

# Carbon Finance in Emerging Markets

## overview

### WHAT IS GLOBAL CLIMATE CHANGE?

Global climate change is attributed to the greenhouse effect, where greenhouse gases (GHGs)<sup>1</sup> such as carbon dioxide (CO<sub>2</sub>) and methane trap solar energy within the Earth's atmosphere. This naturally occurring process keeps the planet about 15°C warmer than it otherwise would be—without this, the Earth's temperature would be too cold to support current life forms. The Earth's temperature has to maintain a delicate balance. Possible consequences of imbalance are rising sea levels, extreme weather events and intense precipitation which could have severe consequences on our health, ecosystems, coastal areas, agriculture and water resources.<sup>2</sup>

It is natural for the climate to vary over time, but the Earth's temperature has begun to increase at an accelerated rate; according to the National Academy of Sciences, it rose by approximately 0.5°C in the 20<sup>th</sup> century. This effect has been dubbed "global warming."<sup>3</sup> Potential risks of global warming include:

- ▶ health impacts (weather-related mortality, infectious diseases, respiratory illnesses);
- ▶ agricultural impacts (crop yields, irrigation demands);
- ▶ forest impacts (forest composition, geographic range of forests, forest health/productivity);
- ▶ water resource impacts (water supply, water quality, competition for water);
- ▶ impacts on coastal areas (beach erosion, inundation of coastal lands); and
- ▶ species and natural areas (loss of habitat and species).

This phenomenon has exposed several scientific uncertainties: How much warming will occur? How fast? How much of it will be due to human activity? What are the potential adverse and beneficial effects? How will the natural climate system adapt and respond? While the perspectives vary across industrialized countries, developing countries, governments, NGOs, and the private sector, there is growing scientific agreement that humans have played a role. The combustion of fossil fuels and increased agriculture, deforestation, landfills, industrial

production, and mining have all been proven to increase the atmospheric buildup of GHGs. The primary debate is the extent of the human contribution. Some governments and businesses have recognized these risks and the growing scientific consensus and are taking steps to circumvent the potential adverse effects.

### WHAT IS BEING DONE?

Collective efforts began in the early 1990s. Various governments voluntarily pledged to reduce their GHG emissions at the 1992 Earth Summit in Rio de Janeiro. Five years later, the Kyoto Protocol was conceived to enhance this with a set of commitments to reduce emission levels. The Protocol had to be ratified by industrialized countries that account for at least 55% of industrial country emissions. With Russia's ratification in November 2004, it will enter into force in February 2005— industrialized signatory countries will now Agree to reduce emissions between 2008 and 2012 by an average of 5.2% from 1990 levels. Developing countries are not obliged to reduce their emissions under the Protocol at this time.

### ROLE OF EMERGING MARKET COUNTRIES

The Kyoto Protocol spurred a global market for the trading of GHG emission reductions or "carbon credits." As CO<sub>2</sub> is the most prevalent of GHG emissions, this emissions trading market has been dubbed the carbon market.<sup>4</sup> Guidelines for international emissions trading

## facts & figures

under the Kyoto Protocol were formalized at the 2001 Marrakech Accords.<sup>5</sup> The Protocol offers three ways to create "carbon credits":

**When countries have to meet emission reduction requirements:** 1) The **cap & trade** system caps emissions on a country basis and allocates them according to each country's internal policies. The excess emissions not utilized can be traded. 2) **Joint Implementation (JI)**. Under the JI, projects can be implemented between two or more Annex I (or industrialized) countries. These projects will lead to Emission Reduction Units (ERUs).

**When countries do not have to meet emission reduction requirements:** 3) Project-based emissions reductions can be created in emerging markets and be traded with Annex I countries where reductions obligations are enforced. Such emission certificates (CERs) are in addition to the ones defined by the cap & trade system. This is the **Clean Development Mechanism (CDM)**, which applies to projects in developing countries.

The CDM and JI instruments can achieve three goals: (i) cheaper compliance costs for industrialized countries, (ii) transfer of cleaner technologies, and (iii) more sustainable development. Each is described in the box on page 2.

### After a quiet decade, the carbon market is preparing for greater activity:

<b>1992</b>	Rio Earth Summit adopts the UN Framework Convention on Climate Change (UNFCCC)
<b>1994</b>	UNFCCC enters into force
<b>1997</b>	Kyoto Protocol negotiated
<b>2001</b>	Marrakech Accords formalize flexibility mechanisms and emissions trading guidelines
<b>2003</b>	European Union issues Emissions Trading Scheme directive (EU ETS)
<b>2003</b>	Chicago Climate Exchange launched
<b>2004</b>	Russia ratifies the Kyoto Protocol
<b>2005</b>	Kyoto Protocol becomes a legally binding treaty in February; first trading period begins for the EU ETS with no target emission reductions
<b>2007</b>	End of the first EU ETS trading phase
<b>2008</b>	Beginning of the Kyoto Protocol commitment period and second EU ETS trading phase
<b>2012</b>	End of the Kyoto Protocol commitment period and second EU ETS trading phase

<sup>1</sup> GHGs include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfurhexafluoride.

<sup>2</sup> US EPA, Pew Center for Global Climate Change.

<sup>3</sup> This differs from ozone depletion. Ozone's purpose is to block harmful ultraviolet radiation from reaching animals and

plants—the depletion of the ozone layer does not affect the climate.

<sup>4</sup> GHG emissions are expressed in carbon dioxide equivalent units (CO<sub>2e</sub>) and metric tonnes of CO<sub>2e</sub>.

<sup>5</sup> The 7th session of the Conference of the Parties to the UNFCCC in Marrakech, November 2001.

### Sample CDM transaction

A German steel producer faces a high cost to reduce its own emissions whereas a Brazilian cement company finds that it can replace older technology to achieve emission reductions at lower costs. Under CDM, the German company could agree to buy the carbon credits that would be generated by the Brazilian company's investment. The revenues that the Brazilian company will receive would pay for the technology update, while the German company would apply its purchased credits to comply with Germany's emissions reduction obligation. While the Brazilian company will have to incur the capital cost, it can borrow today against this future income stream. The end result is that the German steel producer would meet its compliance obligations at a reduced cost, and the Brazilian cement company's investment to lower emissions could have a higher return because of the sale of carbon credits. Without the additional revenue stream from carbon credits, the project in Brazil would not have happened.

Over the past several years, while final ratification was still uncertain, companies and governments began to manage potential risks by engaging in the carbon market.

### Carbon buyers ...

- have committed over \$800M to purchase carbon credits from various carbon facilities and investment vehicles, with primary demand for the current period through 2012;
- traded 78 MtCO<sub>2</sub> in 2003 and a cumulative total of 220 MtCO<sub>2</sub> since 1996.

### Carbon trading has begun...<sup>6</sup>

- More than 14,000 European Union entities have their emissions cap set, enabling them to begin trading in the EU Emissions Trading Scheme (ETS) on January 2005. Through National Allocation Plans, each EU ETS member will impose reduction obligations on their industrial sectors and allow their companies to use the Kyoto Protocol trading mechanisms to meet a portion of their obligations.
- The Chicago Climate Exchange was opened in 2003 to facilitate trading between 19 North American entities that have agreed to reduce annual emissions by 1% over four years.

### Types of carbon projects

Projects that are eligible for carbon financing include:

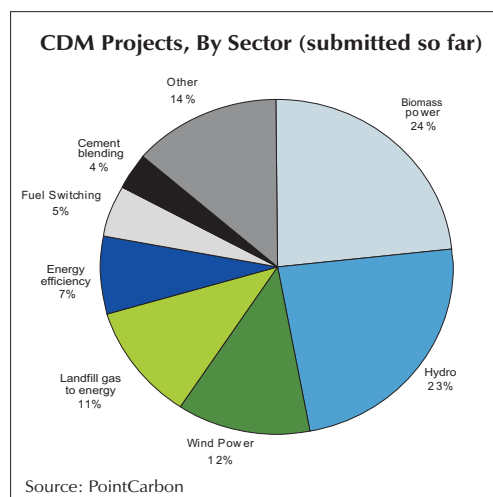
- **renewable energy** to displace use of fossil fuels, e.g. biomass, wind, geothermal;
- **energy efficiency** on the supply or demand side that reduce consumption of fossil fuels;

<sup>6</sup> "Carbon Market Set to Double in Volume," 6/10/04, *Financial Times*; "Beyond Kyoto," July/Aug 2004, *Foreign Affairs*.

CLEAN DEVELOPMENT MECHANISM (CDM)	JOINT IMPLEMENTATION (JI)
<p><b>Applies to: <u>developing countries</u></b></p> <ul style="list-style-type: none"> <li>• The CDM enables industrialized countries and companies to purchase certified carbon credits from projects undertaken in developing countries.</li> <li>• As developing countries are currently exempt from any binding commitments in the Kyoto Protocol, this mechanism permits eligible projects to sell their reductions as carbon credits to entities in industrialized countries that have emission reduction obligations. In many cases, emission reductions in developing countries are cheaper to achieve than in industrialized countries.</li> <li>• Only those projects that demonstrate "additionality" (reducing emissions beyond what would have happened in a business-as-usual scenario) are allowed to sell carbon credits. As a result, the CDM Executive Board was created with a mandate to oversee the approval of CDM projects.</li> </ul>	<p><b>Applies to: all countries with target reductions. IFC focuses on <u>countries in CEE</u></b></p> <ul style="list-style-type: none"> <li>• The JI mechanism enables industrialized countries and companies to purchase certified carbon credits from projects undertaken in other industrialized countries. Several emerging market countries in Central &amp; Eastern Europe (CEE) have these targets under the Kyoto Protocol.</li> <li>• These transitional economies <u>are</u> obliged to reduce emissions under the Kyoto Protocol. However, since many of these countries currently use older technologies, there are likely to be many cost effective opportunities to implement emission reductions projects. The JI mechanism permits eligible projects to sell their reductions as carbon credits to buyers in other industrialized countries that have emission reduction obligations.</li> </ul>

- **methane** recovery and utilization from waste landfills, coal mines, etc.;
- **fuel switching** from fuels with greater to lesser GHG intensity, e.g. from coal to natural gas;
- **decomposition projects**, e.g. reductions of nitrous oxide and hydrofluorocarbons;
- **carbon sequestration**, e.g. reforestation and afforestation to capture CO<sub>2</sub> in trees and soil.

To date, the most common CDM projects involve renewable energy and methane capture from landfills. While many buyers only care that a credit be "certified" under the relevant Kyoto regulatory regime, some buyers are also seeking projects with clear sustainability benefits, especially micro-scale energy solutions, in order to meet corporate social responsibility investment needs—and they are willing to pay a premium for such types of credits.



### Why should the financial sector care?

Financial institutions (FIs) in emerging markets can take advantage of new opportunities presented from the carbon market. In this nascent yet promising market, different types of FIs have roles to play and will have opportunities to carve a niche for themselves, whether they are commercial, investment and development banks, asset management companies, private equity/venture capital firms, insurance or microfinance institutions. Pension trustees, analysts, bankers, insurers and fund managers are following the implications of climate change and carbon related policies on their clients' and their own businesses. FIs could engage directly in the carbon market via risk management or trading, acting as an intermediary on behalf of a carbon buyer, or serving as a project or corporate finance advisor.

### OPPORTUNITIES

#### Intermediation and asset management

In the very early stages of the market, carbon buyers looked to subcontract the identification, evaluation and financing of eligible projects out to FIs. These institutions could act as intermediaries to purchase carbon credits by executing emissions reduction purchase agreements on behalf of a carbon buyer (or a group of buyers). These opportunities may be more limited presently as a liquid market starts to develop, however financial intermediaries could still potentially benefit from the opportunity to participate in the carbon market while acting as a fiduciary on the buyer's behalf throughout the screening, selection, evaluation, structuring, payment and delivery stages of a carbon project.

Furthermore, financial intermediaries can help pioneer the development of investment vehicles to manage the risks associated with the evolving carbon market. Carbon facilities, pooled and/or guaranteed funds provide diversification benefits and lower transaction costs compared to direct investments in eligible carbon credit projects.

### Project finance

The performance risk of carbon projects can generally be viewed as a proxy for the delivery risk of carbon credits. Since the successful implementation of any CDM or JI project requires a thorough understanding of project risks (among other things), global investment, development and commercial banks with the appropriate project finance capacity and expertise are well positioned to actively participate in the carbon market as financiers for projects that generate carbon credits.

### Structured finance

The carbon market today is one of forward contracts—most buyers are signing contracts to purchase, at a pre-agreed price, future carbon credits generated from today through 2012. Payments are typically made on an annual basis when the carbon credits are generated and delivered to the buyer. As long as the project is approved by a regulator and subsequently operates normally, the seller will be able to deliver its contracted carbon credits to the buyer and this forward contract serves as a low risk future asset that can be used as collateral for further financing. Fixed price forward contracts provide the carbon seller with an annual annuity stream in hard currency (¥, €, US\$) from a high creditworthy counter-party. A typical carbon contract contains the following terms:

- ▶ the **volume** of emissions expected to be reduced, measured in metric tonnes of CO<sub>2</sub> equivalent;
- ▶ the **price** per tonne of CO<sub>2</sub> equivalent, determined by spot prices or a fixed price forward contract;
- ▶ the **period** over which payments will be made, typically through to 2012.

### Emissions trading

Emissions trading is increasingly viewed as a system that provides both the incentive and flexibility to efficiently reduce emissions globally. Various regional trade regimes have been developed to foster the purchase of carbon credits in a common emissions trading system. Brokerage houses and investment banks that have historically traded in the crude oil, gasoline, and other commodity markets are also evaluating the potential of entering into these nascent emissions trading systems.

## A CARBON CONTRACT CASE STUDY

- ▶ **Seller:**  
Bagasse sugar mill in an emerging market
- ▶ **Project facility:**  
17 MW cogeneration plant located at the sugar mill
- ▶ **Annual projected carbon credits:**  
83,000 tonnes CO<sub>2e</sub>
- ▶ **Total projected carbon credits to 2012:**  
664,000 tonnes CO<sub>2e</sub>
- ▶ **Proposed contract:**  
Total quantity = 630,000 credits  
Price = €4.00/credit  
Term = contract w/purchase through 2012  
Total contract value = €2,520,000

### Risk management

In typical fixed price forward contracts or derivative transactions, a non-investment grade counter-party would be required to offset its greater perceived credit risk. Such instruments, however, are not yet widely available in the carbon market. As a result, buyers have preferred to contract with the most high quality projects, i.e., project sponsors with strong balance sheets or projects that have low performance risk. FIs could help fill this niche and grow the market for eligible carbon projects by developing credit enhancement and other appropriate forward contract guarantees.

### Financial analysis and accounting

As major industrial emitters come under greater shareholder scrutiny and potentially face climate-related litigation, there will be a need for methods to quantify and account for carbon credits as well as allowances; carbon sellers will need to structure their transactions and manage their carbon credits to minimize their tax burden. Many firms will also need to measure the ensuing financial implications and disclose any associated risks. Securities analysts, corporate finance bankers and credit officers at ratings agencies and other lending institutions have started to incorporate how carbon liabilities will affect the credit rating and valuation of companies under their coverage. Eventually, securities market regulators, fiduciary managers, company directors and accounting organizations will need to formulate generally accepted carbon accounting principles at both the national and international levels.

## TYPICAL CARBON PROJECT CYCLE & FI OPPORTUNITIES

### 1. Development

- ▶ Project sponsor outlines plan to implement potential CDM or JI project
- ▶ Project sponsor obtains documentation to demonstrate consideration for Kyoto Protocol
- ▶ Project sponsor raises financing for eligible project

**FI's opportunity:** project finance, structured finance

### 2. Screening & Selection

- ▶ Screen project against Kyoto Protocol and the buyer's eligibility criteria

**FI's opportunity:** asset management, financial intermediation

### 3. Validation

- ▶ Baseline study, methodology and monitoring plan are prepared and submitted to the relevant regulatory board and for public review
- ▶ Project sponsor submits project to independent auditor for validation
- ▶ Project sponsor obtains Letter of Approval from host country government
- ▶ CDM projects need to be registered with the CDM Executive Board

### 4. Evaluation

- ▶ Buyer appraises project to confirm project strength and determine the preferred structure for an emission reduction purchase agreement

**FI's opportunity:** financial intermediation and due diligence services

### 5. Structuring

- ▶ Project sponsor and buyer negotiate key terms for purchase of emission reductions
- ▶ Project sponsor and buyer sign final emission reduction purchase agreement

**FI's opportunity:** asset management, financial intermediation, structured finance, risk management

### 6. Payment & Delivery

- ▶ Project sponsor generates emission reductions, and commissions periodic verification and certification of emission reductions
- ▶ Carbon credits are verified, issued and transferred to the buyer
- ▶ Payment is received according to negotiated terms between buyer and seller, e.g., payment upon delivery, pre-payment before delivery

**FI's opportunity:** asset management, risk management, financial intermediation

## RISKS

The carbon market is exposed to risks commonly found in other commodity market transactions



and in emerging market project finance, plus risks unique to the carbon market itself. FIs that are familiar with these risks will be well positioned to participate in carbon finance.

#### Common project risks

- ▶ Counter-party credit - creditworthiness & financial stability of seller
- ▶ Financial closure - experience of seller
- ▶ Technology - application of technology
- ▶ Performance - operations and maintenance, engineering, procurement and construction, resource inputs, power off-takers
- ▶ Host country - sovereign risk, output market
- ▶ Force Majeure - events beyond our control, e.g. terrorist attacks and natural disasters

#### Risks for the development of the carbon market

- ▶ Carbon credit regulations
- ▶ High transaction costs, particularly for small-scale projects
- ▶ Forward contracts: delivery and price risks

#### Carbon credit regulations

Carbon buyers will generally not accept CDM registration risk, i.e., the risk that the project will not be approved by a regulator and therefore will not generate credits that can be used for compliance.<sup>7</sup> As such, the primary demand in the carbon market today is for certified carbon credits generated by projects that are registered under the CDM. CDM carbon credits are regulated by the CDM Executive Board, which sets the rules for carbon credit eligibility, approves the projects' methodologies and oversees the validation process.

#### High transaction costs for small-scale projects

The CDM regulatory framework is in the process of being established, and the bulk of carbon projects today involve small-scale renewable energy and energy efficiency projects in emerging markets. Since these project sponsors (carbon credit sellers) tend not to be investment grade, carbon buyers usually incur substantial due diligence costs to appraise project risk. In addition, there are other transaction costs, e.g., legal, validation and consulting fees associated with regulatory approval and documentation, particularly for CDM projects. As such, buyers tend to favor contracts with larger, more established carbon sellers or use intermediaries like carbon facilities and pooled investment vehicles that bundle smaller carbon projects to reduce transaction costs.

<sup>7</sup> The main exception is the World Bank's Prototype Carbon Fund, launched in 2000, before the CDM was formally established, in which buyers decided to take "project CDM registration risk" and purchase credits independent of CDM regulatory approval. This Fund is now effectively closed for new projects.

## drivers

#### DEVELOPED WORLD (demand)

- Kyoto Protocol and/or development of other GHG reduction schemes across various industries and regions
  - Increased awareness of the risks arising from climate change
  - Risk management of expected compliance obligations
    - Strategic positioning
    - Public relations/goodwill
  - Trading mechanisms that enable cost-effective compliance
  - Approval of Kyoto-based credits as currency for emissions trading



#### EMERGING MARKETS (supply)

- Extra revenues from the sale of carbon credits
- New source of financing to support sustainable development (e.g., structured financed projects using carbon credit contracts as security)
  - Opportunity to tap into new-hard currency denominated market
  - Knowledge transfer (i.e. access to clean technologies via technology transfer)
- Carbon credit price impacts on commercial viability of projects

#### Forward contract: delivery and price risks

Typical fixed price forward commodity contracts obligate a seller to provide "market cost to cover" in the event of non-delivery. In other words, the seller has to pay the buyer the difference between the cost to purchase the commodity on the market (spot price) and the fixed forward contract price. While non-delivery penalties vary widely in carbon contracts, such "market cost to cover" provisions are rarely provided by sellers, and usually non-delivery penalties are instead capped at a certain price. This exposes a buyer to price risk in the event that a seller fails to deliver the contracted carbon credits and the non-delivery penalty does not cover the buyer's additional cost to substitute credits in the spot market.

## trends

When the Kyoto Protocol was signed in 1997, *The Economist* generously estimated the carbon market to be in the range of \$1 trillion by 2010. Today, the future potential market is still assumed to be substantial, some estimates put it at \$11 billion by 2007.<sup>8</sup> In the short term, however, the pace at which the market will grow is *highly dependent on the timeline for CDM and JI project processing and, after the implementation of the EU ETS, how GHG emissions regulations will evolve in Japan and Canada.*

***How the Kyoto Protocol is implemented, the nature of the carbon market post 2012, and the speed and scale at which industries and regions adopt climate-related legislation will remain the primary trends to watch in the carbon market.***

<sup>8</sup> Carbon Disclosure Project, *Financial Times* articles: June 10 and June 24, 2004.

<sup>9</sup> As of June 2004 the EB has published five approved methodologies.

<sup>10</sup> Source: World Bank Group

The initial movers into the market have been governments and some private companies. However, with the European countries recently finalizing their specific reduction obligations to the corporate sector, there has been a clear increase of interest from the private sector.

#### OPPORTUNITIES FOR EMERGING MARKET ECONOMIES

Since the carbon market is one of assets created by regulations, the fate of the market is dependent on how the regulatory framework evolves both in the "Kyoto arena" and in "non-Kyoto compliance" type projects (e.g., EU-ETS, Japan, Canada). The market has experienced significant growth following a stronger sense of urgency with regard to policies constraining GHG emissions in Europe but the entry of Kyoto into force could generate an exponential growth to the market. Emerging countries should remain key suppliers of projects as the enhanced revenues from carbon credits attracts new project capital.

Recently, some developments in the regulatory front have improved the prospects for the market in general. In the CDM arena, the Executive Board has adopted new methodologies<sup>9</sup> and has also proposed consolidated methodologies for renewable energy and waste management. If these are adopted, a considerable amount of projects could be potentially validated by the EB.

Demand is coming at this early stage of the market from three main buyers. Japanese buyers (mostly private entities) have been the largest buyers of emissions reductions,<sup>10</sup> representing 41% of the volume purchased during 2003-2004. The second biggest buyer is the government of Netherlands through its various agencies and intermediaries (Senter, Rabobank, IFC, CAF, IBRD). During the 2003-



2004 period, the Prototype Carbon Fund represented the third biggest buyer in the market (the fund recently has been closed to new transactions).

Research firms specializing in the nascent carbon market highlighted some recent trends that may affect emerging markets.

- ▶ A first vintage of project-based emission reductions is sold, which means most project developers sold their first projects and are now in the process of preparing new projects.
- ▶ Sellers tend to take more risk: specialists believe that the market may soon evolve to a stage where sellers become more aggressive and may take either regulatory risk and performance risk; in other words we may start soon to see “guaranteed delivery” type deals.

▶ Prices are rising: as a rule prices are a function of project risk or risk structure of the deal, but market specialists seem to agree that future prices tend to be significantly higher than past ones.

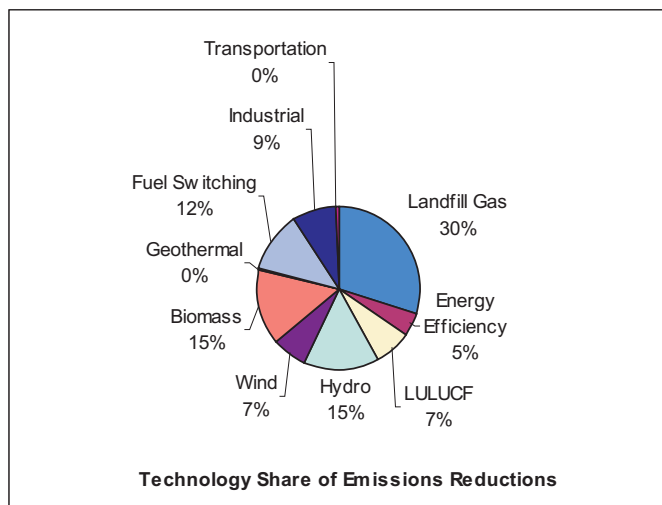
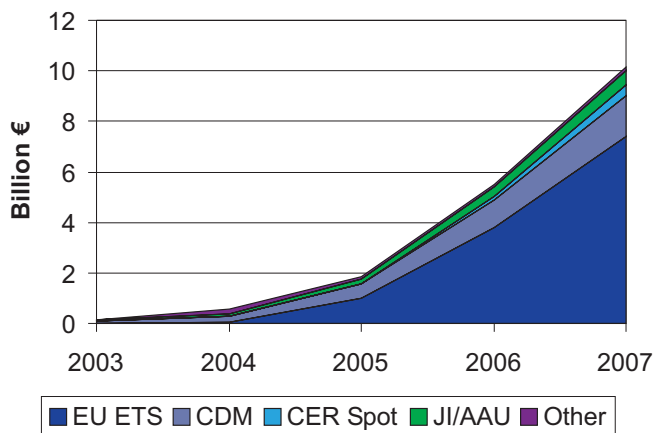
▶ Most favored nation: India. According to specialists on market trends, India is the host country receiving the most attention from developers at the moment. Brazil, Mexico and Chile are also high on the list.

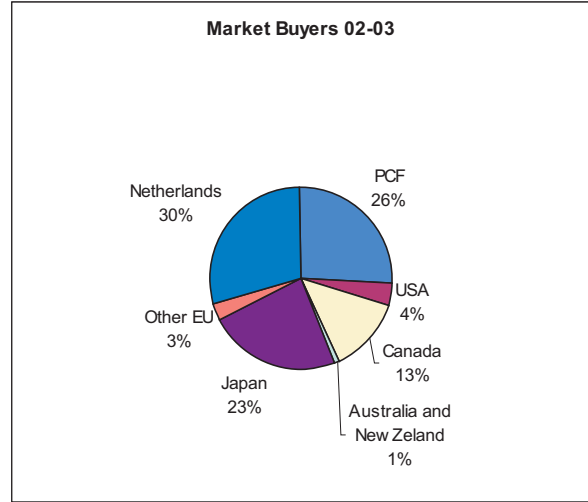
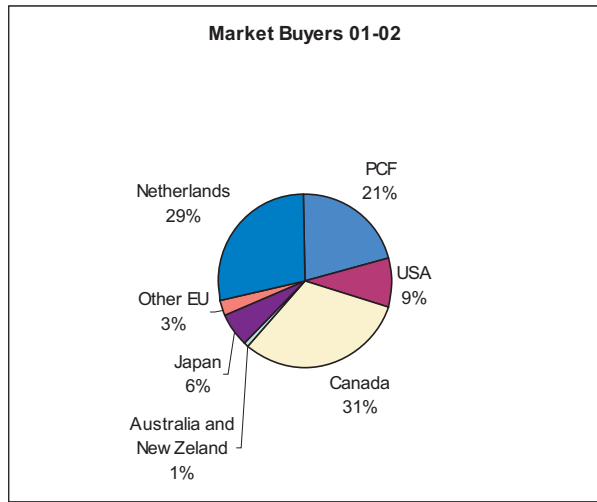
▶ Most favored projects: landfills and hydrofluorocarbons (HFCs). Given their simpler operational characteristics and high impact (from an emissions avoidance basis), methane and HFCs are garnering a lot of attention.

# the numbers

## CURRENT ACTIVITIES

- ▶ To boost private sector projects, IFC launched two facilities to purchase carbon credits for the benefit of the government of The Netherlands: the Netherlands Carbon Facility buys credits from CDM projects and the Netherlands European Carbon Facility focuses on JI projects in transitional countries.
- ▶ Rabobank manages a facility to purchase CDM credits for the benefit of the government of The Netherlands.
- ▶ The Andean Development Corporation (CAF) manages a facility on behalf of the government of the Netherlands. The German Bank KfW is slowly entering the market but to date does not operate a facility similar to IFC's or CAF's.
- ▶ The World Bank has launched several buyers' facilities in the carbon market such as the Prototype Carbon Fund, The Netherlands Clean Development Facility, and the Bio Carbon Fund.
- ▶ CO2e.com, a partnership between Cantor Fitzgerald and Price Waterhouse Coopers, was created to launch a carbon trading platform.
- ▶ Natsource and Evolution Markets were established as CO<sub>2</sub> brokers.





Source: "The State and Trends of the Carbon Market 2003", World Bank

information

Asian Development Bank CDM Facility:

<http://www.adb.org/CDMF/>

Austrian: [www.ji-cdm-austria.at/](http://www.ji-cdm-austria.at/)

Carbon Disclosure Project

<http://www.cdproject.net/>

CO2e.com: [www.co2e.com](http://www.co2e.com)

Dutch: <http://www.carboncredits.nl>

Earth Negotiation Bulletin:

[http://www.iisd.ca/process/climate\\_atm.htm](http://www.iisd.ca/process/climate_atm.htm)

EcoSecurities:

<http://www.ecosecurities.com/index.html>

Environmental Finance

[www.environmental-finance.com](http://www.environmental-finance.com)

European Bank for Reconstruction and Development:

<http://www.ebrd.com/country/sector/energy/ef/carbon/main.htm>

Evolution Markets

<http://www.evomarket.com/>

Finnish:

<http://global.finland.fi/english/projects/cdm/>

IFC Carbon Finance:

<http://www.ifc.org/carbonfinance>

International Emissions Trading Association:

<http://www.ieta.org>

Italian Carbon Fund:

[http://www.minambiente.it/Sito/settori\\_azione/pia/att/kyoto/docs/icf\\_eng.pdf](http://www.minambiente.it/Sito/settori_azione/pia/att/kyoto/docs/icf_eng.pdf)

Joint Implementation Quarterly:

<http://www.nortghsea.nl/jiq>

KfW Carbon Fund:

<http://www.kfw.de/EN/Die%20Bank/KfWUpdate/s60/TheKfWCarb68/Inhalt.jsp>

Marrakech Accords report:

[http://cdm.unfccc.int/EB/COPMOP/decisions\\_15\\_17\\_CP.7.pdf](http://cdm.unfccc.int/EB/COPMOP/decisions_15_17_CP.7.pdf)

OECD:

[http://www.oecd.org/document/60/0,2340,en\\_2649\\_34361\\_1943164\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/60/0,2340,en_2649_34361_1943164_1_1_1_1,00.html)

Point Carbon: <http://www.pointcarbon.com>

Rabobank:

<http://www.rabobank.com/content/rabobank/sustainability/sustainability.html>

Swedish:

<http://www.stem.se/WEB/STEMEx01Eng.nsf/PageGenerator01?OpenAgent&MenuSelect=7155F819C3117E63C1256E7800301E38>

European Union Emissions Trading Scheme:

[http://www3.europarl.eu.int/omk/omnsapir.so/py2?PRG=CALDOC&FILE=20040420&LANGUE=EN&TPV=PROV&LASTCHAP=32&SDOCTA=26&TXTLST=1&Type\\_Doc=FIRST&POS=1](http://www3.europarl.eu.int/omk/omnsapir.so/py2?PRG=CALDOC&FILE=20040420&LANGUE=EN&TPV=PROV&LASTCHAP=32&SDOCTA=26&TXTLST=1&Type_Doc=FIRST&POS=1)

The Kyoto Protocol:

<http://unfccc.int/resource/docs/convkp/kpeng.pdf>

CDM Executive Board:

<http://cdm.unfccc.int/EB>

UNEP FI, Climate Change Working Group:

<http://unepfi.net/cc/index.htm>

United Nations Framework Convention on

Climate Change: <http://unfccc.int>

World Bank Carbon Finance:

<http://www.carbonfinance.org>

World Business Council for Sustainable

Development: <http://www.wbcsd.org>

Climate-L and Climate-L News:

[www.iisd.org/climate](http://www.iisd.org/climate)

**All About IFC**

The International Finance Corporation (IFC) is an international organization which promotes sustainable private sector development in its developing member countries as a way to reduce poverty and improve people's lives. Since its inception in 1956, IFC has committed more than \$34 billion of its own funds and has arranged \$21 billion in syndications for 2,825 companies in 140 developing countries. In terms of annual investment, the financial markets sector has become the single largest recipient (49% of total investment in FY2003).

**About SFMF**

IFC's Sustainable Financial Markets Facility (SFMF) is a donor-funded technical assistance program focused on the private financial sector in the emerging markets. Through the Facility, IFC provides a range of capacity building, best practice development and market-making activities to promote environmental and socially responsible and sustainable business practices in banking, insurance and investment.

The Facility currently receives funding from IFC and the Governments of Switzerland, the Netherlands and Norway.

**About MIBs**

This Market Intelligence Brief (MIB) is produced by IFC through the support of SFMF. The goal of the MIB series is to collate, analyze and disseminate intelligence on sustainability business issues relevant to emerging market lenders and investors.

The information provided in this document is not intended to be nor should it be construed as investment advice. Recipients should undertake their own independent evaluation and analysis with respect to any potential investments discussed herein.

IFC encourages dissemination of its work and unless otherwise indicated permits reproduction of articles contained in this publication for personal, non-commercial use, subject to appropriate purposes, without asking a fee. Requests for permission to reproduce articles should be sent to Corporate Relations at the address in the copyright notice above.

IFC does not guarantee the accuracy of the information included in this publication and accepts no responsibility whatsoever for any consequence of its use.

Copyright ©2004, International Finance Corporation. All rights reserved. 2121 Pennsylvania Ave., NW, Washington, DC 20433

For more information on MIBs and subscription inquiries, please contact by:

Email [MIB@ifc.org](mailto:MIB@ifc.org)

Web <http://www.ifc.org/ifcext/enviro.nsf/Content/MIB>

