

## *World Bank Carbon Finance Business Implementation Note No. 3*

### *Efforts to Increase Private Sector Participation in the Market*

#### **Context**

The World Bank's Carbon Finance Business (CFB) has made significant efforts in the development of the carbon market, first by launching the Prototype Carbon Fund to demonstrate how to cost-effectively achieve greenhouse gas reductions while contributing to sustainable development, and more recently by launching a series of carbon funds that address market failures and expand *learning-by-doing* to other countries and economic sectors. The Bank has a vision of its role in carbon market development over the next 10 years in which it achieves a balance between stimulating demand as a buyer in the early market and its support to sellers to tap new and additional sources of funds from carbon trade to support their sustainable development and to alleviate poverty.

As the volume of funds under management has grown so has the capacity of the Bank to catalyze market development. Equally, choices have become more diverse and difficult, on how best to use this increased capacity, whether in reducing risk and uncertainty, in pioneering new market segments, or in any other way. Moreover, fulfilling the Bank's obligation to stakeholders to disseminate unique knowledge derived from being the first to cross new frontiers in market development has become increasingly challenging.

In response, CFB has established a stakeholder relations function to initiate a dialogue with key players (i) to learn how well the work of the CFB is known and to build greater awareness of the Bank's role and activities (ii) to better understand what role key stakeholders feel the Bank should play in market development as the market evolves and (iii) to identify and fine tune strategic alliances, partnerships and initiatives that can enhance the effectiveness of the Bank's work in carbon market development.

This note attempts to contribute to this dialogue, by highlighting CFB efforts to increase private sector participation in the market.

#### **Private Sector Role**

CFB recognizes that a significant global challenge remains as to how to cost-effectively reduce greenhouse gas emissions to avert the worst impacts of climate change, which will proportionally have a greater impact in developing countries and among the world's poor. Furthermore, it is clear that private sector know-how and investment in low carbon technologies will be critical to achieve the reductions necessary to adequately address climate change.

In our view market mechanisms such as CDM and JI have a significant role to play in the long-term combat against climate change, and therefore it is critical to ensure their success in the first

commitment period of 2008-2012 as a source of cost-effective emission reductions and an indispensable means of financing technology transfer and sustainable development. Failure to do so would dampen governments' commitments to deeper reductions in greenhouse gas emissions in the second commitment period and beyond. However, time is running out to prove this concept beyond reasonable doubt on the ground, through a critical mass of transactions that demonstrate this extraordinary potential and make abandoning such market based mechanisms unthinkable. It is obvious to project developers and financiers that the window of opportunity to deliver emissions reductions into compliance registries from long lead time assets such as renewable energy, clean coal and coal-to-gas conversion, by 2012 is rapidly closing, and along with it catalytic value of carbon finance to support these technologies. This can only change when firm irrevocable and equally tough commitments are made to reduce emissions beyond 2012.

## **Market Trends**

Market intelligence data gathered by CFB in collaboration with leading brokers and buyers continues to show a limited contribution of CDM/JI to the overall commitment of OECD countries to reduce GHG emissions and weak direct private sector emissions reductions procurement activity. Continued regulatory risk and uncertainty and limited OECD commercial bank financing for clean technology investments in developing countries are factors which limit private sector confidence in CDM/JI investment, especially in power and energy sector related projects with emissions reductions potential. To illustrate, the CFB's portfolio is now a heavy reliant on billions of dollars of bilateral and multilateral funding to provide underlying finance (more than 57% of total underlying financing) to make CDM/JI projects bankable (in comparison to 26% from commercial banks).

Another important emerging factor that contributes to this trend is the relative softness of the National Allocation Plans, which appear to reflect a growing strategy among OECD governments that they will be significant buyers of emission reductions at least during the first commitment period. These government buyers have a strong preference for the CO<sub>2</sub> and methane based segment of the CDM (which we are differentiating as the "strong sustainability" segment) as such CDM projects usually include clean technology and obviously contribute to sustainable development locally. Hence Government buyer preferences exacerbate the already evident constraint of limited availability of underlying financing for such CDM projects.

At this stage, we know that it will take several years of transactions and regulatory consolidation to establish and then streamline and standardize carbon asset creation under CDM (and likewise JI which will be subject to regulatory risk through 2008) and to reduce to negligible proportions regulatory risk and uncertainty in CDM and JI which is a pre-requisite for global trade on a volume commensurate with the needs for serious climate change mitigation. Likewise, in the strong sustainability segment of the CDM, the Regulator's and buyer reaction to large scale clean coal, coal-to-gas, gas cycle efficiency, and hydropower projects which must be embraced by CDM if it is to have relevance for mitigating climate change is still untested.

## CFB Efforts to Increase Private Sector Participation in the Market

In light of the pressing need to grow CDM assets for the first commitment period, CFB continues to be proactive in promoting and supporting direct private sector participation in carbon procurement and in building confidence in private sector intermediation. As well, many of its activities are aimed at increasing the capacity of host countries to deliver high quality assets to the market, which should contribute to lowering market entry risk and increase volumes of compliance-grade assets. A summary of these efforts is provided in the attached table.

<b>Summary of CFB Efforts to Promote Private Sector Participation in the Market</b>		
<b>Activities</b>	<b>Description</b>	<b>Examples</b>
<b>Facilitating Early Participation in the Market</b>	<i>Learning-by-doing for Fund Participants:</i> private sector participants in World Bank carbon funds have opportunities to capture and integrate knowledge gained into their own direct carbon purchases or compliance initiatives or to build businesses in carbon trading.	Operational manual is available to fund participants. In addition, many opportunities are created to share information, including participating in project-based missions, fund meetings, specialized workshops, internships and long-term fellowships, and access to carbon asset documentation across a diverse array of assets that are often “first-of-a-kind”.
	<i>Learning-by-doing for project developers in developing countries, economies in transition:</i> Experience has shown that there is no better learning tool than transacting the first deal and being forced to define and defend self interest. CFB provides training and assistance in carbon asset creation for projects in its portfolio, which enhances capacity of project developers to deliver other projects to the market.	Private sector sponsors that developed early projects in the CFB portfolio have used this experience to develop others independent of CFB, for example Empresas Publicas de Medellin of Colombia and Hidroelectrica Guardia Vieja of Chile.

	<p><i>Dissemination of knowledge and lessons learned to international community:</i> CFB's benchmarking efforts and business procedures are widely disseminated to the international community including the private sector.</p>	<p>Documents that eventually become part of public domain are: project idea notes (when endorsed by host governments), baseline studies and monitoring plans, project design documents, environmental and social assessment reports, validation reports, verification reports, certification of emission reductions, distribution agreements and basic terms of emission reduction purchase agreements.</p>
	<p><i>Leadership in carbon asset creation:</i> Through its work, CFB contributes to the body of knowledge and expertise in developing credible baseline and monitoring methodologies that meet of the modalities of the Marrakech Accords. This is enhanced by CFB's objective to develop projects in new markets and technologies. Approved methodologies can be taken up by others, and others can be improved upon.</p>	<p>As of September 2004, CFB has been responsible for about 30% of total methodologies submitted, but its efforts have been focused on the core segments of the CDM market where there is high replicability once regulatory certainty is achieved, such as the power and waste management sectors. CFB methodologies have contributed heavily to the consolidated methodologies now under review.</p>
	<p><i>Provision of advice to others:</i> CFB facilitates the efforts of others through portfolio-wide advice and back-up to manage regulatory and delivery risk.</p>	<p>CFB is regularly consulted on these issues by private sector entities.</p>
<p><b>Creating Space for Private Sector Participation at Deal Level</b></p>	<p><i>Opportunities for co-purchasing:</i> CFB only purchases a portion of pre-2012 carbon asset it creates which enables project developers to sell excess to other buyers (except in Dutch CDM Fund). If warranted, another buyer may be sought during the negotiation of an emission reduction purchase agreement.</p>	<p>As of September 2004, 24 % of the expected emissions created up to 2012 from the CFB portfolio is available for purchase by the private sector (more than 18 Mt CO<sub>2</sub>e). For assets post 2012, 88 % are available for purchase by the private sector (77 Mt CO<sub>2</sub>e). This proportion will expand as new funds become operational.</p>
	<p><i>Policy of non-competition:</i> CFB ascertains early in project preparation that project proponent is committed to negotiating deal with another carbon buyer, and would withdraw from the deal if this were the case.</p>	<p>CFB has withdrawn from deals when it discovered that another buyer was committed to the deal and was clearly providing superior terms.</p>

	<p><i>Purchasing Verified Emission Reductions:</i> Unlike the private sector which is primarily interested in compliance grade assets, CFB bears all of the regulatory risks and purchases verified emission reductions (not certified emission reductions). This is in line with CFB’s mission to catalyze investments in the CDM, and is absolutely necessarily in the early market to convince commercial lenders to monetize emission reduction purchase agreements. Consequently, CFB will not be able to compete head-to-head with the private sector for low risk assets once methodologies have been established and registration is assured.</p>	<p>Apart from the purchases for the Netherlands Clean Development Mechanism Facility, CFB as trustee of various carbon funds purchases verified emission reductions.</p>
<p><b>Opening New Markets for Private Sector</b></p>	<p><i>Extending carbon finance to new countries, technologies and sectors and to the poor.</i> CFB strives for an equitable distribution of carbon assets across the regions, and for the development of carbon assets in new sectors (for example through the Bio Carbon Fund and in development of major clean fossil fuel assets) and technologies throughout its carbon funds. CFB is committed to building the credibility of CDM transactions in large scale leading edge fossil fuel power and efficiency measures, including transmission. CFB also has a specific objective to ensure that carbon finance is extended to smaller countries and the rural poor (through the Community Development Carbon Fund). Especially in large-scale power and energy projects, CFB plays the lead buyer role to open the market segment and facilitates co-purchasing.</p>	<p>CFB has conducted first transactions in many countries including: Brazil, Chile, Uganda, South Africa and Indonesia, and is opening up new large CDM markets by supporting Kyoto ratification and demonstrating market potential to domestic interests, such as in Egypt and Iran. CFB has pioneered carbon asset creation in many sectors including the cement, iron and steel and fertilizer industry, as well as rural electrification, wastewater treatment afforestation, agro-forestry and forest conservation. Efforts are being directed now to large scale clean coal technology, coal-to-gas conversion and high value transmission projects.</p>

	<p><i>Promotion of Kyoto Protocol ratification and adoption of clear and transparent rules in developing countries and EITs to govern carbon trade.</i></p>	<p>CFB has promoted Kyoto ratification in many countries, including Indonesia, Kenya, Egypt and the Russian Federation. Furthermore, CFB has assisted many countries in establishing simple market friendly rules for CDM approvals, for example Argentina, South Africa, Uganda, Colombia, among others.</p>
	<p><i>Linking with Bank operations:</i> where feasible, carbon finance will be linked to large-scale programmatic lending or non-lending assistance provided by the Bank and other multilateral financial institutions. This is necessary in sectors such as improved solid waste management where municipal sponsors have poor credit ratings and limited administrative capacity and need long term assistance to make the transition to modern alternatives in waste and resource management.</p>	<p>For example, current discussions include how to link carbon finance to World Bank lending in the municipal sector in China, Brazil and in Iran, and how to open the publicly-owned coal-fired and hydro- power sector in India to carbon finance in association with Bank lending assistance. Typically, a separate capacity building program is initiated alongside major programmatic lending to open new CDM segments and markets to private trade.</p>
	<p><i>Supporting market liquidity and credibility:</i> When acting as agent for borrowing countries, Bank will facilitate trade of large pools of assets on terms which support market liquidity and stability and optimize sustainable development locally</p>	<p>Current discussions include: how to bring liquidity to large pools of HFC23 assets in China and N20 assets in Egypt where there is convincing evidence that these would not be accessible to global CDM trade without ongoing Bank assistance.</p>
<p><b>Facilitating and Promoting Intermediation</b></p>	<p><i>Creation of alliances and partnerships with intermediaries:</i> CFB pioneers partnerships with financial intermediaries through, inter alia, offering access to dedicated pools of carbon finance for defined periods of time on pre-set terms, and enhances capacity of intermediaries to deliver deals to the market through tailor-made training programs.. Intermediary agreements are non-exclusive.</p>	<p>Intermediary agreements exist with the Infrastructure Development Finance Corporation (India), Ecoenergy and the Development Bank of Southern Africa (DBSA). IDFC has now gone forward in its own right to build carbon assets for trade alongside its own investment portfolios.</p>

<b>Capacity Building and Training</b>	<p><i>Enhancing capacity to fully participate in the market:</i> Through CF-Assist, CFB will work with developing countries and economies in transition for 3-5 years to develop sound governance structures, establish a robust portfolio of projects and assist them in delivering real transactions to the market (where CFB is a buyer of last resort). The program integrates knowledge gained from Bank involvement in the carbon market. CFB partners with IETA in providing training programs for the private sector.</p>	<p>More than twenty countries participated in the National Strategies Program (pre-cursor to CF-Assist) to develop strategies on how to participate in the market. CFB anticipates to initiate 5 to 7 CF-Assist programs per year for the next five years. By the end of December 2004, it is anticipated that CF-Assist programs will begin in: India, Sri Lanka, South Africa, Kenya, Senegal, Uganda and Mexico.</p>
	<p><i>Carbon Expo:</i> In partnership with the International Emissions Trading Association and Koelnmesse, CFB operates an annual trade fair to showcase private sector know-how and facilitate dialogue between carbon buyers, sellers, as well as technology and service providers.</p>	<p>Carbon Expo 2004 had more than fifty exhibitors representing key market players and more than 700 participants. Carbon Expo 2005 will take place May 11-13.</p>
	<p><i>Training:</i> In partnership with the World Bank Institute, the Bank offers training in carbon finance to private sectors in OECD and non-OECD countries</p>	<p>More than thirty training events have been held from 2001 to 2004 across the world, and in particular to provide training on how to design successful CDM/JI projects (representing more than 7000 training days)</p>
	<p><i>Fellowship Program:</i> To facilitate knowledge transfer, experts from host country governments are encouraged to work with CFB for one to three months.</p>	<p>As of September 2004, 18 experts have taken advantage of the fellowship program.</p>

<b>Efforts to Encourage Lending to CDM/JI Projects</b>	<i>Promotion of monetization of Emission Reduction Purchase Agreements (ERPAs) with commercial / development banks.</i>	<p>CFB has pioneered innovative financial structures that capitalize on the high quality of emission reductions cash flow (hard currency denominated, with investment grade counterparties). Through PPIAF, and CDCF+, and in cooperation with UNEP’s Sustainable Energy Finance Initiative, CFB convened public and private financial institutions and export credit agencies to identify ways to improve “bankability” of projects. CFB has also identified boutique investment firms that are willing to lend against emission reduction proceeds.</p>
	<i>Pioneering Credit Risk Insurance</i>	<p>To reduce risk in lending to climate-friendly projects, CFB is working with insurers and financial advisors to develop a credit risk insurance product that project developers could tap to facilitate financing. GEF and other sources of first loss grant financing is being sought to help bring down the barriers to the introduction of such a product .</p>

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