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Italian
Carbon
Fund

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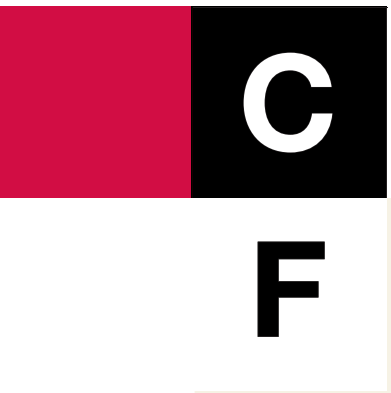


Italian Carbon Fund

A Word From the Minister for the Environment and Territory of Italy

Integrating the environmental dimension into development strategies, and recognizing the positive and necessary role played by private companies and the business community in order to combine economic growth and protection of the environment have been the starting point for the activities of the Ministry for the Environment and Territory of Italy in the past few years.

Global climate change is undermining our ability to sustain the development gains made over the past decades. The Intergovernmental Panel on Climate Change suggests that, no later than 2025-2030, carbon dioxide emissions must be reduced by at least 50% compared with 1990 levels. An extraordinary effort in terms of research and innovation is required to reduce the "carbon intensity" of the economy worldwide. This cannot be achieved without a commitment by all countries to cooperate across borders in developing and disseminating clean and efficient technologies.

In this perspective, carbon finance is emerging as a valuable tool to improve the viability of, and to catalyze, clean technology investments. It is also tangible proof of our commitment to the concept of the "environment as a driving force for development".

The Ministry for the Environment and Territory of Italy views the Italian Carbon Fund (ICF) as a means to promote the protection of the global environment, by leveraging substantial investment in clean technologies in host countries, acquiring and disseminating carbon finance experience, while meeting some of our emission reduction obligations in a reliable and economical way. And in the same spirit we are also partners with the World Bank in the Community Development Carbon Fund and the BioCarbon Fund.

We are convinced that the ICF will promote and facilitate Italian industry's engagement in the emerging carbon market by providing knowledge about maximizing project-based opportunities for cost-effective acquisition of emission reductions and clean technology transfer.

We will stimulate the direct participation of Italian industry in the ICF because we believe that the ICF provides an economic and secure vehicle for acquiring emission reductions needed for compliance with international and domestic greenhouse gas emission regulations.

Altero Matteoli,
Minister for the Environment and Territory of Italy

Letter from the World Bank

The Italian Carbon Fund is a vote of confidence by the Ministry for the Environment and Territory of Italy in the global carbon market and a resounding commitment to the reduction of climate-altering greenhouse gas emissions.

The current level of investment in the Kyoto Protocol's Clean Development Mechanism (CDM)—which allows industrial countries to obtain greenhouse gas reductions from projects in developing countries while promoting their sustainable development—is much lower than expected. The benefits to Organization for Economic Cooperation and Development (OECD) companies and to beneficiary countries from Kyoto Protocol mechanisms like the CDM could be significant in terms of lowering the cost of compliance with regulatory regimes such as the European Union's Emissions Trading Scheme and providing much needed private investment, technology and know-how to developing countries in key economic sectors such as infrastructure and power supply.

At this stage without World Bank involvement, little carbon finance would be likely to reach developing countries. The threat that climate change poses to long-term development and the ability of the poor to escape from poverty is of particular concern to the World Bank. The carbon finance activities of the Bank are a natural extension of the World Bank's mission to reduce poverty but with the added advantage that it is based on fair trade of a new environmental commodity—"carbon" or greenhouse gas emission reductions.

The Ministry for the Environment and Territory of Italy is to be congratulated for its foresight in seeing the potential of the carbon market and the CDM. Through the Italian Carbon Fund, private sector entities would be able to assess the cost-effectiveness of buying emission reductions from projects in developing and transition economies.

We see the role of the World Bank as helping to reduce risk and uncertainty for private investment in greenhouse gas emission reductions in projects in developing and transition economies, and building the capacity of emerging markets to meet these demands.

Ken Newcombe
Funds Manager and Senior Manager, Carbon Finance Business, The World Bank

INTRODUCTION:

RESPONDING TO THE CLIMATE CRISIS

Climate change is emerging as one of the most profound environmental threats to the human future. 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.

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 and areas 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. The Kyoto Protocol (Protocol) and the European Union's Emissions Trading Scheme (ETS) provide an opportunity for OECD countries to reduce greenhouse gas emissions and at the same time help developing and transition economies invest in environmentally friendly technologies and infrastructure that will contribute to their sustainable development.

The Kyoto Protocol

The Kyoto Protocol was adopted at the third session of the Conference of the Parties to the Convention (COP), held at Kyoto, Japan, on December 11, 1997. Once entered into force, the Kyoto Protocol will commit the Annex I countries that will have ratified it, to individual targets to limit or reduce their emissions, adding up to a total cut of at least 5% from 1990 levels in the "commitment period" 2008-2012. The individual targets for Annex I countries are listed in the Protocol's Annex B, and range from an 8% reduction for the European Union and several other countries, to a 10% increase for Iceland. The targets cover emissions of six main greenhouse gases listed in the Protocol's Annex A.

In order to enter into force, the Protocol must be ratified (or acceded to) by 55 Parties to the United Nations Convention on Climate Change including Annex I countries accounting for 55% of carbon dioxide emissions from this group in 1990. One hundred and twenty-one nations and the European Union had ratified or acceded to the Protocol as of the time of printing of this document, representing 44.2% of the Annex I emissions. Ratification by the Russian Federation would bring the share of Annex I emissions beyond the 55% threshold and cause the Kyoto Protocol to enter into force. The United States, which accounts for about a quarter of the world's greenhouse gas emissions and over 35 percent of the Annex I emissions, has stated its intention not to ratify the Kyoto Protocol.

The Mechanisms of the Kyoto Protocol

The Annex I countries may meet part of their emission targets through the so-called "Kyoto mechanisms". Article 12 of the Kyoto Protocol defines a Clean Development Mechanism (CDM) allowing the issuance of Certified Emission Reductions (CERs) for projects located in non-Annex I countries that generate permitted reductions of greenhouse gas emissions or sequestration of greenhouse gases. Once verified and certified by a designated independent entity, such emission reductions may be used by Annex I countries to meet their quantified emission limitation and reduction commitments.

The other two mechanisms envisaged by the Kyoto Protocol—projects under Article 6 (Joint Implementation) and Emissions Trading under Article 17—allow an Annex I country to acquire, respectively, emission reductions generated through a project undertaken jointly with another Annex I country and units of another Annex I country's quota of permissible emissions (Assigned Amount Units), and to use these units for the purpose of meeting its targets. The rulebook for the implementation of the Kyoto mechanisms is contained in the Marrakesh Accords, adopted by the seventh session of the COP held in November 2001 in Morocco.

The Marrakesh Accords allow for land use, land use change and forestry projects to be eligible under the CDM (for the first commitment period), but limited these afforestation and reforestation activities. COP 7 also agreed that an Annex I country may account for emission reductions from such CDM projects up to 1% of its base year. COP 9, held in December 2003 in Milan, Italy, resolved some of the issues left pending from the previous negotiations.

The linking of JI and CDM projects to the European Union's Emissions Trading Scheme is key to reducing the costs of compliance of companies covered by the ETS.

Accordingly, emission reductions from afforestation and reforestation projects are allowed for up to 60 years subject to verification and certification of continued storage of carbon every five years.

The Emissions Trading Scheme of the European Union

Beyond the Kyoto Protocol, the European Union's Emissions Trading Scheme (ETS) is the single largest greenhouse gas mitigation regime in the world. In its pilot phase (2005-2007) the ETS imposes a cap on carbon dioxide (CO_2) emissions of medium and large fixed sources, which amount to about 45% of the total CO_2 emissions of the European Union (EU). The second phase of the ETS will be 2008-2012.

The ETS requires European Union member states to set legally binding caps on carbon dioxide emissions from facilities involved in energy activities, iron and steel production and processing, cement, glass or ceramic production, or pulp, paper or board production. The documents which establish the liabilities of the individual facilities covered by the ETS are the National Allocation Plans which set individual emissions caps and allowance allocations. Almost 15,000 EU facilities are covered by the ETS, about 2,900 of which are located in Italy.

On April 21, 2004 the European Parliament approved an amendment of the ETS which allows for the linking between the ETS and the Kyoto Protocol. The linking enables emission reductions under the Kyoto Protocol's Clean Development Mechanism and Joint Implementation to be used by companies for compliance in the ETS. The linking of JI and CDM projects to the EU's Emissions Trading Scheme is key to reducing the costs of compliance of companies covered by the ETS.

The Carbon Finance Business of the World Bank

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 the evolving carbon 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.

Following initial consultations with the United Nations Framework Convention on Climate Change (UNFCCC) secretariat and the International Emissions Trading Association (IETA), in March 2003, the World Bank established the Community Development Carbon Fund (CDCF) with the dual objective of purchasing and facilitating the generation of high-quality greenhouse gas emission reductions from small-scale projects which also reduce poverty and improve the quality of life of local communities in poorer countries and areas of the developing world. The CDCF is intended to extend the reach of carbon finance and the Clean Development Mechanism to developing countries that would otherwise be potentially excluded from their benefits.

The World Bank launched the BioCarbon Fund in November 2003 to provide an opportunity to channel private capital to pilot projects that sequester and conserve greenhouse gases in forest and agricultural ecosystems. Currently, the market is bypassing opportunities to remove carbon dioxide from the atmosphere through sustainable land management, agriculture, and forestry—including forest restoration for biodiversity conservation—and is therefore missing an opportunity to increase financial support for the rural poor through sustainable natural resource utilization. Ultimately carbon sequestration may be the only significant option for many poor nations which have only small industrial sectors and energy use to benefit from carbon finance.

Italy is also a participant in both the CDCF and the BioCarbon Fund.

Italy's Climate Change Policies

The Ministry for the Environment and Territory is the lead agency in Italy with respect to climate change policy.

Italy's emission reduction target under the Kyoto Protocol is a 6.5% reduction from 1990 levels by 2008-2012. Projections indicate that business as usual emissions are likely to increase to around 13% above 1990 levels. Therefore a reduction in emissions of around 19.5% may be required by 2008-2012. To address this challenge, in 1998 the Italian Government adopted a national plan that envisages a number of measures, including increased energy efficiency and use of renewable energy (through such incentives as "green certificates"), enhancement of domestic "carbon sinks", reduction of fuel for transport, and reduction of energy use for industry and household.

A reduction in emissions of around 19.5% may be required by 2008-2012. To address this challenge in a cost-effective way, the Italian Kyoto Protocol Ratification Law envisages full use of the Clean Development Mechanism and Joint Implementation.

In addition, the Kyoto Protocol Ratification Law approved by the Italian Parliament on June 1st 2002, foresees full use of the project-based Kyoto mechanisms—Clean Development Mechanism and Joint Implementation—to achieve the emission reduction targets in a cost-effective way and promote sustainable development.

Italy is fully engaged in the European Union's Emissions Trading Scheme. Recently, the Ministry for the Environment and Territory of Italy published the proposed draft National Allocation Plan, which foresees allocating a total of 837.4 million tons of allowances to these sources over the first phase 2005-07. The proposed allocation will be annual, starting with 278.5 million tons of allowances in 2005, increasing to 279.7 million tons of allowances in 2006, then 279.2 million tons of allowances in 2007.

The Italian Carbon Fund was established at the request of the Ministry for the Environment and Territory of Italy. The Fund is designed to purchase emission reductions from projects that meet the regulatory requirements of the Clean Development Mechanism, Joint Implementation and/or the EU's Emissions Trading Scheme.

The ICF operations are intended to share knowledge and information with Italian government and business, helping to reduce the costs for both the public and private sectors of achieving their emission reduction commitments, as well as assisting developing countries by purchasing emission reductions from projects in those countries.

CHAPTER 1:

THE ICF OPPORTUNITY

The following are some of the important reasons behind the development of the Italian Carbon Fund by the Ministry for the Environment and Territory.

An Opportunity to Demonstrate Commitment to Greenhouse Gas Reductions

The Ministry for the Environment and Territory of Italy has established the Italian Carbon Fund explicitly for Italian companies and public entities to provide a government-endorsed *alternative to obtain emission reductions which may be used to help meet Italian emission reduction targets* (quoted from the ICF brochure, November 2003).

An Easier "Make or Buy" Decision

As companies face carbon compliance obligations, many are also facing a "make or buy" decision on managing their carbon risks. Companies can buy greenhouse gas emission reductions from projects on their own but to do that they would have to develop in-house capabilities. Experience to date indicates that very few companies have developed the capacity needed to complete carbon emission reduction purchases cost-effectively as the risks and transaction costs are too high for most companies to handle on their own. Many are choosing to outsource at least part of the process initially, with a view to gaining experience. The World Bank-managed Italian Carbon Fund is designed to provide an opportunity to develop such in-house expertise and to acquire needed emission reductions (see Ensuring Success, Sharing Knowledge, page 28).

The Chance to be out of the Starting Blocks Early

The Italian Carbon Fund became operational in March 2004 with a portfolio of eligible activities already under development. The ICF therefore should help participants maximize the volume of emission reductions generated by 2012, since the Fund is expected to begin to deliver emission reductions in 2005-2006, with up to 60% of the total emission reductions generated by 2012.

This early project advantage accrues to ICF participants joining the ICF prior to its closing—projected for the end of 2006. The projects proposed for the fund are drawn from the large number of project proposals which continue to be submitted to the World Bank in its role as Trustee for a number of carbon funds, and as a buyer on their behalf of greenhouse gas emission reductions from project activities under the CDM and JI. Throughout its

FOCUS ON POTENTIAL ICF PROJECTS...

TUNISIA: Cogeneration Plants

Cogeneration has recently been included by the Tunisian government as a priority for its energy and environmental strategy because of the high efficiency of the technologies involved. This proposed project would focus on the implementation of cogeneration plants, supplying electricity and thermal energy for the installations targeted by the project. The surplus of produced electricity would then be sold to the national utility to maximize the revenues from the cogeneration plants. The plants would include gas turbines or gas reciprocating engines connected to a heat recovery system from the exhaust. Over a period of 14 years 561,400 tons of carbon dioxide equivalent (tCO_2e) would be reduced.

years of operations in the carbon finance business, the World Bank has acquired experience in the identification, development and delivery of carbon assets to the market. Through shorter project preparation time, lower transaction costs and higher success rates, the World Bank expects to reduce the time of first delivery of emission reductions to fund participants. This is important since participants are concerned to maximize the delivery of emission reductions prior to the end of the first commitment period of the Kyoto Protocol.

Participating in the ICF Portfolio

Italian Carbon Fund participants will receive a *pro rata* share of emission reductions generated by projects within the ICF portfolio. ICF corporate participants can participate in the Italian Carbon Fund with a minimum contribution of US$1 million.[1] The fund participants may either pay the full contribution upfront, or by signature of a promissory note, drawn over approximately 10-12 years, as payments are made upon delivery of reductions. The World Bank fund managers anticipate a draw-down schedule of approximately 10%-12% in the first year, followed by a similar schedule thereafter.

[1] *All dollar references are US dollars.*

Based on the World Bank's previous experience in managing other carbon funds, the costs of generating emission reductions are expected to be in the $4-5/ton range with an eventual outcome price, including costs, of about $6/ton (more information on markets and pricing is contained in Chapter 2).

International Network

Access to emission reductions from projects in developing countries and economies in transition can provide an opportunity for Kyoto governments and industry to meet their commitments flexibly, cost-effectively and credibly. The World Bank's carbon finance business (CFB) unit works closely with

major international climate change bodies and companies active in the emerging carbon market. In addition, the CFB unit often provides comments, lessons from practical operations and other feedback to the UNFCCC international negotiating process.

Reputation as a Good Corporate Citizen

All of the World Bank's carbon funds buy emission reductions from projects that not only reduce global greenhouse gas emissions but also seek to maximize local environmental, social and economic gains. This provides participants with an opportunity to demonstrate social and environmental leadership through active engagement in the activities of the fund. In order to emphasize that the message from participants reaches the public, the World Bank has appointed a senior communications specialist to coordinate public relations of all funds and with fund participants.

CHAPTER 2:

THE EMERGING GLOBAL CARBON MARKET

An efficient global market for greenhouse gas emission reductions is expected to make compliance with emission reduction targets more achievable at a manageable cost and helps to reduce the risk of climate impacts on developing countries and the poor.

It is important to leverage private and public capital for climate change mitigation. 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 Italian Carbon Fund which is designed to provide a source of funding for emission reduction projects in developing countries and economies in transition.

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. Moreover it will be difficult for these countries to reduce the emissions intensity of their economic activity over the longer term without increased foreign investment in cleaner technologies and more energy efficient infrastructure.

Given the difference in emission abatement costs between OECD and poorer 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 has been traded since the Kyoto Protocol's inception in 1996, with international prices ranging from only pennies a ton to about US$10. 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.[2]

Partly due to uncertainties related to the Kyoto Protocol's entry into force, and lack of clarity about market rules, the private sector—particularly in Europe—has been reluctant to enter the market for structuring projects that originate emission reductions under the Clean Development Mechanism and Joint Implementation.

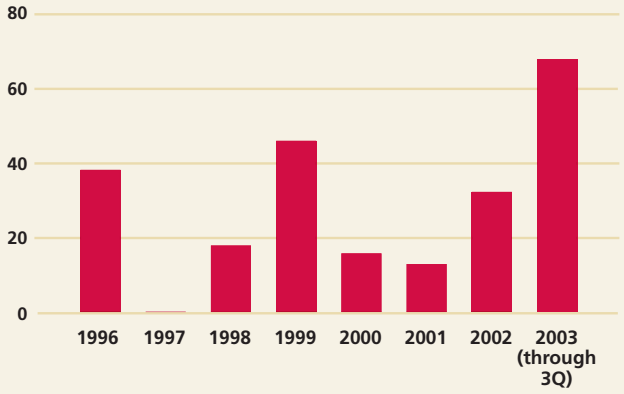
Market research suggests that rather than directly purchasing from project sponsors in smaller developing countries, private sector carbon

[2] *State and Trends of the Carbon Market(s),* December 2003.

STATE AND TRENDS OF THE CARBON MARKET(S), DECEMBER 2003

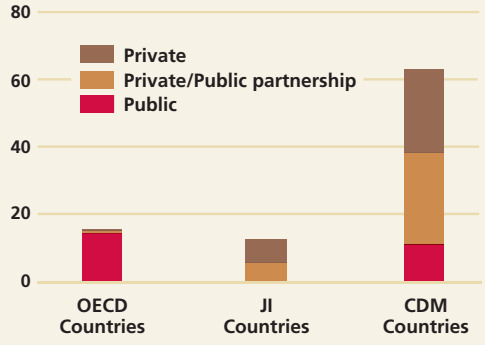
Market Volume Has Increased

Estimated Volumes of Project-based Transactions (million tCO_2e)



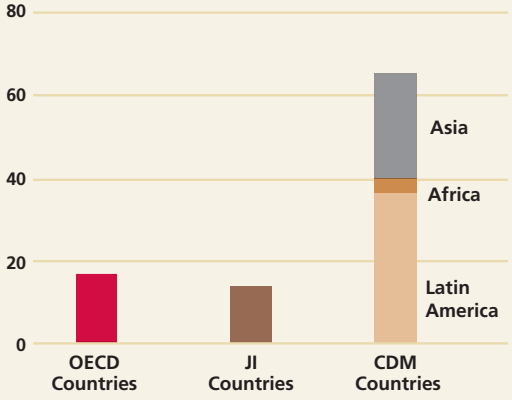
Private Sector Flows Remain Mostly within OECD

by Volume of Project-based Transactions (million tCO_2e)



Carbon Finance Flows 2002-03

Volume Of Emission Reduction Projects (million tCO_2e)



buyers are more likely to purchase emission reductions either through large projects in India, Indonesia and Latin America or through public/private partnerships such as the Prototype Carbon Fund, where risks and transaction costs can be managed across a large project portfolio.[3] Small developing countries, Africa and the poorer areas of developing countries which generally tend to receive less foreign direct investment,[4] 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; nearly 60 million tCO_2e were 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 two years.[5]

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

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.[6] Over the next several years, a much greater percentage of emission reductions is likely to come from projects in India and China.

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[3] *Market Analysis contained in State and Trends of the Carbon Market(s),* December 2003. Available at http://www.prototypecarbonfund.org in the PCFPlus/Research section

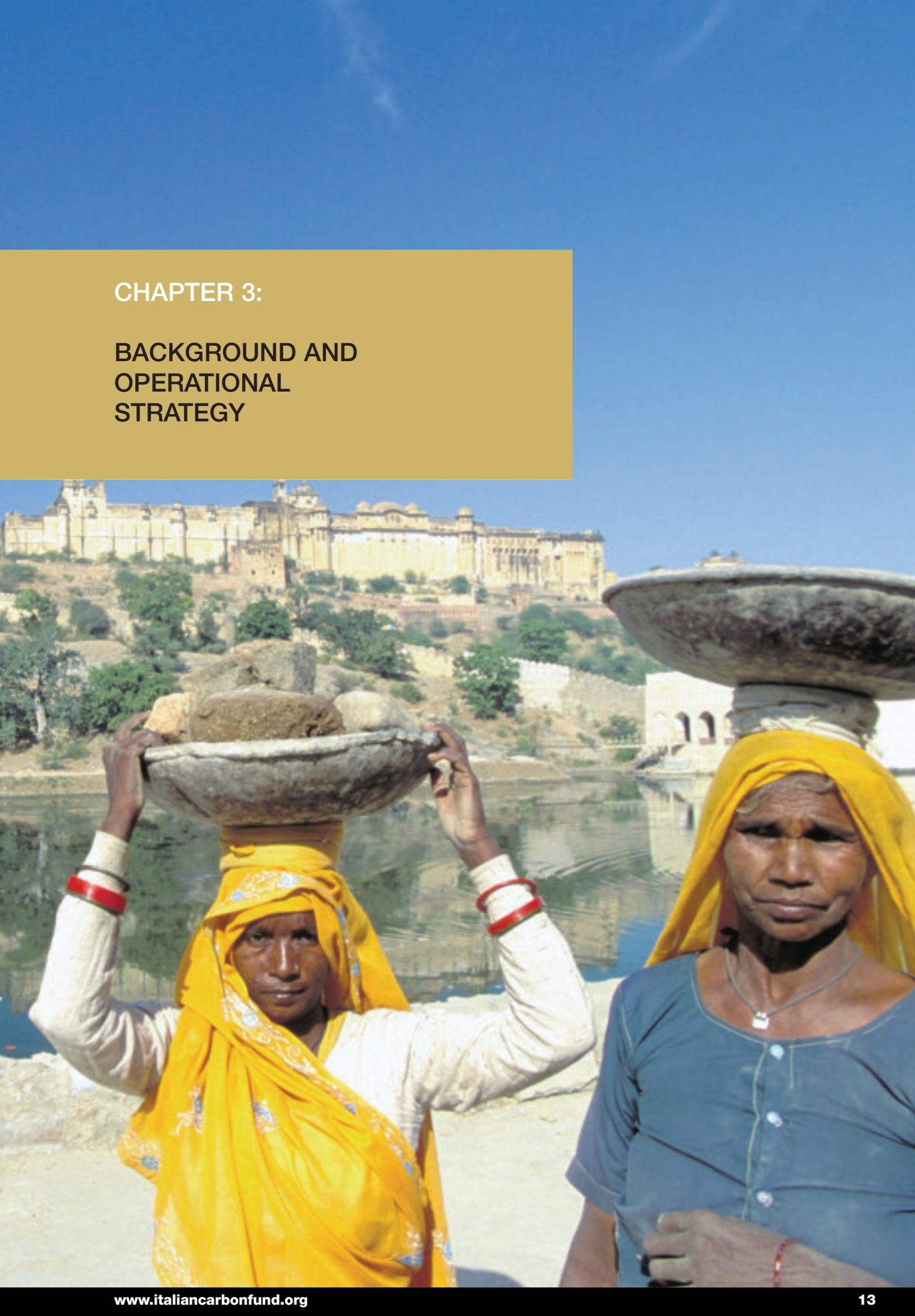
[4] *PCFPlus/Research section Global Development Finance Online 2003,* World Bank, 2003

[5] *State and Trends of the Carbon Market(s),* December 2003. Available at http://www.prototypecarbonfund.org in the PCFplus/Research section

[6] *State and Trends of the Carbon Market(s),* December 2003. Available at http://www.prototypecarbonfund.org in the PCFplus/Research section

CHAPTER 3:

BACKGROUND AND OPERATIONAL STRATEGY



The Italian Carbon Fund operates in a similar way to other World Bank managed carbon funds. The fund purchases emission reductions from projects and pays on delivery of the verified reductions. The fund's participants receive a pro-rata share of those emission reductions based on their level of contribution to the fund. The emission reductions purchased by the fund are intended to be certified under the Kyoto Protocol and may be eligible for use towards mandatory or voluntary greenhouse gas reduction commitments under Kyoto or Non-Kyoto regulatory regimes.

THE ICF'S OBJECTIVES:

The objectives of the fund are:

a) To purchase emission reductions which are or which are likely to become eligible pursuant to one or more of the Kyoto Mechanisms and the EU ETS Linking Directive;

b) To support projects which promote sustainable development;

c) To promote international projects in renewable energy, energy efficiency, and carbon sequestration, and

d) To build knowledge and understanding of the Kyoto Mechanisms and implementation of projects among the participants through their active engagement in the activities of the fund.

Fund Structure, Term, Size, and Contribution Level

Like the PCF, this fund is established as a trust fund maintained and operated by the World Bank in its capacity as Trustee (Trustee) for the ICF on behalf of the Italian public and private sector contributors to the fund (Participants).

At the end of the 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 Fund's Operational Strategy

Operating Principles

The principles that have guided the carbon finance activities of the World Bank in the past will also apply to the operations of this fund. These principles include: (i) to purchase emission reductions consistent with the requirements of the UNFCCC and/or the Kyoto Protocol; (ii) to equitably

distribute between both the participants and the recipients of the funds the benefits resulting from the projects; and (iii) to disseminate the knowledge gained as a result of the fund development.

In addition to these general principles, the fund 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 regions that are of particular interest to the Italian economy, including the People's Republic of China, Central and Latin America, the Mediterranean Region, as well as the Balkans and Middle Eastern countries.

Putting it All Together: The Initial Portfolio of Projects

The Italian Carbon Fund is developing an initial portfolio of projects that will allow it to meet its objectives of efficiently generating Kyoto compliant-grade emission reductions from projects in developing countries and economies in transition.

In the ICF, projects are to be 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 their prospects of achieving financial closure; for their likely 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 ICF also is designed to give preference to projects that will generate at least 60% of contracted emission reductions by 2012. The ICF may however contract to purchase emission reductions generated after 2012.

The ICF portfolio of projects is expected to be technologically diverse, within the context that technologies need to be commercially proven and applicable to specific projects and unique country environments.

CHAPTER 4:

ICF ORGANIZATIONAL STRUCTURE

The Participants

Within 12 months following the participation in the Fund by five or more participants, the Trustee will call an annual meeting of participants. Each year following the first annual meeting, the Trustee will call an annual meeting of participants at such date and time as the Trustee determines. In the absence of any annual meeting, the Government of Italy will fulfill the role and undertake the responsibilities of the annual meeting.

Within three months following the participation in the fund of seven or more participants, the Trustee will establish a participants' committee for the fund. In the absence of any participants' committee, the Government of Italy will fulfill the role and undertake the responsibilities of the participants' committee. Membership of the participants' committee will, unless determined otherwise by a unanimous vote of the participants, comprise members drawn pro-rata based on the number of participants from both the private and public sector participants, as well as a host country observer.

The role of the participants' meetings will include, among others, the following:

a) Reviewing the operations of the fund, and providing the Trustee with general policy and strategic guidance on the overall operation and management of the fund;

b) Reviewing and approving the business plan and annual budget for the next fiscal year for the fund;

c) Providing general guidance to the Trustee on the selection of projects, including where relevant, proposing changes to the project selection and portfolio criteria; and

d) Reviewing projects proposed by the Trustee in order to determine whether to object to the inclusion of such projects in the fund's portfolio.

The World Bank

To manage, maintain and operate the Italian Carbon Fund, the World Bank will use the services of the Fund Management Unit (FMU) responsible

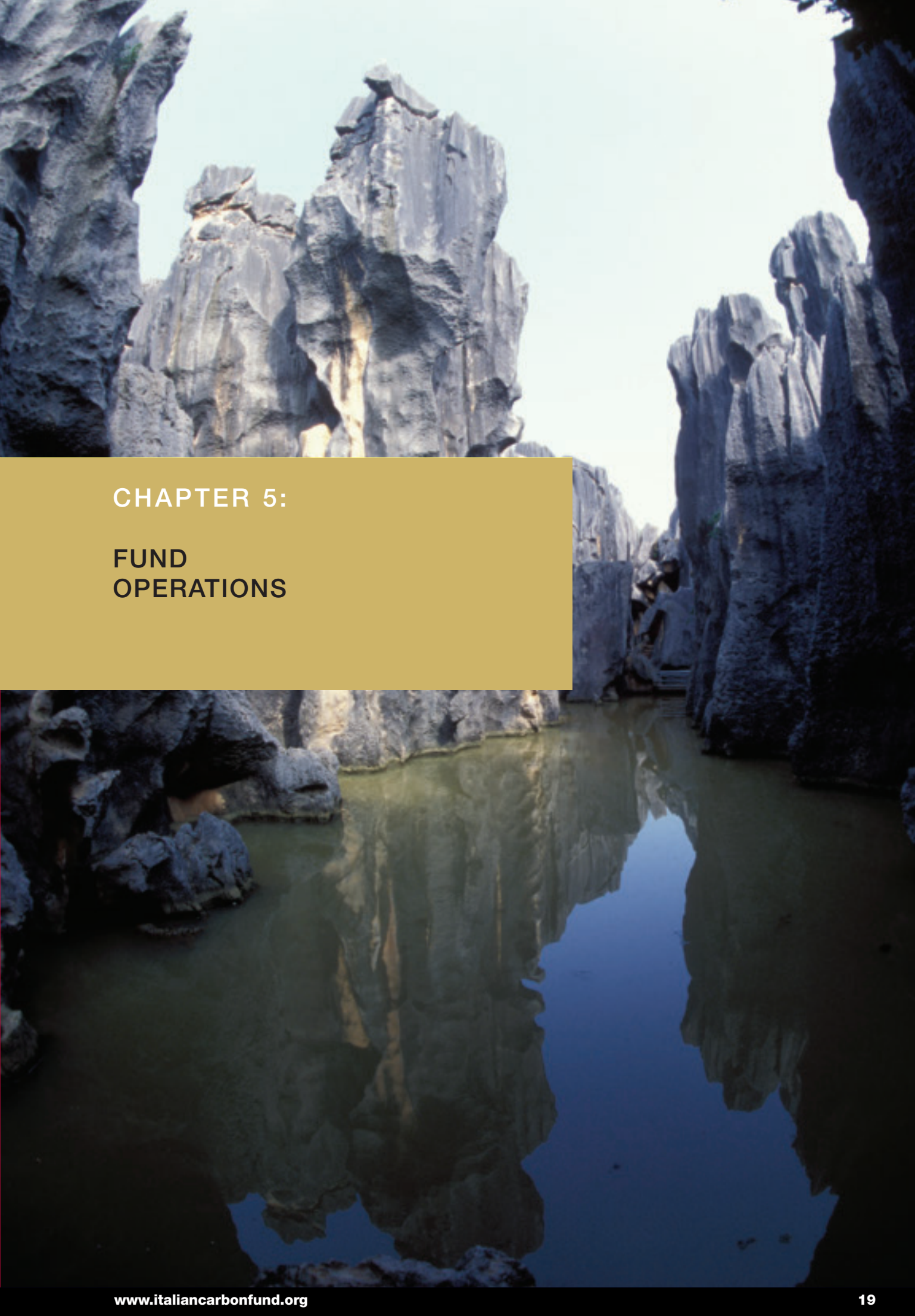
for the management of other Bank operated carbon funds. The fund manager of the FMU will be responsible for the day-to-day management of the ICF, including management of the project portfolio, overseeing the selection of projects, negotiating relevant project agreements, ensuring compliance with the project selection and portfolio criteria.

As with the other carbon funds administered by the World Bank, the Fund Management Unit will call upon the World Bank's specialist staff as needed. Specialists may be needed for project technical review, appraisal of consistency with the World 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.

FOCUS ON POTENTIAL ICF PROJECTS...

GUATEMALA:
Hydro Electric Project

As in all Central American countries, in Guatemala, there exists significant concern for the conservation of the environment and a desire to balance economic development with protection of the country's air and water quality and unique biodiversity. This proposed hydroelectric project would provide electricity from a renewable resource rather than use thermal greenhouse gas emitting technologies, as is the case with the majority of Guatemala's electricity generation today. The emission reductions—projected at almost half a million tCO_2e over 14 years—would result from the project's displacement of electricity from thermal plants. After construction the project would embark on reforestation and environmental activities in the proposed project area.



CHAPTER 5:

FUND OPERATIONS

Project Selection Criteria

To be eligible for Italian Carbon Fund support, projects must:

Be consistent with the rules and procedures governing emerging regulatory regimes as these may be established, such as the JI, the CDM or International Emissions Trading (IET) under Articles 6, 12 and 17 of the Kyoto Protocol, respectively, and/or the Emissions Trading Scheme of the European Union;

Be consistent with all relevant Italian and Host Country criteria concerning JI, the CDM or IET;

Comply with the operational policies and procedures of the World Bank, including the Bank's safeguard policies, except to the extent these are inconsistent with the Kyoto Protocol or UNFCCC, or the rules developed pursuant thereto, in which case the latter will prevail;

Be consistent with the World Bank's country assistance strategy for the country in which the project is located;

Be consistent with any applicable national sustainable development programs and poverty reduction strategy papers of the host country; and

Be consistent with any strategic direction and advice provided by the participants.

Project Portfolio Criteria

The Government of Italy and the World Bank have set the following criteria for the development of the ICF project portfolio:

Projects will be located exclusively in countries that are Parties to the UNFCCC and are either not included in Annex I of the UNFCCC (non-Annex I Parties) or are countries undergoing the process of transition to a market economy as specified in Annex B of the Kyoto Protocol. The ICF will not support projects in other Annex I countries.

No more than 50% of the contributions of the ICF capital will be committed to projects located in the same country. No more than 50% of the assets of the ICF will be invested in any one project.

In addition, following consultation with the participants in the ICF, the Trustee may consider allocating some of the contributions of the ICF capital to projects involving transactions pursuant to Article 17 of the Kyoto Protocol—"early" or "late" crediting.[7]

[7] *These refer to the possibility that the Trustee may purchase on behalf of Participants, Assigned Amount Units equivalent to emission reductions generated from JI projects in the period prior to or following the commitment period (2008-2012).*

FOCUS ON POTENTIAL ICF PROJECTS...

CHINA: Converter Gas Recovery and Cleaning Project

This project in the People's Republic of China would focus on the recovery and use of converter gas which is the secondary energy of the iron and steel industry. By using the recovered gas the project would partly displace the need for an equivalent amount of coal-fired power generation. The project would reduce greenhouse gas emissions through the supply of the secondary energy. The annual greenhouse gas emission reductions for this potential project are estimated at about 80 thousand tons of carbon dioxide reductions.

All projects must meet standard selection criteria to ensure that the due diligence required for all World Bank projects (and therefore for all carbon funds managed by the World Bank) is undertaken. In addition, projects must be consistent with the UNFCCC, the Kyoto Protocol and the Marrakesh Accords, national environmental protection and development priorities of the countries hosting the projects, and the World Bank'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.

ICF Project Cycle

The World Bank's Carbon Finance Business, through the process of developing project portfolios for its pioneer fund, the PCF, and its other carbon funds, has continued to refine and standardize a set of project documents, contracts and procedures. This experience will be utilized to develop a streamlined set of documents, contracts, and procedures for the ICF. While the project cycle is under constant refinement, an initial set of documentation has been developed.

All projects considered by the ICF will go through the following project cycle (see page 22), which is designed to make sure the project complies with the Kyoto Mechanisms rules, the safeguard policies of the World Bank, and the fund objectives and operating principles.

Supervision during project construction and lifetime

The Carbon Finance Business 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 on behalf of the participants.

The Carbon Finance Business 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; 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.

Italian Carbon Fund

PROJECT CYCLE

(required ICF documentation in red)

1 PREPARATION AND REVIEW OF THE PROJECT

1. Project ideas reviewed by ICF
   - 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. ICF formally signals intention to purchase emission reductions
   - Letter of Intent (LoI)
6. Letter of Approval sought from relevant host country
   - Letter of Approval (LoA)

3 MONTHS

2 BASELINE STUDY AND MONITORING PLAN (MP)

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

2 MONTHS

3 VALIDATION PROCESS

1. ICF contracts the validator and submits documents
2. Validator studies project design, baseline and MP and consults with ICF 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

7 PROJECT COMPLETION

1. At lifetime of valid baseline or useful life of technology
2. According to 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. ICF 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

1-3 YEARS

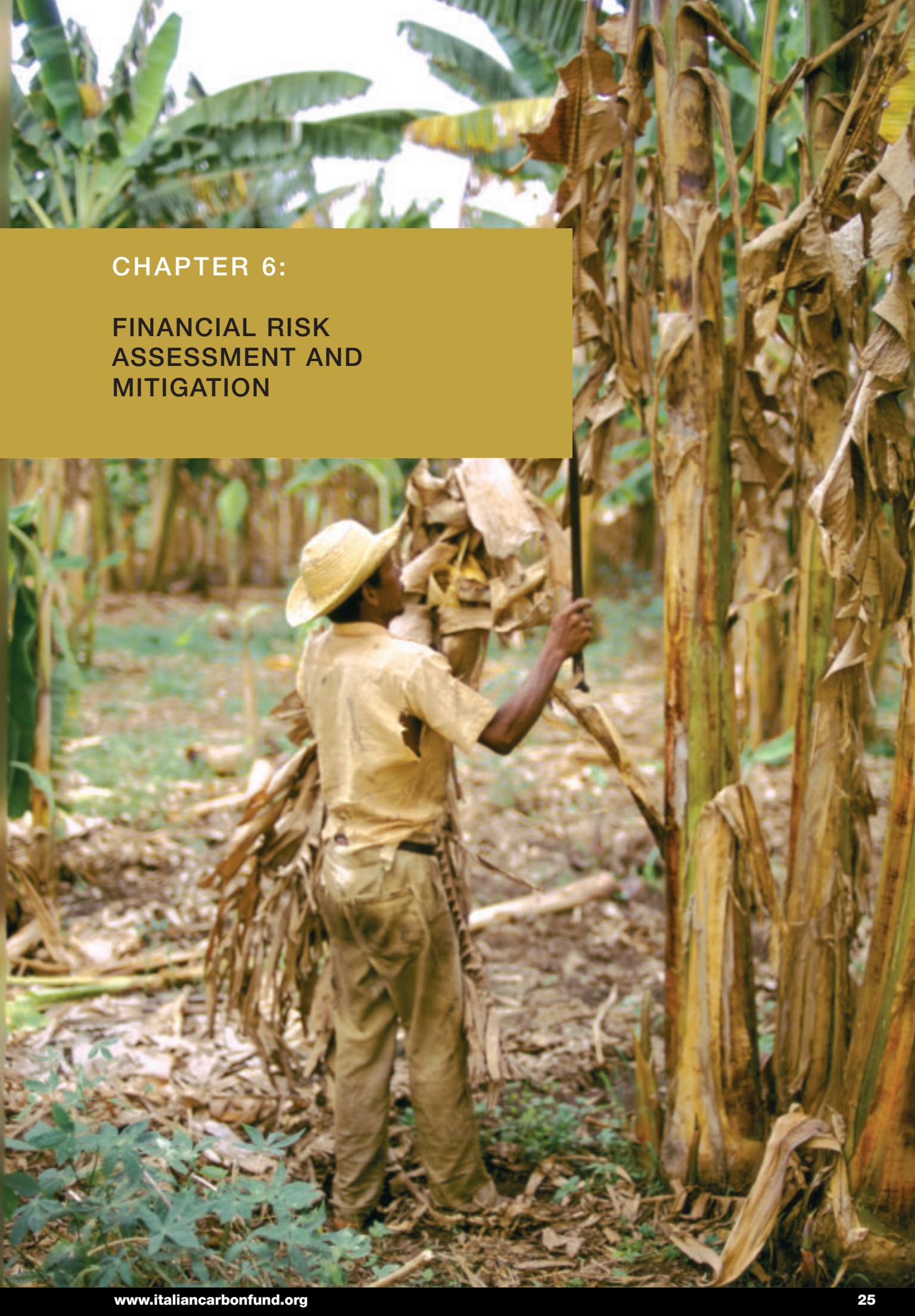
5 CONSTRUCTION AND START UP

1. At construction completion, verifier contracted by ICF
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

4 NEGOTIATION OF PROJECT AGREEMENTS

1. ICF 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



CHAPTER 6:

FINANCIAL RISK ASSESSMENT AND MITIGATION

In negotiating more than fifty transactions in the period 2001-2003 alone, the Carbon Finance Business unit of the World Bank on behalf of the carbon funds it manages, has developed techniques for systematically evaluating risk and structuring transactions to mitigate and assign risk. These policies, drawn from best practice in the risk management industry, entail the following:

Risk Assessment and Allocation

The CFB uses a range of risk assessment tools including: (a) financial, technical, social and environmental appraisal of candidate projects in accordance with World Bank Group operational policies, (b) monitoring the Kyoto Protocol process, as well as trends in the emission reductions market, and (c) applying a rigorous process of validating emission reductions. Recently, the CFB refined its appraisal process to improve its ability to screen projects, reducing the cost of dropped projects.

Under most Emission Reductions Purchase Agreements, the World Bank commits to pay an agreed price *upon delivery of emission reductions* (signified by receipt of a verification report from an independent third party), net of verification costs.

Mitigating Risk at the Portfolio Level

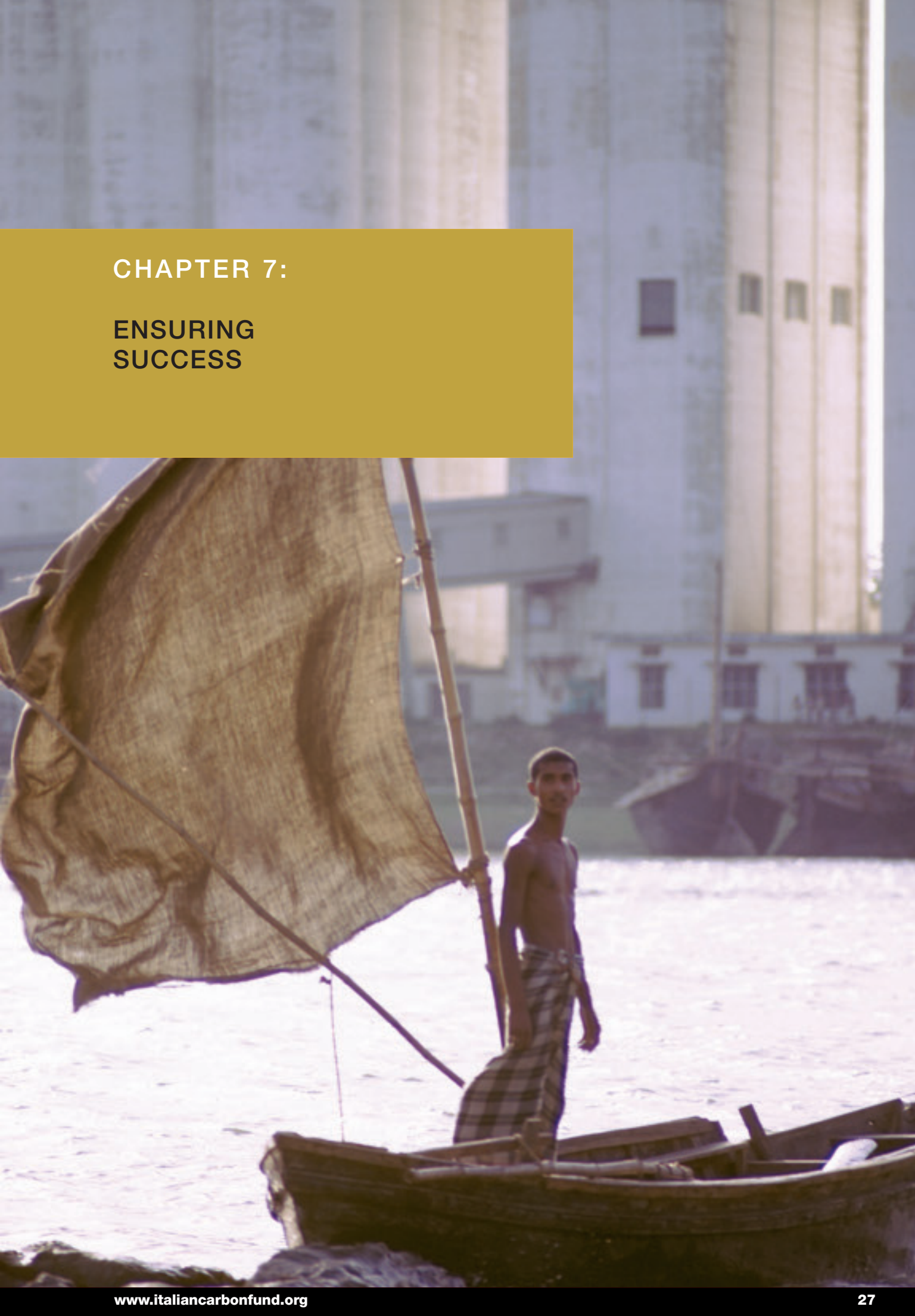
In addition to managing risk at the project level the World Bank has developed several tools to manage risk at the *portfolio* level. First, by purchasing from a range of projects, it *diversifies* away much of the unique risk of each project.

Second, the World Bank can exercise *remedies* under the Emission Reductions Purchase Agreement if a project does not deliver the committed volume of emission reductions, including in some cases recovering liquidated damages—potentially making financial resources available to purchase the shortfall from excess emission reductions produced by other projects within the portfolio (please see call options below).

Third, each Emission Reductions Purchase Agreement includes a set of milestones, including at least one that occurs before the end of a fund's allocation phase. This enables the CFB to quickly identify which projects are not delivering in accordance with the milestones, and to give notice to the project entity and (if the default is not remedied) reallocate CFB funds elsewhere.

Fourth, to hedge against the risk of projects defaulting after the end of the allocation phase, and to ensure that the participants receive adequate emission reductions given a limited capital base, the CFB may purchase call options. Experience with the PCF has shown that these are particularly useful in the event of under-production or a delay in one or more projects.

Fifth, the CFB has developed a portfolio management model, through which it regularly monitors overall portfolio performance and estimates potential defaults in order to develop a hedging strategy.



CHAPTER 7:

ENSURING SUCCESS

Knowledge Sharing, Technical Assistance and Capacity Building

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.

For many companies, participation in the funds is a relatively less expensive way to learn about the details of a new business opportunity. The annual draw-down is usually under 12% of the participant's overall contribution.

Fund participants review projects and get access to much of the emission reduction documentation, including baselines, contracts etc. They also have access to fund staff who respond to questions or make introductions or, where financially feasible, conduct briefings for executives or training of participants. The funds' staff conduct research on key issues including market information—recent studies were cited in the Wall Street Journal and elsewhere.

Below are some of the knowledge sharing tools that the Italian Carbon Fund shares with the other carbon funds of the World Bank:

The ICF's web site (www.italiancarbonfund.org) will be the main and most frequently used channel for dissemination of relevant information and knowledge, both publicly and to fund participants through its private domain. Opportunities will also be provided for interactive discussion and contributions from interested parties. Fund participants will have access through the private domain of the web site to all project documentation other than that subject to confidentiality agreements and to the Emission Reductions Registry which will register certified emission reductions in participants' accounts and provide a record of distribution of these assets in accordance with participants' instructions. Individual emission reductions accounts will be password protected.

The Helpdesk—During FY02 the Carbon Finance Business established a carbon finance helpdesk, providing a window of transparency to our external audience and an opportunity for them to learn and comment on World Bank carbon finance operations. The helpdesk has added to the CFB becoming 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

Publications including the ICF Annual Report, will detail the development of the fund.

Fellowship and Intern Programs—The fund will also build upon and expand the fellowship or

FOCUS ON POTENTIAL ICF PROJECTS...

INDIA: Gypcrete Building

Mass production of an alternative building material to replace clay bricks by recycling by-product waste.

According to the World Energy Council, the global building industry contributes 40% of carbon dioxide greenhouse gas emissions. A new building material, gypcrete, developed in the early 1990's could help avoid the use of burnt clay bricks in construction and their associated pollution and other environmental impacts like depletion of agricultural land to make the bricks. India produces some 100 billion bricks a year.

India has a housing shortage of some 63 million. This proposed project would use recycled industrial by-product waste—phospho gypsum which is abundantly available in India—to manufacture the gypcrete which is produced in large sheets for walls. In just five years the project projects that its 33 proposed plants would reduce greenhouse gas emissions by 1.30 million tons of carbon dioxide.

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 Carbon Finance Business unit observing and learning aspects of the business of particular interest. ICF participants fund their own staff in residence under the Participants' Fellows program.

The ICF will also sponsor training through the World Bank Institute and capacity building programs in carbon finance, drawing upon lessons learned from ICF implementation and other Bank-managed carbon finance operations. In addition, wherever practicable, fund management 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

In recognition that a successful CDM is a geographically fair and balanced CDM, the Ministry of the Environment and Territory of Italy and the World Bank have agreed that the income generated by upfront payments to the ICF be used to support CDCF*plus*, the technical arm of the Community Development Carbon Fund which aims to support small-scale project development and preparation in Least Developed Countries and other poor developing countries.

Through CDCF*plus*, donor resources are mobilized from governments, foundations and corporations to build local capacity to develop the necessary infrastructure to prepare projects.

CDCF*plus* will benefit all actors engaged in CDM transactions as it will reduce learning costs in seeking to benchmark small-scale assets and efficient procedures; as a result it will lower the cost of transactions, expand the reach of carbon finance over time and promote a fair and equitable CDM.

FUND MANAGEMENT UNIT: Unit headed by the ICF 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 ICF 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.

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: 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.

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.

PARTICIPANTS: Contributors to the ICF.

PCF*plus*: which supplements the work of the Prototype Carbon Fund in the areas of outreach and capacity building, and research and training, was initiated in November 2000.

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 ICF. The Project Idea Note is set forth in a format provided by the ICF.

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.

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: the monitored emission reductions that have occurred as a result of a registered CDM project activity during the 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

AAU	Assigned amount unit
CERs	Certified emission reductions
CDCF	Community Development Carbon Fund
CDM	Clean Development Mechanism
CF-Assist	Carbon Finance Assist Program
CFB	Carbon Finance Business (of the World Bank)
COP	Conference of the Parties to the UNFCCC
ERs	Emission reductions
ERPA	Emission reduction purchase agreement
EU-ETS	European Union Emissions Trading Scheme
FMU	Fund management unit
GHG	Greenhouse gases
ICF	Italian Carbon Fund
IDA	International Development Association
IET	International Emissions Trading
IETA	International Emissions Trading Association
JI	Joint Implementation
NCDMF	Netherlands Clean Development Mechanism Facility
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

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Designed by Studio Grafik, Herndon, VA

Italian
Carbon
Fund

www.italiancarbonfund.org

The World Bank
1818 H Street NW
Washington, DC 20433