delivered. Bank staff state that, “As far as the Bank is concerned, the successful completion of the project activity is sufficient to demonstrate intrinsic sustainable development outcomes.”⁵⁵ For CDCF projects that have indirect community benefits, the project sponsor is responsible for implementing and monitoring them, as set out in a (confidential) community benefit plan. Payment for emission reductions is dependent in part on annual supervision “carried out by a World Bank team, based on these monitoring reports”, which are not disclosed.⁵⁶ However, the Bank says that “project entities lack the

experience and qualified staff” to monitor on a systematic basis.⁵⁷ An official evaluation of the CDCF found that most projects “did not have robust monitoring systems” or consistent reporting of community benefits, and community participation in evaluation was “limited.”⁵⁸ The Bank is developing monitoring templates but has not always provided consistent support to project sponsors, according to the evaluation.

The transfer of clean technologies to developing countries to enable low-carbon development has been an explicit Bank goal since 2005, but applies only in a minority of projects. The IEG’s review of 59 Bank-sponsored carbon projects that were in the pipeline in June 2008 found that only one-third mentioned technology transfer – a lower level than among CDM pipeline projects overall. Of these, only one involved a low-income country.⁵⁹ Though the IEG says that progress has been made in some areas, such as landfill gases, in others “transfer has foundered in the absence of a solid logical framework linking interventions to technological diffusion, especially in the case of advanced technologies.”⁶⁰ Problems have included conflicting objectives and false assumptions. Renewable energies have been marginal to the Bank’s carbon finance. US NGO Friends of the Earth has warned that, “Without using the carbon financing to fund clean and sustainable renewables projects, the Bank is losing an opportunity to promote new technologies that could provide reliable, long-term electricity generation for developing countries.”⁶¹ Wind energy accounts for 3 per cent of the Bank’s portfolio, and solar and geothermal for less than 1 per cent each.⁶² An official evaluation of the CDCF found that in solar power and biogas projects in Bangladesh and Nepal, “the poorest households are not able to access the technology as the upfront investment required is relatively high.”⁶³

Conclusion

The Bank's launch of the Partnership for Market Readiness in Cancun reinforces the institution's ambition for the role of the carbon market in tackling climate change, as well as further positioning the institution as a central player in this process.

This is further emphasised in the active and prominent role it has played over the past decade, managing 12 funds and facilities that have bought carbon credits in 57 countries, for 16 governments and 66 companies.

Working within the framework of the Kyoto Protocol's Clean Development Mechanism it aims to demonstrate to the wider carbon markets that emission reduction transactions can deliver sustainable development outcomes, as well as establishing clear policies, rules and business processes.

However, the multitude of concerns raised by evaluations from within the Bank as well as civil society seriously call into question the effectiveness of Bank-financed carbon markets and their effectiveness in reducing emissions and delivering development outcomes, two aims which should be fundamental for a development institution and one which has continued to position itself in a central role in global climate change discussions.

Bank financed projects have been lacking in meaningful reduction additionality, with the Bank's Independent Evaluation Group finding that projects are consistently producing fewer emission reductions than originally projected. At the same time civil society groups have outlined that carbon finance can often improve the efficiency and profitability of fossil fuel intensive industries, such as coal, and so prevent a transition to a low-carbon economy. There also remains a contradiction

between the Bank's role in reducing emissions through carbon finance, and the carbon intensity of its broader portfolio, notably in the energy sector.

The development-oriented character of Bank financed projects has also come under fire. Critics point to the fact that only a fraction of carbon finance has gone to poorer countries, and that projects are rarely designed with sustainable development in mind. Civil society groups have also highlighted the lack of adequate consultative mechanisms in projects and the prevalence of non-transparent and unaccountable decision making processes. The lack of verification of stated developmental aims, with monitoring focussing almost entirely on emissions reductions also cannot be overlooked.

In addition, there are a number of development risks resulting from carbon market projects. Countries are tied into potentially volatile carbon markets and forest carbon projects often lend to large plantations and agro-forestry, which in turn have negative impacts on land rights, livelihoods and the environment. There is little clarity on the implementation and enforcement of social and environmental safeguards.

Despite the transfer of clean technologies to developing countries being a goal of Bank policy since 2005, it has only been undertaken in a minority of projects. Innovative renewable energy sources account for only a small fraction of the Bank's carbon finance portfolio. The numerous problems listed above present major challenges to the role of the Bank and carbon finance markets generally as means of limiting climate change and promoting development.

Endnotes

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- 4 Of the CDCF's 29 projects, 22 are small scale (i.e. they use a small scale methodology in their application for CDM registration). 11 of these are actually registered. There are seven other active small scale projects in the rest of the Bank's carbon portfolio, three of which are registered with the CDM. (Source: email communication with World Bank Carbon Finance Unit, October 2010.)
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- 31 World Bank (2006) *The role of the World Bank in carbon finance: An approach for further engagement*.
- 32 Independent Evaluation Group (2010) *Climate change and the World Bank Group, Phase II: The challenge of low carbon development*, pp. 113-4. The BioCF and CDCF have purchased 39 per cent of their credits in low-income countries. The figure for the other funds is just 0.3 per cent.
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- 34 Ibid p. 16.
- 35 Bank Information Center, Friends of the Earth, Global Witness, Greenpeace (2010) 'Civil Society comments on the revised Carbon Fund Issues Note.' Available from: www.bicusa.org/en/Document.102364.aspx.
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