COMMUNITY DEVELOPMENT CARBON FUND

For the participating governments and companies, the Community Development Carbon Fund (CDCF) is an opportunity to put a human face on carbon finance, by combining carbon emission reductions with development.

"The Government of Canada's present involvement with the World Bank Prototype Carbon Fund has been useful in helping us understand the complexities of CDM and JI projects. With the CDCF, we will continue learning by doing in the area of small-scale projects. Participation in these Funds allows shareholders, such as Canada, the opportunity to pilot a variety of methodologies for pursuing CDM and JI projects in a low-risk environment and to gain invaluable operational experience which can be conveyed to the Canadian private sector pursuing this nascent industry."

Government of Canada

"Italy looks forward to working together with the World Bank and other participants in this innovative partnership. The CDCF will allow Italy to reduce the costs of achieving its Kyoto commitments, while at the same time promoting the protection of the global environment."

Government of Italy

"We participate in the CDCF because we believe small-scale projects deserve a fair chance. We sincerely hope that projects in Africa will benefit from the CDCF. We feel that the more parties that participate in CDCF, the more difficult it will be to not recognize credits which are delivered beyond December 2012."

Government of the Netherlands

CONTENTS

A Word From the World Bank ...

World Bank President James D. Wolfensohn, speaking at the launch of the Community Development Carbon Fund, at the World Summit on Sustainable Development, Johannesburg, South Africa, September 2, 2002.

The Community Development Carbon Fund is significant for us at the World Bank, and for me personally. I'm a veteran of Stockholm, and it's gratifying to see how far we've come in focusing attention on the really important issues of our day.

With the carbon funds, we at the Bank are happy to be able to generate emission reductions in a way that can be of direct benefit to developing countries. I think the CDCF initiative is just the sort of step that's required now, a step that goes in at the local level to create carbon assets that can be traded, and that also have a development bonus that goes to the communities.

Micro-hydroelectric, gas conversion, solar energy—these are projects that in their scale, and in themselves, can serve the local community. In addition, these projects can generate extra funding for teacher salaries, or health facilities, or other development needs of the particular communities.

I want to emphasize how committed we at the World Bank are to this objective, and how proud we are to be piloting the first fund of this type. We believe it will help us to bring about our dream of a world that is free of poverty, but also a world in which all of us can live a healthy and happy life.

JAMES D. WOLFENSOHN
President, The World Bank

Letter from the CDCF Advisory Group Chair

The Community Development Carbon Fund (CDCF) resonates with three global themes—reducing poverty, fighting climate change and promoting corporate social responsibility. It provides opportunities to pursue those three objectives simultaneously, which makes it very attractive.

The emission reductions purchased by the CDCF must be of high quality—and they must also have strong social credibility, in that they will generate benefits for poor people in poor developing countries. These countries are often bypassed by business-as-usual project financing opportunities—both internal and external.

This fund aims to purchase emission reductions—at least 25% of the US$60 to 80 million of the first tranche of funds—from small-scale projects in least-developed countries and in other poorer developing countries with a population of less than 75 million. This will help to address the projected carbon-market bias toward fewer projects in larger countries and contribute to a more equitable geographic distribution of resources for sustainable development.

The development attributes of CDCF projects will be certified and bundled with the projects' Kyoto-compliant emission reductions. In this way, participants will be able to contribute towards sustainable development, while receiving emission reductions. Capacity-building in host countries is also a parallel objective of the CDCF, for which separate funding is provided.

The Advisory Group which I chair helps to guide the CDCF manager in his effort to reach out to the poorest communities in developing countries and to enhance community development in all of the CDCF projects.

Investing off the beaten track is not easy. But the appeal of the CDCF concept and the commitment of its management, gives me every confidence in its success.

MICHAEL ZAMMIT CUTAJAR

former Executive Secretary, United Nations Climate Change Secretariat

Responding to the Climate Crisis

Climate change threatens to disrupt the weakest economies and disadvantage the poorest people. Scientists predict that in the absence of global action to reduce human-caused greenhouse gas emissions—principally carbon dioxide from burning fossil fuels—the average global temperature of the planet will increase by 1.4 to 5.8 degrees Celsius over this century, bringing with it an increase in extreme weather events and radically changing weather systems of drought and rain.

Those with the least resources and the least capacity to cope—the poor of the developing world—will be hardest hit. The United Nations Intergovernmental Panel on Climate Change estimates that the steady warming of the Earth's surface temperature will lead to falling agricultural production in tropical and sub-tropical countries, especially in Sub-Saharan Africa, where people are least able to cope in terms of adjusting crops and cropping patterns. Sea level rise associated with projected increases in temperature could displace tens of millions of people living in low-lying areas, such as the Ganges and the Nile deltas, and could threaten the very existence of some small island states. Climate change will put new stresses on populations in the weakest economies as they try to resist the spread of vector-borne diseases and are forced to move away from increasingly marginal lands and habitat.

Reducing emissions of carbon dioxide and other greenhouse gases in order to mitigate climate change is therefore a key challenge facing the international community. With the benefit of a rewarding partnership with six governments and 17 private companies, the World Bank has played a pioneering role in developing the market for greenhouse gas emission reductions through the Prototype Carbon Fund (PCF). Operational since 2000, the PCF's mission is to pioneer this evolving market while promoting sustainable development and offering a learning-by-doing opportunity to its stakeholders. In 2002, the Bank expanded this effort in partnership with the Ministry of Environment of the Netherlands, with the launch of the Netherlands Clean Development Mechanism Facility (NCDMF), which purchases greenhouse gas emission reductions from projects in developing countries.

Through its work on the PCF and NCDMF, the Bank identified weaknesses in the emerging carbon market. First, unless working through intermediaries, the World Bank has found that the private sector has

FOCUS ON POTENTIAL PROJECTS:

FURATENA ENERGY EFFICIENCY

UTICA, COLOMBIA

Utica, Colombia, is a small rural community of 5,500 inhabitants, 80 kilometers northwest of Bogotá. More than 83% of the rural population in the area have basic needs that are unmet, and more than 43% are living in extreme poverty. Many people in Utica are involved in the manufacture of *panela*, a type of solidified brown sugar obtained from the dehydration of sugar cane juice. Panela is used as a sweetener and is an important source of vitamins and minerals in the food and pharmaceutical industries. Colombia is the world's second largest producer of panela, which contributes to 1.3% of its gross domestic product, and which represents the second-highest source of rural employment in the country.

The Furatena Energy Efficiency Project will directly benefit 120 small- and medium-sized traditional panela manufacturing farms. It will focus on energy-efficient processing facilities, achieved by retrofitting existing, farm-based facilities and building a central panela manufacturing plant. The new plant will use high-efficiency boilers that will eliminate burning of firewood and old tires. The project will also support the adoption of organic practices in sugar-cane production. Social development activities of the project include a social program in education, as well as training and health services for the community of manufacturers.

The project will increase the income for small family-owned farms. Families on 120 small rural farms will receive basic managerial training. At least 800 farmers will be trained to improve practices in sugar-cane production, which will improve soil conservation and create social links among the farmers. The project will also lead to direct employment at the central manufacturing plant and on-the-job-training. The project has considerable replication potential because of the prevalence of panela production in the country.

generally avoided developing countries and economies in transition as places to acquire emission reduction credits to fulfill their commitments under domestic emission reduction obligations and emissions trading regimes.

Second, the Bank has found that a large number of poorer developing countries can only deliver small projects since they generally do not have large and rapidly growing energy and industrial sectors that would generate clean energy projects of many tens to hundreds of megawatts. The high transaction costs and high risks involved in delivering carbon from small-scale projects means that most of the smaller and poorer of the Bank's client countries are unlikely to benefit from the catalytic investment effect of carbon finance.

To address these issues, on March 25th, 2003, the Bank established the Community Development Carbon Fund (CDCF). The Fund began operations on July 15, 2003 with almost US$30 million in contributions. Today the Fund's financial contributions stand at US$37 million (as of November 2003), and very good prospects exist for a doubling of its capitalization in the next few months. Throughout its life, the CDCF will develop diversified portfolios of projects across the developing world, in that way not only diversifying and minimizing risk for participants but also opening the carbon market to most of the developing world.

"There have been increased extreme climatic events since the 1970s, and these have had drastic repercussions on African economies. Countries like mine will be hardest hit by climate change, and yet these same countries have until now, been bypassed by the carbon market. The CDCF is an extraordinary opportunity to not just reduce carbon emissions but to use carbon finance as an innovative development tool. The Fund will link private companies with community development projects, so that there are equitable benefits under the Kyoto Protocol, benefits that also go to the poorest of the poor."

Emily Ojoo Massawa,
Climate Change Coordinator of Enabling Activities in the National Environment Management Authority of Kenya.

The CDCF Opportunity

There are some important features of the CDCF which differentiate it from many other funds and providers of emission reductions that can be used to meet domestic compliance objectives of countries and companies.

REGULATORY CERTAINTY

By virtue of the special advantage that the Parties to the UNFCCC have given small-scale projects in the Marrakesh Accords of the Kyoto Protocol, such projects not only benefit from streamlined procedures to reduce "production costs" for emission reductions, but also from existing baseline methods pre-approved by the Executive Board of the Clean Development Mechanism.

This situation contrasts with larger scale Clean Development Mechanism projects where methodologies for establishing baselines and determining project additionality are still under development and few have been approved. In CDCF it should be possible for Designated Operational Entities to validate projects and to have their emission reductions registered without further review by the Methodology Panel and the CDM Executive Board. With the window of opportunity of the Clean Development Mechanism closing rapidly (see next page), this relative certainty that the emission reductions the World Bank is purchasing will be converted into Certified Emission Reductions is important.

CDCF IN ACTION

Becoming operational on July 15th 2003 with a portfolio of eligible projects already under development, the CDCF gives participants the potential for early delivery compared with funds yet to become operational, especially those seeking emission reductions from larger Clean Development Mechanism projects with longer project development lead times. The CDCF should help participants maximize the volume of compliance-worthy emission reductions generated by 2012, since the Fund aims to begin to deliver emission reductions in 2005, with up to 70% of the total emission reductions expected to be generated before 2012.

This early delivery advantage is available only to participants in the first tranche of CDCF and this tranche is expected to be closed to further participation well before the end of 2004. Existing participants in CDCF tranches may increase their participation in a tranche without penalty while that tranche remains open.

DOING WELL BY DOING GOOD

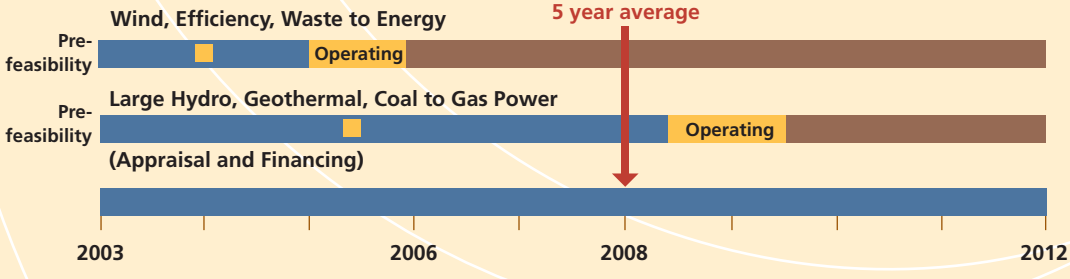
Support for small-scale projects that transparently and measurably contribute to local community welfare while reducing greenhouse gas emissions is not philanthropy. It is good business, not only because CDCF participants can point to the sustainable development and poverty reduction impacts of the projects they are supporting, but because these projects are generating emission reductions with certified sustainable development attributes which are likely to be acceptable in

IMPORTANT CONSIDERATIONS FOR PROJECT LEAD TIMES:

The advantage accruing to CDCF Participants from a rapidly expanding pipeline of eligible projects is best described in the graphic below which illustrates that project lead time is an important consideration in the Clean Development Mechanism where the participant is concerned to maximize delivery of certified emission reductions before the end of 2012. The graph shows that smaller projects typically take less time to build and begin delivery of emission reductions than larger projects, and that waiting until 2006 to begin even small projects will result in five years of fewer emission reductions from such projects being available by the end of the Kyoto Protocol's First Commitment Period.

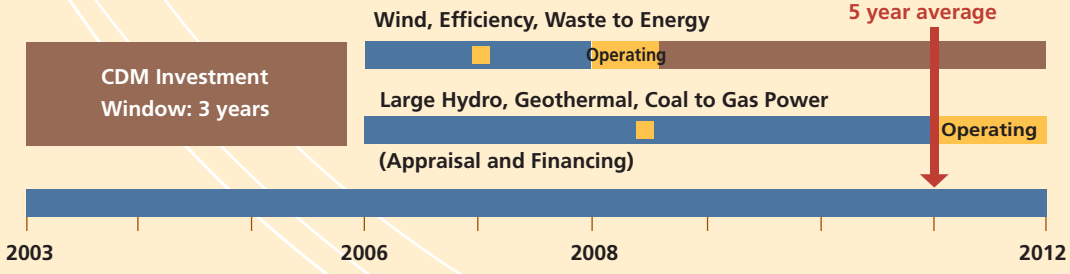
Given that most participants are uncertain about their needs for emission reductions after 2012, the market is currently discounting such reductions. From the sellers perspective this is also a critical fact of the carbon market. If buyers pay less for emission reductions earned after 2012, or don't buy them at all, the value of carbon finance is limited to sales before 2012. Experience shows that not less that 5 years, and usually 10 years of revenues from emission reductions at current market prices are required to influence project financing and enable CDM-eligible projects to proceed to implementation.

Lead Time and Uncertainty Constraints on CDM Projects



Second Commitment Period Rules and Targets Need to be decided by 2006 to ensure continuity in CDM Market Development

Lead Time and Uncertainty Constraints on CDM Projects



Even small-scale projects receiving letters of intent to purchase emission reductions in 2006 are unlikely to yield more than 4 years of emission reductions before 2012.

FOCUS ON POTENTIAL PROJECTS:

FLY ASH/LIME/GYPSUM BRICK TECHNOLOGY

INDIA

Clay brick is the predominant building material for walls in India, with demand for over 360 billion. About 50% of this demand is in urban areas, which results in the denuding of agricultural fields because production of every million bricks requires 3,500 tons of soil. Clay-brick manufacturing is also very energy intensive—200 tons of coal is used in sintering every 1 million bricks. The government of India has already committed to banning clay bricks in urban centers, which will displace a great number of workers, but at the same time will open the market for alternative technologies.

One type of alternative technology involves bricks made with fly ash—a waste product from burning bituminous coal—of which India generates about 90 million tons at various thermal power plants. The technology uses a mixture of fly ash, lime (a byproduct of the acetylene industry), and gypsum (from chemical plants) to produce bricks. This technology completely avoids the sintering process of clay brick production.

With the help of carbon financing from the CDCF, the proposed project will replace clay brick with fly-ash brick for the construction sector in India. At present, there are over 800 units of fly-ash brick operations, producing 1.6 billion bricks. However, this is a tiny fraction compared to the overall national market potential of 360 billion bricks and the wide availability of fly ash. The project will bundle 200 tiny sector units spread throughout India, each with an annual capacity of about 3 million bricks or equivalent volume (6,000 cubic meters) of blocks. Over 270 tons of carbon dioxide equivalent will be saved for every million clay bricks displaced. The project is estimated to generate annual emission reductions of 387,240 tons of carbon dioxide equivalent. The CDCF expects to purchase a minimum of 1,400,000 tons of carbon dioxide equivalent over a 10 year period.

This new activity absorbs the displaced workers from clay brick kilns, so that they can maintain their livelihoods. A bundle of 200 new fly-ash brick plants will contribute to the development of 200 entrepreneurs and provide employment for over 3,000 urban and rural poor people. The project will also lead to the conservation of top soil, hence improving agricultural productivity.

domestic emissions trading or voluntary compliance regimes, and to have sustained value in the retail consumer market for individuals and entities seeking to offset the climate-impact of their consumption in environmentally and socially responsible ways.

Some Governments and carbon-intensive corporate entities subject to emission reduction obligations are already expressing a preference for these kinds of emission reductions bearing in mind such emerging regulatory regimes as the emissions trading system in the European Union as well as the often negative views of domestic constituencies to large-scale CDM projects of various kinds. Others seeking CDCF participation take into account that with uncertainty about the timing of the Kyoto Protocol, holding high quality emission reductions provides an insurance policy as they are more likely to be recognized by future greenhouse gas emissions regulatory regimes.

Finally, others recognize that climate change is a long term global problem requiring for its solution the support of all countries and communities, no matter how small. Activities such as those embraced by the CDCF to include even remote or marginalized communities in efforts to mitigate climate change are necessary to build a global constituency for action that must be sustained for generations in order to be effective.

FAIR AND STABLE PRICES

In order to address the higher transaction costs of small-scale projects, and to ensure that carbon finance makes an important contribution to the risk management and financing of the underlying project, CDCF prices will likely be higher than the average of those so far recorded in the Clean Development Mechanism. However, compared to price trends anticipated for Assigned Amount Units (the allowances drawn against the quotas of Annex I Parties' permissible emissions under the Kyoto Protocol) or for allowances in the European Union, CDCF prices are expected to be competitive.

It is in the interest of all constituencies to promote small projects in small countries as a reliable source of reasonably priced emission reductions over the longer term. The CDCF aims to help achieve this outcome by endeavoring to ensure a price for emission reductions that is fair both for the seller and the buyer.

"Being operational since July 2003, the CDCF is giving poorer and smaller countries the possibility to develop and implement small-scale Clean Development Mechanism projects. Launched in response to developing countries' needs expressed over the years of negotiations of the Kyoto Protocol, this fund will counteract the higher transaction costs that small Clean Development Mechanism projects may have, in addition to generating relevant environmental, social and economic benefits for the local communities. We, as host countries, welcome this new World Bank carbon initiative and expect that the CDCF will serve also as a powerful tool to overcome the barriers for engaging investors in these types of carbon projects—now and in the long-term."

Juan Pedro Searle Solar
Chair of the Host Country Committee

The Global Context

Involving diverse public and private stakeholders in combating climate change is essential to a sustained long-term program to reduce atmospheric concentrations of greenhouse gases. This requires mobilization of predominantly private capital on an unprecedented scale to tackle a global environmental problem. This can be achieved through the development of efficient markets for achieving and trading emission reductions. The Kyoto Protocol gives that opportunity. It provides the context for the establishment of the Community Development Carbon Fund which is designed to provide a source of funding for emission reduction projects in developing countries.

THE INTERNATIONAL LEGAL AND REGULATORY FRAMEWORK

In June 1992, over 180 countries at the "Earth Summit" in Rio de Janeiro adopted the United Nations Convention on Climate Change (UNFCCC), a legal framework that enables Parties to the Convention to start the process of stabilizing greenhouse gases (GHG) like carbon dioxide, in the atmosphere. The Kyoto Protocol adopted under the UNFCCC in December 1997, commits signatory industrialized countries and those countries with economies in transition (called "Annex I" countries) to reduce their greenhouse gas emissions by an average of 5.2 percent compared with 1990 emissions, in the period 2008-2012. In other words, annual Annex I emissions must be, on average, 950 million metric tons of carbon dioxide equivalent (tCO_2e) lower annually than 1990 emissions during the period 2008-2012. Under the Kyoto Protocol, Annex I countries may achieve these reductions either domestically or through three international market-based mechanisms:

- Joint Implementation (JI), or purchasing greenhouse gas emission reductions from projects in other Annex I countries (this includes economies in transition);
- Clean Development Mechanism (CDM), or purchasing emission reductions from projects in developing countries; and
- Emissions trading among Annex I countries.

Through the first two mechanisms, the Kyoto Protocol enables countries and companies in countries that have committed to reductions, to supplement their domestic efforts to reduce emissions by purchasing greenhouse gas emission reductions generated by projects in developing countries and economies in transition. These are countries where emissions can be reduced at lower cost, while contributing to sustainable development. The emerging global carbon market is predicated on the fact that greenhouse gases mix uniformly in the atmosphere, which makes it possible to reduce greenhouse gas emissions at any point on the planet and have the same effect.

The Parties to the UNFCCC at their annual Conferences have been going through the process of developing the "rules of the game" for the Kyoto Protocol. At their Seventh Conference (October/November 2001 in Marrakesh), the Parties agreed on the main elements of the regulatory framework for the implementation of the Kyoto Protocol, particularly the market-based mechanisms, although a number of important practical details remain to be worked out.

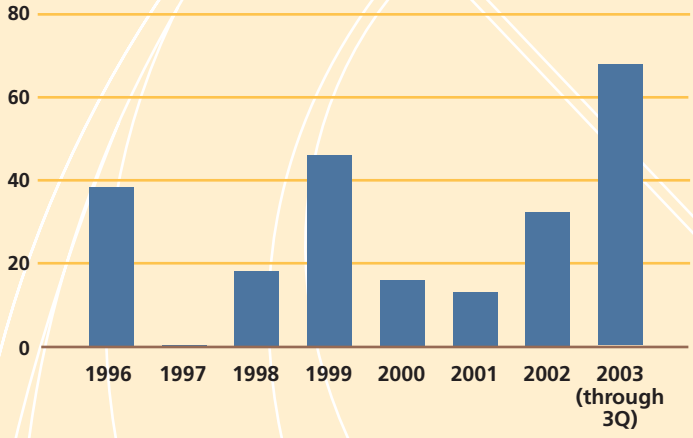
THE EMERGING GLOBAL CARBON MARKET

Carbon emission reductions can be a powerful tool for development. The carbon market offers an opportunity to channel private capital to clean technologies in developing countries and economies in transition and to make their development more sustainable.

Given the important arbitrage opportunity provided by the difference in emissions abatement

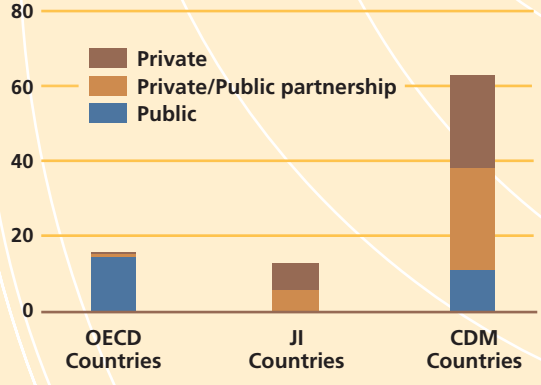
Market Volume Has Increased

Estimated Volumes of Project-based Transactions (million tCO_2e)



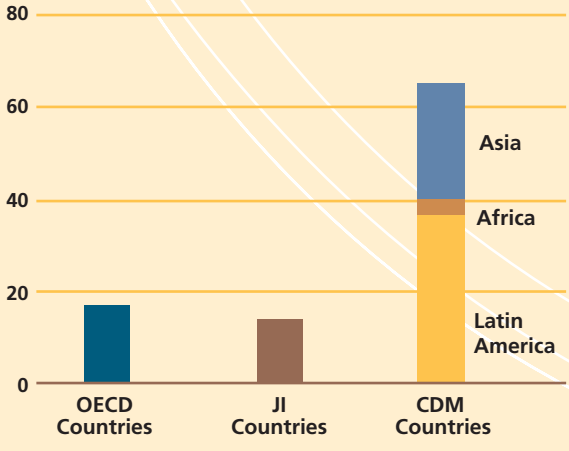
Private Sector Flows Remain Mostly within OECD

by Volume of Project-based Transactions (million tCO_2e)



Carbon Finance Flows 2002-03

Volume Of Emission Reduction Projects (million tCO_2e)



Source: *World Bank Carbon Market Report 2003.*

costs between industrialized and many developing countries, it may be surprising that the supply response from developing countries and economies in transition has been limited. Only about 200 million tons of carbon dioxide equivalent have been traded since the Kyoto Protocol's inception in 1996, with international prices ranging from a few cents a ton to about US$10 per ton of CO_2e.[1] These prices are only a fraction of the cost of abatement in the more energy-efficient Annex I countries, which range from about $15 to well over $100 a ton of CO_2e.

Partly due to uncertainties related to the Kyoto Protocol's entry into force, and lack of clarity about market rules, the private sector has been reluctant to enter the market for structuring projects that originate emission reductions under the Clean Development Mechanism and Joint Implementation. Significantly, World Bank market research indicates that direct private-sector emission reduction purchases represent only about 18% of all purchases in developing countries, and close to none in economies in transition, or in the least developed countries.

Market research suggests that rather than directly purchasing from project sponsors in smaller developing countries, private sector carbon buyers are more likely to purchase emission reductions either through large projects in India and Latin America or through public-private partnerships like the Prototype Carbon Fund, where risks and transaction costs can be managed across a large project portfolio.[2] Small developing countries, Africa, and the poorer areas of developing countries which generally tend to receive less foreign direct investment,[3] therefore also appear to be at risk of not receiving any significant carbon investment.

In 2002, contracts for over 32 million tons of carbon dioxide equivalent (tCO_2e) were concluded and indications are that more than 60 million tCO_2e have been transacted in 2003. These are a significant increase over the approximate volume of 12 million tCO_2e traded in 2001.

CARBON FINANCE FLOWS

Early carbon projects tended to take place in industrialized countries, but the share of developing countries in the overall market for project-based transactions has been rising steadily, and appears to have reached more than 80% in the past 2 years.[4]

The Marrakesh Accords appear to have provided more certainty to emission reduction purchases in developing countries.

1 All dollar references are US dollars.

2 Market Analysis contained in State and Trends of the Carbon Market(s), October 2002. Available at http://www.prototypecarbonfund.org in the PCFPlus/Research section

3 Global Development Finance Online 2003, World Bank, 2003

4 State and Trends of the Carbon Market(s), October 2002. Available at http://www.prototypecarbonfund.org in the PCFplus/Research section

Over 2002 and 2003, 44% of the private sector's independent carbon asset volume acquisitions have come from developing countries. Of that, a majority of reductions have come from larger projects in Latin America and to a lesser degree Asia, while very small volumes were associated with projects in the poorer regions of Asia and Africa.[5] Over the next several years, a much greater percentage of emission reductions is likely to come from projects in India and China—again bypassing the smaller and poorer countries within Asia and Africa.

RISING CARBON PRICES

The World Bank concurs with the rationale provided by market analysts such as Point Carbon, CO_2e.com and Natsource that carbon prices are likely to rise steadily over the next several years. A recent Point Carbon projection for prices in the 2010 Kyoto compliance market (ex. USA) is US$10.98/t$CO_2$e.[6]

Analysis for carbon prices in the European Union market points to spot prices as high as €13 in April 2005 and €15 in April 2008.[7] A more recent expert poll projects a mean expectation for European Union allowances at spot prices of €10.6 in April 2008.[8]

A proposed compliance penalty of €40 in the 2005–2007 phase and of €100 in the 2008–12 phase provide additional data points.

In addition, there is some evidence of growing demand for high-quality emission reductions for the retail carbon market. These are already trading in the range of US$10–12/t$CO_2$e for small volumes.[9]

"Without external support, the current status of the carbon market would reject small-scale projects especially those from poor communities, due to transaction costs and low prices. The CDCF will help catalyze the carbon market to benefit poor communities to fulfill the principles of sustainable development and social justice of the World Bank and the Clean Development Mechanism."

Alberto Gonzales
Director Ejecutivo, Fondo Nacional del Ambiente, FONAM PERU

5 State and Trends of the Carbon Market(s), October 2002. Available at http://www.prototypecarbonfund.org in the PCFplus/Research section

6 Key Indicators, Point Carbon, November 20, 2002

7 The Size of the EU Carbon Market, Point Carbon, Carbon Market Analyst, 24 February 2003

8 Point Carbon, Carbon Market Europe, April 25, 2003. Point Carbon's What Price for EU Allowances? Carbon Market Analyst issue of March 25, 2003 also examines different scenarios for carbon prices in the European Union.

9 This information is provided for informational purposes only. No warranties or representations are made as to the accuracy, reliability or completeness of this information.

Background and Operational Strategy

The Community Development Carbon Fund evolved from a proposal by the Secretariat of the United Nations Framework Convention on Climate Change and the International Emissions Trading Association (IETA) that the World Bank address the special needs of small countries through a fund mechanism, building on its experience with the Prototype Carbon Fund. The CDCF is designed to provide communities in developing countries and in particular least developed countries with an opportunity to benefit from new investments in renewable energy and clean technology that aim to reduce greenhouse gas emissions and mitigate the effects of climate change. The Fund purchases emission reductions from projects that meet the regulatory requirements of the Clean Development Mechanism.

The Community Development Carbon Fund provides carbon finance to small-scale projects in the least developed countries and poorer areas of all developing countries. Many small-scale projects, such as mini- and micro-hydro, wind energy, small municipal and agricultural waste projects, energy efficient end-use appliances and manufacturing processes, clean transport and biomass fuel projects can benefit local communities even as they abate greenhouse gas emissions. However, proportionately higher business costs and risks in small countries and less developed countries put small-scale projects at a disadvantage when competing for carbon finance, making them likely to be bypassed by carbon investors.

Through the CDCF, the World Bank links private sector participants with community development projects. By working through local intermediaries such as financial institutions, micro-credit institutions, cooperatives and non governmental organizations, while also applying streamlined project procedures compatible with small-scale Kyoto projects, the CDCF seeks to lower transaction costs and risks associated with small-scale projects.

The World Bank is committed to independent monitoring of the local community development benefits that arise from CDCF projects. The CDCF is bundling these community development attributes with emission reductions, to create 'Development plus Carbon' or 'Carbon with a Human Face', and using financial innovation to improve local livelihoods and living conditions. By delivering the benefits of carbon finance to the community level and to poorer countries and communities, the CDCF is helping the parties to the Kyoto Protocol fulfill their ambition to have the Clean Development Mechanism serve sustainable development and achieve *equitable distribution* of the benefits of addressing climate change through project-based mechanisms.

Like other World Bank managed carbon funds, the CDCF purchases emission reductions from projects and pays on receipt of a report verifying those reductions occurred. The Fund's participants receive a pro-rata share of the emission reductions in accordance with the proportion of their contribution. Eventually the emission reductions they receive may be certified under the Kyoto Protocol and used towards mandatory or voluntary greenhouse gas reduction commitments under Kyoto or Non-Kyoto regimes.

FOCUS ON POTENTIAL PROJECTS:

SOLAR HOME SYSTEMS MARKET DEVELOPMENT

BOLIVIA

Bolivia confronts the most difficult conditions in South America for meeting its infrastructure needs. Because of its sparse population—8 people per square kilometer, with two thirds of rural inhabitants living in communities with fewer than 350 inhabitants—and low per-capita income, Bolivia has by far the lowest density of economic activity in South America. This, in turn, results in high unit costs of infrastructure, particularly in rural areas. The mountainous terrain of the Altiplano and Valleys zones, which allows for low-cost hydroelectricity generation, also results in increased costs for infrastructure construction and operation. Bolivia's electricity coverage in rural areas (communities below 2,000 inhabitants) remains very low at 24.5%. Most schools and health centers in rural areas are not electrified. Up to 40% of the non-electrified rural households are too far away from the national grid to permit an economically justified grid extension.

The Solar Home Systems Market Development Project will promote off-grid service-delivery models led by the private sector. Solar home systems of 50 watts peak will be installed and serviced by qualified private sector operators who will work via networks of local micro-enterprises. Twenty thousand rural households, micro-enterprises, schools, and health posts with be provided with electricity in a sustainable way. The project will open the Bolivian market for the first time to solar home systems of 50 watts peak.

Solar home systems would provide substitutes for the use of fossil fuels, either kerosene or diesel. The project is offering to mitigate 60,000 tons of carbon equivalent offsets over a 21-year period, starting delivery in 2004. Calculations of estimated incremental carbon are based on estimations of the annual displacement of the fossil fuel mix being used for lighting and power generation. CDCF participants will receive 100% of the carbon dioxide emission reductions that accrue to the project from inception through 2015.

THE CDCF'S OBJECTIVES:

- **Purchase and facilitate the generation of greenhouse gas emission reductions from small-scale projects which reduce poverty and improve the quality of life of local communities in the least developed countries and poorer areas of developing countries;**
- **Help build a market for these emission reductions, thereby expanding the reach of carbon finance and the benefits of the Clean Development Mechanism to developing countries that may otherwise be excluded;**
- **Leverage private capital flows for sustainable development; and**
- **Offer relevant information to the Parties to the UNFCCC and other interested parties engaged in the implementation and further development of the Clean Development Mechanism.**

FUND STRUCTURE, TERM, SIZE AND CONTRIBUTION LEVEL

Like the PCF, this Fund has been established as a trust fund maintained and operated by the World Bank in its capacity as trustee for the CDCF on behalf of the public and private sector financial contributors (participants). Unlike the PCF, this Fund will be set up as a rolling series of tranches, with a target size for the first tranche of between US$50 and $100 million. Subsequent tranches will be developed on a similar basis in response to demand. Tranche One began operations in mid-July 2003 and is likely to remain open to new participants until mid-2004.

At the end of the 17 year term of the Fund, the Fund's remaining assets will be distributed pro-rata among the participants, unless they and the World Bank agree otherwise. The size of the Fund is not expected to exceed US$500 million, although the Bank (with the approval of the Bank's Board of Executive Directors) may decide to accept contributions or open additional tranches, taking the cumulative value of participant contributions across all tranches above US$500 million.

THE FUND'S OPERATIONAL STRATEGY

The operating principles that guide the carbon finance business of the World Bank also apply to the operations of the CDCF. These principles include the purchase of emission reductions which will be consistent with the requirements of the UNFCCC and the Kyoto Protocol; an equitable distribution between both the participants and the recipients of the funds of the benefits resulting from the projects; and the dissemination of the knowledge gained as a result of the Fund development.

In addition to these general principles, the CDCF will:

(i) Be constituted on a similar basis to that of the PCF, whereby its principal activity will be to purchase verified and certified emission reductions on behalf of its participants through the entry into Emission Reductions Purchase Agreements.

(ii) Actively seek to reach countries and communities that are neither presently benefiting from development through carbon finance nor are likely to benefit greatly from it in the future. To this end, the Fund management will use its best endeavors to place a minimum of 25% of the Fund into eligible projects located in least developed countries and other poor developing countries. For the purpose of the Fund, least developed countries are defined as countries

listed in the International Development Association's list of countries, countries commonly referred to as "IDA blend", with a population of less than 75 million, or, countries designated as least developed countries by the United Nations.

(iii) Facilitate projects which include, as a measurable output, the provision of goods and services that under normal circumstances would lead to improvements in the social welfare of the communities involved in the projects. Where there is no identifiable community integral to the project, a beneficiary community will be identified. These project outputs will be certified by entities independent from the Fund.

(iv) Purchase emission reductions from projects that meet the definition of "Small-Scale CDM Project activities" (small-scale projects) included in decision UNFCCC 17/CP.7 and with the simplified modalities and procedures for small-scale CDM Project activities adopted by the eighth session of the COP (e.g. renewable energy projects with a maximum output capacity of 15 megawatts). Experience with the PCF shows that the great majority of potential projects in least developed countries and the poorer areas of developing countries fall under the small-scale project definition.

(v) In the short term, be expected to have a higher unit price per ton of emission reductions than applicable for emission reductions arising from larger Clean Development Mechanism projects in the larger non-Annex 1 Countries. Price differentials may be reduced in the medium term as demand exceeds supply in the core CDM market focused on larger projects in larger and middle income developing countries.

"The development, design and practice of the CDCF initiative represents a great opportunity for developing countries. It allows the promotion of small-scale activities that can generate significant social and environmental benefits for the rural communities that undertake them. Under the current economic conditions of the Latin American region, such an initiative becomes extremely attractive for our country. Through the carbon market, small-scale projects can access new financial resources that would hardly be available from other sources, restraining or even impeding the development of such projects. Therefore taking the opportunities the carbon market offers to our countries could end up in positive opportunities for the sustainable development of the region."

Martha Patricia Castillo
Chief, Colombian Climate Change Mitigation Office

PUTTING IT ALL TOGETHER: THE INITIAL PORTFOLIO OF PROJECTS

The CDCF is developing an initial portfolio of projects that will allow it to meet its objectives of generating reasonably priced emission reductions from small-scale projects eligible under the Clean Development Mechanism.

In the CDCF, projects are selected for their ability not only to meet all primary portfolio and project selection criteria but also for the financial credibility of the sponsors, which must have a proven track record and economic depth; for the projects' prospects of achieving financial closure, which must be sound; for their ability to generate emission reductions within two to three years from their selection; and for their potential for replication in other countries or sectors.

The CDCF also gives preference to projects that will generate all or at least 70% of contracted emission reductions by 2012. In order to ensure project financing and meet the portfolio design

FOCUS ON POTENTIAL PROJECTS:

BIOGAS

NEPAL

Nepal is a small land-locked country with a population of 25 million people, more than 90% of whom live in rural areas and rely on agriculture for their livelihoods. Nepal is one of the world's very low-income countries: per-capita income reached US$236 in 2003. Only 10% of households are connected to the power grid, and per-capita energy consumption is very low. Most energy used comes from traditional fuel such as fuelwood and animal dung, in particular for cooking purposes. The dependence on fuelwood has contributed greatly to deforestation.

With the help of the CDCF, The Netherlands Development Agency, the Kreditanstalt für Wiederaufbau of Germany, and the Nepali government's Alternative Energy Promotion Center, the project aims to disseminate and install high-quality biogas plants at a reasonable price and will bring fuel for cooking and lighting right into the rural household. Under the coordination of the Biogas Support Program, about 60,000 of these plants will be installed over 21 years, and will reach more remote and poor areas of the hills. The project will generate a total of 1.8 million tons of emission reductions during the first crediting period of 7 years, starting delivery in 2004. The sources of emission reductions are from manure treatment and the displacement of use of chemical fertilizer and fossil fuel. The CDCF expects to purchase a minimum of 1,429,000 tons of emission reductions over a 10-year crediting period.

There are many community benefits from the project. The technology is indigenous, and hence locally available. A major benefit to households is reduction of the workload for women and children, who will no longer have to collect firewood for cooking. A village woman near Kathmandu pointed to a hill nearby and said, *"Life with the biogas plant has become so much easier…no more climbing to that hill to collect wood."* Potential employment will add more than 150,000 person-years for skilled people in the construction, maintenance and marketing of biogas. The use of biogas means negligible smoke, hence better family health. Moreover, the residual biological slurry from the biogas plants can be used as superior organic fertilizer to enhance agricultural yields.

requirements, especially the requirement to invest at least 25% of the Fund's resources in priority countries, the CDCF may contract to purchase emission reductions generated after 2012.

The CDCF portfolio of projects will also be technologically diverse, bearing in mind that technologies are to be commercially proven and applicable to specific projects and unique country environments.

All of the CDCF projects will measurably improve the welfare of the local communities that are associated with them. Examples may include projects that provide communities with first-time access to modern energy services or additional income from payment for water rights or for crop residues that would otherwise be valueless. Some CDCF projects, particularly projects located in least developed countries where viable project opportunities are harder to come about, may have indirect community benefits (see Fund Operations, Community Development Benefits, page 27).

Finally, the CDCF will actively pursue projects that may benefit from such cost-reduction circumstances as underlying World Bank financing and/or support from the International Finance Corporation's Small and Medium Enterprise Program, the World Bank's Global Village Energy Partnership, and other CDCF*plus* implementation partners.

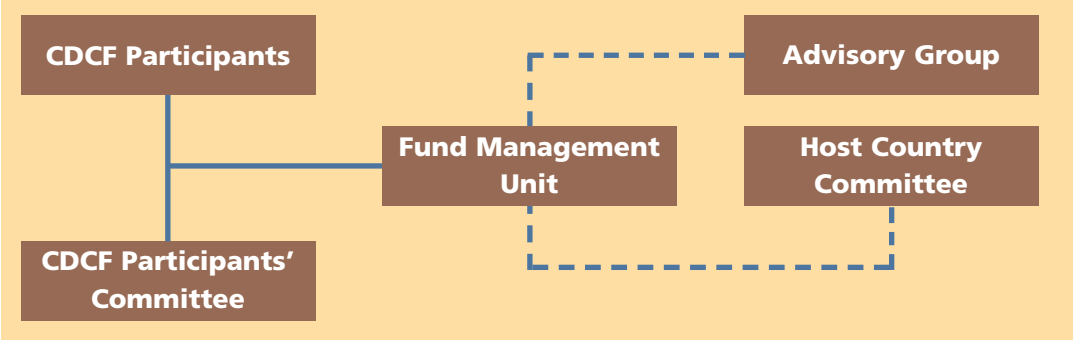
CAPACITY DEVELOPMENT FACILITY

Experience with the PCF and the UNFCCC pilot phase of Activities Implemented Jointly has shown substantial front-end expenses associated with the need to reduce investment risks, facilitate project development and replication and streamline project procedures. Project validation costs have also proved to be significant, particularly when there is a need to elaborate first-of-a-kind methodologies for the determination of a project's baseline and monitoring plan. This experience has also demonstrated that the first and second transactions add to the capacity of project sponsors, non governmental organizations, government agencies and intermediaries to participate in the market. Preliminary analyses and experience indicate the critical role of development finance in building capacity for the CDCF, particularly given the proportionally higher transaction costs associated with small-scale projects, and the risky investment conditions existing in poorer countries. As a result, in parallel with the CDCF, the Bank has established a technical assistance and capacity building facility—CDCF*plus*. (For more information please see page 30, Ensuring Success)

INTERMEDIARIES

The Fund Manager is committed to encouraging cost-effective and sustainable delivery of projects to meet the needs of the communities they are intended to serve. To help meet this objective, and to try and extend the benefits of carbon finance to very small projects (e.g., those comprising tens to hundreds of kilowatts), the Fund Manager will use local intermediaries, including small and medium enterprises, non governmental organizations, banks and micro-credit agencies, to help deliver projects, enable payment to project beneficiaries, and deliver carbon assets to the Fund. Small-scale projects such as community-level renewable energy systems (small wind, pico-hydro and solar home systems) in rural areas, poorer developing countries and small-island developing states, potentially yield very large local and regional development benefits. Project bundling and delivery through intermediaries which operate within local cost structures and enjoy local business knowledge can substantially reduce business costs and mitigate risks to the Fund.

CDCF Organizational Structure



CDCF PARTICIPANTS*

GOVERNMENTS	PRIVATE SECTOR
Canada	BASF AG *Germany*
Italy	Daiwa Securities SMBC Co. Ltd. *Japan*
The Netherlands	Endesa *Spain*
	Idemitsu Kosan Co. Ltd. *Japan*
	Nippon Oil Corporation *Japan*
	Okinawa Electric Power Co., Inc. *Japan*
	Swiss Re *Switzerland*

CDCF PARTICIPANTS

There are three types of participants' meetings. An organizational meeting is held within 30 days of the operational date of each tranche to approve the payment of the development costs, and to establish the first Participants' Committee for that tranche. Annual meetings will be held for all participants in that tranche, where participants will give general guidance on the overall operations of the Fund; review and approve the business plan and annual budget of the Fund for the next fiscal year; provide general guidance on the selection of projects; elect the members of the Participants' Committee and two observers to the Advisory Group; and review and authorize the payment of any development costs associated with establishing the Fund. Special meetings will be held as needed.

THE PARTICIPANTS' COMMITTEE

At the organizational meeting for each tranche, the participants will elect a committee of six members to serve until the second annual participants' meeting after the organizational meeting at which they were elected. The membership of the committee will include four representatives of the private sector participants, and two representatives of the public sector participants.

MEMBERS OF THE PARTICIPANTS' COMMITTEE*

PUBLIC SECTOR	PRIVATE SECTOR
Ms. Laura Canuto *Italy—Chair*	Mr. David Corregidor *Endesa*
Ms. Tara Preston *Canada*	Mr. Dirk Drechsel *BASF*
	Mr. Kazuhisa Fujiyama *Nippon Oil Corporation*
	Mr. Kunihiro Nishikawa *Daiwa Securities SMBC Co. Ltd.*

The Participants' Committee has several responsibilities. They provide general advice to the Bank on the operations of the Fund. They review the operations of their tranche and determine whether the project agreements negotiated by the World Bank are in agreement with the criteria for project selection and portfolio composition. They review the Fund's proposed budget and business plans for the following fiscal year, in advance of the annual participants' meeting.

* as of November 2003

THE ADVISORY GROUP

The Bank (through its President) has appointed a group of internationally recognized experts to advise the Fund. Two voting members of the Advisory Group come from business, two from government, three from nongovernmental organizations, one as an additional eminent person, and one as the chairperson. In addition, four members of the Advisory Group will be ex officio members: one observer nominated by the Host Country Committee, the president or executive officer of the International Emissions Trading Association, and two participants elected annually at the participants' annual meeting.

MEMBERS OF THE ADVISORY GROUP

Mr. Michael Zammit Cutajar
Former Executive Secretary UNFCCC secretariat, United Nations Assistant Secretary General, and Chair of the CDCF Advisory Group

Mr. Yvo de Boer
Director for International Environment Affairs, Dept. Director General for Environmental Protection, The Hague, Netherlands

Ms. Lidia Maria Ribeiro Arthur Brito
Minister of Higher Education, Science & Technology, Government of Mozambique

Mr. Holger Liptow
Head of Project, Climate Protection Programme, Environmental Management, GTZ, Germany

Mr. Andrei Marcu
Executive Director, International Emissions Trading Association, Geneva, Switzerland

Ms. Emily Ojoo Massawa
Coordinator, Climate Change Enabling Activities, Kenya

Mr. Nasser Munjee
Managing Director and CEO, Infrastructure Development Finance Company. Mumbai, India

Mr. Juan F. Rada
Senior Vice President, Oracle Indutries, Oracle EMEA - Geneva, Switzerland

Mr. Youba Sokona
Director, Environment et Développement du Tiers Monde, Dakar, Senegal

The Advisory Group will give advice to the Bank on issues such as the effectiveness of the CDCF in meeting its portfolio development and project selection criteria; and the proposed budgets and business plans for each forthcoming fiscal year. The group will independently review and advise on measures to ensure that the Fund and its tranches meet community development objectives. The Advisory Group will meet formally at least twice a year.

THE WORLD BANK

The World Bank's Fund Management Unit has day–to-day responsibility for the World Bank's duties—as trustee of the Fund—in approving and managing projects, monitoring emission reductions and community benefits, and administering the Fund. The CDCF is managed by the Fund Management Unit, and as with the PCF, will call upon the Bank's specialist staff as needed. Specialists may be needed for project technical review, appraisal of consistency with the Bank's country assistance strategies, advice on the Bank's safeguard policies, economic and financial analysis, training, knowledge management, legal services, research, marketing and issues such as participant and host country relations.

THE HOST COUNTRY COMMITTEE

The CDCF, like the PCF, recognizes the importance of the host countries in the Fund's development and operation. Various measures have been taken to formalize the role of the host countries. Within the Fund, each project will require prior host country approval.

In addition, the Host Country Committee of the PCF has agreed to advise the Fund Management Unit on all carbon finance activities of the CDCF. Interactions between the Host Country Committee and the CDCF will be managed by the World Bank, and a Host Country Committee observer will attend participants' meetings and Advisory Group meetings.

Fund Operations

The CDCF supports small-scale renewable energy, energy efficiency and waste-to-energy projects. Its unique advantage is that these projects will also provide significant and measurable development benefits to communities living in the immediate project vicinity or with a historical, cultural or economic affiliation to the project.

STREAMLINING PROCEDURES TO REDUCE COSTS

A key concern of small projects lies in their limited ability to absorb transaction costs. The time and costs spent on project development, baseline analysis, preparation of the monitoring plan, contract negotiation, validation, registration and so forth are largely the same whether the project is small or large. However, small projects cannot absorb the same level of transaction costs as large or regular-size projects—in many cases, high project preparation costs render these projects unviable.

"Payments for environmental services through innovative funds like the CDCF open new possibilities for the Bank to fulfill its poverty reduction mandate. We are demonstrating that dealing with global issues like climate change can have profound positive impact at the community level."

Ian Johnson
Vice-president of Sustainable Development, the World Bank

Small-scale projects will probably generate emission reductions at a higher cost per ton of carbon dioxide equivalent than larger projects, due to inherently higher transaction costs for small projects and to higher risks associated with doing business in some developing countries. The Fund manager will attempt to reduce the cost differential between large and small projects by, for example, finding donors to help build local capacity to prepare projects; using local financial and NGO intermediaries to help prepare projects; streamlining and standardizing documents and procedures such as baseline studies, certification and verification; and using umbrella agreements with host countries.

In an attempt to ensure accessibility to the Clean Development Mechanism for these smaller projects (often in the least developed countries and poorer areas of larger developing countries) the idea of fast-tracking and simplifying the rules for small renewable energy and energy-efficiency projects was adopted under the Marrakesh Accords. Simplified procedures for small-scale project activities were adopted by the eighth session of the Conference of the Parties to the Kyoto Protocol. These include:

- bundling of similar project activities, at the design, validation, registration, monitoring, verification and certification stages of the project cycle;
- simplified validation and certification by a single Designated Operational Entity;
- simplified baseline and monitoring methodologies developed for each category of a list of fourteen types of small-scale projects; and finally
- a simplified project design document.

PROJECT PORTFOLIO CRITERIA

Given the specialized focus of the CDCF, the design of the project portfolio is structured so as to ensure that the unique qualities of the Fund are maintained. The World Bank as CDCF trustee will set the criteria which will dictate the overall allocation of resources for each tranche of the Fund For the first tranche, the project portfolio criteria are as follows:

- Projects will be located only in developing countries which are Parties to the United Nations Framework Convention on Climate Change.
- No more than 10% of the Fund's assets will be contributed to projects in the same country.
- A minimum of 25% of the Fund will be contributed to eligible projects located in least developed countries and other poor developing countries, although the Fund may support projects in other countries, if these projects provide direct and independently certifiable benefits to the poorer communities of those countries.
- Projects will be selected using as a guide the definition of small-scale procedures provided under the Marrakesh Accords.

Commitment to afforestation and reforestation projects may only be made with the specific approval of the participants after issuance by the Parties to the UNFCCC of guidance on eligibility, additionality requirements and other matters at COP9 or subsequently. In any case, no more than 10% of the Fund's assets can be contributed to such projects.

All projects must meet standard selection criteria to ensure that the appropriate due diligence required for all World Bank projects (and therefore for all carbon funds managed by the World Bank) is undertaken. For the first tranche, projects must be consistent with the UNFCCC, the Kyoto Protocol and the Marrakesh Accords, national environmental protection and development priorities of the host countries, and the World Bank Group's country assistance strategies. It is required that various risks should be mitigated, i.e., projects should have manageable technical risk; the technology to be used in a project should be commercially available; and projections of emission reductions over the life of the project should be fairly robust. CDCF projects must also be complementary to the Global Environment Facility's long-term operational program, and with its short-term response measures. A comprehensive list of project selection criteria can be found on the CDCF web site: http://communitycarbonfund.org.

The project selection criterion that encapsulates the singularity of this fund is the requirement that the project demonstrably improves the quality of life of the poor. This is to be ascertained through the provision of measurable and certifiable benefits, discussed further on.

CDCF Project Cycle

Required CDCF-specific documentation in blue; other World Bank documentation in brown

1 PREPARATION AND REVIEW OF THE PROJECT

1. Project ideas reviewed by CDCF
   - Project Idea Note (PIN)
2. Host country endorsement sought
   - Letter of Endorsement (LoE)
3. Advanced project design documentation prepared by project sponsor
   - Project Concept Note (PCN)*
   - Project Concept Note (Bank PCN)–if required
4. Further work authorized by Fund Management Committee and Participants' Committee
5. CDCF formally signals intention to purchase emission reductions
   - Letter of Intent (LoI)
6. Letter of Approval sought
   - Letter of Approval (LoA)

7 PROJECT COMPLETION

1. At lifetime of valid baseline or useful life of technology
2. According to emerging UNFCCC rules, project can earn credits up to 21 years
   - Project Completion Report

up to 21 years

6 PERIODIC VERIFICATION AND CERTIFICATION

1. Verifier undertakes first verification and certification, typically one year after start up
   - Verification and Certification Report
2. CDCF pays project sponsor for emission reductions (ERs) certified
3. Certified ERs issued as per UNFCCC rules and shared as per distribution agreement
4. Verification and certification undertaken annually or as deemed appropriate

*including Community Benefits Questionnaire

The Steps in the Creation of Community Benefits

Consultation with Community

Getting Designated Community Counterpart

Agreeing Benefit(s) Arising or to be Provided

Benefits Baseline and Monitoring Plan

Contracting for Benefits Provision

Implementation by/with Community Oversight

Monitoring and Verification of Delivered Benefit(s)

3 months

2 BASELINE STUDY AND MONITORING PLAN (MP)

1. Baseline study and MP prepared by consultants or project sponsor
2. CDCF quality control of results
3. Documents for validation prepared by CDCF and project sponsor
   - Project Design Document (PDD)
4. Technical, financial, environmental, social due diligence (the World Bank)

2 months

3 VALIDATION PROCESS

1. CDCF contracts the validator and submits documents
2. Validator studies project design, baseline and MP and consults with CDCF and project participants
3. Validator issues a report and opinion
   - Validation report and opinion
   - Project Appraisal Document (PAD)–if required
4. Registration of project as per UNFCCC rules

2 months

4 NEGOTIATION OF PROJECT AGREEMENTS

1. CDCF prepares term sheets and draft legal documents
2. Pre-negotiations workshop for project participants on market, contracts and the Kyoto Protocol (optional)
3. Negotiations
4. Project financial closure
5. Effectiveness of project agreements
   - Emission Reductions Purchase Agreement
   - Host Country Agreement

3 months

5 CONSTRUCTION AND START UP

1. At construction completion, verifier contracted by CDCF
2. Verifier checks that specifications of the MP are met ("initial verification")
   - Initial Verification Report
3. Project implementation starts
4. Project entity monitors in accordance with the MP
   - Monitoring Reports
   - Periodic Supervision Reports

1-3 years

SUPERVISION DURING PROJECT CONSTRUCTION AND LIFETIME

The Fund Management Unit will monitor project construction; supervise modification requirements; arrange for initial verification to make sure all data collection and management are in place; and confirm that a satisfactory initial verification report has been received and that the Fund is willing to accept delivery of certified emission reductions and community development benefits on behalf of the participants.

The Fund Management Unit will also play a supervisory role during the lifetime of the Fund, and will procure carbon-related services for each project; prepare annual business plans and budgets for the carbon assets; maintain project accounts and emission reduction records; develop a community benefits registry; administer consultant contracts for the preliminary project verification and ongoing supervision; review project performance against the purchase agreement; and carry out social and environmental assessments as needed.

FOCUS ON POTENTIAL PROJECTS:

JEFFREYS BAY

SOUTH AFRICA

Jeffreys Bay, the site of one of the CDCF's first projects, is a small ocean-side municipality in the Eastern Cape Province of South Africa with a permanent population of about 65,000. While the town relies heavily on revenue from tourism, the area just inland of Jeffreys Bay has an agriculturally based economy, with citrus and dairy farming providing much of the opportunity for local employment. The Eastern Cape has been declared an economically disadvantaged province of South Africa. Lack of fresh water is a key barrier to sustainable development along much of the coast. The Eastern Cape also suffers from a shortage of electricity—a major constraint inhibiting development.

The project will create up to 12 megawatts of additional power-generation capacity, by means of a 7-megawatt wind facility combined with an associated 5 megawatts of hydroelectric power derived from one of several possible sources. The Jeffreys Bay project is an example of the provision of direct benefits—by providing electricity in peak hours when electricity is most needed, the proposed project will directly contribute to expanded economic development in the region, through the creation of new jobs and encouragement of small and medium enterprises. Because the government of South Africa is in the process of implementing a nationwide free "lifeline" electricity supply of 50 kilowatt hours for the poor, this additional power generation capacity partially funded by carbon finance will ensure that more low-income households will have access to electricity services. The CDCF will work with the national utility and local distributor to investigate how best to incorporate new electricity coverage into project planning.

COMMUNITY DEVELOPMENT BENEFITS

All projects facilitated by the Fund will benefit local communities either directly, or indirectly. In the case of direct benefits, the community benefit will be integral to the project and the target community will be readily identifiable, for example where the project would generate extra income for the community from watershed maintenance services for a small hydropower plant. If there is no identifiable community integral to the project, the CDCF will use part of the payments for the emission reductions for goods or services to benefit the communities that have geographical, cultural or historical association with the project site resources. For example, electricity for schools, health clinics, or workshops; potable water; teaching or medical services may be provided.

For all projects, it will be vital, through community dialogue and consensus building, to ensure that individuals, community leaders, and local government officials agree on the benefits to be provided and, more importantly, on the counterpart contributions required both for initial and recurrent costs. This agreement should be expressed in a written agreement that clearly describes

A PCF PROTOTYPE FOR THE CDCF:

JEPIRACHI WIND POWER

COLOMBIA

The 19.5 megawatt Jepirachi wind power project, a PCF project located in the Wayuu Indigenous Territory of Colombia is an example of the successful provision of indirect benefits. This PCF project inspired the design concept for CDCF projects with indirect community benefits. Once construction is completed in February 2004, the 15 windmills will be delivering around 68.3 gigawatt hours per year to the Colombian national grid.

Jepirachi will contribute to the development of the host indigenous community by financing a series of community-driven projects that were designed in consultation with the project sponsor, above and beyond what is required by the system of transfers mandated by Colombian law. The social plan was the result of extensive consultation with the community and the project developer. The main features are: training to facilitate direct and indirect job creation; the provision of a water desalinization plant fed by wind power and the provision of water storage depots; the rehabilitation of the graveyard; health and educational facilities, as well as the refurbishing of a health center, including solar-powered refrigeration capacity. By targeting water supply, education and health services, the project addresses the priorities for social development identified by the community. There is also an agreement between the project sponsor and the host indigenous community to review the program 2 years following its implementation.

the roles and responsibilities of all parties. To the extent possible, it will always be preferable that benefits provided via CDCF projects be combined with other development initiatives that may be underway or planned in the community as this will help ensure integration and contribute to sustainability.

NEGOTIATION OF THE EMISSION REDUCTIONS PURCHASE AGREEMENT

For each project or bundle of projects, the World Bank as trustee for the Fund will enter into an Emission Reductions Purchase Agreement with the project entity selling the emission reductions generated by the project. Key elements of such a purchase agreement include:

- agreement to sell a contracted amount of emission reductions generated by the project;
- agreement to provide specific communities with certain benefits, and a plan detailing how such benefits will be monitored, quantified and verified;
- commitment by the Bank to pay the purchase price upon delivery of the emission reductions;
- estimation of the annual projected volume of emission reductions to be generated and the minimum volume to be purchased;
- statement of the agreed price and conditions for payment;
- the monitoring plan for the project;
- provisions related to satisfactory project implementation;
- identification and allocation of common project-related risks, and methods for managing the project's financial risk;
- request for the project entity to maintain insurance; and
- provision for the management of any other issues relating to the mitigation of environmental or social impacts.

CARBON ASSET RISK ASSESSMENT

Experience with the PCF has shown that the risks associated with creating a carbon asset are often not covered in the standard due diligence undertaken on a project. These risks are usually associated either with policy issues yet to be resolved in the framework of the Clean Development Mechanism (including eligibility and baseline risk) or with technical issues of greenhouse gas emission volumes and flow rates. If these issues come up, the Fund undertakes further risk assessments in addition to the project's standard due diligence.

PARALLEL COMPREHENSIVE DUE DILIGENCE OF UNDERLYING PROJECT

All projects receiving carbon finance are appraised to confirm their financial, technical, commercial and legal feasibility and soundness, as well as their compliance with the World Bank Group safeguards policies. Projects with World Bank Group financing are appraised according to standard procedures. Projects that are not receiving underlying World Bank Group financing will be subject to an independent appraisal and due diligence in accordance with World Bank Group standards.

THE FUND'S POLICY ON DISTRIBUTION OF EMISSION REDUCTIONS

Once the emission reductions and community development benefits have both been certified, they can be distributed to CDCF participants on a pro-rata basis.

RENEWAL OF THE CREDITING PERIOD

For all eligible projects, the Fund may arrange to request a renewal of the crediting period, in accordance with decisions on guidelines that have been adopted under the Kyoto Protocol.

"A wide range of small-scale projects in countries like mine, Mozambique, can generate emission reductions. However, experience with carbon finance thus far has shown that probably 80% of poor countries will see limited or no projects under the Clean Development Mechanism. That's why the CDCF is so important—it is a new and concrete way to benefit many potentially excluded poor and least-developed countries.

The CDCF presents a unique opportunity to develop by private-sector investment in cleaner technologies and to improve environmental management in poor countries. For example, my country, Mozambique, is rich in forests, a renewable resource, and also rich in micro-hydropower possibilities. But our communities don't have the financial means to invest in those potential opportunities.

These CDCF projects will benefit our communities, and will be implemented in close partnership with local stakeholders such as medium and small enterprises, non governmental organizations, community-based organizations, and the local people themselves. This local collaboration is a key factor in the success and sustainability of development activities."

Lidia A. Brito
Minister Of Higher Education, Science & Technology, Mozambique

Ensuring Success

KNOWLEDGE SHARING, TECHNICAL ASSISTANCE AND CAPACITY BUILDING

There is a familiar adage that knowledge is power. In the early carbon market, knowledge *is* power and empowering the historically disadvantaged with insight on the opportunity and the know-how to take advantage of it is the most important step we can take. CDCF will communicate most effectively to potential beneficiaries through transactions, through preparing and negotiating their first carbon sale. This is an enormously illuminating experience. The greater the volume of CDCF transactions, the greater the enlightenment and the faster awareness will build on the opportunities of the Clean Development Mechanism.

To fulfill the mandate of the CDCF, the Fund Management Unit must choose target markets wisely, proactively identify projects in partnership with local or global partners, and increase awareness at three levels: First that global climate change is a serious global problem but one that can be addressed in any part of the world on any scale—the climate is neutral to the location and the actor. Everyone can make a difference. Second, that the intergovernmental process of the UNFCCC has created a regulatory framework in which public and private entities can offset their climate impacts by investing in emission reductions generated by certain activities and following certain rules, and that knowing how to interpret these rules and use these procedures is key to tapping into the global carbon market. Third, at the level of the individual transaction, it is important to understand costs, risks and market prices in order to ensure that sellers and buyers strike fair and durable deals.

From the World Bank's experience to date, several well-tested means of knowledge capture and dissemination have been developed and will be utilized by the CDCF.

SHARING KNOWLEDGE

Sharing knowledge is fundamental to ensuring that learning takes place and the widest possible stakeholder groups can understand and provide feedback on what is being done. Below are some of the knowledge sharing tools of the CDCF:

The CDCF's Web Site will be the main and most frequently used channel for dissemination of relevant information and knowledge. Through the web site, opportunities will be provided for interactive discussion and contributions from interested parties. Fund participants will have access through the private domain of the web site to more detailed project documentation and to the emission reductions database which will assist in tracking the verified emission reductions flowing from CDCF projects.

The Helpdesk. In 2002 the Carbon Finance Business established a carbon finance helpdesk, providing a window of transparency to the external audience and an opportunity for them to learn about and comment on World Bank carbon finance operations. With support from the helpdesk, the World Bank's Carbon Finance Business has become one of the standard references and primary sources of information for all actors in the carbon market. To contact the carbon finance helpdesk, please send an email to helpdesk@carbonfinance.org

The Independent Assessment of the Advisory Group will help to guide CDCF managers in their efforts to reach out to the poorest communities in developing countries and to enhance community development through all their projects. The Advisory Group will document the credibility of these efforts.

Publications including the CDCF Annual Report will detail the development of the Fund.

"It is our hope that CDCF projects will promote development in poor rural areas while achieving the goal of greenhouse gas emission reduction benefits."

Lu Xuedu
Director, Division of Resources and Environment, Ministry of Science and Technology of China
Alternate Member, CDM Executive Board, Kyoto Protocol to UNFCCC

Fellowship and Intern Programs. The CDCF will build upon and expand the successful fellowship and interns programs run through the PCF*plus* technical assistance umbrella for developing country constituencies, and the participant fellows program where fund participants spend weeks to months in residence with the Fund Management Unit observing and learning aspects of the business of particular interest. CDCF Technical Assistance Facility resources will be drawn upon to support the CDCF Fellowship program.

The CDCF will also sponsor training through the World Bank Institute and capacity building programs in carbon finance, drawing upon lessons learned from CDCF implementation and other Bank-managed carbon finance operations. In addition, wherever practicable, the Fund Management Unit will provide upstream consultations and training on the carbon market and access to independent advice on prices and terms and conditions of carbon purchase agreements, as part of the process of carbon asset creation and purchase negotiations. These activities are designed to increase awareness and competence among buyers to negotiate the sale of carbon assets on fair and equitable terms.

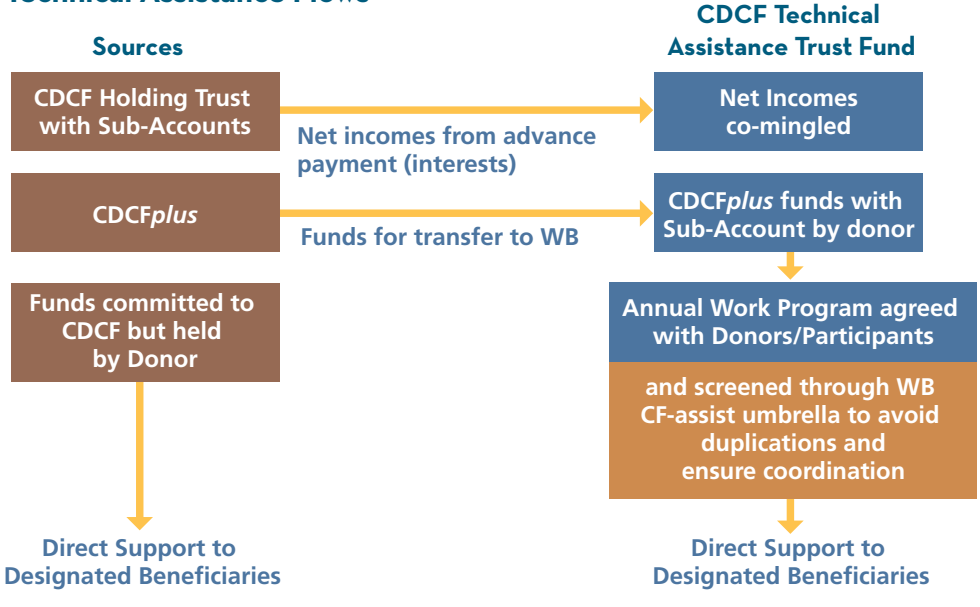
PROVIDING TECHNICAL ASSISTANCE AND BUILDING CAPACITY

Interested companies and governments have the opportunity to participate in the CDCF in two ways: by becoming a participant in the Fund itself or by providing technical assistance and capacity building. The World Bank is mobilizing donor resources from governments, foundations and corporations to build local capacity to develop the necessary infrastructure to prepare projects. The program to establish these partnerships is **"CDCF*plus*"** and the partnerships form part of the World Bank's Technical Assistance Program for Carbon Finance (**CF-Assist**), which provides the umbrella—ensuring coordination among the various technical assistance initiatives of the World Bank in the area of carbon finance.

CDCF*plus* benefits participants and beneficiaries alike as it reduces learning costs in seeking to benchmark small-scale assets and efficient procedures; as a result it will lower the cost of transactions and expand the reach of carbon finance over time. CDCF*plus* works in parallel with the CDCF, with its participants contributing either financial resources or technical expertise. Through targeted technical assistance, CDCF*plus* helps to build the local capacity needed to make the Clean Development Mechanism a reality for a larger number of developing countries. The work of CDCF*plus* is consistent with the principles and rules for the Clean Development Mechanism—including those of official development assistance—as well as the capacity-building framework for developing countries, adopted at the seventh session of the Conference of the Parties to the UNFCCC (Marrakesh, October 29—November 10, 2001).

The funds contributed by the CDCF*plus* counterparts will be called on as needed by the Bank to undertake the technical assistance activities in the CDCF*plus* Work Program (see figure below).

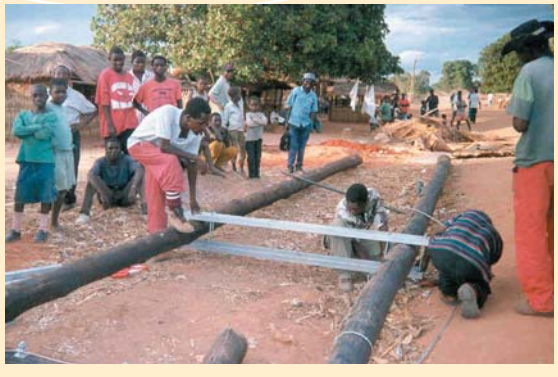
Technical Assistance Flows



Learning by Doing

Through targeted activities, CDCF*plus* will:

- Identify local intermediaries—commercial banks, savings and loan associations, cooperatives, development NGOs, utilities—and train them to prepare and implement small-scale carbon projects (both individual and bundled);
- Respond to specific requests from project developers for technical assistance to bring the project to validation stage;
- Ensure that local communities and other stakeholders are fully informed and consulted from the beginning on all aspects of project development and implementation, and that their concerns and interests are reflected in the final project; and
- Fill the gaps in project preparation financing for quality projects and support the development of a pipeline of such projects.



Glossary

Additionality: According to the Kyoto Protocol greenhouse gas emission reductions generated by CDM and JI project activities must be additional to those that otherwise would occur. Additionality is established when there is a positive difference between the emissions that occur in the baseline scenario, and the emissions that occur in the proposed project.

Advisory Group: The committee of experts established by the Trustee to provide advice to the Trustee on the implementation of the Fund, the effectiveness of each Tranche, the procedures for verifying and certifying Local Community Benefits, proposed budgets and business plans, project selection and portfolio criteria and community development objectives;

Afforestation: The process of establishing and growing forests on bare or cultivated land, which has not been forested in recent history.

Annex I Countries: The countries listed in Annex I of the UNFCCC and, when appropriate, in Annex B of the Kyoto Protocol.

Assigned Amount Units: The quota of Annex I Parties' permissible emissions under the Kyoto Protocol.

Baseline: The emission of greenhouse gases that would occur without the contemplated policy intervention or project activity.

Carbon asset: The potential of greenhouse gas emission reductions that a project is able to generate and sell.

Carbon finance: Resources provided to projects generating (or expected to generate) greenhouse gas (or carbon) emission reductions in the form of the purchase of such emission reductions.

Carbon dioxide equivalent: The universal unit of measurement used to indicate the global warming potential of each of the six greenhouse gases. Carbon dioxide—a naturally occurring gas that is a byproduct of burning fossil fuels and biomass, land-use changes, and other industrial processes—is the reference gas against which the other greenhouse gases are measured.

CDCF*plus*: The CDCF technical assistance and capacity building facility which aims at mobilizing donor resources from governments, foundations and corporations to build local capacity to develop the necessary infrastructure to prepare projects.

Certification: In relation to: (a) Emission Reductions is the written assurance by an independent third party or Operational Entity that, during a specific time period, a project achieved the anthropogenic reductions in emissions by sources or the anthropogenic removals of greenhouse gases by sinks as certified. **(b) Local Community Benefits** is the written assurance by an independent third party or Operational Entity that the local community benefits identified in the project agreement were achieved.

Certified Emission Reductions: A unit of greenhouse gas emission reductions issued pursuant to the Clean Development Mechanism of the Kyoto Protocol, and measured in metric tons of carbon dioxide equivalent.

CF-Assist: The World Bank's technical assistance program for carbon finance, which will provide the umbrella ensuring coordination among the various technical assistance initiatives of the World Bank in the area of carbon finance.

Clean Development Mechanism: The mechanism provided by Article 12 of the Kyoto Protocol, designed to assist developing countries in achieving sustainable development by permitting industrialized countries to finance projects for reducing greenhouse gas emissions in developing countries and receive credit for doing so.

Clean Development Mechanism Executive Board: The committee established pursuant to the UNFCCC to supervise and monitor the implementation of Article 12 of the Kyoto Protocol.

Conference of the Parties: The meeting of parties to the United Nations Framework Convention on Climate Change.

Emission Reductions: The measurable reduction of release of greenhouse gases into the atmosphere from a specified activity or over a specified area, and a specified period of time.

Emission Reductions Purchase Agreement: Agreement which governs the purchase and sale of emission reductions.

Fund Management Unit: Unit headed by the CDCF Fund Manager and responsible for the day-to-day operations of the Fund.

Fund Manager: The World Bank staff member selected by the President of the World Bank to head the Carbon Finance Business.

Greenhouse gases: These are the gases released by human activity that are responsible for climate change and global warming. The six gases listed in Annex A of the Kyoto Protocol are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_20), as well as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

High quality emission reductions: Emission reductions of a sufficient quality so that, in the opinion of the World Bank, at the time a project is selected and designed, there will be a strong likelihood, to the extent it can be assessed, that CDCF participants may be able to apply their share of emission reductions for the purpose of satisfying the requirements of the United Nations Framework Convention on Climate Change, relevant to international agreements, or applicable national legislation.

Host country: The country where an emission reduction project is physically located.

Host Country Committee: The committee known as the Carbon Finance Host Country Committee established by the Bank for the purpose of facilitating interaction between the host countries and the Bank in relation to the development and operation of CDM projects.

Joint Implementation: Mechanism provided by Article 6 of the Kyoto Protocol, whereby a country included in Annex I of the UNFCCC and the Kyoto Protocol may acquire Emission Reduction Units when it helps to finance projects that reduce net emissions in another industrialized country (including countries with economies in transition).

Kyoto Protocol: Adopted at the 3rd Conference of the Parties to the United Nations Convention on Climate Change held in Kyoto, Japan in December 1997, the Kyoto Protocol commits industrialized country signatories to reduce their greenhouse gas (or "carbon") emissions by an average of 5.2% compared with 1990 emissions, in the period 2008-2012. In other words, annual Annex I emissions must be, on average, 950 million tons of carbon dioxide equivalent lower than 1990 emissions during the period 2008-2012.

Least Developed Countries: For the purpose of the Fund, least developed countries are defined as countries listed in the World Bank's International Development Association (IDA) list of countries, countries commonly referred to as "IDA blend," with a population of less than 75 million; or, countries designated as least developed countries by the United Nations.

Local Community Benefits: Local Community Benefits mean identifiable and quantifiable improvements in the quality of life of a local group of people who are identified by the Trustee and the project entity as in the vicinity of, or affected by a CDCF project.

Marrakesh Accords: The set of rules agreed to by the Parties to the UNFCCC at the occasion of their Seventh Session, which provides additional implementation guidelines for the CDM.

Monitoring plan: A set of requirements for monitoring and verification of emission reductions achieved by a project.

Operational Entity: An independent entity, accredited by the CDM Executive Board, which validates CDM project activities, and verifies and certifies emission reductions generated by such projects.

Participants: Contributors to the CDCF.

Participants' Committee: A committee established by the trustee for a tranche with membership and role as defined in the Instrument, approved by the Executive Board of the World Bank, to establish the CDCF.

Project Concept Note: A brief description of a project prepared by the project proponent entity or intermediary.

Project Design Document: A project-specific document required under the CDM rules which will enable the Operational Entity to determine whether the project **(i)** has been approved by the parties involved in a project, **(ii)** would result in reductions of greenhouse gas emissions that are additional, **(iii)** has an appropriate baseline and monitoring plan.

Project Idea Note: A note prepared by a project proponent regarding a project proposed for CDCF. The Project Idea Note is set forth in a format provided by the CDCF.

Reforestation: This process increases the capacity of the land to sequester carbon by replanting forest biomass in areas where forests have been previously harvested.

Registration: The formal acceptance by the CDM Executive Board of a validated project as a CDM project activity.

Small-Scale Projects: Projects which are compatible with the definition of "Small-Scale CDM Project activities" set out in decision 17/CP.7. of the Conference of Parties to the UNFCCC.

Tranche: means a tranche of the CDCF into which participants pay their contributions, with the first Tranche representing contributions received by participants between the first opening date and the first closing date;

Trustee: The World Bank, acting not in its individual or personal capacity but solely in its capacity as trustee of the Fund.

United Nations Framework Convention on Climate Change: The international legal framework adopted in June 1992 at the Rio Earth Summit to address climate change. It commits the Parties to the UNFCCC to stabilize human induced greenhouse gas emissions at levels that would prevent dangerous manmade interference with the climate system. In December 1997, the Parties to the UNFCCC adopted the Kyoto Protocol.

Validation: The assessment of a project's Project Design Document, which describes its design, including its baseline and monitoring plan, by an independent third party, before the implementation of the project against the requirements of the CDM,

Verification: The periodic independent review and ex post determination by an independent third party of: **(a)** the monitored emission reductions that have occurred as a result of a registered CDM project activity during the verification period; and/or **(b)** the local community benefits that have accrued during the relevant verification period.

Verification Report: A report prepared by an Operational Entity, or by another independent third party, pursuant to a Verification, which reports the findings of the Verification process, including the amount of reductions in emission of greenhouse gases that have been found to have been generated.

List of Acronyms

CDCF	Community Development Carbon Fund
CDM	Clean Development Mechanism
CF-Assist	Carbon Finance Assist Program
COP	Conference of the Parties to the UNFCCC
GHG	Greenhouse gas
IDA	International Development Association
IETA	International Emissions Trading Association
JI	Joint Implementation
KFW	Kreditanstalt für Wiederaufbau
NCDMF	Netherlands Clean Development Mechanism Facility
NGO	Nongovernmental Organization
OECD	Organization for Economic Cooperation and Development
PCF	Prototype Carbon Fund
PCN	Project Concept Note
PIN	Project Idea Note
tCO_2e	Tons of carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change

For the participating governments and companies, the Community Development Carbon Fund (CDCF) is an opportunity to put a human face on carbon finance, by combining carbon emission reductions with development.

" For BASF, participating in the fund is an excellent opportunity to acquaint itself with the complex mechanism of global greenhouse gas trading, provide development aid, and at the same time acquire emission rights. By participating in the CDCF, we want to emphasize our stance on sustainable development and the mechanisms of the Kyoto Protocol."

BASF, Germany

" Daiwa Securities SMBC Co. Ltd. is participating in the CDCF, with the expectation that we would serve as an intermediary of a future carbon finance market through our outstanding expertise in the capital market."

Daiwa Securities SMBC Co. Ltd., Japan

" Endesa, one of the largest power companies in the world, is aware of the climate change challenge and has decided to actively support initiatives that will contribute to a sustainable world—benefiting communities in developing countries and, specifically, in least developed countries. Endesa, through its participation in the CDCF, has adopted a learning by doing approach seeking to widely use one of the key mechanisms envisaged by the Kyoto Protocol to cooperate internationally"

Endesa, Spain

" We started thinking more about the global environment after deciding to join the CDCF. This brings to mind an expression—we are ' learning by joining'."

Idemitsu Kosan Co. Ltd., Japan

" Nippon Oil Corporation, Japan's leading oil company as well as a comprehensive energy enterprise, is participating in CDCF as a strategic measure to tackle the global warming issue."

Nippon Oil Corporation, Japan

" Greenhouse gas emission reduction is one of our corporate strategies. We decided to invest in CDCF not only because it helps us reach our goal, but because we would be able to contribute to prevent global warming through a Fund which promotes projects in developing countries and least developed countries.

Okinawa Electric Power Co., Inc., Japan

" Swiss Re plans to become a greenhouse neutral company. Swiss Re will initiate a 10-year program combining internal emission reduction measures with an investment in the World Bank Community Development Carbon Fund."

Swiss Re, Switzerland

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COMMUNITY DEVELOPMENT CARBON FUND

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