Funding options for Small and Medium Size Enterprises to finance Cleaner Production projects and Environmentally Sound Technology investments

INSTITUTE FOR ENVIRONMENTAL
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Foreword

The UNIDO Cleaner and Sustainable Production Unit carried out an international study on the existing credit lines for the application of cleaner production (CP) methods and/or transfer and development of environmentally sound technology (EST) available to the national cleaner production centres. Based on the outcome of the study, the best practice examples were examined and new CP/EST credit line mechanisms were proposed, at the same time that the stakeholders were identified to participate in the subsequent discussions and eventual decision making.

The UNIDO CP Programme aims at building national CP capacities, by fostering dialogue between industries and governments, and thus enhancing the possibilities for investment in the transfer and development of environmentally sound technologies. Through this programme, UNIDO is bridging the gap between competitive industrial production and environmental concerns. CP is more than just a technical solution. It has widespread applications at all decision-making levels in industry, with the main focus on the adoption of cleaner technologies and techniques within the industrial sector. Costly end-of-pipe pollution control systems are gradually being replaced with a strategy aimed at reducing and avoiding pollution and waste throughout the entire production cycle; from efficient use of raw materials, energy and water, to the final product.

The UNIDO CP programme represents an innovative approach, which contributes to increasing competitiveness and facilitating market access by strengthening the productive capacity of developing economies, taking into consideration the two other dimensions of sustainable development; environmental compliance and social development.

CP can only be sustained if capacity is in place to adopt it and adjust it to local conditions. To make the programme a reality and promote the application of CP by enterprises in developing countries and countries with transition economies, UNIDO started setting up National Cleaner Production Centres (NCPCs) in 1994. Since then, more than 40 National Cleaner Production Centres and Programmes have been established and 45 have joined the international UNIDO CP network.

We hope that the results of this study will improve the financial situation of national SMEs as well as of NCPCs and help implement technologies that better respond to the international environmental challenges.

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List of Synonyms

AAITPC	Asia-Africa Investment and Technology Promotion Centre
AAUs	Assigned Amount Units
ADA	Austrian Development Agency
ADB	Asian Development Bank
ADC	Austrian Development Cooperation
AFD	French Cooperation Agency
AfDB	African Development Bank
AfrIPANet	Africa Investment Promotion Agency Network
AG	Austrian Kommunalkredit
AMCOST	African Ministerial Council on Science and Technology
ANPME	National Agency for the Promotion of Small and Medium Size Enterprises
AU	African
BCIE	Banco Centroamericano de Integración Económica
BIO	Belgian Investment Company
BMI	Banco Multisectoral de Inversiones
BNCR	Banco Nacional de Costa Rica
BOD	Biological Oxygen Demand
CABEI	Central American Bank of Economic Integration
CAF	Corporacion Andina de Fomento
CAREC	Central American Renewable Energy and Cleaner Production
CCC	Ceylon Chamber of Commerce
CDM	Clean Development Mechanism
CEA	Central Environmental Authority
CEEC	Central and Eastern European Countries
CERs	Certified Emission Reductions
CET PERÚ	National Cleaner Production Centre of Peru
CHP	Combined Heat and Power
CLIND	Clean Industry Development
CO2	Carbondioxide
COAD	Comision Centro Americana para Ambiente y desarollo
COMFAR	Computer Model for Feasibility Analysis and Reporting
COP	Conference of the Parties
CORFO	Corporacion de Fomento
CP	Cleaner Production
CPA	Consolidated Plan of Action
CPC	Morocco Cleaner Production Centre
CPF	Cleaner Production Revolving Facility
CPS	Country Partnership Strategy
CSP	Country Strategy and Programme
CSR	Corporate Social Responsibility
DAC	Development Assistance Committee
DCA	Development Credit Authority
DEG	Deutsche Investitions- und Entwicklungsgesellschaft
DER	Debt Equity Ratio
DMCs	Developing Member Countries
DMI	German Microfinance Institute
DTIE	Division of Technology, Industry and Economics
DWM	Developing Worlds Markets
EC	European Commission

E-FRIENDS	Environmentally Friendly Solutions Fund
EFSE	European Fund for South-East Europe
EIA	Energy Investment tax Allowance
EMA	Environmental Management Accounting
EOF	Environmental Opportunities Facility
ERUs	Emission Reduction Units
ESC	Energy Saving Credits
EST	Environmentally Sound Technology
EUR	Euro
FAO	Food and Agriculture Organization
FCCISL	Federation of Chambers of Commerce and Industry of Sri Lanka
FDI	Foreign Direct Investment
FIAS	Foreign Investment Advisory Service
FMTA	Financial Markets Technical Assistance
FNSt	Friedrich Naumann Stiftung
GCT	Green Credit Trust
GEF	Global Environment Facility
GEP	Greenhouse Gas Pollution Prevention
GHG	Greenhouse Gas
GIIC	Gujarat Industrial and Investment Corporation
GSFC	Gujarat State Financial Corporation
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HNB	Hatton National Bank
ICICI	Industrial Credit and Investment Corporation of India
IDB	Inter-American Development Bank
IDBI	Industrial Development Bank of India
IDFC	Infrastructure Development Finance Company
IFAC	International Federation of Acountants
IFC	International Finance Corporation
IFCI	Industrial Finance Corporation of India
IOEW	Institute for Environmental Management and Economics
IPAs	Investment Promotion Agencies
IPO	Initial Public Offering
IPs	Integrated Programme
IPS	Investment Promotion Service
IPU	Investment Promotion Unit
IREDA	Indian Renewable Energy Development Agency
IRR	Internal Rate of Return
ISB	Industrial Services Bureau
ITPN	Investment and Technology Promotion Network
ITPO	Investment and Technology Promotion Offices
JBIC	Japanese Bank for International Cooperation
JI	Joint Implementation
KfW	German Kreditanstalt für Wiederaufbau
KPC	Kommunalkredit Public Consulting
KSFC	Karnataka State Financial Corporation
KSIIDC	Karnataka State Industrial Investment and Development Corporation
LCA	Línea de Crédito Ambiental
MDG	Millennium Development Goal
MFI	Microfinance Institution
MIA	Environmental Investment tax Allowance
MIF	Multilateral Investment Fund

MOEF	Ministry of Environment and Forest
MoU	Memoranda of Understanding
MSEs	Micro and Small Enterprises
NASD	National Association of Securities Dealers
NCPC	National Cleaner Production Centres
NEFCO	Nordic Environmental Finance Corporation
NEPAD	New Partnership for Africa's Development
NGOs	Non-governmental organizations
NIB	Nordic Investment Bank
NMF	Nordic Environmental Development Fund
NPV	Net Present Value
NWICPC	North-Western International Cleaner Production Centre
ODA	Official Development Assistance
OECD	Organization for Economic Co-operation and Development
PAC	Competitiveness Support Programme
PCAF	Pollution Control and Abatement Fund
PEP	Promotion of Eco-efficient Productivity
PFC	Power Finance Corporation
PLI	Partner Lending Institutions
PLR	Prime Lending Rate
PPP	Public Private Partnership
RCSPs	Regional Cooperation Strategies and Programmes
REC	Rural Electrification Corporation
RMC	Regional Member Countries
ROI	Return On Investment
SANet	Sustainable Alternatives Network
SBAP	Sustainable Business Assistance Program
SECO	State Secretariat for Economic Affairs
SEFI	Sustainable Energy Finance Initiative
SIDBI	Small Industrial Development Bank of India
SME	Small and Medium Size Enterprises
SMED	Small and Medium Enterprise Developers
SMILE	Small and Micro Industries Leader and Entrepreneur
SRI	Socially Responsible Investment
SSI	Small-Scale Industries
TAAS	Technical Assistance and Advisory Services
TDMF	Technology Development and Modernization Fund
TGF	Testing Ground Facility
UN DESA	United Nations Department of Economics and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Organization
USAID	United States Agency for International Development
VAMIL	Free depreciation of environmentally benign investments
VAT	Value Added Tax
WIPO	World Intellectual Properties Organization
WTO	World Trade Organization

Introduction and project outline

The UNIDO CP programme aims at building national CP capacities by fostering dialogue between industry and government and enhancing the opportunities of investment for transfer and development of EST. Through this programme, UNIDO is bridging the gap between competitive industrial production and environmental concerns. CP is more than just a technical solution. It has widespread applications at all decision-making levels in industry, with the main focus on adoption of cleaner technologies and techniques within the industrial sector. Costly end-of-pipe pollution control systems are gradually being replaced with a strategy that reduces and avoids pollution and waste throughout the entire production cycle; from efficient use of raw materials, energy and water, to the final product.

UNIDO's webpage (www.unido.org/cp) defines cleaner production as a preventive, integrated strategy that is applied to the entire production cycle in order to:

- Increase productivity by ensuring a more efficient use of raw materials, energy and water;
- Promote better environmental performance through reduction of waste and emissions at source;
- Reduce the environmental impact of products throughout their life cycle by the design of environmentally friendly, but cost-effective products.

The definition of cleaner production that has been adopted by UNEP as given on its webpage (www.uneptie.org/pc/cp/understanding_cp/home.htm) is as follows:

Cleaner production (CP) is the continuous application of an integrated preventive environmental strategy to processes, products and services to increase overall efficiency, and reduce risks to humans and the environment. Cleaner production can be applied to the processes used in any industry, to products themselves and to various services provided in society.

For *production processes*, cleaner production results from one or a combination of conserving raw materials, water and energy; eliminating toxic and dangerous raw materials; and reducing the quantity and toxicity of all emissions and wastes at source during the production process.

For *products*, cleaner production aims to reduce the environmental, health and safety impacts of products over their entire life cycles, from raw materials extraction, through manufacturing and use, to the "ultimate" disposal of the product.

For *services*, cleaner production implies incorporating environmental concerns into designing and delivering services.

Environmentally sound technologies (EST) protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products, and handle residual wastes in a more acceptable manner than the technologies for which they were substitutes. ESTs in the context of pollution are "processes and product technologies" that generate low or no waste, for the prevention of pollution. They also cover "end-of-pipe" technologies for treatment of pollution after it has been generated.

UNIDO's holistic approach to CP includes its application in sectoral activities, as well as the implementation of multilateral environmental protocols through the development and transfer of CP technology and investment promotion. Cleaner production requires changing attitudes, exercising responsible environmental management and promoting technology change.

This study, carried out in 2007, contains a review of the experiences of the NCPCs with a set of international programmes designed to promote cleaner production (CP). On this basis additional investigations with financing institutions were carried out and funding schemes analysed. The study is intended for use by UNIDO, the NCPCs, financial institutions and donor agencies in their considerations of how best to structure their funding schemes for small and medium size enterprises (SMEs).

The main activity of the project was to carry out a study on the existing CP/EST credit line mechanisms and/or already concluded, taking into account the information provided by the NCPCs and additional investigations. The study specifically focused on the situation in Latin America, as most of the funding schemes in this region are developed.

Based on the results of the previous evaluation, proposals for new credit line mechanisms with selected financial institutions were discussed. The main objective of the discussions was to recognize lessons learned by donor and executing agencies in the field of CP, and to identify ways in which these lessons could be incorporated into recommendations to promote CP among the SME clients of the NCPCs.

The results of the study and the proposals for CP/EST credit line mechanisms aim at improving the possibilities for SMEs to obtain funding for their projects and the strengthening of the position of the NCPCs as a one-stop shop for technical and financial advice in their countries.

Chapter 1 describes the challenges for the NCPCs in promoting CP and EST options in a difficult economic environment, a less developed financial sector and a less demanding legal framework. CP is discussed as a strategy for SMEs to improve their environmental as well as their economic performance. The main constraints for CP adoption that have been analyzed in previous studies are summarized. The chapter concludes with success factors of environmental finance based on previous experiences.

Chapter 2 contains the results of the questionnaire on CP funding schemes available for SMEs, based on the information provided by the NCPCs. The annex contains the questionnaire in its original wording.

Chapters 3 and 4 contain selected best practice funding schemes without aiming to be exhaustive. They are divided into examples provided by the NCPCs, reflecting the outcome that Latin America is more developed than the other regions in this respect (chapter 3), and examples from financing institutions trying to demonstrate a larger variety of tools available and regions addressed (chapter 4).

Chapter 5 explores information networks and tools available to improve access to and the accountability of funding options.

Chapter 6 develops proposals to improve the capacity of SMEs to access CP financing via the following funding instruments:

- Multilateral and bilateral cooperation and regional development;
- Microcredits;
- General credits for SMEs;
- National grants for environmental protection;
- Tax incentives;
- Equity finance and socially responsible investment (SRI);
- Joint implementation/clean development mechanism (JI/CDM).

Chapter 7 concludes the study with the results of the questionnaire and further investigations, and develops recommendations on how best to proceed with facilitating access to CP funding by SMEs. While some deficiencies seem to be generic to SMEs all over the world, other issues need different regional focus. Improving the accounting and financial capacity of the SMEs and the NCPCs, as well as strengthening the interest of financial intermediaries are among the core recommendations.

The annex provides references for additional reading, in addition to the questionnaire and lists of contacts.

Executive summary

Several initiatives to improve funding for SMEs were started around the year 2000. The questionnaire sent out to all NCPCs investigated their success and revealed significant regional differences. The remaining hindrances of SMEs to obtaining funding for their projects can be divided into general SME problems, which are the same worldwide, and problems specifically related to the funding of CP projects and EST investments.

Several studies and also the responses of the NCPCs to the survey suggest that the problem is not always availability of funding options, but rather lack of information on CP/EST as well as on funding options; and that the main obstacles for SMEs are lack of collateral, inadequate accounting systems and poor preparation of financial proposals.

Improving the accounting and financial capacities is therefore a prerequisite not only for SMEs, but also for the NCPCs. In addition, awareness, interest and capacities of financial intermediaries must be strengthened.

The aggregated outcome of the study provides a fairly accurate overview of the general constraints in developing countries. The recommendations from the NCPC survey results, focus on the following aspects:

- Return on investment is the selling key argument for CP/EST;
- Promotion of management accounting and systems;
- Changing the price signals by inducing economic instruments;
- Funding must be organized in addition to CP consulting;
- Technical solutions and funding must go hand in hand.

The key words for obtaining funding are:

- SME;
- Climate change;
- Sustainability/corporate social responsibility/corporate governance.

Several funding schemes and initiatives are available from institutions worldwide for the above issues, while "environmental protection" and "cleaner production" have a lower ranking on the list of priority issues. However, several CP projects would qualify easily under the existing funding schemes for SMEs and Climate Change.

Special funding lines for CP/EST are available in 67 per cent of all countries that responded to the survey. In Latin America alone, special funding lines for CP/EST are available in 78 per cent of all countries that responded to the questionnaire. Funding schemes are available in all Latin American countries, except for Guatemala and Nicaragua, but they are hardly used by SMEs.

Lack of availability of funding options is a clear problem in Africa and parts of Asia. In addition, the length of the approval process in these regions and the number of parties involved in obtaining funding are a problem. In Latin America, however, the difficulty in obtaining funding seems to be more related to the lack of information on funding options and the lack of appropriate financial and accounting systems. While in Africa and some Asian countries, the general bureaucracy of local governments and financial intermediaries still needs to be addressed, the task in Latin America is simply to fine tune existing instruments to better fit the needs of SMEs and to improve their accounting capability.

The optimal choice of policy and financial instruments depends heavily on local and national conditions. This study does not attempt to provide a "one-size-fits-all" solution. It rather seeks to encourage actors on a local, national and international level to combine and tailor different policy measures and financial instruments, in order to provide a balanced and sound policy mix that meets the objectives of mainstreaming resource efficiency and of shifting toward sustainable consumption and production patterns within the unique context of each local jurisdiction and environment.

This study indicates that there is a lot of funding available; but that coordination, making use of synergies and direct linking and updating of current activities, need more emphasis.

1. The challenge of the mission of the NCPCs

Cleaner production as an environmental and production strategy for SMEs

The most common definition of cleaner production (CP) is the one the appears in the United Nations Environment Programme (UNEP, 2001d). It calls for

> "the continuous application of an integrated preventive environmental strategy applied to processes, products and services to increase eco-efficiency and reduce risks to humans and the environment."

Among many objectives, CP helps to minimize the use as well as optimize the reuse and recycling of hazardous and non-hazardous materials. The application of CP methodologies is directed towards the use of materials of manufacturing process in a more efficient way, reducing the amount of inputs needed and the amount of non-desired outputs. CP can also contribute towards minimizing the risk to and improving human capital through workers hygiene and safety programmes. Although CP usually requires capital investment, it often produces monetary returns by minimizing energy consumption and lowering material and handling costs (Graedel and Howard-Grenville, 2001). By doing this, the CP approach becomes both an environmental and a production strategy (Ashton et al., 2002).

Small and medium-sized companies (SMEs) represent a large proportion of industrial enterprises in all countries. The Asian Development Bank (ADB) notes that most of the pollution in Asian countries comes from SMEs, and is especially concentrated in its mega-cities (ADB, 2000). The definition of SMEs varies among institutions, regions and countries.

The European Commission defines SMEs as independent enterprises with fewer than 250 employees and less than ECU (European Currency Unit) 40 million in annual sales (EC, 1996). Usually the number of employees and a monetary value (yearly sales, capitalization) is used to determine whether an enterprise is micro, small, medium or large. For the purposes of this study, however, no single definition of SME was used since the analysis and recommendations apply to a broad range of enterprises.

SME-specific barriers to implementation of cleaner production schemes include: lack of professional management skills, poor record keeping, resistance by decision makers (exacerbated by the concentration of power to few people), over-emphasis on production, non-involvement of workers, limited technical capability and access to technical information, limited skilled human capital, lack of in-house monitoring, deficiencies in maintenance, unstable finances, and high cost and low availability of capital for CP (Cooray, 1999). These are general management issues that challenge SMEs throughout the world, not only in the area of adopting CP strategies (McVay and Miehlbradt, 2000).

Several studies have demonstrated that there is no shortage of funding for CP/EST projects and technologies but that the main obstacles among SMEs are lack of collateral, poor accounting systems and inadequate preparation of financing proposals.

Major constraints for CP adoption

Several previous studies identified CP financing as one of the major constraints for CP adoption. These constraints are based on the lack of credit schemes dedicated to CP projects and the inability of firms to present creditworthy proposals (UNEP-TIE, 2001b). Studies done by UNEP in Guatemala, Lithuania and Mexico, among other countries, highlight the difficulties faced by the industrial sector, and SMEs in particular, in accessing adequate funding to invest in CP. Banks do not have a particular preference for environmentally-oriented projects, and pay more attention to the financial aspects of a loan than to the technical and environmental aspects. Companies have stated that, with adequate financial conditions, they would maintain or increase investments in CP. The main challenge is to promote CP investment opportunities and benefits among the financial sectors (UNEP, Chandak at al.).

Table 1 shows a summary of studies on CP financing programmes that highlight several difficulties faced by companies (based on UNEP, 2001c).

Studies on financing carried out in the United Nations CP programme have documented the following issues (UNEP, 2001c):

- Language: CP language has not been adopted by the financial sector. They are more aware of the concepts related to "environmental management" of traditional, end-of-pipe environmental "costs" (not efficiency);
- Time scales: The initial process of CP assessment generally takes only a short period of time. However, in many cases the implementation of recommendations depends on the capital budgeting process, expanding significantly the period of time for the adoption of the new approach. There is usually a long period between loan agreement and disbursement, a delay that also acts as a significant barrier to the implementation of CP within a firm;
- Incremental nature of CP investments: The CP investment is often seen as an additional component of a major strategy, rather than a mainstream strategy in itself or an integral part of a project. Following this pattern, environmental investment is seen as incremental or hybrid. According to United Nations experience, "best results can be achieved if the process change incorporating CP investment is valued as a whole".

To overcome the difficulties associated with CP financing, some organizations have established specific programmes. One of the most innovative aspects of these initiatives is that they target not just the industrial sector, but also banks and other financial institutions. They aim at helping financial institutions understand CP as well as at helping firms develop creditworthy CP investment proposals.

Some of the general recommendations that came out of the United Nations' CP financing programme include (UNEP, 2001c):

- Financial institutions, business schools and academia need to strengthen their capacity to understand the benefits of CP in order to create a cadre of financial professionals who are more receptive to financing CP projects. This topic has to be integrated within the formal education programmes;
- Revolving funds for CP should be encouraged to provide funding for SMEs to adopt CP projects;

- Enterprises should establish practices to measure and reflect the cost of waste management and external environmental costs;
- There is a strong need to measure the economic benefits of CP—what the costs and benefits can be of doing things in a different way.

Table 1. Problems, causes and possible solutions for CP financing

Problems	Possible solutions
Difficulties related to technical and financial assessment of CP investment proposals. Causes: Lack of understanding of the CP possibilities by the financial sector. Credit providers are unable to assess CP investment proposals. Inadequate financing: shortage of capital, limited experience in risk analysis, legislative and asset related constraints in arranging collateral, limited use of credit financing as a resource.	Enhance the capacity of technical assistance providers and CP assessors in the preparation of proposals. Use independent local and foreign "third-party" experts to provide assistance in assessment.
CP investment proposals lack creditworthiness Causes: Lack of financial competence and loan writing capacity in companies.	Training firms in the formulation of creditworthy proposals.
Lack of credit lines or schemes for CP Causes: Bank system focused on traditional collateral value (land and buildings). Provision of working capital only. High interest rate due to economic and financial instability.	Develop financial and economic tools and instruments to correct the bias and allow the evaluation of the economic benefits of CP. Promotion of credit schemes for CP investments. Adoption of CP investments in bank portfolios.
High costs for implementing CP Causes: Lack or limited CP technology and capacity Perceptions of technology risks. Unfamiliarity with the concept of profitable environmental investments.	Promotion of credit schemes for CP investments.
Lack of an adequate environment for CP Causes: Lack of an adequate CP policy framework. Lack of demand for CP by the industrial community.	Promote CP as a means to improve and manage a company's image. Transfer intellectual property rights to stimulate local production and commercialization of CP. Introduce policies and instruments that will promote the adoption of CP such as: - Import tax reductions; - Special funds and credit lines; - Pricing of water and energy; - Elimination of escalating tariffs.

Other experiences show similar results. Hamner (2001) presented lessons learned from financing projects around the world in an effort to improve this focus area in the ADB's project work. Problems and successful strategies included:

- Availability of financing is not enough to motivate investment;
- Financial institutions are not interested in CP because they do not know/understand the technical and financial merits of CP investment proposals;
- Credit schemes are not designed for CP investments;
- Proposals are usually poorly written and/or not creditworthy;
- Local financial environments are not supportive of CP;

- In Europe, successful results have stemmed from partnerships between donor agencies and local financial institutions that understand CP as it relates to local SMEs;
- Loan guarantees are a successful approach in Europe and offer appropriate roles for international donors;
- Equity financing through socially-responsible investors/venture capital using screening mechanisms should be explored as means of financing CP;
- The CP options planned to be applied should also be defined as productivity improvements to encourage support by finance providers;
- Small loans should be grouped to reduce transaction costs to institutions;
- Promotion of lending, especially to SMEs, by domestic entities, rather than remaining reliant on foreign aid. This involves bringing across to financiers the CP concepts and their effect on the improvement of their clients' productive and environmental performance;
- Technical assistance and facilitation for SMEs must include proposal preparation and identification of local funding sources.

To pursue this integration and remove constraints to CP financing, the United Nations Environment Programme, Division of Technology, Industry and Economics (UNEP/DTIE), implemented a four-year project called "Strategies and mechanisms for promoting cleaner production investment in developing countries" (UNEP, 2003). This project, financed by the government of Norway, included a global component for research, communication and demonstration activities in Guatemala, Nicaragua, United Republic of Tanzania, Viet Nam and Zimbabwe.

Some of the conclusions were:

- In many developing countries, corporate bank loans are unattractive due to high interest rates and unfavourable lending terms. Furthermore, the procedure for borrowing money from commercial banks is often complicated and lengthy;
- In many banks, the due diligence process is mainly focused on the financial aspects of loan applications and generally does not include assessments of environmental costs and risks from operations that pollute;
- Governmental policies on the environment have focused mainly on the tools to enforce and extend environmental compliance but not on the use of economic tools;
- The business sector has lacked insight into finance options for the purchase of appropriate machinery and equipment to support CP concepts.
- Contrary to some popular beliefs, foreign direct investment (FDI) into a country can improve the adoption of CP methods through the transfer of cleaner technologies and efficient managerial practices, which can influence the entire supply chain within the country;
- Environmental funds (such as carbon funds) are being considered as new opportunities for CP investment.

Table 2. Constraints for CP investments

FINANCIAL
• High cost of external capital for investments in industry.
• Lack of funding mechanisms (lending schemes etc.) appropriate for CP investments.
• Perception that investments in CP present a high financial risk due to the supposedly innovative nature of CP.
• Credit providers do not properly value CP in their evaluation procedures (for lending, equity contribution, etc.).
• Lack of knowledge in industry (in particular among small and medium-sized industries) of available funding channels.
• High transaction costs.

- Size of investments in the environmental field is often too low to interest bank loan or investment officers.
- Incentive systems in financial institutions discourage loan/investment officers from considering environmental elements of the applications.
- The environment department, which is less influential in the bank structure, often evaluates environmental investments.
- CP investments are seldom tangible assets.
- Lack of confidence in the non-biased expertise of environmental consultants.

ECONOMIC

- CP investments are not sufficiently cost effective (compared with other investment opportunities), given present resource prices.
- Immaturity of the company's internal cost calculation and cost allocation practices.
- Immaturity of the company's internal capital budgeting and capital allocation procedures.

POLICY-RELATED

- Insufficient focus on CP in environmental, technology, trade and industrial development policies and strategies.
- Immaturity of the environmental policy framework (including in particular the lack of enforcement and low prices for natural resources (energy, water, etc.).

ORGANIZATIONAL

- Lack of leadership in environmental affairs.
- Perceived management risk related to CP (i.e. no incentives for managers to put their efforts into the implementation of CP).
- Immaturity of the environmental management function in the company's operations.
- General immaturity of the organizational structure of the company and its management and information systems.
- Limited experience in employees' involvement and project work.

TECHNICAL

- Absence of a sound operational basis (well established production practices, maintenance schemes, etc.).
- Complexity of CP (i.e. need to undertake a comprehensive assessment of all production processes to identify appropriate CP opportunities).
- Limited access to equipment supportive to CP (e.g. high quality process instrumentation devices etc.).
- Limited accessibility to reliable technical information tailored to the company's needs as well as limited company's capacity to assimilate technical information.

CONCEPTUAL

- Indifference: perception regarding own role in contributing to environmental improvement.
- Narrow interpretation or misunderstanding of the CP concept.
- General resistance to change.

On the other hand, investments in CP can have attractive economic benefits due to reduction in input costs of materials, energy and water, and reduced expenditure related to waste treatment and disposal (Staniskis, Stasiskiene, 2004). Several international organizations, banks and donors have initiated and implemented projects to facilitate the introduction of CP investments. However, these domestic and international efforts to strengthen environmental financing still face a number of serious obstacles, many of which are related to profound economic, political and social problems. The obstacles to financing CP investments have been summarized as follows (Staniskis, Stasiskiene, 2002):

- On the demand side, enterprises have insufficient experience in preparing real CP projects, which systematically evaluate environmental, economic and technical aspects and present motivating applications for project financing. Lack of knowledge of CP auditing and assessment, and of evaluating the financial aspects of project efficiency and investments,

often blocks implementation of CP projects. Even when capital exists, CP is one among a range of investment options.
- On the supply side, there are obstacles in capital markets: there is a lack of environmental expertise and loan rates are unattractive to enterprises. Also, costly administrative requirements result in the establishment of loan thresholds by international financial institutions, which are sometimes significantly higher than the costs of CP investments; it is difficult to receive financing for small projects. Generally, there is little experience with the implementation of economically viable CP projects.

Furthermore, an effective financing system requires environmental strategies with clear goals and priorities. There is a need for training and education in environmental management and financing, especially at the local level. In many countries, the capacity for preparing financially—and environmentally—sound projects should be increased (Schaltegger, Burrit, 2000).

Success factors for environmental financing

Environmental financing is an instrument used for promoting environmentally beneficial measures through financial institutions or independent funds. Their loans and/or grants are provided to fully or partially finance measures aimed at reducing environmental impact, and are offered on more favourable terms than in the local market. Such measures are usually initiated through governmental programmes or credit lines of donor agencies with the necessary resources to provide the financial funds for such schemes (often a development or APEX bank).

In general, financing should be provided only for the following project situations (GTZ et al., 2006):

- Improvement of already existing, polluting or inefficient facilities, if no environmental standards exist or the actual enforcement of existing standards has started or enforced standards were made stricter;
- Selected new or any other pilot projects, if they comply with significantly stricter environmental standards as required;
- New or existing facilities, where new technology is being implemented which imposes risks great enough to deter investors.

New conventional projects should in all cases be required to meet existing environmental standards according to the "polluter-pays-principle", and should not be eligible for preferential financing.

The main objectives of environmental financing are (GTZ et al., 2006):

- To promote investments in the direct reduction of actual environmental pollution or implementation of cleaner and resource-efficient technologies. This may include industrial activities as well as investments for resource-efficient buildings;
- To disseminate knowledge of environmental investments and stimulate application of cleaner processes and end-of-pipe pollution abatement technologies;
- To assist countries where required to broaden their environmental policy mix, through the introduction of environmental financing and thereby support their pursuance of improved environmental targets.

As environmental financing can hardly be implemented without the involvement of the financial sector, awareness needs to be raised and assistance provided to broaden the services of the domestic financing market. Environment ministries usually do not directly manage

environmental funds, but provide the necessary resources and needed cooperation with the financial sector. As in many cases if a well-developed financial sector is not in place, it may be necessary to assist interested financial institutions entering into this new lending field. Creating an economic market capable of providing long-term financing will eventually establish a financing structure where the necessary funding to subsidize lending will come from sources other than donor agencies.

The actors involved in the establishment and operation of environmental financing reflect the differing objectives of this instrument and can be grouped into three hierarchical levels (GTZ et al., 2006):

- The environmental ministry (possibly in cooperation with a donor agency) and, if required, the ministry responsible for the financial sector;
- The financial institution, preferably a promotional, development or APEX bank that provides financing directly to clients or through retail or commercial banks, the environmental authorities (if engaged in the appraisal of individual project applications) and consultants to assist the financial institution or other banks in appraising and monitoring investments;
- Clients of the financial institution or the retail banks, i.e. sub-borrowers who are the direct final beneficiaries that will apply the funds toward qualifying investments, and consultants or equivalent assistance to support the clients particularly in identifying and planning the intended measures.

If financing is provided through an independent fund, as is the usual case of grant mechanisms, additional organizations may be involved.

The weaknesses of this economic instrument are (GTZ et al., 2006):

- Only creditworthy clients have access to such financing. Candidates deemed unworthy of credit often lack resources to adequately improve their operation in a manner that does not threaten the environment;
- Companies serving local markets without high competition may not perceive the need to increase efficiency or reduce pollution and therefore may not show interest in an environmental financing scheme;
- Incentives for companies to make use of such financing are also low if environmental standards are not enforced, or if input resources are heavily subsidized;
- If the subsidy from such credits and grants is large, intensive control of the end uses of financing is necessary to reduce the risk of misuse. This control can lead to extra costs;
- Voluntary actions supported by the credit line may be insufficient to achieve compliance with environmental threshold levels;
- Lending policy should not exclude larger companies given their comparatively high potential for environmental impacts. However the absence of a ceiling for individual credits or grants may result in a small number of large projects receiving the majority of the available funding;
- There is a certain degree of doubt as to whether it is environmentally desirable to provide the same level of subsidies for integrated process measures and end-of-pipe solutions. Integrated measures seem more promising, but are also more complex and therefore more difficult to implement. Policy should clarify this aspect in advance of any support.

The Organisation for Economic Co-operation and Development (OECD) policy (2000) on financing cleaner production therefore involved:

- Setting a priority to fund low-cost, small investments that bring immediate economic and environmental returns (using both domestic and external financing);

- Using savings from prior investments to fund larger investments, where possible;
- Encouraging enterprises to use their own resources (capital and credit) as far as possible. The government must establish the necessary framework and conditions for environmental investments;
- Training enterprise managers in the preparation of loan requests, as well as financiers (and in some cases government officials) in the merits of CP investments;
- Building credit lines to commercial banks and revolving funds for enterprises to finance CP investments;
- Developing a project appraisal methodology;
- Assisting governments in creating environmental funds.

The Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) lists success factors for environmental financing schemes, which may differ from case to case depending on the local political, economic and social conditions (table 3).

Table 3. Success factors for CP financing

Success factor	Issues to consider
Responsibility of government	• A clear environmental policy framework and strict enforcement of standards. • Reduction of subsidies on resources such as energy, water or input materials. • A developed financial sector with pro-active promotional or APEX and retail banks with a degree of environmental expertise. In addition the promotional or APEX bank should have favourable borrowing possibilities from capital markets or other sources.
Responsibility of the financial institution	A pro-active approach by the financial institution with top management support for promotion of environmental issues, including: • An understanding within the financial institution of the linkages between clients' improved environmental performance and the reduced financial risk to lenders; • Information for clients regarding the environmental and economic advantages of pollution prevention investments and of higher material efficiency; • Establishment of an environmental unit or at least a technical department with some environmental expertise; • Regular training of staff within the financial institution, ideally by a competent environmental unit within the organization.
Task of the institutions that prepare the concept of the financing scheme	• The financial instrument should be focused either regionally, on (industrial) subsectors, on specific sizes of companies or on specific technologies. The type of environmental challenge the financial instrument is intended to address should also be defined clearly. • Subsidies for individual projects should be limited to prevent abuse by borrowers. • To ensure that transaction costs remain low, a single financial institution should ideally be an exclusive funding provider and application procedures should be transparent. • Appropriate performance indicators for all projects should be developed.
Activities on the level of the client/ borrower	• The success of the financial support will be increased if the sub-borrower is also financially involved as this increases the notion of "ownership" of the investment and ensures the proper operation of end-of-pipe measures, which at times involve additional running costs. • Clients should become familiar with the advantages of environmental financing and/or cleaner technologies. • For sub-borrowers assistance should be available for identifying appropriate investments. Such assistance, provided by experienced consultants or advisory services, could also be arranged by the financial institution or by the state.

2. The results of the questionnaire

The questionnaire on funding for SMEs (small and medium-sized companies) for cleaner production (CP) projects and environmentally sound technologies (EST) investments was developed in March 2007. It was pre-tested by the directors of the National Cleaner Production Centres (NCPCs) from Morocco and Uganda at UNIDO in Vienna, Austria. The questionnaire was sent to all 38 NCPCs on 4 April 2007.

The questionnaire assessed who provides funding to SMEs for CP projects and EST investments. It did not address the funding of the CP Centres themselves, but the funding schemes available to SMEs to perform and invest in CP/EST measures and technologies.

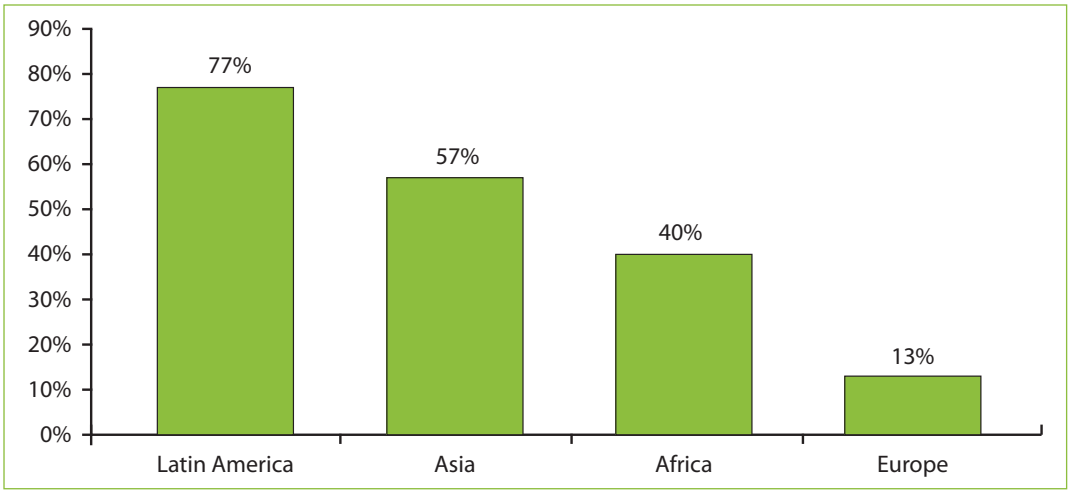
The questionnaire also addressed obstacles and hindrances faced by SMEs in obtaining funding. It also investigated the involvement of the relevant NCPC in assisting the SMEs in obtaining funding.

The role of the NCPC in providing technical and/or financial assistance depending on the availability of a national information point for funding options was also explored. The questionnaire concluded with a request to provide details and experiences on national funding options available.

By the end of May 2007 the response rate was 50 per cent (19 NCPCs) with a very unequal regional distribution. This is partly due to a focus on Latin America in the reminders to submit responses. But the high response rate from Latin America also reflects the finding, that significantly more funding options are available there than in other regions of the world. The low response rate of the European NCPCs can be related to their orientation to the European Union and not so much to UNIDO.

The response rate by regions is shown in figure 1.

Figure 1. Response rate by regions



The CP network of UNIDO comprises NCPCs in 38 countries. The following figure shows the countries, where UNIDO NCPCs are established and those that responded to the questionnaire (marked by an "x").

Table 4. Responses from NCPCs by region and country

Latin America	Response	Europe and Central Asia	Response	South-East Asia	Response	Africa	Response
Bolivia	x	Armenia		Cambodia		Egypt	
Cuba		Russian Federation		China	x	Ethiopia	
Colombia	x	Czech Republic		India	x	Kenya	
Ecuador		Hungary		Lao People's Republic		Lebanon	x
Costa Rica		Macedonia		Republic of Korea		Morocco	x
Guatemala	x	Serbia		Sri Lanka	x	Mozambique	x
El Salvador	x	Slovakia	x	Viet Nam	x	South Africa	
Mexico	x	Uzbekistan		7	4	United Republic of Tanzania	x
Honduras	x	8	1		57%	Tunisia	
Brazil	x		13%			Uganda	
Paraguay	x					Zimbabwe	
Peru	x					11	4
Nicaragua	x						36%
13	10						
	77%						

The national situation regarding funding options

In the questionnaire and throughout this study the term "funding" was used for the many different CP/EST financing options provided to SMEs and not as funding for the establishment and operation of the NCPCs themselves.

Grants or *subsidies* are funds given by governments, bilateral aid or intermediaries to foundations, corporations, governments, small business and individuals. Most grants are meant to finance specific projects and require some level of reporting. The process involves an applicant submitting a proposal to a potential funding institution, either on the applicant's own initiative or in response to a request for proposals from the funding institution.[1] Other grants can be given to individuals, who seek financial assistance to establish a small business. This can also include consultation by a CP specialist, which is offered free of charge by some institutions. Grants do not have to be paid back.

[1] In Austria, grants for CP/EST are provided by the Ministry of Environment and range from 10 to 30 per cent of the investment volume. A bank that is specialized in funding for utilities, municipalities and environmental projects, e.g. climate change and cleaner technologies (Kommunalkredit AG) manages the grants. The Chamber of Commerce provides free initial consultation on specific issues, e.g. energy efficiency or environmental management systems.

A *loan* or *credit* is a type of debt. Like all debt instruments, a loan entails the redistribution of financial assets over time between the lender and the borrower. The borrower initially receives an amount of money from the lender, which he pays back, usually but not always in regular instalments, to the lender. This service is generally provided at a cost, referred to as interest on the debt. Acting as a provider of loans is one of the main tasks of financial institutions. Any movement of financial capital is normally quite dependent on credit, which in turn is dependent on the reputation or creditworthiness of the applicant.

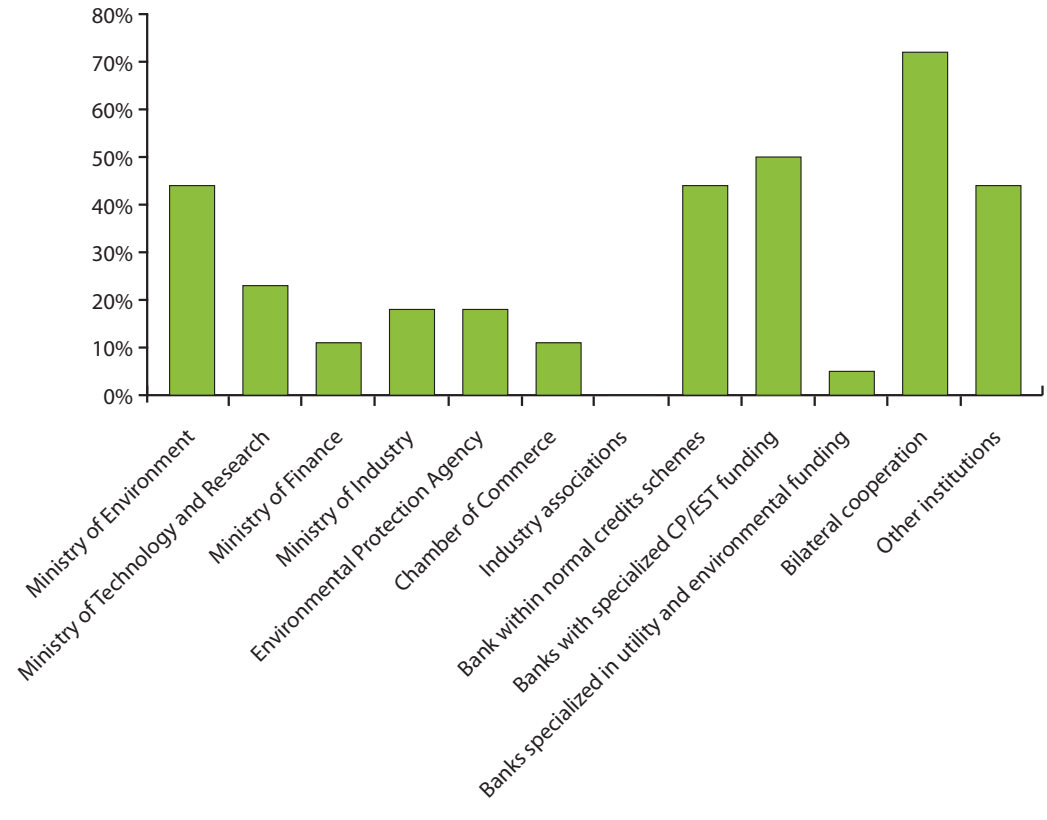
The results of the questionnaire have been calculated for all respondent countries including Latin America, and separately for Latin America. The figure for Latin America is quoted in brackets for the remainder of this chapter.

Providers of funding to SMEs for CP projects and EST investments

Funding to SMEs for CP projects and EST investments is provided by:
- 72 per cent (67 per cent) Bilateral cooperation;
- 50 per cent (44 per cent) Banks with CP/EST funding lines;
- 44 per cent (44 per cent) Ministry of Environment;
- 44 per cent (56 per cent) Banks within normal credits;
- 44 per cent (33 per cent) other institutions (mostly specially created funds).

No funding comes from industry associations, Chambers of Commerce or Ministries of Finance.

Figure 2. Who provides funding to SMEs for CP projects and EST investments?



The responses show that bilateral cooperation is the most important source of funding (72 per cent of all countries). But it is positive to note that in half of all countries, banks that provide CP/EST funding lines are available. In Latin America, this is only true for 44 per cent of all respondent countries. The next important sources of funding are, the Ministries of Environment's specially created funds for environmental protection and banks' normal credit schemes. Industry associations play no role in providing funding, but do provide information on sources of funding.

Availability of special funding lines for CP/EST

On the question as to whether there were special funding lines for CP/EST available nationally, the responses were promising. In 67 per cent of all respondent countries, and for Latin America 78 per cent of all respondent countries, this is the case! Funding schemes are available in all Latin American countries that responded to the survey, except for Guatemala and Nicaragua, but are sometimes hardly used by SMEs. The following quotes from the responses emphasize this:

Brazil: "The results are good, but not many companies are applying for it."

Nicaragua: "It has not been successful, as in two years not one company applied for the scheme."

Peru: "Several companies applied and implemented projects."

Sri Lanka: "Big demand for different types of projects, including end-of-pipe and energy conservation projects."

United Republic of Tanzania: "Very few SMEs know about this fund. The approval process is too bureaucratic. Most of the applicants (SMEs) do not understand how the scheme works and do not know how they could sustain their businesses after taking the loan."

China, Guatemala, Lebanon, Nicaragua, Slovakia, United Republic of Tanzania and Viet Nam answered that no special CP/EST funding lines were available. However in some of these countries, environmental funding is designed for municipalities to install waste water treatment plants and does not target SMEs. Only in exceptional circumstances can companies also use it for CP/EST options. In some countries such as Slovakia, national environmental funding that was mostly addressed municipalities was recently opened to other projects as well, including those targeting climate change impact.

Central national information point for funding options

Only 17 per cent (22 per cent) of all responding countries answered that there is a central information point for funding options (El Salvador, Peru and Sri Lanka).

In El Salvador, the "Industrial/Environmental Credit Line" started in October 2006. Banco Multisectorial de Inversiones is the national central information point and the NCPC El Salvador carries out the technical assessments.

The National Cleaner Production Centre of Peru, CET PERÚ, is the central information point for funding options. The CET PERU develops CP projects and promotes the use of the Green Credit Trust.

In Sri Lanka, there are German and Japanese funds named Pollution Control and Abatement Fund (PCAF) and Environmentally Friendly Solution Fund (E-FRIENDS). These funds are not only for CP/EST, but also for environmental and energy-related conservation. The

NCPC is not officially established as the central national information point, but as the Central Environmental Authority (CEA) directs all entrepreneurs to the NCPC for guidance, it in effect has taken on this role.

Two-thirds of all NCPCs or 67 per cent (56 per cent) answered that it would be an option for them to take over the role as central national information point. As shown above, this ideal positioning of the NCPC is already established in Peru and Sri Lanka.

The countries that answered "yes" to this question are Brazil, Guatemala, Honduras, Morocco, Mozambique, Nicaragua, Paraguay, Peru, Slovakia, Sri Lanka, United Republic of Tanzania and Viet Nam. Bolivia, China, Colombia, El Salvador, India, Lebanon and Mexico saw no option for this; partly because of lack of resources, or because they see their role as only related to technical and not financial matters. The following quotes from the responses emphasize this:

Bolivia: "This is not an expected role of the NCPC".

China: "The main role of our centre is to provide technical assistance and policy advice to government, but it doesn't involve funding issues".

Colombia: "Each funding scheme provides its own information. The NCPC offers general information to its clients, but more specific information is necessary".

India: "The NCPC has no capacity/expertise to deal with funding options. The core competence is in the technical expertise of CP/EST, not in financial issues".

Mexico: "We don't have a specialized area for environmental funding".

El Salvador: "The NCPC is established as the technical unit of the national funding scheme".

Lebanon: "There are hardly any funding options".

Availability of financial institutions specialized in funding CP/EST

Only in 28 per cent (33 per cent) of all responding countries are there national banks specialized in funding environmental projects. These countries include Bolivia, El Salvador, Honduras, Mexico and Sri Lanka.

One third of all NCPCs 33 per cent (22 per cent) answered, that it would be an option for them to take over this role. This response came from Lebanon, Mozambique, Paraguay, Peru, United Republic of Tanzania and Viet Nam. It must be noted, that Peru NCPC stated that it would only partly take over this role. It would develop CP projects and promote the use of the Green Credit Trust.

In some of the countries, that answered yes, there is no special CP/EST funding line available at all, therefore it is an option for Lebanon, United Republic of Tanzania and Viet Nam to directly develop into a one-stop-shop for CP/EST.

Some countries emphasized their existing networks and reputation, which would help them in fulfilling this role:

Mozambique: "Yes, as the NCPC is well known in the country".

Paraguay: "Yes, as we have many contacts with several institutions".

There are several countries where the NCPC is established as the technical unit of the national environmental funding scheme, while financial administration is provided by one or more financial institutions. This is perhaps the optimum situation for the NCPCs and is established in 28 per cent of all responding countries and in 44 per cent of all Latin American countries participating in the survey namely, Bolivia, Colombia, El Salvador, Peru and also in Morocco.

Tax incentives or hindrances for CP/EST

Economic instruments as taxes are hardly used in relation to environmental protection in any of the countries surveyed. There is a vast field for their development in conjunction with national governments.

Only in 22 per cent (22 per cent) of all responding countries namely, Colombia, Honduras, India and Mexico, are there tax incentives for CP/EST technologies. They mostly relate to an exemption from customs duty or value added tax (VAT) or allow accelerated depreciation.

Tax incentives are best developed in Colombia. They comprise:

- Exclusion from value added tax: Colombia has an exclusion from value added tax for equipment and machinery that is acquired in order to operate control systems, to monitor environmental impact and to secure legal compliance in the areas of recycling, waste processing, waste water treatment, gaseous emissions, and for the protection of rivers and ground water. It must be mentioned, that the value added tax system in most Latin American countries does not allow tax deduction for entrepreneurs and is therefore a cost factor in opposition to the system in Europe. Only basic consumables like food and medicine are exempted from it.
- Reduction of income tax: Companies in the production sector, which invest in the control and reduction of environmental impacts are allowed to deduct from their income the value of the annual investment, provided that they submit a certificate from the environmental agency, certifying the environmental improvements realized with the investment. The deduction allowed for is 20 per cent of the total investment, before the deduction of the related depreciation. Mandatory environmental investments do not qualify for this allowance.

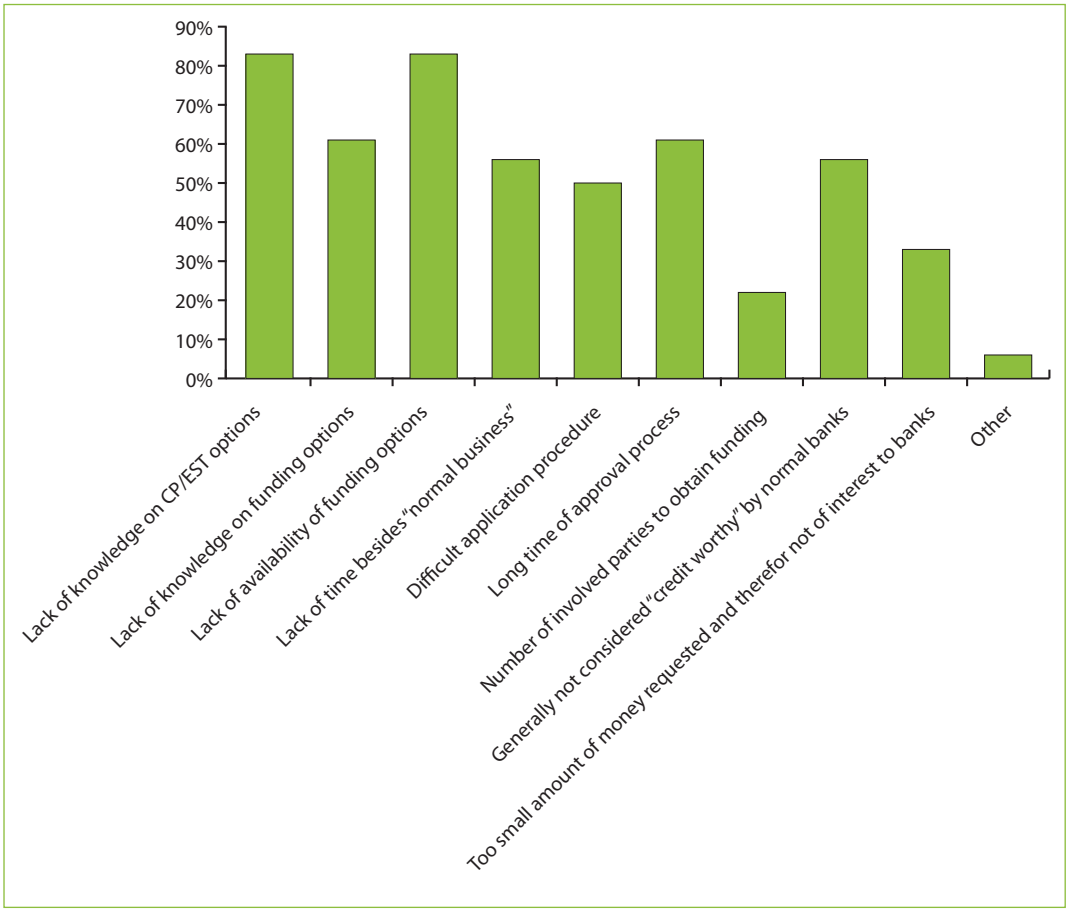
To promote the adoption of cleaner technologies the Indian Government had a scheme under which imported pollution control equipment was exempted from customs duty, but this scheme has been withdrawn in order to protect the domestic manufacturers of similar equipment.

Tax hindrances are not a problem; only in Mozambique are there high import duties on new technology. However Morocco mentioned the non-existence of tax incentives for CP/EST options, as a tax hindrance.

Obstacles and hindrances for SMEs

Figure 3 shows the responses on the obstacles and hindrances to SMEs obtaining funding for CP/EST projects.

Figure 3. Obstacles and hindrances for SMEs to obtain funding for CP/EST options



The hindrances to SMEs obtaining funding for their projects can be divided into general SME problems, which are the same worldwide, and problems specifically related to the funding of CP projects and EST investments. For both problems, lack of knowledge is the most significant obstacle that can only be overcome by intensive information and awareness campaigns.

The following hindrances are CP/EST specific:

- 83 per cent (67 per cent) Lack of knowledge on CP/EST options;
- 83 per cent (78 per cent) Lack of availability of funding options;
- 61 per cent (33 per cent) Long time of approval process;
- 50 per cent (44 per cent) Difficult application procedure;
- 22 per cent (0 per cent) Number of involved parties to obtain funding.

The following hindrances can be seen as typical SME problems worldwide:

- 61 per cent (78 per cent) Lack of knowledge on funding options;
- 56 per cent (56 per cent) Lack of time besides ”normal business”;
- 56 per cent (67 per cent) Generally not considered “creditworthy” by normal banks;
- 33 per cent (44 per cent) Too small amount of money requested;
- 6 per cent (11 per cent) Others.

The suggestions of the NCPCs to overcome these obstacles focus on the following aspects:

- Demonstrating the profitability of CP/EST investments;
- Easier access to information by SMEs;

- Availability of one focal information point centralizing all funding options;
- Development of special funding lines for SMEs with better conditions compared to "normal" financing instruments;
- Improving the accounting and investment appraisal competence of SMEs;
- Providing assistance to SMEs to apply for funding;
- Awareness-raising and capacity-building for financial institutions and governments;
- Providing economic incentives and enforcing legal compliance at the government level.

Some of the suggestions for improvement from the NCPCs are quoted below, from the questionnaire responses:

Brazil: "Create funding politics for supporting and improving CP/EST and dissemination of CP/EST to all stakeholders."

Bolivia: "There is a need to improve the conditions of access to credit by small industries, and extend technical assistance to industries and financial institutions."

El Salvador: "Develop a special funding special line for SMEs, including attractive conditions regarding guarantees and interest rates."

Guatemala: "SMEs could be assisted to fulfil the procedures and complete the forms provided by the bank, and to prepare the investment proposal. Another improvement would be if national banks had someone specific for evaluating these projects. One aspect that should be mentioned is that usually entrepreneurs expect that the conditions of specialized environmental credit lines should have more attractive conditions, than normal credit lines."

Honduras: "To revert the situation the NCPC is working together with the national government and the private sector on a national CP policy."

India: "Educating companies, SMEs in particular and financiers will lead to a greater acceptance and adoption of CP/EST. In case of SMEs, support is needed to assist in the preparation of bankable proposals, which show CP/EST as an economic tool for improving the companies' bottom line. For financiers, guidance is required for evaluating and appraising CP as a viable investment opportunity."

Morocco: "The main improvements would be:

- To have one focal point centralizing all funding options;
- To have simplified procedures for small-scale projects interesting for SMEs;
- To enforce national environmental regulations;
- To set up economic incentives for the use of CP and EST technologies including taxes reduction, customs tariff reduction."

Nicaragua: "Promote programmes to demonstrate the profitability of CP/EST investments, with the participation of the private sector, government and financial institutions."

Peru: "The funding schemes that are working demonstrate to the companies and banks that investments in cleaner technologies are profitable. This type of funding needs more diffusion."

Viet Nam: "Economic tools such as taxing and availability of favourable funding sources would be a motivation toward CP/EST."

Involvement of the NCPC in obtaining funding for SMEs

Involvement of the NCPC

The questionnaire assessed to what degree the NCPCs are involved in assisting SMEs. The answers show the gap between the technical/environmental and financial assistance. While about 80 per cent of all NCPCs evaluate the environmental benefits of CP/EST options, only 72 per cent provide information on funding options. In Latin America, provision of funding options is more common (78 per cent) than in other regions, but seems to the statement, that fewer NCPCs are directly assisting SMEs in preparing project applications (67 per cent).

Involvement of the NCPC:

- 83 per cent (78 per cent) Evaluating the environmental benefits of the investment;
- 83 per cent (67 per cent) Preparing the project application for the SME;
- 72 per cent (78 per cent) Providing information on funding options;
- 67 per cent (67 per cent) Calculating the profitability (Return On Investment (ROI), Internal Rate of Return (IRR) etc.) of the investment.

From the SME perspective with a one-stop-shop in mind, the goal for the involvement of the NCPCs would be 100 per cent for all options mentioned above.

The other options mentioned below relate a lot to national circumstances and are less important:

- 33 per cent (33 per cent) Checking the project results and officially approving the final project outcome;
- 22 per cent (22 per cent) Other;
- 0 per cent (0 per cent) Administering the distribution of money on behalf of government.

Strengths and weaknesses of the NCPCs

The responses of the NCPCs on their strengths and weaknesses in assisting SMEs to obtain funding reflect the different national situations regarding CP/EST promotion and awareness but at the same time relate to the period that the NCPCs have been in existence. It can be seen that in some countries, the competence and networks of the NCPCs are well established, while in other countries these aspects of the NCPCs are in their infancy. The responses also emphasize the importance of economic arguments to promote CP/EST and the need to improve the related competences as well, in both SMEs and NCPCs.

Bolivia: "The experience shows that the implementation of cleaner production practices generates important savings in the operational cost and additional earnings for the companies. Usually, the return on the investment in these projects is high, as is the internal rate of return and the net present value. These projects are attractive from a financial point of view. Moreover, they have a good impact on the environment since they reduce pollution at source. For these reasons, financial institutions are getting more interested in providing funds for them. But, usually SMEs don't have financial reports or they are of bad quality. Financial institutions take into account the total operations of SMEs to approve a loan. The lack of accurate accounting information complicates the evaluation process, even when the CP/EST project is well done".

China: "Our centre helps SMEs to conduct CP audits, develops CP options with detailed environmental, economic and technical evaluations and provides basic information on how and where to apply for CP funding. In addition the NCPC has a good relationship with governmental bodies and can provide valuable information and advice to SMEs to obtain CP funding. But, our centre has no contact with the banking system, so it lacks access to advice on funding from banks and financial institutes".

Colombia: "The NCPC is the national coordinator of the Green Credit Trust (Línea de Crédito Ambiental) and the only organization allowed to evaluate the environmental impacts and to recommend the financial terms for the funding of projects of the applicants".

Guatemala: "The NCPC has the knowledge of the economic and environmental benefits of the investment proposal since it is based on the technical assistance given by the centre. The centre has experience in preparing and submitting CP investment proposals and has the personnel required for this activity. Also, we have knowledge of the obstacles that the SMEs face for getting funds through the experience gained from seven years of working in CP/EST in SMEs and carrying out projects. The centre has the software and experience of using it for the financial evaluation of investment proposals (COMFAR). But, there is not enough information on the availability of funds to support SMEs".

Morocco: "Morocco Cleaner Production Centre (CPC) is listed within the Ministry of Environment and the Ministry of Industry as a technical centre on cleaner and sustainable production. Moreover, Morocco CPC is hosted by the General Confederation of Moroccan Enterprises (private sector) and thus, has easy access to industrial enterprises through professional associations. Furthermore, Morocco CPC has access to CP databases of the UNIDO network and has good experience in implementing CP and EST projects within Moroccan industrial enterprises".

The main weakness is the lack of facilitation in the relationship between the banks and the enterprises. On the one hand, the NCPC provides technical assistance to develop CP/EST projects without having information on the records between the enterprise and its bank. On the other hand, banks are using their own approach to evaluate the financial risks based on the macro evaluation of the industrial sector and the records of the applying enterprise. The key factor is to improve the coordination between the CPC approach and the bank approach.

United Republic of Tanzania: "The NCPC sees its strengths in the identification of CP/EST options and the evaluation of the environmental benefits of an investment but reports weaknesses in the evaluation of the economic benefits of an investment".

The role of the NCPCs

It is interesting to note the different perceptions of NCPC directors on the role of the NCPCs. The questionnaire gave the following options:

How do you see your role?

- Intermediary between government and SMEs (information point and funding agency);
- Intermediary between banks and SMEs (facilitating communication with banks);
- Consulting on CP options to SMEs (direct consulting like other engineers and environmental experts).

All NCPCs provide consultancy services on CP/EST options to SMEs, but for an NCPC under the umbrella of UNIDO, there should be additional value.

Guatemala specifically states that they do not see their role as a consulting agency like other engineers and environmental experts, even though they support SMEs in identifying CP options and making all the related analysis (technical, environmental, financial and organizational). Some other countries answered "no" to this option, but stated that they act as consultants to SMEs on CP options.

Sixty-one per cent (44 per cent) of all respondent countries see their role as an intermediary between government and SMEs, in particular as an information point and as a funding facilitator. NCPCs that attest to this opinion include Brazil, China, El Salvador, Guatemala, Honduras, India, Morocco, Mozambique, Nicaragua, Slovakia and United Republic of Tanzania. NCPCs that disagree with this view on their role include Bolivia, Colombia, Lebanon, Mexico, Paraguay, Peru, Sri Lanka and Viet Nam.

Sixty-one per cent (67 per cent) of all NCPCs see their role as an intermediary between banks and SMEs, in particular in facilitating communication with banks. NCPCs that agree with this opinion include Bolivia, Colombia, Guatemala, Honduras, Nicaragua, Paraguay, Peru, Slovakia, Sri Lanka, United Republic of Tanzania and Viet Nam. Brazil, China, El Salvador, India, Lebanon, Morocco and Mozambique do not agree with this opinion on their role.

It is very interesting to note, that only Guatemala, Honduras, Slovakia and United Republic of Tanzania agreed to both opinions that NCPCs play an intermediary role. Most of the other countries agreed with one opinion, but disagreed with the other.

Only Lebanon and Mexico answered "no" on both occasions, and see their roles as limited to consultation on CP/EST only.

While the result of the assessment of the role of the NCPCs partly relates to divergent national circumstances, it also shows that there is room to develop a common understanding on the role of the NCPCs. The service profile of the NCPCs is not identical in all countries, but depends a lot on national circumstances, needs and other local actors, as well as on their funding structure and the priorities of donor agencies.

Details on the different funding schemes

The NCPCs were asked to provide more detailed information on the different funding schemes available, as well as additional information, using a standardized template. 78 per cent (89 per cent) of the NCPCs provided these details, but only 50 per cent of them used the questionnaire format, namely Brazil, Bolivia, El Salvador, Honduras, Nicaragua, Peru, Slovakia, Sri Lanka and United Republic of Tanzania. 39 per cent (33 per cent) of the NCPCs provided details on more than one funding scheme. Some of these schemes are geared towards municipalities for facilitating, for example, the installation of waste water treatment facilities and do not target SMEs. They have therefore not been further considered in this study. It is therefore also not possible to provide a sound statistical analysis for this section. On the other hand, best practice funding schemes were selected and discussed in more detail. These experiences are reported in chapter 3.

For the funding schemes available to SMEs, a question has been asked as to what is being funded? In most cases only the technology investment qualifies for funding. This is the case

in El Salvador, Honduras, Nicaragua, Peru and United Republic of Tanzania. Only Brazil has funding available for general measures for environmental management such as the implementation of an environmental management system according to ISO 14001.

In Brazil, Bolivia, El Salvador, Peru and Sri Lanka there are funding schemes that make a difference between end-of-pipe-solutions and CP/EST options, by having a defined CP/EST preference.

In most cases only the company that invests in a certain technology, can apply for funding. This is the case in Brazil, El Salvador, Honduras, Nicaragua, Peru, Slovakia and Sri Lanka. Only in Bolivia can scientists and consultants who assist in the implementation process also apply for funding. In Bolivia and Brazil the NCPCs can apply for funding as well. Brazil, Bolivia, El Salvador, Peru and United Republic of Tanzania NCPCs reported that they are assisting SMEs in the preparation of applications within the funding schemes described.

As to what documents the SMEs, who apply for funding, have to submit, the following responses were given:

- 44 per cent (56 per cent) Balance sheet;
- 50 per cent (56 per cent) Profitability calculation for the project (ROI, IRR, etc);
- 50 per cent (56 per cent) Proof of creditability;
- 39 per cent (33 per cent) Securities;
- 33 per cent (44 per cent) Material input comparison of the old and new technology;
- 33 per cent (44 per cent) Energy input comparison of the old and new technology;
- 28 per cent (44 per cent) Emission outputs of the old and new system;
- 17 per cent (22 per cent) Climate change effect;
- 22 per cent (22 per cent) Other environmental benefit assessment;
- 11 per cent (11 per cent) Other.

Thirty-nine per cent (44 per cent) of all countries that took part in the survey reported, that the applicants have problems with submitting the required information as the quality of accounting systems in SMEs is very poorly developed.

3. Funding schemes utilized by NCPCs

This chapter gives an overview of the funding schemes provided by the NCPCs that were investigated in more detail through personal contact with the responsible programme managers.

Bolivia:
In Bolivia there is a special funding line called the Biomass and Cleaner Production Fund which was established with resources provided by the Netherlands through the World Bank, the Danish Cooperation via the National Chamber of Industry, and a second tier bank named FUNDAPRO, which manages the fund nationally.

Brazil:
The Brazilian NCPC provided information on two national funding schemes: SEBRAE and the ABN Amro funding line for cleaner production. SEBRAE is the Brazilian Micro and Small Business Support Service. SEBRAE currently has two funding lines for companies. The first one is a line of funding available for target clusters, where resource grants are not bound to reimbursement. The other funding line is for specific calls named, SEBRAE/FINEP, funded by the Ministério da Ciência e Tecnologia (Federal Ministry of Science and Technology).

Colombia:
In Colombia there are several credit lines available which provide 80-100 per cent financing to CP/EST projects. In addition, there are several funds that offer investment grants or co-financing. The Línea de Crédito Ambiental (LCA) (Green Credit Trust) was developed by the Swiss State Secretariat for Economic Affairs (SECO) and reimburses 15 or 25 per cent of the invested capital, depending on the reduction of the environmental impact by the project.

El Salvador:
In El Salvador the NCPC carries out the technical assessment for the Industrial/Environmental Credit Line that was established by the Salvadorean development bank, Banco Multisectoral de Inversiones (BMI), and the German Kreditanstalt für Wiederaufbau (KfW).

India:
In India, there is a vast variety of different funding tools available and the NCPC has provided a good overview of them.

Morocco:
The Ministry of Environment, in partnership with KfW, has for several years managed an industrial pollution abatement fund (FODEP) which finances end-of-pipe, as well as CP/EST investments. The fund has the following components:

- A grant component of 40 per cent for end-of-pipe solutions and 20 per cent for CP technologies;
- A credit component of 40 per cent for end-of-pipe solutions and 60 per cent for CP technologies;
- A self finance component of 20 per cent.

Morocco is one of the countries where, in addition to the NCPC, a UNIDO Investment Promotion Unit (IPU) is operational. The NCPC cooperates with the UNIDO IPU to carry out the financial appraisal of projects using the UNIDO COMFAR Software. The IPU does not provide grants but helps industrialists to formulate business plans and to carry out the financial appraisal of the projects including non-environmental projects. Subsequently, the industrialists are able to apply and obtain funding from a specific credit line sponsored by the Government of Italy.

Peru:
The Swiss SECO established a Green Credit Trust in Peru. The Green Credit Trust increases the attractiveness of CP/EST investments by reducing the demand on collateral through a partial reimbursement of the capital invested, based on the reduction of environmental impacts as a result of the investment.

Russian Federation:
The financing of CP investments in the Russian Federation is operated along two lines by the Nordic Environmental Finance Corporation (NEFCO) in cooperation with the NCPC:

- Energy and resource efficiency projects, where the focus is on, modernization of an enterprise's energy and resource consumption, technology optimization and waste minimization, by the implementation of "closed-loop" systems (e.g. conversion of waste into raw materials or energy sources) . The credits amount to EUR350,000 with a maximum pay back period of four years.
- Environmental protection projects that focus on environmental impact reduction by modernization of purification facilities, sludge conversion processes, galvanic lines, smoke and air cleaning, etc. The credits amount to EUR400,000, with a maximum pay back period of eight years.

Sri Lanka:
Small and Medium Enterprise Developers (SMED) is a project of the Federation of Chambers of Commerce and Industry of Sri Lanka (FCCISL) and Friedrich Naumann Stiftung (FNSt) in Sri Lanka, which was set up to develop management and technical capacity in the industrial and services sectors.

E-FRIENDS is an environmentally friendly solution fund for industrial firms funded by the Japanese Bank for International Cooperation (JBIC) and administered by the National Development Bank. The fund consists of two components:

- A general loan component at concessionary interest rates.
- An interest-free technical assistance loan component.

SMILE-3 (Small and Micro Industries Leader and Entrepreneur) provides SMEs with long-term credits at an interest rate of 9 per cent per annum.

The Ceylon Chamber of Commerce (CCC) with financial assistance from the Royal Netherlands Embassy, has launched the Promotion of Eco-efficient Productivity (PEP) grant scheme that provides assistance to corporate entities. The scheme provides a grant of a minimum of 50 per cent of the project costs for the corporate entities, while SMEs and women entrepreneurs will receive a minimum of 65 per cent of the project costs under the grant scheme.

Bolivia—Biomass and Cleaner Production Fund

In Bolivia there is a special funding line called the Biomass and Cleaner Production Fund which was established with resources provided by the Netherlands through the World Bank, the Danish Cooperation via the National Chamber of Industry, and a second tier bank named FUNDAPRO, which manages the fund nationally. Its webpage is available only in Spanish. There are also other institutions managing funds for environmental projects, e.g. Fonabosque, Fundeco and Fundación Puma.

The NCPC participated in the design of the Biomass and Cleaner Production Fund. Currently, the function of the NCPC is to provide technical assistance to the fund by promoting the introduction of efficient technologies in industrial enterprises. In addition the NCPC is to provide information on energy efficiency best practices and experiences for industries, advice and training for first tier technical assistance, and advice to FUNDAPRO and financial intermediaries, on the technical soundness of projects proposed by enterprises for financing from the fund.

The Biomass and Cleaner Production Fund does not finance end-of-pipe projects. Funding is available for technology investment including related consultation fees, research work and internal labour. The financial terms for funding depend on the project. The NCPC can assist the companies in preparing the applications, and can itself apply for funding as well as other scientists and consultants who assist in the implementation process. As usual, the applicants (SMEs) have problems when submitting their financial statements or obtaining the security (collateral) to support the credit.

There are several organizations that provide information on funding options, therefore there is no need for the NCPC to develop into a central national information point for funding options. However, in its regular activities the NCPC promotes among its clients the Biomass and Cleaner Production Fund as well as other funding lines when required.

The NCPC focuses its efforts on technical assistance in CP and energy efficiency projects, and on the development of cleaner technology projects. Thus, the NCPC is not interested in the administration or intermediation of funding lines, believing that this task demands additional expertise in the management of financial resources, and that there are many other institutions available that are better qualified to assume this role in a more efficient manner. However, the NCPC has provided technical assistance to credit officers through training on the assessment of CP projects, or supported first tier financial institutions in the design or strengthening of other financial mechanisms.

Even in this relatively optimal situation (funding and financial institutions are available), the NCPC reports the following hindrances which impede the execution of CP/EST projects:

- Lack of an extended country-wide affordable financial mechanism, specialized in CP/EST projects;
- Lack of information in the industry regarding opportunities in CP and EST;
- Strict requirements set by financial institutions in order to give credit;
- Lack of experience of credit officers in evaluation of CP and EST projects.

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Brazilian Micro and Small Business Support Service SEBRAE and ABN AMRO Funding

The Brazilian CPC provided information on two national funding schemes: SEBRAE and the ABN AMRO funding line for cleaner production.

SEBRAE is the Brazilian Micro and Small Business Support Service. It is a non-profit private institution, supporting the development of small-sized business activities, a result of public and private sector cooperation, and the country's main educational and research entities.

The coordination of its actions and policies is carried out by the National Deliberative Council, made up of more than 350 institutions representing the government, business entities, and educational and research institutions. The Deliberative Council is in charge of SEBRAE's annual budget. Most of its resources are utilized in programmes and activities that are important to micro and small enterprises. They include credit and capitalization support, sectorial and regional development, professional and technological qualification, among many others, that strengthen and foster the creation of new productive chains.

Another important aid to small enterprises has come up in the Brazilian legislation, to which SEBRAE has dedicated great effort. The Federal Constitution established, in article 179, preferential treatment for these companies. The Statute of the Micro and Small Enterprise sought to establish a legal framework favourable to small businesses, while the FÁCIL (The Easy One) programme increased the speed and practicality of procedures for establishing and registering a company. The SIMPLES (The Simple One), the single tax for small companies, is sought to reduce the tax and social security load and simplify, in a clear manner, the bureaucratic processes.

SEBRAE currently has two funding lines: The first one is a line of funding available for companies or target clusters, where resource grants are not bound to reimbursement. The other funding line is for specific calls named SEBRAE/FINEP funded by the Ministério da Ciência e Tecnologia (Federal Ministry of Science and Technology). Those calls are targeted to priority areas defined by SEBRAE. Within this model, resources are granted to non-profit institutions, and not to companies. Project budgets vary according to the call. For example, a specific call might establish a maximum funding request of $US 100,000 for projects with an overall budget of $US 250,000. For this kind of calls the participation of medium-sized or large companies as counterparts may be required, as well as the participation of other financing parties. Currently, there are no specific calls open for CP/EST projects. But these subjects may be included in other open calls.

In addition the ABN AMRO bank manages a funding scheme for cleaner production. The general terms are defined by the Brazilian Central Bank and can vary according to government policy. It provides credits for CP projects including consultation fees, and research and installation of environmental management systems. Unfortunately only very few companies apply for it. When the applicant is assisted by the NCPC or a consultant, the problems in preparing the application are not many, however, when they apply alone, the NCPC noted that SMEs have many difficulties. Proof of creditworthiness is sometimes difficult to obtain.

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Colombia—Línea de Crédito Ambiental (LCA) Green Credit Line of SECO

In Colombia there are several credit lines available which provide up to 80-100 per cent of financing for CP/EST projects. There are also several funds which offer investment grants or co-financing.

The Línea de Crédito Ambiental (LCA) (Green Credit Line) seeks to increase the attractiveness of investing in cleaner technologies. This is achieved by a partial reimbursement of up to 25 per cent of the invested capital, based on the environmental impact reduction achieved by the project.

The webpage of the LCA fund states that entrepreneurs usually implement low-cost options, but are not always ready to invest in cleaner technologies if the pay back period of the investment is longer than that for "regular" investments. In many cases, cleaner technologies seem to be less attractive financially and this is worse in countries with high interest rates and/or short credit periods as is the case for Colombia.

The LCA was designed to overcome these hindrances. The resources for the credit itself come from the funds of financial intermediaries. These are the managers of the credits themselves, and are responsible for the establishment of the contracts and other documents needed to grant the credits to the companies. They are also responsible for analyzing the financial eligibility of the company that requests the credit.

In addition, the Swiss SECO established a trust fund associated with the Green Credit Line, which grants the incentives in the form of reimbursements. After the NCPC recommends the reimbursements according to the environmental impact reduction achieved by the project, SECO approves the transfer of funds to decrease the credit balance.

The NCPC is responsible for evaluating the technical and environmental aspects of the projects, including measurement of the environmental indicators, before and after the implementation of the project. The NCPC recommends the amount of reimbursement in accordance with environmental impact reduction. The NCPC is also in charge of monitoring the correct usage of the credit resources for the project.

The line of credit was designed and created by SECO which is responsible for the internal economy as well as for the trade and the external economic affairs of Switzerland. One of its tasks is to define the development of the economic and commercial cooperation in selected priority countries. A new initiative is to assist in the establishment and support of NCPCs in those countries. Over the last few years, SECO has supported the establishment of several NCPCs, in the Colombian centre.

The National Centre of Cleaner Production and Environmental Technologies of Colombia, the NCPC, is the national coordinator of the Línea de Crédito Ambiental (LCA). Its staff is composed of 29 technical and administrative professionals, responsible for the monitoring and coordination of, CP programmes and projects, efficient use of water, energy efficiency, waste management, eco-labelling, environmental management systems and performance indicators, eco-balance and life cycle assessment, and special strategic projects. The services include provision of information, capacity-building, training, technical assistance, technology transfer and policy advice.

There are two financial intermediaries in Colombia, who establish the conditions of the credits, handle the lending and transfer the possible partial reimbursements of the investment to the borrower: BANCOLOMBIA (www.bancolombia.com.co) and BANK OF BOGOTA (www.bancodebogota.com.co).

The credit application process starts with the submission of an application by the company to the LCA fund through the financial intermediary or directly to the NCPC. The company has to prepare a project proposal, which defines the amount of investment, the credit needed, the environmental impact reduction, the technology to be used, and the cash flow of the project. Engineering companies or the equipment supplier provide assistance in preparing the proposal.

To determine the environmental impact reduction of a project proposal, the NCPC must carry out an initial environmental review according to ISO 14001, and determine the significant environmental aspects of the company and the relevant environmental indicators for the project. The NCPC communicates the results of its assessment to the financial intermediary, who then assesses the creditworthiness of the company and determines the terms of the contract.

The detailed evaluation by the NCPC comprises: review of relevant environmental aspects according to procedures established in the ISO 14001, evaluation of the proposed technology, calculations of the environmental impact of the main environmental indicators, and the economic evaluation of the project.

The assessment of the creditworthiness of the financial intermediary comprises: analysis of the terms of credit, constitution of guarantees, and elaboration of contracts and disbursements as agreed with the company.

If the company agrees to the technical terms defined by the NCPC and the financial terms defined by the financial intermediary, the contract can be signed. Once the credit contract has been signed between the company and the financial intermediary, but before the start of the implementation of the project, the actual measurement of indicators is defined by the NCPC. At the end of the project the NCPC carries out an economic evaluation to ensure that the money from the line of credit was correctly invested in the project, and again measures the environmental indicators and informs the financial intermediary. The ex-ante and ex-post environmental indicators measured determine the recommendation of the NCPC on the rate of reimbursement of investment costs. SECO arranges the transfer of the reimbursement to the financial intermediary which reduces the amount of credit to be repaid.

The average credit amount is between $US 100,000 and $US 1,000,000. The minimum amount must be $US 10,000. A maximum amount has not been set. The payback period can be up to five years, with a grace period of one year. The payment terms are negotiated between the company and the financial intermediary.

The current interest rates are 13.6-16.6 per cent for credit in Colombian pesos and 10.6-11.6 per cent for credit in US dollars (calculated for September 2007).

To apply for the Green Credit Trust, a company must fulfil the following criteria:

- Have less than 500 employees or direct contractors;
- Have less than $US 5,000,000 in total assets;
- At least 75 per cent of the capital of the company must be Colombian.

If the environmental impact reduction is lower than 30 per cent, no reimbursement is granted. If the reduction is between 31 per cent and 50 per cent, a reimbursement of 15 per cent of the value of the credit is granted. If the reduction is bigger than 51 per cent, a reimbursement of 25 per cent is granted. The maximum possible reimbursed quantity is $US 200,000 for each project/credit.

The NCPC recommends reimbursement depending on the reduction in the environmental impact, based on real measurements with laboratory equipment. The measurements must be taken before (ex-ante) and after (ex-post) the implementation of the project. The cost of taking these measurements and the evaluation and monitoring of the project, can be included in the amount of the credit applied for. The reimbursement is paid to the company via the financial intermediary, as a prepayment on the credit balance.

The LCA fund has an impressive record of projects:

Finished projects	26
Running projects	13
Rejected projects	40
Accepted projects up to December 2007	43
Total value of securities (collateral)	$US 1,637,891.82
Reimbursements completed	$US 1,352,858.85
Reimbursements planned	$US 661,797.11
Total reimbursements	$US 2,014,655.96

The major problem for SMEs is that the companies have difficulties in identifying CP/EST options that apply to LCA and preparing the documentation required for the funding application, given that the SMEs have to present the current and envisaged environmental impact. Another problem is that financial institutions tend to provide credits to companies that have a solid history and financial records, but the NCPC found out that the companies that need the LCA fund most, to reduce their environmental impacts sometimes do not qualify for credits because of their poor financial performance and lack of records.

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El Salvador—Industrial/Environmental Credit Line by BMI and KfW

In El Salvador the NCPC carries out the technical assessments for the Industrial/ Environmental Credit Line that was established by the Salvadorean development bank BMI and KfW. This line of credit started in October 2006. The BMI implemented the credit line and deals with the commercial banks. Currently, understandings have been established with commercial banks such as Banco Cuscatlán and Banco Salvadoreño.

The NCPC provides technical assistance and consulting services for enterprises participating in the credit line. It operates mainly at the level of the SMEs and supports them in planning and implementing the environmental investments. It also trains some of the credit officers in the respective commercial banks, as they also need to understand what the environmental credit line is about.

Estimations by the Banco Centroamericano de Integración Económica (BCIE) put the number of SMEs in the formal and informal sectors in El Salvador, at around 530,000. They employ roughly 44.5 per cent of the working population.

KfW describes the situation in El Salvador as such: Pollution is caused by industrial companies, particularly in food processing (milk, coffee, sugar, fruit and meat products) and metal processing, which are considerably contaminating water sources. Additional sources of pollution in recent years have been the semi-industrial pig-raising enterprises. The public transport enterprises are also contributing to air pollution in the wider San Salvador area. Overall, the environmental situation in El Salvador can be assessed as serious, with particular regard to natural water resources and rivers. It is estimated that half of this pollution is caused by the municipalities as there are hardly any sewage treatment plants in operation. The other half is caused, with a few exceptions, by untreated industrial effluents. This is a considerable threat to groundwater and drinking water supply. Soil contamination is also high; it is caused by solid waste being stored on company premises, roadside dumping and uncontrolled incineration. The air pollution in the San Salvador area, with dense road traffic and by far the largest concentration of industrial enterprises in the country, is caused primarily by outdated motor vehicles, as mentioned above, but also by waste incineration and industrial emissions.

The objective of the KfW project is to contribute to reducing environmental pollution and ensuring more efficient use of natural resources by SMEs, as well as promoting the financial sector by establishing long-term financing instruments for environmental investment by industries. This would enable enterprises to meet the legal requirements and improve their competitiveness. By promoting environmental investments for SMEs, a contribution is made to improving the environmental situation and hence also improving the living conditions of the local people. The programme thus contributes to the achievement of the Millennium Development Goals, particularly goal 7 on "Ensuring environmental sustainability" (www.un.org/milleniumgoals/), and is in line with the German government's Action Programme 2015.

The project consists of two components:

- The first is a credit line of EUR 7 million to the regional development bank BCIE. The financing is to be used to establish a refinancing line for loans and leasing operations at El Salvador's state promotional bank, BMI, which can be used by commercial banks to refinance environmental investments, particularly by SMEs.
- The second component is a fund for technical assistance providing consulting services for the planning and implementation of environmental protection measures by Salvadorean enterprises. This technical assistance is provided by the NCPC and other independent consultants contracted by the NCPC.

The project is designed in such a manner that only those companies or persons who invest in a certain CP/EST technology can apply for funding. This includes investments in: cleaner production, reduced usage of primary resources, emission reduction of any kind, compliance with national environmental legislation (Diagnósticos Ambientales; Planes de Adecuación Ambiental), energy efficiency and renewable energy.

The credit limit is $US 500,000. Up to 80 per cent of the investment volume is financed. The payback period is 1-15 years, with a fixed interest rate of 7.36 per cent for the SMEs. The environmental credit line has a total budget of $US 10 million.

Other hindrances for SMEs reported by the NCPC are:

- The very small amount of money requested and therefore lack of interest by banks;
- SMEs are generally not considered "creditworthy" by normal banks;
- The funding application procedure is rather difficult for SMEs because of lack of awareness of CP options;
- General SME problems such as lack of time and poor accounting systems.

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India's variety of funding tools

In India, there is a vast variety of different funding tools available. The NCPC has provided a good overview of them.

The Ministry of Environment and Forest focuses on various programmes and schemes aimed at prevention and control of pollution. It focuses on issues such as promotion of clean and low waste technologies, reuse or recycling, control of pollution at source rather than traditional end-of-pipe treatment. The objective is to conserve resources during various industrial processes and minimize levels of environmental pollution. A separate Cleaner Technology Unit was set up in the Ministry in 1994 to develop and promote cleaner technologies. The Ministry has funded research in multidisciplinary aspects of environment and ecological protection, conservation, and management. The scheme for promotion,

development and adoption of cleaner technologies, including waste reuse and recycling for small-scale industries, has been available for years.

The Ministry is enthusiastic about providing grants for cleaner technology demonstration projects that are technically and economically viable and worthy of emulation by various units in a particular industry, thus ensuring sustainable development. The average project costs between $US 125,000 and $US 167,000, and there is no maximum limit to the grant. The grant is given to institutions/industry associations but not to individual borrowers.

Commercial banks offer conditional loans at commercial rates. In many cases they also render loan assistance under various schemes of the Government of India. However, they do not offer any specific programme for adoption of cleaner technology. The general level of awareness in favour of cleaner technology among banks is rather low.

Projects with a loan component of up to $US 1.04 million are normally financed by state-level conditional lending institutions, either on their own or acting in consortium with commercial banks. Indirect assistance by way of refinance from Small Industrial Development Bank of India (SIDBI)/IDBI to lending institutions (state level institutions, banks etc.) is available in such projects.

Some public sector banks such as the State Bank of India and the Bank of Baroda are promoting programmes in the area of environmental management.

Schemes offered by the SIDBI, the principal institution concerned with development and financing of the Small-Scale Industries (SSI[2]), sector have been looked into. SIDBI offers schemes under which financial support for cleaner technology adoption is available on concessional terms and conditions. It also assists in setting up demonstration projects and offers loan guarantees.

Credit lines funded by multilateral or bilateral organizations and routed through development financial institutions are available, and offer soft loans at concessional rates. The Indian Renewable Energy Development Agency and Power Finance Corporation offer financing for cogeneration projects. The Infrastructure Development Finance Company promotes programmes in the area of environmental management.

The SIDBI gives loans at concessional rates of interest for upgrading and modernization of industrial production methods to environmentally friendly standards. The concessional interest rate starts from 3 per cent per year. This Technology Development and Modernisation Fund Scheme offers assistance for technology upgrading initiatives at Prime Lending Rate (PLR), which at present is 12.5 per cent. Other loans are charged at PLR plus a spread of up to 3 per cent based on the credit rating assessment of the borrower. Companies applying for funding should have been in operation for at least three years and not have defaulted in the payment of dues to institutions/banks. Companies graduating out of the SSI definition[2] are also eligible. In selective cases, SIDBI may also consider participating in equity, depending on the exit route available to SIDBI for disinvestment in due course.

SIDBI is also the nodal agency for channelling investment subsidies that are available to facilitate technology upgrading in as many as 14 identified sectors, including auto component dyes and dye intermediates. A credit-linked capital subsidy (sponsored by the Government of India) of 12 per cent, is provided for the introduction of proven technologies

[2] Definition of SSI units: An industrial undertaking in which the investment in fixed assets in plant and machinery does not exceed Rs. 10 million ($US 210,000).

under the scheme. The eligible subsidy is calculated based on the actual loan amount or the maximum ceiling, whichever of the two is lower. The investment subsidy in some sectors such as tanneries is as high as 30 per cent of the cost of plant and machinery. The eligible primary lending institutions through which this subsidy is available are scheduled commercial banks and state financial corporations.

There is a National Equity Fund Scheme in which equity of up to 25 per cent of the project cost is given by SIDBI, subject to a maximum of $US 21,000 per project. No interest is charged on the soft loan component except for a service charge of 5 per cent per annum.

SIDBI is in advanced stages of negotiations for a EUR 15.3 million credit line from KfW, Germany, for promoting environmentally friendly investments. It is expected that loans at lower interest rates would be available for cleaner production activities.

The Equipment Finance Scheme offers assistance in the acquisition of machinery/equipment, both indigenous and imported, for existing units in the SSI sector with a good track record of performance and a sound financial position. The units should have been in operation for at least three years and have earned profits and/or declared dividend during the two years preceding the uptake of the scheme. The units should not be in default in payment of dues to instutions/banks. The amount of the loan required should not be less than $US 156,000. Debt equity ratio (DER) should not be more than 2:1 for the project, and not more than 1.5:1 for the company. Repayment is over a period of five years including a moratorium of up to 12 months.

There is a Foreign Currency Term Loans Scheme for the acquisition of fixed assets in the small-scale sector for technology upgrading and modernization of existing units with a good track record. The units should preferably be export-oriented. Repayment is over a maximum period of five years, with a moratorium of one year linked to the cash flow of the unit.

SIDBI also has a development scheme where a combination of a loan and a grant is provided for setting up demonstration projects involving innovative processes and technology. The bank subsidizes, to some extent, the consultants' fees and also provides the beneficiary units with financial assistance to partially meet the cost of equipment, for these projects. As an example, the bank has supported National Environmental Engineering Research Institute, India, in taking up suitable environmental management measures for the starch and sago industry cluster in the Salem and Dharmapur districts in Tamil Nadu.

In order to increase collateral-free flow of credit to small-scale industries SIDBI has launched a Credit Guarantee Fund Scheme for small-scale industries. The fund has a corpus of $US5,208 million. The guarantee scheme covers loans above $US 10,400 and up to a limit of $US 50,000, extended by eligible lending institutions that enter into an agreement with the trust.

Cleaner production processes and pollution control equipment are covered by the above mentioned schemes, although none of these schemes are specific to them.

Even though there is so much funding available, the NCPC reports several remaining hindrances for SMEs.

To a certain extent lack of knowledge of CP/EST options is a factor for small-scale industries since generally the size of the technology available does not match the size of the industries. In addition, because of lack of time aside from time for normal business, the small-scale industries are unable to search for CP/EST options on their own.

It is also true that the SMEs are not aware of the funding options available for investment. Slowly but steadily, different financial institutions are raising the awareness of the SMEs of the various funding options available through advertising campaigns and various discussion forums.

The implementation of CP in SMEs is hindered by lack of financial resources. The most important funding channels for financing CP are government-backed specialized assistance funds and development assistance. Development banks play a significant role in providing finance, however, the high interest rates charged are a major impediment.

Many of the loans under various programmes provided through the World Bank, the Asian Development Bank, etc., are available only to medium and large-scale industries.

Lack of time aside from time for normal business, and the complicated application procedures are also obstacles to SMEs securing loans. Due to these reasons, the SMEs are not in a position to prepare viable proposals. In addition, the appraisal of a loan application also depends on the firm's overall creditworthiness. Inexperience in preparing viable proposals for CP investments is a problem amongst SMEs.

The disbursement process is considered inadequate and bureaucratic especially in the case of grants released by ministries, under various schemes for CP/EST projects. The companies have to wait for a long time for the funds to be released.

In the case of CP options requiring smaller investments, the amounts required are such that neither the companies can finance the investments from their own internal resources, nor are the financial institutions interested in, or willing to contribute to financing as the amounts requested for are rather small.

The major hindrance in India is the high interest rate.

Support is needed by SMEs in the preparation of viable proposals, which present CP/EST as an economic tool for improving the companies' performance. Financing institutions require training and guidance in evaluating and appraising CP as a viable investment opportunity.

Table 5. Schemes available for cleaner technology initiatives by financial institutions in India

Institution	Scheme	Available to		Type of assistance						
		Small-scale industry (SSI)	Large and medium enterprises	Commercial loan	Concessional loan	Equity	Grant	Leasing	Loan guarantee	Fiscal/other incentives
SIDBI (Small Industries Development Bank of India)	Technology development and modernization fund (TDMF)	X			X	X	X			
SIDBI (Small Industries Development Bank of India)	National equity fund	X			X	X				
	Equipment finance	X		X						
	Foreign currency term loan	X		X						

	Credit guarantee fund	X							X	
	Credit-linked capital subsidy	X		X						X
	Demonstration projects	X			X		X			
IDBI (Industrial Development Bank of India)	United States Agency for International Development (USAID) funded India's Greenhouse Gas Pollution Prevention (GEP) Project		X				X			
	Equipment finance scheme		X	X						
	Venture capital fund		X	X		X				
ICICI (Industrial Credit and Investment Corporation of India Bank)	Venture financing		X			X				
	USAID clean technology initiative	X	X		X		X			
ICICI (Industrial Credit and Investment Corporation of India Bank)	USAID energy conservation and commercialization programme	X	X		X		X			
	World Bank and ADB funded pollution control and energy efficient projects	X	X		X					
	Japan Bank for International Cooperation funded industrial pollution control programme	X	X		X					
IFCI (Industrial Finance Corporation of India Limited)	Scheme for financing renewable energy systems		X		X					
IFCI (Industrial Finance Corporation of India Limited)	Equipment finance scheme		X	X						
	Equipment finance for energy conservation		X	X						
	Equipment procurement scheme		X	X						
	Equipment leasing scheme		X	X				X		
KSFC (Karnataka State Financial Corporation)	Technology development and modernization fund	X			X					
	Equipment finance scheme	X		X						
KSIIDC (Karnataka State Industrial Investment and Development Corporation) Limited)	Medium and long-term loans	X	X	X						
	Equipment finance scheme	X	X	X						

Institution	Scheme	Available to		Type of assistance						
		Small-scale industry (SSI)	Large and medium enterprises	Commercial loan	Concessional loan	Equity	Grant	Leasing	Loan guarantee	Fiscal/other incentives
GSFC (Gujarat State Financial Corporation)	Technology development and modernization fund	X			X					
	Equipment finance scheme	X		X						
GIIC (Gujarat Industrial and Investment Corporation Limited)	Project finance scheme	X	X	X						
	Equipment finance scheme	X	X	X						
IDFC (Infrastructure Development Finance Company)	Financing environmental projects		X	X						
MOEF (Ministry of Environment and Forest)		X	X				X			
GEF (Global Environment Facility)		X	X		X		X			
IREDA (Indian Renewable Energy Development Agency)	Scheme for cogeneration				X					
PFC (Power Finance Corporation)	Scheme for cogeneration	X	X	X						
REC (Rural Electrification Corporation)	Scheme for cogeneration	X	X	X						
SECO (State Secretariat for Economic Affairs)	Swiss technology venture capital fund	X	X			X				

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Morocco—KfW Green Fund FODEP and Cooperation of UNIDO´s NCPC and IPU

The Ministry of Environment, in partnership with KfW, has for several years managed an industrial pollution abatement fund (FODEP) which finances end-of-pipe as well as CP/EST investments. The fund has the following components:

- A grant component of 40 per cent for end-of-pipe solutions and 20 per cent for CP technologies;
- A credit component of 40 per cent for end-of-pipe solutions and 60 per cent for CP technologies;
- A self-finance component of 20 per cent.

The selection criteria for eligibility is:

- Industrial or handcraft enterprises with a total balance of less than EUR 20 million;
- End-of-pipe technologies and EST;
- Maximum amount of investment is EUR 1.5 million per individual project or EUR 3 million for collective projects;
- Legal compliance with national environmental regulations.

FODEP is managed by several banks within the country. The Moroccan CPC is included in the list of companies/institutions that may carry out the studies required to access the fund. The Moroccan CPC has submitted 10 proposals for the FODEP fund since 2004. The major difficulties in accessing FODEP funds are the bureaucratic process, and banks that are reluctant to give credit to enterprises that have no traceable records.

In 2003, the Government established regulations for a national environmental fund which is supposed to take the lead following the phase-out of FODEP. The major sources of income for this fund will be national environmental taxes and international subsidies, mainly from the European Union.

In 2005 and 2006, the CPC in Morocco provided technical assistance to six enterprises to implement CP/EST projects with FODEP funding. The following table summarizes the investments realized and grants obtained.

Table 6. FODEP investments and grants in Morocco

Enterprise	Sector	Project description	Investments ($US)	FODEP Grant (20-40%) ($US)
Tissages Safadi	Textile	Heat recovery and pH neutralization systems	280,000	65,000
Silver Food	Fish canning	Water reuse and wastewater treatment	1,580,000	460,000
Nora	Olive oil extraction	Olive oil extraction	1,520,000	413,000
HTO			880,000	184,000
SOHNA			1,460,000	460,000
GIALE			1,200,000	260,000
Total			**6,920,000**	**1,842,000**

Other funds have been established by the Government to finance the modernization of SME's with the support of donor countries and private banks (www.anpme.ma). These are highlighted below:

- Public Private Partnership (PPP) programme, with grants from KfW and GTZ to joint venture investment projects;
- FOMAN, a co-funding mechanism between the Government and the banks to finance programmes to upgrade industrial SMEs' management and production processes;
- FORTEX, a co-funding mechanism between the Government and the banks to finance programmes to upgrade the textile sector SMEs' management and production processes;
- RENOVOTEL, a co-funding mechanism between the Government and the banks to finance programmes to upgrade hotel management;
- Economic and Social Development Fund (Hassan II), investment support to the following sectors: textile, leather tanning, automotive, electronics, as well as environment-related projects;
- AWEX: financial grants awarded by the Belgium Wallonne Exports Agency to promote bilateral joint ventures in Morocco.

There are four foreign credit lines funded by France, Germany, Italy and Portugal that support the acquisition of equipment and technologies by Moroccan SME's with an interest rate fixed at 5 per cent. Other bilateral cooperation funds namely, USAID, French Cooperation Agency (AFD), GTZ, Italian Cooperation, Spanish Cooperation, are also financing environmental projects.

In Morocco, there is no national central point of information on funding options for CP and EST projects. The main national information points are:

- Ministry of Environment (www.matee.gov.ma/fodep), for information on funding options for CP and EST assessments, equipment and implementation;
- Ministry of Industry (www.mcinet.gov.ma), for information on funding options for CP and EST assessments;
- National Agency for the Promotion of SME's (www.anpme.ma), for information on funding options for CP and EST assessments.

Morocco is one of the countries where a UNIDO IPU is operational in addition to the NCPC. The NCPC cooperates with the IPU in the preparation of financial appraisals of projects using the UNIDO COMFAR Software. The IPU does not provide grants but helps industrialists to formulate business plans and to carry out the financial appraisal of the projects, including non-environmental projects. The projects are subsequently funded through a specific credit line sponsored by the Government of Italy.

The IPU in Rabat started operations in June 2001. Financed by the Cooperation Department of the Italian Ministry of Foreign Affairs, the unit is managed by UNIDO, and hosted by its local counterpart—the National Agency for the Promotion of SME's (ANPME). The office is part of the UNIDO Investment and Technology Promotion Offices (ITPO) network and the UNIDO Mediterranean-Arab network formed by the ITPOs from Bahrain, France, Greece and Italy, and the IPUs from Egypt, Jordan, Morocco and Tunisia, operating in the Mediterranean-Arab Region.

The IPU has the mandate to promote the inflow of investments to Morocco and to assist local SMEs in developing industrial cooperation projects with foreign companies. The Unit is also responsible for providing assistance to Moroccan SMEs when applying for funding from a credit line made available by the Italian Government, for the Moroccan SMEs

interested in purchasing Italian technology. Priority is given to projects with a positive impact on employment, use of clean and updated technology, and joint venture projects.

The Unit focuses on three main groups of activities (www.unido.org/doc/20381):

1. *Promotional activities* are geared towards the selection and promotion of investment opportunities in Morocco. The Unit carries out feasibility studies on industrial sectors in Morocco and assists Moroccan SMEs in the identification of foreign partners on the basis of selected project proposals. The Unit also assists foreign companies in the identification of Moroccan companies interested in developing joint venture industrial projects.

2. *Projects completion activities* are aimed at assisting Moroccan companies in the implementation of industrial projects particularly from the economic and financial point of view. The Unit assists the companies in the evaluation of the viability of their industrial projects and provides assistance in accessing "soft" financing facilities. In particular the Unit assists the Moroccan companies in preparing applications for funding from the Italian credit line.

3. *Capacity-building activities* target mainly public and private institutions dealing with SMEs. The Unit organizes workshops for local offices on exchange of experiences and training courses on investment promotion and evaluation of industrial projects.

The NCPC benefits from working with other branches of UNIDO including ITPO and making use of the different tools and networks available. The cooperation between the NCPC and the IPU is very fruitful, as evidenced by the following jointly organized activities:

- Training sessions on financial appraisals;
- Training sessions on financial aspects of CDM projects;
- Promotion of cleaner technologies to meet the needs of Moroccan enterprises through offers from Italian technology providers;
- Participation of Moroccan enterprises in Italian forums and exhibitions.

Cooperation between NCPCs and ITPOs is recommended by UNIDO for the CP strategy 2007-2015. Furthermore, the UNIDO Multilateral Environmental Agreements Branch is implementing environment-related projects in Morocco, mainly on the phasing out of ozone depleting substances (Montreal Protocol), persistent organic pollutants (Stockholm Convention) and clean development mechanisms (Kyoto Protocol).

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Peru—Green Credit Trust of SECO

The Swiss SECO established the Green Credit Trust (GCT) Fund in Peru as well. SECO supports sustainable industrial production in developing countries, and has therefore designed the GCT to increase the attractiveness of investments in ESTs. The GCT has been operational in Colombia and Peru since 2004. The core objective of the GCT is to foster sustainable industrial production modes through the promotion of investments in EST, including eco-efficient processes and end-of-pipe technologies. The GCT increases the attractiveness of EST investments by reducing the demand on collateral and through a partial reimbursement of the capital invested, depending on the reduction in environmental impact resulting from the project. The GCT finances changes in the production process for example, environmentally friendly production of leather, but not the production of environment-related products or services such as solar collectors or compressed natural gas service stations.

SECO itself states that a significant barrier towards substantial implementation of EST is the lack of access to favourable financing opportunities. This barrier exists as ESTs have higher up-front costs in general, compared to conventional technologies and, at the same time, they are considered of higher risk by entrepreneurs and financial intermediaries. In addition, ESTs are not used by the majority of entrepreneurs, due to insufficient information and uncertainty of operational benefits. Furthermore, non-internalization of environmental costs or nationally subsidized low resource prices can make ESTs non-profitable (Grütter, 2005).

Instruments used by the GCT Fund to reduce these barriers and promote investment in ESTs include:

- Partially guaranteeing credits, thus reducing the barrier of lack of collateral especially for SMEs;
- Partially reimbursing investment costs based upon the monitored environmental impact;
- Informing enterprises and financial intermediaries involved with the GCT Fund about successful projects.

The strategy for a massive replication of the environmental improvements from implementation of ESTs is based primarily on two pillars:

- Additional national and/or international funds accessed to contribute to the reimbursement fund.
- An active information dissemination strategy to ensure that ESTs get mainstreamed and are recognized as profitable investments by entrepreneurs and by the financial intermediaries. Demand for EST investments from entrepreneurs would thus increase independently from the existence of reimbursement schemes, while financial institutions would be willing to finance such investments. The core assumption is that these investments would not have occurred in the absence of the GCT, i.e., the trust fund leads to additional investments and thus to an additional environmental performance improvement.

Important conditions for fulfilling the objective are (Grütter, 2005):

- An economic framework which is sufficiently attractive to invest in new technologies and to finance it through banks (external condition outside the scope of influence of the project);
- A working financial sector (not directly influenced by or under the control of the project);

- Limited transaction and opportunity costs (including time spent) to access credits (this factor can be influenced by various project stakeholders);
- Commercial viability of ESTs (not under the control of the project).

In Peru the Línea de Crédito Ambiental (LCA) currently has five successful cases, with five companies having received the reimbursement, and five cases in the process of implementation. The fund provides 50 per cent of the guarantee and 20-40 per cent of reimbursement of investment costs, if the project reduces the environmental impact by more than 20 per cent. The maximum amount required for collateral is $US 500,000. The maximum possible reimbursement for each credit/project is $US 200,000. The fund is managed by the Banco de Crédito del Perú, Banco Sudamericano, Interbank and the NCPC of Peru.

To qualify for a credit under the environmental credit line, a company must be registered in Peru with a maximum of 25 per cent foreign capital, and be legally independent from an international organization. The company must also be an SME with a maximum of $US5million worth of fixed assets and 500 employees. The funding is available only for companies in the industrial sector, and not for the service or agricultural sectors.

The role of the intermediary financing institutions is to:

- Define the persons and companies eligible to obtain credit;
- Define the terms of credit;
- Manage the credit;
- Manage the reimbursement of capital;
- Keep close coordination with the NCPC;

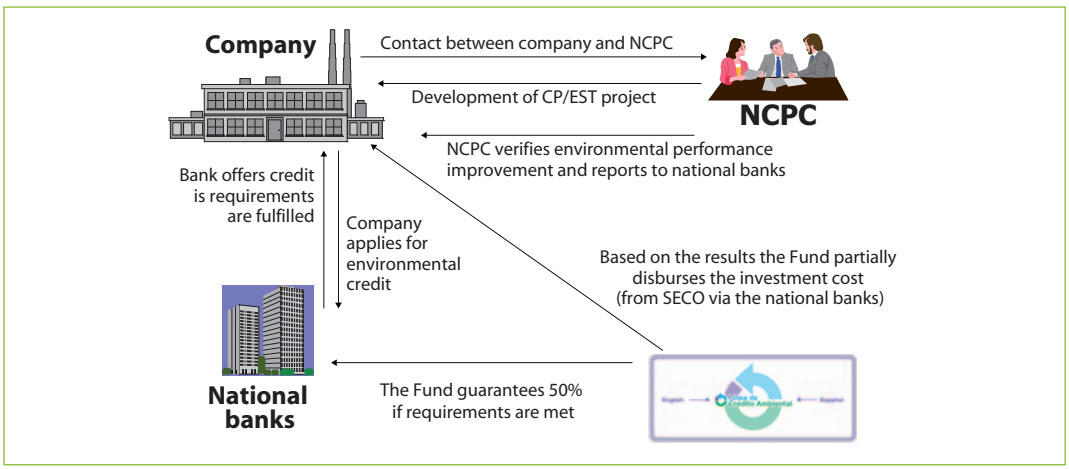
A guarantee of 50 per cent is given if required by the bank. The guarantee bears no cost to the bank or to the client (all costs are born by SECO). This constitutes an important incentive for the bank to approach clients as the bank can reduce its risk exposure.

The reimbursement levels are:

- Fifteen per cent reimbursement for 30 per cent worth of environmental improvement.
- Twenty-five per cent reimbursement for 50 per cent worth of environmental improvement.

No intermediate levels exist. The reimbursement level is based on the credit amount or the investment amount, whichever is the smaller of the two. Internal costs e.g. manpower, maintenance and operation, working capital, vehicles, land and buildings, are not financed.

Figure 4. SECO—Green Credit Trust Fund



In the period March 2004 to March 2007, 69 companies applied for the fund, but only 12 projects were approved:

- Five of the projects received reimbursement;
- Five of the projects are in the process of implementation;
- Two of the projects only received the guarantee.

Most of the projects that were rejected did not qualify for environmental impact reduction reasons. Some companies did not comply with the general requirements, as many companies in Peru are subsidiaries of international organizations. The applicants also have difficulty in obtaining the financial information that the bank requires in order to approve the credit.

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Economic Affairs Secretariat of Switzerland.
www.seco.admin.ch/index.html?lang=en

Russian Federation—NEFCO´s Financial Mechanism for North Western Russia

The Russian NCPC, named North-Western International Cleaner Production Centre of the United Nations Industrial Development Organization (UNIDO NWICPC) was established in St. Petersburg in the year 2000, as a non-commercial organization supported by the Russian Parliament (State Duma) Committees on Ecology and Foreign Affairs. The financing of CP investments is operated in cooperation with NEFCO along two lines:

- Energy and resource efficiency projects, where the focus is on modernization of an enterprise's energy and resource consumption, technology optimization and waste minimization through the implementation of "closing the loops" systems (e.g. conversion of waste into raw materials or energy sources) . The credits amount to EUR 350,000, and the maximum payback period is four years.
- Environmental protection projects, which focus on environmental impact reduction by modernization of purification facilities, sludge conversion processes, galvanic lines, smog and air cleaning, etc. The credits amount to EUR 400,000, with a maximum payback period of eight years.

These credit lines are operated in cooperation with the NCPC and NEFCO, whose headquarters are in Helsinki. Local commercial banks are appointed to handle payment transactions on behalf of and under agreement with NEFCO.

NEFCO says that experience with cleaner production programmes reveals that a 20 per cent reduction in waste and emissions is achievable with no investment. A further 10-20 per cent reduction is possible with minor investments, with a payback period of less than six months. Even though these cleaner production investments are highly profitable, few enterprises that have participated in cleaner production programmes have been able to implement them. This

is mainly due to a lack of effective and applicable financing mechanisms. As a way of improving this situation, NEFCO has set up a Revolving Fund Facility for financing priority CP investments targeted at a specific region in its area of operation, starting with North Western Russia and the Baltic countries.

The objective of the NEFCO Revolving Fund Facility is to finance, on favourable terms, the implementation of high priority CP investments with rapid payback, that yield environmental and economic benefits ("win-win projects"). The investments should be commercially viable, with an identifiable and secure stream of earnings that is to be used to repay the loan. The Revolving Fund Facility provides loans that are tailored to the particular projected requirements of CP investments. The basis for providing a loan is the cash flow of the CP investment, and the ability of the enterprise to repay the loan within the agreed period of time.

As a rule, the borrower is expected to finance part of the costs with his own financial resources, normally at least 10 per cent of the costs. The repayment period of the loan from the Revolving Fund Facility is linked directly to the investment's payback period. The total costs and the annual net savings are determined for each investment, for the purpose of calculating the payback period. Net savings can be derived from reduced costs of inputs and reduction of wastes, e.g. chemicals, materials and energy, reduced maintenance costs, reduced emission charges, etc. Simple and consistent methods are applied in determining the payback period.

The NCPCs or centres with similar environmental objectives play an important role in project identification, preparation, appraisal and monitoring. Preliminary technical, environmental and financial appraisals of the projects are performed locally by these institutions.

Financial and physical performance indicators are specified in the loan agreement. For each project the savings achieved are verified and compared with the savings that had been expected. A standard reporting format is provided, with a focus on savings in energy use, water use, use of chemicals, etc. The environmental effects of each project are also verified. This verification should document reduction in emissions and wastes, and reduction in inputs such as water, energy and chemicals.

Presently, private Russian enterprises in St. Petersburg, the St. Petersburg region (Leningradskaya Oblast) and other regions in North Western Russia can get profitable (6 per cent annual refunding) and long-term (up to four or eight years) credits for eligible investment projects. The investments are expected to generate profit and improve efficiency of key environmental parameters like biological oxygen demand (BOD), as well as elimination of the discharge of chloro-organic compounds, or other toxic/hazardous chemicals and dispersed/suspended solid particles including heavy metals. The credit recipient is obliged to use the financial resources exclusively for the purchase of the required equipment, its installation, commissioning, pilot operation, and the related personnel training.

The NCPC provides the following assistance:

- Evaluation of the financial and technical situation of the enterprise, and environmental and financial analysis and forecasts, before and after project implementation;
- Selection of the most appropriate technical solutions in cooperation with the credit recipient;
- Development of the project's business plan according to NEFCO standards;
- Consultation services to the credit recipient with regard to the credit guarantee provider (a third party);
- Presentation and follow-up of the project proposal with the creditor;

- Assistance in concluding credit and guarantee agreements, as well as delivery of the credit resources to the recipient;
- Monitoring the project's performance.

Additional conditions for receiving a credit include the following:

- The recipient enterprise should have been active in the sector of manufacturing of goods and/or service delivery, for at least 2-3 years, and should preferably be a private (non-state or non-governmental) organization, with sufficient capital and a positive balance sheet.
- The recipient enterprise should be free of other large credit obligations limiting its ability to refund the NEFCO credit;
- The ratio between the recipient enterprise's own capital and the credit amount should be not less than 85 per cent:15 per cent;
- The recipient enterprise should be connected to the St. Petersburg central municipal water collection system (Vodokanal);
- The planned investment should be eco-efficient, i.e. it should be related to the reduction of waste or effluent, and overall minimization of environment pollution;
- The credits are target-oriented and therefore can be used only for equipment purchase, installation and commissioning, as well as, partially, for the related personnel training;
- Profitable period for the project performance is about one year from receipt of the first installment to the start of operation of the new equipment;

Several projects with very good payback periods have been implemented. There is a strong focus on energy saving approaches, electricity generation from renewable resources, and industrial waste processing.

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Sri Lanka—SMED, SMILE, E-FRIENDS and PEP

SMED is a project of the Federation of Chambers of Commerce and Industry(FCCISL) and FNSt in Sri Lanka, which was set up to develop management and technical capacity in industry and the service sector. It initiated a number of CP promotional seminars and workshops. Gradually a SMED CP department was established and staff capacity was enhanced. Several joint workshops and implementation programmes were held in association with the FCCISL, and other chambers such as Matara District chamber in the Southern Province, Sabaragamuwa Chamber, and the Central Province chamber. SMED is also engaged in promotional campaigns with other organizations that play a supporting role to the business sector. Examples of such institutions are the Ministry of Forestry and Environment, the Ministry of Industries, the Colombo Municipal Council and the Western Province Provincial council.

The Industrial Services Bureau (ISB) of North Western Province has also been actively participating in energy and environmental management activities since its inception in 1990. As an extension to the well established energy and environmental management activities, ISB is actively engaged in the introduction of CP to Sri Lankan industries.

The main objectives of the NCPC are:

- Creating awareness and taking down the message of CP to as many industries as possible;
- Providing professional consultancy/advisory services to industries;
- Training of industrial personnel in launching and conducting CP assessments in industries and training of universities on inclusion of CP into university their curricula;
- Keeping up to date information on CP and providing relevant and appropriate information;
- Assistance in promoting access to financing for CP investment projects;
- Providing appropriate inputs and interventions to the policymakers and enabling then to effectively introduce CP in industrial and environmental policies (including training of government officials).

The Government also has taken a major step in implementation of the "Clean Industry Development Project" (CLIND), a one-year programme sponsored by the Ministry of Enterprise Development, Industrial Policy and Investment Promotion. The programme was funded by the ADB. The programme was undertaken with the collaboration of a wide range of stakeholders to develop the strategy, action plan and public policies needed by the industrial sector of Sri Lanka to implement CP and thus increase productivity and achieve international competitiveness and sustainable development.

Funding for end-of-pipe pollution technology has been available in Sri Lanka for several years. With the development of CP technology, the need to create funding options for CP investments arose, and as a result, the E-FRIENDS scheme was launched by the National Development Bank. Hatton National Bank (HNB) offers the two funding programmes sponsored by the Government; SMILE and E-FRIENDS credit schemes.

The financial institution HNB has been the forerunner in development banking among the private sector banks in Sri Lanka. The bank has been an active "Participating Credit Institution" for almost all credit lines funded by the ADB, World Bank, International Fund for Agricultural Development, JBIC, as well as concessionary credit lines introduced by the Government of Sri Lanka from time to time.

In 1989 the bank introduced its own micro financing programme known as "Gami Pubuduwa" (village awakening), to extend financial services to self employment projects and other micro enterprise sectors in the rural and semi-rural areas. The primary objective of this scheme is to establish a closer link between the bank and the rural community, which was treated as "non-creditworthy". This scheme emphasizes the harnessing of inherent skills of the rural community, thereby assisting them to become self-reliant.

SMILE-3 provides SMEs with the financial backing to upgrade their enterprises—from start-up, to business/factory expansion, to purchase of equipment or working capital infusion. A maximum of $US 90,300 (as a long-term loan) for such investments could be obtained, at an exceptionally reasonable interest rate of 9 per cent per annum. A technical assistance loan is also offered by the bank, enabling enterprises to: cover the cost of the consultancy and technical services necessary for the smooth coordination of such projects; acquire the professional learning with regard to management, technical and accounting skills; and purchase quality control equipment. A maximum of $US 24,400 could be obtained at an interest rate of 2 per cent per annum, through this secondary loan scheme.

E-FRIENDS-2 is a fund set up to provide long-term low-cost loans to industrial enterprises seeking to develop in an environment friendly manner. E- FRIENDS is funded by the JBIC.

The fund consists of two components:

- A general loan component at concessionary interest rates;
- An interest-free technical assistance loan component.

HNB provides concessionary loans of up to $US 451,670 at an interest rate of 6.5 per cent per annum for the following purposes:

- For those seeking to purchase equipment for end-of-pipe technology, and other equipment, that will: lead to reduction of harmful emissions and reduce waste generation;
- To acquire facilities that would save/reduce consumption of energy, and/or save/reduce usage of resources that generate energy;
- To purchase equipment that would substantially improve the safety of work places, especially with regard to the exposure of workers to potentially hazardous substances, noise etc.
- Investments related to acquiring equipment for the monitoring of pollutants in relation to the above, and the relocation of highly polluting industries to special estates.

The Bank also offers a technical assistance loan to cover the cost of the consultancy and technical services directly related to the investigation of measures to control pollution, ensure waste minimization, etc. The loan also covers consultancy services associated with resources recovery/savings, and pollution control/abatement as well as the design, supervision, installation and commissioning of equipment financed by E-FRIENDS-2. Enterprises are entitled to a maximum of $US 677 (interest free), with a reimbursement of up to 75 per cent of the cost of consultancy.

The fund is not only for CP/EST, but also for environmental and energy-related conservation. It not only funds the technology investment, but also related consultation feees, research work and internal labour. Only companies that invest in a certain technology can apply for funding. There is a big demand for end-of-pipe and energy conservation projects, but not so much for CP projects. The applicants have the usual problems with providing the security requested for.

The CCC, with financial assistance from the Royal Netherlands Embassy, has embarked on a new initiative to provide technical and financial assistance to private sector organizations, to adopt best practices in cleaner production and environmental management. The PEP grant scheme provides assistance to corporate entities of a minimum of 50 per cent grant of the project costs, while SMEs and women entrepreneurs will receive a minimum of 65 per cent of the project costs under the grant scheme.

The technical and financial assistance from the PEP Project is limited to private sector organizations. Preference is given to companies in the priority business sectors identified by PEP. Priority is also given to SMEs that have already taken positive steps to implement similar initiatives (the PEP Project considers organizations with less than $US 451,670 in fixed assets, excluding land and buildings as SMEs) and to women entrepreneurs. PEP provides 100 per cent financial support for technical assistance by way of consultancy support, training etc. 24 companies signed agreements and commenced project implementation, during the period October 2006 to May 2007.

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www.hnb.net/development_overview.asp

Uruguay—Credit line to support cleaner production

The credit line has been established within the framework of the policy of the Banco de la República Oriental de Uruguay to strengthen its activity in the area of sustainable development. This specific credit line has been developed in collaboration with the Cleaner Production Centre in Uruguay.

The funds of the credit line can be used to cover the costs of assessments at company level for the identification of potential for improvement through cleaner production and the costs of the direct implementation of cleaner production. It is currently under evaluation the possibility to expand the coverage of the credit line to the relocation of companies and the investment required for the compliance with the national or local environmental legislation.

The conditions for the access to the credit line are:

For the cleaner production assessment: it is possible to finance up to 100 per cent of the cost, for a period of 18 months, including a 6 months of grace period for the repayment of the capital. Promotional interest rates are applied to this credit line.

For the implementation of cleaner production: it is possible to finance up to 70 per cent of the cost, for a period of 36 months, including a 6 months of grace period for the repayment of the capital. Promotional interest rates are applied to this credit line

For the areas of expanded coverage: the conditions of the credit line are still to be defined.

Companies willing to apply to these credits have to comply with the general requirements of the financial institution. These include the provision of information on the company's data, responsibility state of the owners, financial information (balance sheets) and membership to BPS (Banco de Previsión Social—social insurance) and DGI (Dirección General Impositiva —tax administration).

Specific information has to be provided to access the cleaner production credit line. This includes the description of the project, the details on the investment, the technical cleaner production report (covering the energy, materials and waste status with and without cleaner production) and the projected cash flows.

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4. Other funding schemes from financial institutions

During the course of this study, several sources of information have been reviewed and several institutions were requested to provide additional information on CP funding options available for SMEs. The examples presented in this chapter do not attempt to give a complete overview, but rather reflect the availability of information on the Internet and the willingness of organizations to provide additional information in English.

Examples have also been chosen in order to provide an overview on instruments available, different from those presented in the previous chapter. It was also attempted to provide a more regional balance of funding tools.

The instruments for CP funding can be structured as follows:

- Bilateral cooperation and foreign aid;
- Microcredits;
- General credits for SMEs;
- National grants for environmental protection;
- Tax incentives;
- Equity finance and SRI;
- JI/CDM.

The examples provide insight into the funding strategies and options of the following financial institutions:

- ADB
- African Development Bank (AfDB)
- Austrian Development Agency (ADA)
- Austrian Kommunalkredit AG
- Corporacion Andina de Fomento (CAF)
- Developing World Markets
- European Fund for South-East Europe
- Fortis Investment
- (KfW) and Deutsche Investitions- und Entwicklungsgesellschaft mbH (DEG)
- German Microfinance Institute (DMI) and Austria Wirtschaftsservice GmbH
- GTZ and Mercosur
- International Finance Corporation (IFC)
- Multilateral Investment Fund (MIF) of the Inter-American Development Bank (IDB)
- Netherlands Green Funds Scheme
- NEFCO
- USAID

The examples show the broad range of emphasis and the different stakeholders involved. Several donor countries have specific target countries for their involvement and funding priorities, which need to be followed up on a case by case basis. There are also good opportunities to develop existing tools and structures into better funding options for SMEs.

Asian Development Bank (ADB)

The ADB is committed to the protection of the environment in its Developing Member Countries (DMCs) in particular. ADB has actively included environmental protection among its development priorities since the early 1980s. The ADB is a financial, as well as a development institution, and is committed to successful strategies to integrate CP into financial systems and markets. ADB recognizes that implementing CP solutions will often require additional capital, and obtaining this capital is a major challenge for SMEs in particular.

The Asian Development Bank (ADB) has a comprehensive environmental programme aiming at improving environmental conditions in its DMCs. One of their focus areas is the promotion of CP at national level (ADB, 2001a). A wide range of projects including company CP strategies, establishment of information systems, building of core groups of CP professionals, and strengthening of research and development capacity, have been supported. Some projects have special focus on SMEs through the inclusion of credit financing as a source of funding. Governments have also benefited from financial and technical assistance in developing CP programmes. As of the end of 1999, $US 3.2 billion was provided for CP projects, in the form of loans to six countries, namely China, India, Indonesia, Malaysia, Philippines and Thailand (ADB 2000).

The ADB uses a regional technical assistance approach, with geographical focus on China and the other five countries listed above, with an aim to:

- Assist in policy and institutional framework for integrating CP in national environmental and industrial development strategies;
- Recommend financing mechanisms for implementing CP strategies;
- Encourage cooperation among governments, private sector, academic institutions, non-governmental organizations (NGOs) and other aid agencies, in developing national action plans and technical needs.

The ADB conducted a global study of financing mechanisms to promote CP (Evans/Hammer, 2003). The study found that there is no shortage of capital financing available for CP improvements, but that the main obstacles among SMEs are lack of collateral and inadequate preparation of financial proposals. In its study of CP financing, ADB found that the most successful mechanism for improving SME access to capital for CP financing is loan guarantees. These overcome the basic barrier to debt financing caused by lack of collateral, or, in the case of entrepreneurs, a successful operating history. Loan guarantees are particularly cost-effective when used to support CP investments, because CP investments tend to be inherently profitable as they increase resource efficiency and decrease pollution control costs.

Evans/Hammer (2003) describe the outline of such a funding scheme: To link CP to loan guarantees, local governments can work with CP technical assistance programmes. For example, a financial institution such as ADB can establish a loan guarantee programme that is implemented through a local bank. The local government can collaborate with the bank to market the programme to SMEs, and can use its regulatory authority as a particularly potent marketing channel. Environmental inspectors can inform regulated businesses of the availability and terms of the guarantee programme. When a business expresses interest in obtaining financing, it can be directed to a local CP technical assistance organization which can help it evaluate its CP options and prepare proposals for financing. The business and the CP organization can approach the bank together, to apply for a loan and the loan guarantee.

Such an approach is intended to overcome the most significant barriers to CP adoption and financing. The local government promotes CP because it is in its financial and political interest to do so. Local officials know which businesses pollute the most and are in need of CP

funding assistance, and also know who is planning to expand or build a new factory that can benefit from CP design. Local organizations that assist in the implementation of CP technology, can provide the technical resources needed to find CP solutions and prepare financial proposals. Development institutions can support loan guarantees that mobilize locally available capital, so SMEs can obtain the funds they need for CP improvement.

The ADB has incorporated the lessons learned into its approaches to promote CP in Asia. While national level policy reform and CP integration remain vitally important, it is local government that is the real "paying customer" for CP, and that has the greatest capacity to promote it. Supporting CP capacity through local government ensures that the support reaches the largest target, and directly supports local programmes for poverty alleviation and environmental improvement. ADB's cluster approach to CP promotion allows for national, local and sector specific development of CP programmes and strategies.

ADB uses its capacity as a financial institution to help create positive incentives that reward CP behaviours. These may include offering loan guarantees for CP financing, incorporating CP principles into equity investments, development of market based instruments that encourage CP as a complementary precursor to pollution control, and mobilization of existing capital resources for strategic projects that promote CP.

However, detailed information on the funding schemes currently available cannot be obtained from the bank's webpage but must be sought nationally, as ADB formulates operational strategies for individual countries, including economic, thematic and sector policy analysis, and undertakes country performance reviews which provide a basis for policy dialogue with the governments of DMCs.

ADB develops a Country Partnership Strategy (CPS), formerly Country Strategy and Programme (CSP), which includes an indicative rolling country business plan, composed of individual technical assistance and loan projects and programmes for priority sectors and/or themes. To ensure coherence and strategic prioritization, Regional Cooperation Strategies and Programmes (RCSPs) are prepared for the five subregions covered by ADB's regional departments. On the basis of priorities established, ADB assists DMCs in financing regional cooperation through technical assistance grants and projects loans.

Additional information:

www.adb.org

African Development Bank (AfDB)

The AfDB is a regional multilateral development finance institution established in 1964 and engaged in mobilizing resources towards the economic and social progress of its Regional Member Countries (RMCs). Its headquarters is in Abidjan (Côte d'Ivoire). The African Development Bank is Africa's premier development finance institution which is dedicated to combating poverty and improving living conditions across the continent. The AfDB is also engaged in mobilizing resources for the economic and social progress of its RMCs. The Bank's mission is to promote economic and social development through loans, equity investments and technical assistance.

The Bank has a special financing line for the public sector that offers loans to regional member countries or public entities that benefit from a state guarantee. A loan qualifies as a guaranteed loan if it is made to a RMC or if it is supported by the full faith and credit of the member country in whose territory the borrower is domiciled or, in the case of loans to

multinational institutions, if it is guaranteed by a member country or by member countries in whose territory the borrower shall execute the project.

The African Ministerial Council on Science and Technology (AMCOST) was established in November 2003 under the auspices of the New Partnership for Africa's Development (NEPAD) and the African Union (AU). It is a high level platform for developing policies and setting priorities on science, technology and innovation for African development. AMCOST provides political and policy leadership for the implementation of Africa's Science and Technology Consolidated Plan of Action (CPA), and would also be a good partner for the development of funding options.

To achieve its objectives, AMCOST has developed and adopted the CPA. The CPA articulates Africa's common objectives and commitment to collective actions, to develop and use science and technology for the socio-economic transformation of the continent, and its integration into the world economy. The CPA is based on capacity-building, knowledge production, and technological innovation. Capacity-building in this context refers to the creation, improvement and mobilization of human skills, physical infrastructures, financial resources and the necessary policies for science and technology to be produced, and used to solve specific African problems. Knowledge production is really about the conduct of science, the generation of scientific and technical knowledge about Africa's problems and identification of specific ways to solve the problems. Technological innovation entails the generation of specific products, processes and services.

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Austrian Development Corporation (ADC)

The ADA is the operational unit of the Austrian Development Cooperation (ADC) and Cooperation with Eastern Europe. The ADA is responsible for the implementation of all bilateral programmes and projects in the ADC partner countries and administrates the corresponding budget. Its working basis is the Three-Year Programme on Austrian Development Policy, which is elaborated by the Federal Ministry for European and International Affairs. It defines the central position of Austrian development policy and the strategic framework conditions of the ADC. This programme is based on the new Development Cooperation Act, in which sustainable economic and social development in line with the principle of environmental protection is enshrined as the central goal.

Since 1996 all projects and programmes are subject to an environmental impact assessment. In this way the ADC attempts to preclude any unintentional negative social or ecological consequences.

Austria concentrates on the following themes and sectors, where it has long-standing experience. The sector programmes are drawn up in cooperation with the partner countries, NGOs, and experts, as well as other donor countries. Thematic priorities are:

- Water and sanitation;
- Education and training, and science and research for development;

- Rural development;
- Energy;
- Investment and employment and promotion of SMEs;
- Conflict prevention and resolution, good governance and rule of law, development of democratic structures, decentralization, and strengthening human rights and human security.

Austrian cooperation with Eastern Europe focuses on democratic, economic, social and ecological development in the reform countries of South Eastern Europe and the Newly Independent States, as well as their integration into the international economy. Thematic priorities are education, investment and employment, environment, water and energy, the rule of law and civil society, and crisis prevention and reconciliation.

ADC priority regions and ADC partner countries are:

- Central America: Nicaragua, Guatemala, El Salvador.
- West Africa/Sahel: Cape Verde, Burkina Faso, Senegal.
- East Africa/The Great Lakes: Ethiopia, Uganda, Kenya, Burundi, United Republic of Tanzania, Rwanda.
- Southern Africa: Mozambique, Zimbabwe, Namibia, South Africa.
- The Himalayas/Hindukush: Bhutan, Nepal, Pakistan.
- South Eastern Europe/Western Balkans: Albania, Bosnia and Herzegovina, Macedonia, Montenegro, Serbia and Kosovo.
- South Caucasus: Armenia, Azerbaijan, Georgia.
- Other priority countries: Republic of Moldova, Palestinian Territories.
- Special programmes: Afghanistan, Iraq, Western Sahara.

For the countries in Central America, as well as Ethiopia, Uganda, Kenya, United Republic of Tanzania, Mozambique, South Africa, Macedonia, Serbia and Armenia, where UNIDO has established NCPCs, there is room to explore how the promotion of SMEs can be strengthened further. However, the ADC does not directly fund projects in the countries, but works via intermediary funding agencies.

Additional information:

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Austrian Kommunalkredit AG

Kommunalkredit is a successful special purpose bank with about 300 employees. The bank's primary fields of business include the financing and support of municipal (environmental) investments, the management of the environmental support schemes of the Federal Government (by Kommunalkredit Public Consulting GmbH), treasury operations, and international consulting projects.

Its core competencies are:

- Number one specialist bank for public finance in Austria;
- Specialization in the provision of finance for public-sector infrastructure investments (in Austria, Switzerland, the member states of the EU, and some other selected Central and Eastern European Countries (CEECs));
- Products are tailor-made to meet the specific requirements of customers (public and quasi-public institutions);

- Partners for environmentally oriented investors, a renowned issuer of environmental bonds and the AAA-rated Kommunalkredit Covered Bonds;
- As a specialist bank for public finance, places particular emphasis on sustainable investments. Public and institutional investors appreciate their asset management know-how and consultancy services;
- Provision of fund management services as a public-sector trustee, with a range of activities which include international especially in the environmental sector through Kommunalkredit Public Consulting.

Austrian Eco-Funding Scheme

The Austrian Eco-Funding Scheme, which is financed by the Austrian Ministry of Agriculture, Forestry, Environment and Water Management, provides investment grants for environmental projects for companies and municipalities, with the aim of protecting the environment by preventing or reducing air pollution, noise exposure and waste accumulation.

The basis for the eco-funding scheme was the Environmental Subsidies Act (Umweltförderungsgesetz), which came into effect in 1993. It refers to environmental measures in the areas of residential water management, remediation of contaminated sites, as well as environmental protection in Austria and abroad (Czech Republic, Hungary, Slovakia and Slovenia). Since 2003, the JI/CDM Programme, which serves as a basis for the purchase of emission reduction units has been included in the Environmental Subsidies Act. By the year 2004, a total of 24,963 projects were granted EUR 4,633.8 million, which accounts for an investment volume of EUR 14,686.9 million. The average percentage granted for environmental investments was 31.6 per cent in the period 1993 to 2004. In general, the grant rate for additional environmental investments is 20-40 per cent for investments in Austria, and 10-15 per cent for investments abroad.

Most projects funded in 2006 relate to biomass heating systems (32 per cent), solar power systems (25 per cent), and energy saving measures in companies (9 per cent). In terms of money provided, most of the funds (approximately 47 per cent) were spent on biomass heating systems. 19 per cent of the total subsidies were spent on individual biomass heating systems, 14 per cent on biomass district heating, and nearly 14 per cent on biomass-fired combined heat and power plants.

The Minister of Agriculture, Forestry, Environment and Water Management is responsible for the subsidies for environmental protection. Accordingly, the Ministry enacts directives, develops the funding strategy, and takes decisions on granting subsidies. It is supported by two institutions: the Kommunalkredit Public Consulting GmbH (KPC) as managing body, and the Commission for Issues Relating to Environmental Support in Austria and abroad.

The KPC accepts applications for funding, assesses them and submits them to the commission, which makes its recommendation. On this basis, the Federal Minister takes a decision on which applications should be granted funding. Following the ministerial decision, the KPC enters into a contract with the applicant on behalf of the Ministry. The KPC is also responsible for managing the contracts. The projects range from an investment of at least EUR 35,000 to an upper limit for funding of EUR 3.75 million.

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JI/CDM Programme

The Austrian Government launched the Austrian JI/CDM Programme for purchase of emission reductions generated by JI and Clean CDM projects. Austria will use these emission reductions to meet its Kyoto Protocol target, in accordance with the National Climate Strategy. The main purpose of the Austrian JI/CDM Programme is the purchase of Emission Reduction Units (ERUs) and Certified Emission Reductions (CERs), generated by "high value" JI/CDM projects, and the financing of certain project related intangible investments like baseline studies.

On behalf of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, KPC is responsible for management of the Programme. The core business of KPC is managing environmental and economic support schemes and development assistance programmes on behalf of public authorities, and providing consultancy services for national and international clients.

Article 6 of the Kyoto Protocol defines JI projects as emission reducing projects conducted jointly by two annex I countries. The CDM governed by Article 12 of the Kyoto Protocol denotes the implementation of emission reducing projects in countries, which are not listed in annex I of the United Nations Framework Convention on Climate Change (www.ji-cdm-austria.at/kyoto).

Some advantages of the Austrian programme are that the precise terms of Emission Reduction Purchase Agreements are determined on a case-by-case basis. Payments are normally made upon delivery of ERUs/CERs, but pre-payments are also possible. Financing of certain project-related intangible investments and services such as baseline studies is also possible. In principle, there are no limits to the scale of projects.

All potential JI and CDM host countries are eligible for the Austrian JI/CDM Programme. Offers of Emission Reduction Credits may be submitted by any domestic or foreign natural person or legal entity which can plausibly assure that it will be legally entitled to ERUs or CERs. To facilitate cooperation, Austria has already signed bilateral agreements (Memorandums of Understanding), with some potential host countries, on certain general and operational Kyoto Protocol-related aspects. However Memorandums of Understanding (MoU) do not constitute a prerequisite for project eligibility.

Currently, MoUs have been signed with Bulgaria, Czech Republic, Estonia, Latvia, New Zealand, Romania, Slovakia, Hungary for JI projects;, and with Argentina, Bolivia, Ecuador, Indonesia, Colombia, Morocco, Mexico, Peru, Tunisia, Viet Nam and China for CDM projects.

Currently only few countries are actively making use of the JI/CDM mechanism to foster environmental and economic development with most of the existing projects being in India, China and Brazil. Until the end of 2006, Africa only accounted for 13 CDM projects. Austria therefore decided to put emphasis on developing projects with Ethiopia, Ghana, United Republic of Tanzania and Uganda.

The following types of projects are particularly suitable for inclusion in the Austrian JI/CDM Programme:

- Construction or retrofitting of combined heat and power (CHP) plants;
- Fuel switch projects;
- Projects using renewable energy sources;

- Projects leading to the avoidance or recovery of energy from landfill gas;
- Waste management measures resulting in avoidance of greenhouse gas emissions;
- Projects leading to reductions in final energy consumption (energy efficiency measures).

Proposed projects must conform to the rules and requirements of JI/CDM projects, as detailed by the Kyoto Protocol and relevant Conference of the Parties (COP) decisions, and must contribute to sustainable development in the host country. Emission reductions resulting from a JI/CDM project activity have to be additional to any that would occur without the project activity.

SMEs could profit from the JI/CDM mechanism, if projects in a sector or a region are clustered (several biomass or small-scale power plants in a region), as the average costs for registering a project registered are in the range of EUR 50,000-EUR 100,000. The possibility of selling the resulting ERUs and CERs covers on average 5-20 per cent of the investment costs, depending on the technology and the market price for ERUs and CERs.

A current issue of international debate is the transfer of "greened" Assigned Amount Units (AAUs) among countries. In principle the trading of AAUs through the international emission trade system has been accepted in article 17 of the Kyoto Protocol. In order to make sure that the selling country actually invests resources in climate protection, the concept of Green Investment Schemes was developed. The buyers of AAUs thereby invest in a fund, which provides resources for defined projects and programmes for climate protection and has installed a monitoring procedure to secure the correct usage of resources. The buyer purchases "greened" AAUs in turn for his investment. In many JI countries, this instrument is of great interest because it is easier to handle. For public buyers it opens a new source for emission reduction permits, and allows the inclusion of projects, which would not have qualified as JI projects because of their small scale and relatively high transaction costs. It would also be an option to pursue CP finance (with related carbon dioxide (CO_2) reduction potential) for SMEs.

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Corporación Andina de Fomento (CAF)

The Corporación Andina de Fomento (CAF) is a multilateral financial institution that mobilizes resources from international markets into Latin American, in order to provide multiple banking services to both public and private clients in its shareholder countries. The institution is committed to sustainable development and regional integration.

CAF is the main source of multilateral financing in the Andean region, with approvals that amount to $US 29,674 million over the past six years, equivalent to 56 per cent of the total financing approved by the leading multilateral institutions in Bolivia, Colombia, Ecuador, Peru and Venezuela. Likewise, over the past five years, the institution has strengthened its presence in Latin America, particularly with projects that contribute to regional integration.

The products and services offered by CAF include a series of financial tools designed to meet clients' requirements and market opportunities, under the following subjects: Loans (project

financing, credit lines, projects structuring and financing as well as co-financing) guarantees, partial credit guarantees, treasury services, equity investments and cooperation funds.

CAF also co-finances operations with multilateral agencies such as the Inter-American Development Bank, World Bank, Inter-American Investment Corporation, Nordic Investment Bank, International Finance Corporation and International Fund for Agricultural Development, as well as local and international private banks. CAF uses the A/B loans to supplement its own financial resources, and attract external resources into the region where it operates. Within these loans, the A portion comes from CAFs own funds and the B portion is shared among international banks and institutional investors.

The CAF Biodiversity Programme (BioCAF) is founded on the enormous potential of the region's biodiversity and genetic resources for sustainable economic development of its member countries, and on the capacity of ecosystems to provide environmental services. The objective of the programme is to promote the conservation and sustainable use of eco-systems, natural and genetic resources, and biodiversity.

Among its areas of work, BioCAF has defined three subprogrammes, which make important contributions to:

- Promoting conservation initiatives for species and ecosystems, especially those that are critical for provision of environmental services;
- Developing mechanisms and tools to promote biodiversity products and services, and other natural resources for example green markets, bio-trade and bio-technology;
- Improving the capacity of actors and institutions in international negotiations involving biodiversity i.e. Convention on Biological Diversity, Food and Agricultural Organization (FAO), World Intellectual Properties Organization (WIPO), World Trade Organization (WTO) among others.

Additional information on this programme is available in Spanish at:
www.caf.com/view/index.asp?ms=9

The Competitiveness Support Programme (PAC) was set up by CAF in 1999 to develop a series of initiatives to improve regional competitiveness, and is part of a coordinated and cross-sectional effort of various areas of the institution, to directly and indirectly support the improvement of the region's competitive environment.

Among its activities, PAC supports various dissemination actions on competitiveness issues in the region. At the same time, the programme has been developing projects jointly with governments, business and members of the academic sector. PAC offers non-reimbursable technical and financial assistance for projects which help create competitive advantage as a mechanism for achieving higher levels of development and welfare among the majority of the population.

Based on the experience acquired and the demands of the region, the competitiveness support programme has concentrated on supporting the following areas of work:

- Development of clusters, productive and commercial capabilities by fostering confidence, cooperation and capacity of association among the various actors in the clusters, such as universities, companies, suppliers, distributors, financial and non-financial support organizations, science and technology institutions, public organizations and associations among others. Some examples of PAC interventions in this component are development programmes for suppliers and distributors, quality certification programmes based on international standards, development of export consortia and logistics improvement programmes, among others;

- Promotion of entrepreneurial capacity by improving the entrepreneurial environment, generating new business ideas, and strengthening existing competitive companies in the region. In this area PAC has promoted pre-incubators and incubators in the region, entrepreneurial idea competitions, and business plans; contributed to setting up university networks to assist entrepreneurs, and virtual and face-to-face entrepreneurship courses; and generated knowledge for academic use on entrepreneurial issues;
- Improvement of business climate by reducing the main obstacles that restrict business development in the region, such as administrative barriers. In this area PAC has supported studies to identify barriers to doing business in the countries of the region, and projects that have promoted simplification, electronic systematization, and lowering the costs of administrative barriers which affect productive activity.

To benefit, projects must offer specific results in their area of action, be self-sustaining and generate externalities such as a demonstrative effect on raising the level of competitiveness in the region.

The operating agreements range from six months to two years. PAC's financial participation varies according to the nature of the project and in all cases, beneficiaries must partially assume the cost of the initiatives, as well as making and executing non-financial commitments.

Additional information on this programme is available in Spanish at:
www.caf.com/view/index.asp?pageMS=20224&ms=4

The CAF Latin American Carbon and Alternative Clean Energy Programme (PLAC) contributes to reducing the problem of global warming and promotes the use of alternative clean energy in Latin America by developing and financing innovative projects.

Efforts have been aimed at:

- Promoting and actively participating in developing the emission reduction market for greenhouse gases (GHGs), with participation of public and private sectors;
- Helping countries, productive sectors and projects to find buyers, and generally strengthening demand for reduced GHG emissions in Latin America and the Caribbean;
- Providing technical, intermediation and financial support for projects with potential to reduce GHG emissions;
- Strengthening national institutions and mechanisms to stimulate and build the GHG market;
- Supporting the countries of the region with specialized lines of credit to be used to identify and develop alternative clean and efficient energy projects.

A loan agreement was formulated in 2006 with KfW, for the financing of public and private projects associated with renewable energies and energy efficiency in Latin America and the Caribbean.

The credit line is oriented toward the financing of renewable energy projects in which aeolian, solar, geothermal, biomass and biofuel energies technologies are applied, and in which the components are obtained in sustainable form. Additionally, the line is directed toward the financing of small-scale hydroelectric and power efficiency projects.

The target market is basically clients from the public and private sector in CAF's stakeholder countries i.e. Bolivia, Colombia, Ecuador, Peru, Venezuela, Argentina, Brazil, Chile, Costa Rica, Spain, Mexico, Panama, Paraguay, Dominican Republic, Trinidad and Tobago and

Uruguay. The total amount of the loan agreement is $US 130 million. The maximum amount to be financed for each individual project, is $US 15 million, with tenor of up to 12 years. The benefit is a reduction in the interest rate. The range varies depending on the amount to be financed by the loan, as well as the nature of the project.

Additional information on this programme is available in Spanish at:
www.caf.com/view/index.asp?ms=12

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Developing World Markets (DMW)

Developing World Markets (DWM) began operation in 1994 as a manager of emerging markets equity fund. They run an equity fund focused on Initial Public Offerings (IPOs) in developing countries. Following an initial transaction in 1999/2000, in 2003 they entered the business of socially responsible investment banking in emerging markets, and became the leading specialized actor in this growing sector. DWM identifies socially beneficial businesses in emerging markets that are commercially sustainable, and arranges financing for them from the international capital markets.

DWM is very interested in financing both the SME sector and the environment. In previous projects, they gained experience in aggregating pools of capital directed to a common purpose. The financing projects ranged in size from approximately $US 20 million-$US 75 million.

DWM links international capital markets with microfinance and other socially positive businesses in developing countries. DWM provides structuring, strategic advisory and corporate finance services. It also manages socially positive assets in the developing world for a handful of select institutional clients. Through its United States National Association of Securities Dealers (NASD) registered broker/dealer, it links investing products and transactions from socially positive emerging markets, with a range of institutional investors in international markets.

DWM aims to provide access to capital and promote the growth of these businesses, which reach the poor with financial services, by linking them to the international capital markets. The capital needs of DWM's clients take many forms highlighted in the following subsection:

Debt
- Long-term and short-term;
- Hard currency and local currency;
- Senior and subordinated.

Equity
- Common and preferred shares;
- Subordinated debt with warrants;
- Convertible loans;
- Structured holdings representing equity.

Other
- Guarantee;
- Letter of credit;
- Purchase of micro-loans off balance sheet;
- Participation in collateralized debt obligations or other structured transactions.

DWM partners advised, structured and raised capital for microfinance funds as indicated below:

- In 2005, Balkans Financial Sector Fund, the first private equity fund for microfinance and SME lending focused on South-East Europe;
- In 2005, Global Partnerships Microfinance Fund, the first multi-tranche debt fund for smaller MFIs;
- In 2006, Unitus Equity Fund, the first private equity microfinance fund focused pre-dominantly on India.

DWM has expressed interest in developing this scheme into a CP funding option for SMEs.

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European Fund for South-East Europe (EFSE)

The economic recovery of South-East Europe after the war in the former Yugoslavia largely depends on Micro and Small Enterprises (MSEs) that represent the backbone of the local economies. The provision of loans is therefore critical to unleashing the economic potential of MSEs in terms of income generation and job creation. Furthermore, the war left many families with damaged homes and created a large group of internally displaced people in search of decent shelter. Consequently, there is a strong demand for housing loans to reduce the housing shortage and improve home quality. Against this background, the Fund's objective is to enhance the access to credit of MSEs, well as private households in need of decent shelter. To this regard, the European Fund for South-East Europe (EFSE) provides long-term funding to local financial institutions for further lending to these target groups.

The loans provided to the final borrowers are referred to as "sub-loans". The financial intermediaries bear the full risk associated with these sub-loans and, in principle, are accordingly free to set the final terms and conditions to their sub-borrowers. However, to a limited extent, the fund's instruments bear some minimum conditions to ensure target group orientation as specified below.

- The maximum loan amount of the underlying sub-loans is EUR 100,000.
- The Fund requires Partner Lending Institutions (PLIs) to comply with minimum environmental and social standards that represent international best practices throughout the credit cycle.
- The Fund may invest in Albania, Bosnia and Herzegovina, Bulgaria, former Yugoslav Republic of Macedonia, Kosovo, Montenegro, Republic of Moldava, Romania and Serbia.
- The Fund is open to institutional investors only.

Private institutional investors will primarily invest in the form of A-Shares or Notes. B-Shares will only be issued to a limited extent and are already fully committed. The first-loss tranche

(C-Shares) are exclusively reserved for public donors. The Fund offers attractive investment opportunities to institutional investors interested in combining attractive financial returns with demonstrated social impact. As the primary target group is MSEs in urban and rural areas, the fund has a clear microfinance focus and social responsibility orientation.

Furthermore, the focus is on microfinance transactions, the fund's investments generally show a robust performance in the case of political and economic crisis. This offers advantages to institutional investors exploring new ways of diversifying their portfolios by including a new asset class.

As the definition of MSEs varies across countries and across PLIs, the sub-loan size is taken as reference for defining the MSE target group. EFSE funding may be flexibly used to finance sub-loans for working capital, fixed assets and/or business (re)start-ups. All sectors of the economy, except those specifically mentioned in the social and environmental exclusion list, are eligible for financing.

The fund's current investments are primarily Euro denominated, medium to long-term credit lines (3 to 10 years maturity). However, the fund will explore possibilities to extend its instruments in accordance with market needs in the region. Possible additional instruments may include, without being limited to:

- Short-term loans;
- Local currency loans;
- Fixed deposits;
- Subscriptions to PLI bond issues;
- Certificates of deposit, co-investments (syndicated loans);
- Stand-by letters of credit;
- Guarantees;
- Equity and quasi-equity participation in PLIs.

The terms and conditions applied for each instrument are subject to individual negotiations between the Fund and the respective PLI. However, in general, the following terms are applied:

Maturity: In principle, the Fund's investments have a maximum maturity of 10 years, and in exceptional cases may go up to 15 years.

Pricing: The pricing of the refinancing instruments provided by the Fund reflects market rates and is based on a combination of the following three factors:

- Market rates with an international and/or domestic interest rate, and risk premiums that consider a country's and individual client's risk profile;
- Competition;
- Fund financial structure.

Repayment: In principle, interest is paid semi-annually in arrears. Individual repayment schedules are negotiated between the Fund and each PLI in view of the PLI's funding structure, use of funds and underlying risk profile.

Disbursement: An individual disbursement schedule is defined according to the absorption capacity and effective demand for funding of each PLI. The total investment amount can be paid out at once or in tranches over several quarters.

Reporting: On a monthly basis, PLIs report on the development of their loan portfolio to the target group(s) and/or the products that the Fund wishes to support. Furthermore, PLIs must submit financial statements on a regular basis.

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FORTIS Investments

Future Vision/Oekovision—Equity Fund

There is evidence that as society becomes more aware of environment issues such as climate change, traditional shareholders consider environmental performance in their investment behavior.

FutureVision/Oekovision (in German-speaking countries) is a global equities fund managed by FORTIS Investments which invests in "sustainable" opportunities. The fund avoids investments in companies whose practices or products may cause harm to society or to the environment, while actively seeking stocks that are exposed to long-term performance drivers such as environmentally friendly technologies and consumer goods, renewable sources of energy, organic food and fair trade. Most of them are SMEs. The portfolio manager constructs a diversified portfolio from a universe of eligible stocks that have been verified by an independent advisory committee. The fund is suitable for investors seeking to diversify, and who are interested in global investments within a credible, ecological and ethical investment universe.

Oekovision is a long-term performance fund, with a disciplined bottom-up process, an exposure to small and mid-cap issues and a low turnover. The fund's return objective is to significantly outperform global equity markets over the long-term (five years). Due to the specific nature of the investment universe, sector, geographic and currency exposures, it may deviate significantly from global indices. The fund is fully invested and holds approximately 60-65 securities.

The investment process comprises:

- Performance is generated by pure bottom-up analysis from a universe of carefully researched sustainable stocks;
- The investment universe is formed by screening global SRI indices for stocks with attractive valuation or value creation characteristics, as well as by small and mid-cap issues that are identified by the fund manager in target areas of sustainable activities;
- Fortis Investments' dedicated research analyst evaluates the sustainability case for these stocks and creates a detailed report.; The advisory committee, meeting on a quarterly basis, decides to include or to reject stocks for the final investment universe (170-200 stocks in total), based on the robustness of the sustainability case;
- Stocks are selected from the sustainable universe based on their upside potential and their exposure to the most interesting sustainable opportunities.

The fund is actively searching for suitable small and mid-caps worldwide. Table 7 shows the investment criteria, structured into positive aspects being searched for, and negative aspects leading to an exclusion from the fund.

Table 7. OekoVision/FutureVision investment criteria

1. OEKOVISION invests primarily in companies which:

- Develop, distribute or use environmentally and socially responsible technologies and processes;
- Develop, produce or distribute environmentally and socially responsible products;
- Provide services which promote sustainable development, especially economic and business practices compliant with environmental and social values;
- Especially if they exceed standards specific to their industry segment, region or country of operation.

This includes companies which:

- Produce, use or sell renewable energy, or contribute to a reduction in energy consumption and increase in energy efficiency, thus leading to a reduced use of fossil fuels and reduced nuclear energy production;
- Contribute to a reduction in consumption of non-renewable, natural resources, or to the substitution of non-renewable with renewable resources;
- Produce, process, distribute or support the distribution of food and consumption products which are sourced in an environmentally friendly way, or in accordance with the criteria of organic farming or the keeping of livestock in a natural environment (animals' natural habitats);
- Promote fair trade and local/ regional economies;
- Demonstrate social and environmental involvement beyond the boundaries of their own companies, or support development objectives;
- Promote democratic company structures, human, social or emancipatory working conditions, or actively work towards a reduction in discrimination;
- Fight corruption.

2. OEKOVISION also invests in companies which:

- Develop, distribute or apply practices, products or services aimed at reducing or reversing environmental degradation;
- Contribute to the reduction of social problems;
- Implement social and environmental/sustainability management systems, and strengthen their environmental and social commitments;
- Demonstrate a particularly transparent and friendly corporate policy with regard to consumers and employees;
- Offer high quality products and services which contribute to the general well-being of society and are characterized by particularly high quality standards.

3. OEKOVISION does not invest in companies which:

- Discriminate against people based on gender, ethnic origin, disability, national citizenship, political opinion, faith, social background, or sexual orientation;
- Employ child or slave labour;
- Prevent the work of trade unions, in particular by violating the right to form free organizations or to bargain collectively.

4. OEKOVISION does not invest in companies which:

- Support regimes which violate human rights;
- Produce, market or distribute weapons of war and other arms, or which provide equipment parts or services for the arms industry;
- Produce or distribute nuclear energy or relevant technology, or are directly involved in its marketing, or provide equipment parts or services for the nuclear industry;
- Produce or promote the use of chlorine-based chemical products;
- Are involved in the destruction or depletion of natural resources or contribute to these processes;
- Develop or create genetically modified plants, animals, or micro-organisms for use in open systems or support the distribution of the products thus manufactured. Companies are not automatically excluded if they create or use genetically modified plants or micro-organisms in closed systems, on condition that a special benefit arises from this application;
- Work with embryonic stem cells, or develop products and therapies developed through their use, or intend to do so;
- Carry out or commission avoidable animal tests, or produce and distribute raw materials or products which have been produced by means of avoidable animal tests;
- Apply processes or produce and promote products which may harm human well-being or the environment.

5. OEKOVISION does not invest in companies which:

- Hold strategic shareholdings in companies which violate the exclusion criteria outlined in sections 3 or 4;
- Are financed by companies which violate the exclusion criteria outlined in sections 3 or 4, provided these companies are in a position to exert strategic influence over the direction of the company;
- Have other strategic relationships with companies which violate the exclusion criteria outlined in sections 3 or 4, to the extent that they impede a social and environmental alignment of business practices;
- Predominantly supply goods or services to companies which violate the exclusion criteria outlined in sections 3 and 4.

6. When assessing companies, OEKOVISION also considers:

- Their handling and management of controversial issues, their transparency, their openness for dialogue and information exchange, and their capacity to improve their practices;
- Their lobbying activities and their consistency with the companies' publicly stated positions, as well as with the fund's stated objectives;
- Their activities in countries where social and environmental minimum standards are not guaranteed by the state (e.g. China), this applies to production facilities, joint ventures, and suppliers;
- Their stated development intentions, development potential and trends.

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UNDP/Fortis Carbon Finance

In June 2007, the United Nations Development Programme (UNDP) and banking and insurance giant Fortis, announced an agreement naming Fortis as the financial services provider for UNDP's Millennium Development Goal (MDG) Carbon Facility. This announcement also marked the operational launch of the facility, an innovative means of harnessing the vast resources of the carbon market to bring long-term sustainable development to a more diverse share of developing countries.

Under the terms of the partnership, UNDP will help developing countries conceive projects intended to reduce emissions of GHGs, and will ensure that these projects meet Kyoto Protocol's agreed standards and deliver real, sustainable benefits to the environment and broader human development. Fortis will then purchase, and sell the emissions reduction credits generated by these projects. The revenue from Fortis' purchases will provide developing countries and communities with a new flow of resources to finance much needed investment and promote development.

A recent poverty-environment partnership report estimates that $US 60-90 billion per year, will be needed to address the environmental issues that contribute to poverty in developing nations; the market in emission reduction credits carries enormous potential for bringing essential new investment to tackle these issues. The MDG Carbon Facility will operate within the framework of CDM and JI, the market-based mechanisms under the Kyoto Protocol. These allow developed countries to meet their compliance targets by financing projects in developing countries and contribute to reducing GHG emissions.

CDM, has been at the centre of a rapidly expanding billion dollar international market for carbon credits. However, early signs indicate that the CDM is unlikely to deliver the broad based benefits that many hoped it would, at least in the near to medium term. CDM projects

have so far been limited in geographic reach, restricted mainly to Asia and Latin America, and have focused primarily on end-of-pipe technologies that generate limited benefit for long-term sustainable development.

The MDG Carbon Facility aims to address these limitations by capitalizing on Fortis' resources and substantial carbon experience, together with UNDP's specialized expertise and global reach. By expanding the CDM's presence into countries and regions previously considered inaccessible to carbon finance, MDG Carbon will help people in these areas acquire the resources and knowledge to take greater control over their future environment and development paths. Once a developing country gains proficiency in carbon finance, attracting private sector investment and developing project technologies that deliver longer term development benefits, the MDG Carbon Facility will exit that market, having accomplished its market transformation objectives, and no longer needing to play its role as a bridge between developing countries and the global carbon market.

The Facility aims to bring about market transformation with respect to carbon finance in developing countries, effecting the transition from a pre-market to a fully market-enabled environment that supports MDG-grade carbon projects, and attracts substantial direct investment from the private sector. Indeed, experience suggests that one of the most effective means of increasing private sector interest in, and understanding of, carbon finance has been the availability of "showcase" projects in host countries. Once market capacity has been developed in a particular country, and a critical mass of MDG-grade carbon projects has been established, UNDP will exit that market, having achieved its market development and MDG objectives.

The Facility forms part of UNDP's comprehensive, three-step approach to capacity development in carbon finance. On a country-by-country basis, this approach commences with barrier removal, then addresses the establishment of efficient host-country procedures, and finally culminates in the development of emission reduction projects by the Facility. Over the last few years, UNDP has already engaged in the first two steps of this approach in multiple countries, creating the enabling environment for the Facility to effectively operate.

The Facility will be active in both the compliance and voluntary sectors. Initially, the Facility will focus on the compliance market, leveraging the existing CDM and JI regulatory infrastructure, and generating emission offsets that can be used by governments, businesses and other entities to meet their Kyoto commitments. A second, subsequent voluntary component will allow the Facility to work with smaller projects and to develop new, high-MDG project technologies.

A wide range of project types that meet development objectives will be eligible for the MDG Carbon Facility. Initial screening has indicated the potential for attractive projects based on diverse mitigation technologies, including renewable energy, energy efficiency, fuel switching, agricultural waste management and biofuels, and capture of fugitive emissions from landfills. Several project categories will be ineligible including nuclear energy, large-scale hydropower, geosequestration (including enhanced oil recovery), shifting of electric power loads, and the capture and destruction of industrial gases.

Proposed projects will be screened for their ability to contribute to human development goals while also producing certifiable emission offsets. For instance, a renewable energy project might create local employment and help to improve local air quality as well as generating offsets. Similarly, a landfill gas capture-and-use project might promote better waste management and recycling, watershed protection, energy generation and job creation as well as producing marketable offsets from the destruction of methane.

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German KfW and DEG

DEG mbH, a member of KfW Bankengruppe, has been financing and structuring the investments of private enterprises in developing countries, and countries with economies in transition for more than 40 years. DEG is one of the largest European development finance institutions for the promotion of the private sector. The mission of DEG is to promote private enterprises in developing and transition countries, as a contribution to sustainable growth, and a lasting improvement to the living conditions of the local population, thus long-term capital for private enterprise investment in those countries is provided.

DEG only takes on commitments for projects that make an effective development policy impact, meet environmental standards and comply with social principles. DEG carries out loan programmes on behalf of the German Federal Government, which support, for instance, pre-investment or investment-tied measures, if they are for the benefit of the developing country. DEG offers long-term finance in the form of loans, mezzanine finance, equity capital and guarantees. DEG specializes in long-term finance for its private investment partners, offering more than just capital. It supports investment projects with consultancy services and practical measures to ensure success. The financial products include:

Equity capital:
- Equity participation in the project, usually about 5-25 per cent;
- Variable arrangement of the risk components;
- In certain cases, voting rights and a seat on the board of directors of the company;
- Clearly defined exit strategies.

Mezzanine finance:
- Project specific arrangement;
- Risk oriented yield;
- Subordinated security;
- Conversion rights.

Long-term loans:
- Currency EUR or $US;
- Usually between 4 and 10 years term;
- Fixed or variable interest rate that is market oriented according to project and country risks;
- Collateral security, as fixed assets in the country of investment and project specific arrangement;
- Maximum amount of EUR 25 million.

Guarantees:
- Mobilization of long-term loans or bonds in local currency;
- Reduced exchange rate risk, via loan repayment in local currency;
- Risk sharing with local bank.

KfW presented two examples of funding that they provide in Costa Rica and Chile:

The environmental situation in Costa Rica is characterized by a strong contrast between nature conservation gains and clear deficits in urban and industrial pollution control. Many SMEs do not have adequate pollution control equipment and cause considerable and growing pollution, particularly by releasing untreated wastewater and, in some cases, hazardous waste to the environment.

These grievances are caused by a lack of funding for investment in pollution control, among other factors. Besides, many enterprises are not sufficiently informed about CP options available to them. Although Costa Rica's financial sector is largely consolidated, it still has not made a targeted offer of financing for investment in pollution control. Besides, the banks lending practice still focuses on guarantees instead of using a project-based appraisal of the proposed investments. This banking practice is a significant obstacle, particularly for SMEs.

The aim of KfW programme in Costa Rica is to contribute to reducing pollution caused by SMEs, and to diversify the financial system by establishing long-term lending to finance pollution control investments, through selected financial intermediaries. The main target group of the programme is small and medium-sized manufacturing and service enterprises, including the tourism industry. The improvement of the environmental situation will also contribute to improving the living conditions of Costa Rica's population.

As Costa Rica has no Apex institution, the state-owned Banco Nacional de Costa Rica (BNCR), which already has a special focus on SMEs, is to act as borrower and programme executing agency. Part of the funds are to be channeled through BNCR to commercial banks, and part of them are to be extended by BNCR directly to sub-borrowers. The involvement of commercial banks is intended to expand the market for the financing of pollution control investments beyond the programme period, and disseminate experience gathered with this activity to other commercial banks.

An advisory fund is to be set up to support the SMEs in planning their investments. This fund is to be used primarily to finance consulting services in the phase preceding the loan applications, in order to help the sub-borrowers in planning of their investment projects. The total programme cost is estimated at EUR 18.75 million, with the financial intermediaries providing a counterpart contribution of EUR 3.75 million. The development loan of EUR 15 million is provided from KfW's own funds, at an interest rate subsidized from budget funds of the German Ministry for Economic Cooperation and Development.

Chile's positive economic development over the past years was accompanied by growing depletion of its natural resources. The growing pollution problems are most apparent in the poor air quality in the greater Santiago area. Industrial wastewater, growing amounts of industrial waste and increasing exhaust gas emissions, pose a severe problem to the environment. Over the past years environmental legislation was continuously improved and the inspection activities of public authorities stepped up as well. New investments in large industrial plants are now required to comply with environmental standards. Existing industrial firms are also being forced to adjust their production to the applicable environmental standards, as a result of increasing inspections and/or pressure from international buyers to observe international clean production standards.

SMEs need financial offers from commercial banks to implement the necessary investments. Although a trend was set over the past years to grant medium and longer term loans to SMEs in Chile, the few available commercial financial offers are not properly adapted to the specific character of environmental investments, because they do not take into account their positive

external effects on the community. This often complicates or prevents companies from undertaking necessary investments for CP projects.

The objective of KfW project is to grant long-term financing through commercial banks, on a sustainable basis and in an efficient manner to enable SMEs to realize investments in pollution control. This contributes to improving the environmental situation in Chile by reducing the emission of pollutants from SMEs. The project is also expected to diversify the financial system by establishing long-term financing for environmental investments through financial institutions. The main project impact is the realization of pollution control investments by SMEs of a total volume of up to EUR 40 million. This is expected to significantly reduce the negative environmental impacts of industrial production. In particular, the use of raw materials in the production process is to be organized more efficiently (CP), and the pollution of air and water, and soil contamination is to be reduced (end-of-pipe solutions). In addition, the project promotes the granting of long-term loans and leasing solutions to finance pollution control investments at market rates. This is intended not only to raise the awareness of the commercial banks participating in the project and their staff, but also to increase their readiness to grant financing specifically for pollution control investments from their own funds.

German Financial Cooperation supports the long-term financing of pollution control investments through loans and leasing, by a composite financing scheme amounting to EUR25.6 million (EUR 7.7 million in Financial Cooperation funds from the budget of the Federal Ministry for Economic Cooperation and Development and EUR 17.9 million from KfW's own funds). Additional funds are being provided by Corporación de Fomento (CORFO) amounting to approximately EUR 7.7 million, while the SMEs provide counterpart funds as well.

The funds will be made available by CORFO to Chilean commercial banks under a tried and tested procedure. The onward lending interest rates are slightly below the interest rates usually charged under CORFO programmes, in order to reflect the particular character of the investments. The interest rates are adjusted on the basis of general market developments so as to distribute the scarce funds efficiently and at market rates, and to ensure that the refinancing of the loans to the commercial banks generates positive interest in real terms, and that loans and leasing finance can be offered to the enterprises. The commercial banks are solely in charge of extending the loans and leasing schemes to SMEs, carrying out financial appraisal of the financing applications, setting the conditions for the financing, and ultimately bearing the loan loss risk. The financial support offered to the enterprises for upgrading their production may also be complemented by consulting services. These services include the preparation of necessary investment (integrated or end-of-pipe solutions) and management plans for the individual enterprises by independent consultants. Part of the consulting costs can be covered by an existing special fund of the Chilean government for the promotion of technology transfer (FAT Ambiental).

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German Microfinance Institute (DMI) and Austria Wirtschaftsservice GmbH

In countries all over the world SMEs have some common problems, even in well developed countries such as Germany and Austria there is a need to provide easily available finance to national SMEs. The instruments in these two countries are described below:

Microfinance organizations successfully support the development of micro-enterprises. DMI organizes and provides all the resources that micro-lenders need for their work in Germany, thus intending to offer, in the medium term, overall availability in Germany.

Currently eight MFIs deliver DMI credits in their respective regions in Germany. The borrowers are mainly young businesses in their start-up phase. DMI offers training and consulting, manuals and tools, accreditation body and benchmarking for the fund. The fund is in charge of fundraising, pooling, and allocation of risk bearing capital, with support from private individuals, the Federal Ministry of Labour and Social Affairs, the Federal Ministry of Economics and Technology, the GLS bank and KfW SME bank.

Micro-lending is a very successful way of financing very small businesses. The direct contact with the micro-credit borrower implies that funding is much more "personalized". It provides fast and easy access to capital. Beginning with small loans (from EUR 1,000), the enterprise gradually expands, step by step, so it can quickly learn from mistakes and closely link the credit to specific needs of a client. By requiring small collateral, the involvement of the personal environment of the borrower (family and friends) is encouraged. Micro-lending institutions work in a local network delivering start-up support with the most relevant organizations.

DMI organizes and provides the necessary resources for micro-loan disbursement, which include:

- Training in product development, methods of micro-lending and monitoring;
- Assistance in building up a finance organization;
- Cooperation with a bank for the administration and management of loans;
- Cooperation with a risk fund;
- Nationwide benchmarking for further development of methodology and for effective use of resources.

Cooperating partners comprise:

- Accredited organizations such as start-up centres, economic development organizations, consulting companies and local authority entities;
- Government support such as the Federal Ministry of Economics and Labour, the Federal Ministry of Women, Social Affairs, Family and Youth, and the European Social Fund;
- Financial sector entities such as commercial banks, savings banks and public development banks;
- Additional communal network partners such as business chambers, mentors, enterprises and foundations.

The DMI cooperation model has a clear distribution of tasks. The DMI combines the functions of an Apex organization and a funding institution for the fledgling microfinance sector in Germany. Member MFIs are given a large scope in developing and applying the most adapted products and methods to their local target clients. The objective is to combine centralized efficiency with regional flexibility, while keeping administrative procedures as minimal as possible.

Tasks of the MFIs are:

- Evaluation and support of micro-entrepreneurs with main emphasis on post-start-up phase;
- Loan recommendation to the bank;
- Stand in for repayment control and crisis management.

Tasks of the DMI are:

- Evaluation and rating of the MFIs and granting of accreditation;
- Training the MFIs in product development, marketing, organization and loan management;
- Assistance in building up financial organizations and continuous monitoring of the process;
- Monitoring/benchmarking of the MFI results;
- Linkage between the MFI and the Microfinance Fund.

Tasks of the Fund are:

- Fund raising and risk management;
- Guarantee of the grant conditions designed by the donors/investors such as financing special target groups or regions;
- Checking the economic sustainability of the MFI;
- Crisis management when the portfolio of risk of an MFI exceeds 10 per cent of loan loss coverage;
- Management of a bonus system as an incentive for good lending.

Tasks of the partner bank are:

- Guaranty of the legal framework for loan disbursement;
- Centralization of the loans to attain economies of scale.
-

The steps of loan disbursement comprise:

- The MFI analyses a loan appraisal;
- The MFI gives a loan recommendation;
- The bank closes a standard contract (economies of scale);
- The MFI starts with the support of the borrower.

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In Austria, the Austria Wirtschaftsservice GmbH (AWS) with assistance from the ERP-fund provides similar assistance to SMEs. The package for small enterprises (below 50 employees) consists of up to 80 per cent collateral for the credit and a credit of a maximum of EUR 25,000 for investments and operating materials. The payback time is 5-10 years.

Addtional information:
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GTZ—Mercosur

GTZ carried out a case study on trade tax reductions for CP at municipal level (GTZ et.al. 2006). The proposal for trade tax reductions at municipal level in Paraguay was put forth within the framework of a technical cooperation initiative between the MERCOSUR trade organization and Germany. The MERCOSUR or "Common Market of the South" was founded in 1991 by Argentina, Brazil, Paraguay and Uruguay.

The principle idea is to promote CP in cities and municipalities and thus create win-win situations, whereby companies can enjoy reduced tax burdens, while municipalities benefit from reduced environmental pollution from industrial activities.

In Paraguay, a major part of municipal revenue consists of a trade tax, paid by large industrial enterprises based on their annual turnover. In close cooperation with three medium-sized cities namely Caaguazú, Villarica and Coronel Oviedo, an economic instrument was designed that constituted a stepwise tax reduction (to a maximum reduction of 20 per cent of tax payable) for those enterprises that implement CP programmes, and can actually demonstrate measurable and independently verified results, such as emission reduction, pollution minimization or increased efficiency in the use of natural resources.

The implementation of this measure required a modification of the municipal tributary ordinances, so that the reduced municipal tax income may be compensated within the framework of evaluation and verification procedures and related fees. On the whole, the design of the system provides advantages to enterprises that make steady advances through a CP programme. The introduction of the tax reduction is required to be accompanied by awareness-raising, information and training measures, for public authorities, industries and independent consultants.

Political lobbying and awareness raising were required in order to convince local politicians of the benefits of the model. Nevertheless the existing interest among different municipalities demonstrates that there is a demand for the model, and that the chances of replication are good. Apart from environmental benefits and efficiency gains, the possibility of compensation for lower municipal tax revenues and the creation of local capacities for environmental management are crucial elements.

Good training and information work is necessary for the successful application of this measure. Last but not least, a comprehensive monitoring system is important to guarantee the proper development of the instrument in its introduction phase. In the case of Paraguay, a supporting factor has been the compatibility with the ongoing general decentralization of environmental management that is being supported by among others, the IDB.

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International Finance Corporation (IFC)

The IFC, the private sector arm of the World Bank Group, is the largest multilateral provider of financing for private enterprises in developing countries. IFC finances private sector investments, mobilizes capital in international financial markets, facilitates trade, helps clients

improve social and environmental sustainability, and provides technical assistance and advice to governments and businesses world wide. Since its founding in 1956, to the fiscal year 2006, IFC has committed more than $US 56 billion of its own funds to private sector investments in the developing world, and mobilized an additional $US 25 billion in syndications, for 3,531 companies in 140 developing countries. With the support of funding from donors, it also provided more than $US 1 billion in technical assistance and advisory services to governments and businesses.

IFC 's donor countries and sub-sovereign donor entities currently include, Australia, Austria, Bavaria, Belgium, Canada, Catalonia, Denmark, the EC, Finland, France, Germany, Greece, Iceland, India, Ireland, Israel, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Saxony, Slovenia, South Africa, Spain, Sweden, Switzerland, the United Kingdom, the United States and Wallonia.

IFC's Technical Assistance and Advisory Services (TAAS) operations have been organized into five business lines:

- Business enabling environment;
- Value addition to firms;
- Environmental and social sustainability;
- Infrastructure;
- Access to finance.

CP is part of the environmental sustainability business line, but it is important to note that value addition to firms and access to finance have been designed as business lines on their own, due to the significant lack of this competence and structure in the countries where the IFC is present.

Business enabling environment includes the sub-categories: diagnostic, policy and legislation, cross-border, sub-national, industry-specific, dispute resolution and business advocacy.

Value addition to firms includes the sub-categories: corporate governance, entrepreneurship, business service providers, small business linkages (supply chain), hiv/aids, gender and direct assistance to SMEs and grassroots organizations.

Environment and social sustainability includes the sub-categories: sustainable energy, biodiversity, cleaner technologies and production, sustainable investing and social responsibility.

Infrastructure includes the sub-categories: health and education, and infrastructure.

Access to finance includes the subcategories: banking, non-banking financial institutions, housing and property finance, securities markets, microfinance, trade finance, credit bureau, insurance, municipal finance and sustainable finance.

The distribution of funds reflects the importance of improving the general conditions for entrepreneurship. In the financial year 2006, the IFC TAAS activities had the following distribution per business lines:

- Value addition to firms 12 per cent
- Infrastructure 12 per cent
- Environmental and social sustainability 3 per cent
- Business enabling environment 36 per cent
- Access to finance 37 per cent

The first case study in the 2006 report to the donor community highlights what the company described mainly as "lack of the capacity to develop a bankable business plan and introduce the needed financial management systems for its expansion". The funding provided by the IFC helped to implement capacity-building exercises, designed to improve internal financial management and control systems, which was a prerequisite to gain access to finance for the planned investment, with positive development and environmental effects.

The second case study in the 2006 report describes the transformation of a small dynamic MFI into a full service bank, with the help of a commercial banking advisor, and highlights the importance of capacity-building of the financial institutions in developing countries to be able to attract investors and provide basic services for enterprises.

The IFC also runs a Foreign Investment Advisory Service (FIAS), that advises governments of developing countries on how to improve their investment climates and maximize poverty reduction. FIAS is a multi-donor service of IFC and the World Bank that focuses on 6 core areas:

- Investment climate diagnostic;
- Foreign direct investment policies and regulations;
- Administrative barrier reform;
- Investment promotion;
- Sector-focused solutions;
- Corporate social responsibility.

Understanding the political economy of investment climate reforms was a key priority for FIAS in 2006. In that year, 13 knowledge management products were completed, 30 good practice case studies were developed, and several new products were piloted, including: south-south foreign direct investment, regulatory governance, tax administration, competition policy, secured lending, special economic zones, informality surveys, private sector development strategy and organization, stakeholder management in reform processes, and land markets.

IFC's investments in the financial sector represent about 35 per cent of its portfolio, and financial intermediary projects present a unique opportunity for broader development impact. IFC works with the financial sector in developing countries, to enhance the environmental and social impact of IFC's intermediaries and the broader market. IFC helps the sector use sustainability to build better and more competitive businesses, and to increase environmentally and socially responsible investment in developing countries.

2006 highlights comprise:

- IFC has supported the formulation of a Corporate Sustainability Index at the São Paulo Stock Exchange, the first of its kind in Latin America, to encourage companies to adopt sustainable practices and provide investors with a tool to trace and monitor those companies;
- IFC, together with the European Bank for Reconstruction and Development, financed and commissioned a training programme on environmental and social risk assessment for Romania's largest commercial bank, Banca Comerciala Romana, to address the country's environmental problems. Within a year, 600 credit officers were trained and 700 credit projects reviewed according to environmental and social standards. Both, credit officers and clients, have reported positive outcomes of this initiative.

IFC is a leading provider of Financial Markets Technical Assistance (FMTA) in emerging market countries, aimed at building sustainable, diversified financial systems, that are

accessible to the poor and the businesses they create. Empirical research shows that finance is critical to economic and private sector growth, and benefits the poor in particular. Financial markets projects represent a significant share of IFC's technical assistance work, and are in line with its mission to help reduce poverty and improve people's lives.

In 2006, most technical assistance projects for financial markets were in high risk or low income frontier countries, with typically underdeveloped financial sectors, particularly in Africa and the Middle East. More than 70 per cent of projects focused on strengthening access to finance mainly through lending to micro, small, and medium enterprises and through leasing.

Expanding access to finance in developing markets is the core of IFC's FMTA, particularly by fostering the development of domestic financial markets. Less than 25 per cent of people living in developing countries have access to formal financial services, compared to up to 90 per cent of people living in developed countries. Extending financial services to previously underserved segments of the population, including micro and small businesses, can make a significant difference. IFC's FMTA is built on two pillars: developing financial intermediaries, such as banks and non-bank financial institutions, and creating financial infrastructures. IFC's priority areas for building financial institutions are: banking, microfinance, housing finance, sustainability finance, leasing, trade finance and insurance. IFC's priority areas for building financial infrastructures are credit bureaus and securities markets.

The Environmental Opportunities Facility (EOF) of the IFC acts as a catalyst by providing project preparation grants and flexible investment financing for innovative private sector projects, primarily to address local environmental issues. Target sectors include environmental infrastructure services (clean drinking water, wastewater treatment, solid waste management, recycling, air quality), pollution abatement, and improvements in the sustainable use of resources. The facility aims to overcome the barriers to investment in those sectors and to move projects toward commercial viability. EOF helps IFC push the market toward adopting new business models and technologies that address the most immediate environmental problems of developing countries. Eligible projects can either produce goods or services with significant environmental benefits, or increase the sustainability of resource utilization, through improvements in eco-efficiency.

Additional information can be obtained from the webpage, which is structured into regions and departments. The contact information for the environmental department is listed below:

www.ifc.org

Environment and Social Development Department
International Finance Corporation
enviro@ifc.org
www.ifc.org/enviro

Biodiversity
biodiversity@ifc.org
www.ifc.org/biodiversity

Carbon finance
carbonfinance@ifc.org
www.ifc.org/carbonfinance

Cleaner technologies
cleantech@ifc.org
www.ifc.org/cleantech

Environmental and social standards
PerformanceStandards@ifc.org
www.ifc.org/EnvSocStandards

Environmental business finance program
www.ifc.org/ebfp

IFC gender program
GEM-info@ifc.org
www.ifc.org/gender

Insurance services group
insuranceservicesgroup@ifc.org
www.ifc.org/insuranceservices

Social responsibility
CorporateCitizenship@ifc.org
www.ifc.org/socialresponsibility

Sustainable investing
sustain-invest@ifc.org
www.ifc.org/sustainableinvesting

Additional information of the Carbon Finance Initiative of the World Bank can be obtained from Venkata Ramana Putti, pramana@worldbank.org

Multilateral investment fund (MIF) of the Inter-American Development Bank (IDB)

A long-standing initiative of Latin American countries, the IDB was established in 1959 as a development institution with novel mandates and tools. The IDB's programmes and tools became the model on which other regional and subregional multilateral development banks were created. The IDB is the main source of multilateral financing for economic, social and institutional development projects and trade, and regional integration programmes in Latin America and the Caribbean. It is the oldest and largest regional development bank.

The MIF supports several approaches for developing the private sector in Latin America and the Caribbean, through the creation of a wide portfolio of projects organized in clusters. MIF resources are for projects falling under three main categories:

- Business framework;
- Enterprise development;
- Financial democracy.

The mission of the MIF is to promote broad-based economic growth through private sector development, particularly micro-enterprises and small businesses. Using both grants and investments, MIF actively seeks partners to help test, and then demonstrate, the effectiveness of innovative ideas. MIF's projects are intended to become self-sustaining, and potentially to

reach a scale capable of changing the lives of millions of people throughout Latin America and the Caribbean.

MIF is the leading source of technical assistance grants for micro and small business development in Latin America and the Caribbean. MIF has approved more than 1,000 projects, primarily grants, with over 800 civil society, private sector and government partners, creating a community of change agents to stimulate both private sector innovation, and share lessons learned. Together, these efforts are putting $US 2.2 billion to work in all 26 developing countries of the IDB.

In recent years, MIF also decentralized its operations, increasingly using IDB country offices to identify, process and implement small projects, or "mini-grants" of $US 150,000 or less. This programme enables MIF to reach many more potential clients through smaller programmes, particularly in rural areas.

In March 2007 MIF II was created, and will be able to finance innovative projects up to 2015, with a renewed focus on poverty reduction through private sector development, in line with the IDB Group's ongoing Opportunities for the Majority initiative.

MIF projects under the title "Environment", explicitly include CP, but they also have a focus on SME and workers' skills development, which reflects the necessity to upgrade the financial accounting competence of SMEs. These projects include:

Environment:

- Sustainable agriculture;
- Clean energy markets;
- CP;
- Sustainable tourism.

SMEs development:

- Business development centres;
- Business development;
- Base of the pyramid;
- CSR;
- Housing markets;
- Quality and environmental standards;
- Small business networks;
- Remittances;
- Reducing regulatory burdens;
- Technology for business development;
- International trade and investment.

Worker skills development:

- Displaced workforce;
- Labour market modernization;
- Labour training programmes;
- Skills development and certification;
- Entrepreneurship development;
- Youth training.

MIF also promotes several financial tools and services especially targeting micro, small and medium enterprise financing:

- Dynamic business ventures;
- Investments in environmental funds;

- Expanding SME financing;
- Micro-enterprise;
- Recovery from natural disasters;
- Remittances;
- SME;
- Investments in technology companies.

E+Co Capital Latin America, a subsidiary of E+Co, a provider of services and capital to energy enterprises in developing countries, specifically promotes innovations for the hydro-electric sector in Central America. E+Co is organized as a not-for-profit, public purpose investment company with offices in Bolivia, Brazil, China, Costa Rica, the Netherlands, South Africa, Thailand and the United States.

E+Co Capital Latin America manages the $US 20 million Central American Renewable Energy and Cleaner Production Facility (CAREC). CAREC provides mezzanine and debt financing to clean energy enterprises in Central America. CAREC invests in renewable energy, energy efficiency and CP projects in Central America. The focus is on SMEs with annual revenues of up to $US 5 million and with less than 100 employees.

CAREC was initiated with core financial and institutional support from the MIF of the Inter-American Development Bank. In addition to MIF, CAREC's investors include the Central American Bank of Economic Integration (CABEI), the Belgian Investment Company for Developing Countries (BIO), and the Finnish development finance company, FinnFund. The USAID Development Credit Authority (DCA) has also approved a $US 5 million loan to the MFI to be used in support of private sector debt.

Additional information:

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Netherlands Green Funds Scheme

The Netherlands has a unique method of raising funds for environmental projects.[3] The key element in this model is the Green Funds Scheme, a tax incentive scheme enabling individual investors to put money into green projects that benefit nature and the environment. Individuals who invest in a green fund or save money with financial institutions practicing "green banking", receive a rate lower than the market interest rate, but the tax incentive compensates for this. The banks in turn charge green projects a low interest rate.

The Green Funds Scheme is a tax incentive scheme launched in 1995 by the Dutch government to encourage green initiatives. In a nutshell, it comprises:

- The Green Projects Scheme, which establishes the conditions governing the projects;
- The Green Institutions Scheme, which regulates the role played by the financial institutions;
- The tax incentive for individual investors, who get the flow of funds under way.

The Green Projects Scheme designates projects that are eligible for green project status. There are a few technical and financial conditions, but the main requirement is that these are new projects, providing a significant and immediate environmental benefit. Projects are

[3] Information taken from The Green Funds Scheme—a success story in the making, SenterNovem publication number 3GB0701 www.senternovem.nl/green_funds_scheme

divided into categories covering a broad range of activities, from high-tech environmental innovation to low-tech improvements, in the area of nature and the landscape.

The majority of Dutch banks have a "green fund" or a "green bank" which meet the strict requirements imposed by the Green Institutions Scheme. The banks issue bonds with a fixed value, term and interest rate, or shares in a green investment fund. Usually the interest rate or dividend paid by the bank is lower than the market rate, which means that the bank can in turn invest the funds in green projects, at a lower interest rate.

In the Netherlands an individual investor would normally pay 1.2 per cent capital gains tax on the amount invested, but green capital was exempt up to a maximum of EUR 53,421 per person in the year 2007. Green investors also pay less income tax on their green capital. Their reduction is 1.3 per cent, so the total tax advantage is 2.5 per cent. This means they can accept a lower interest rate or dividend on their investment.

The Green Funds Scheme is an undoubted success. Thousands of projects, from environmentally friendly greenhouses and wind turbines, to organic farming and afforestation, have been implemented with funds provided by a few hundred thousand individual investors in the Netherlands. Since the scheme was launched, 200,000 investors have put in EUR 5 billion, enabling 5,000 green projects to be funded. Many of the projects relate to innovative environmental technology that far exceeds the prevailing standards, but is expensive and technically risky. Examples include over 1,100 wind turbines and environmentally friendly cooling systems, using natural refrigerants for two fishing vessels, and the Green Label greenhouses, which set a global standard in terms of low energy consumption and low environmental impact. One third of the 100 million square meters of greenhouses in the Netherlands currently meet this global standard, which gets stricter every year. Low-tech projects have also achieved remarkable results. EUR 500 million has been invested in organic farming and around 2,000 square kilometres of wood and nature conservation areas, have been created.

The Government wants a clearer focus on environment and energy issues when investment decisions are made. To achieve that aim, it uses both legislation and tax schemes that boost environmentally friendly and energy efficient investments. Examples of such schemes, which to a degree are complementary include the free depreciation of environmentally benign investments (VAMIL), the Energy Investment tax Allowance (EIA) and Environmental Investment tax Allowance (MIA) deduction schemes for green investments by companies, and the Green Funds Scheme for individual investors. The Government also hopes that the increasing availability of private capital for green investment under the Green Funds Scheme, will promote greater involvement on the part of private investors and banks.

Consumers can choose from a variety of financial products, from negotiable green bonds with a fixed term and interest rate, to shares in green investment funds. Sometimes it is possible to invest directly in green projects closer to home. All are government certified projects funded by green banks or funds. The tax incentive of 2.5 per cent that compensates for the lower return on green investments is what initially attracts the majority of investors. Nevertheless, they continue to show growing interest in green projects, and many take the opportunity to visit organic farms receiving green funding. The average green investor is older, has a substantial income, and has invested an average of EUR 25,000 in green funds or bonds.

The return on green investments for the individual investor consists of interest or dividends, plus the 2.5 per cent tax incentive. Taken together, this provides a return roughly comparable to what the market offers. For example, the green investor receives an interest rate on green certificates of on average 1.4 per cent to 2.2 per cent below that offered by government securities, but on balance comes off slightly better. In social terms, that 2.5 per cent is more than reasonable.

Banks may be commercial institutions, but that does not mean they are not concerned about the environment. Even before the Green Funds Scheme was launched, some Dutch banks had green financial products on offer, such as investment in wind turbines and organic farming. These were mostly smaller banks operating in a niche market. Since the scheme's introduction, the demand for green savings and investment opportunities has risen sharply, and the larger banks have now broadened their range of green products.

The banks apply for green certificates for companies wanting to launch green projects, and finance them with money from individual investors. Under the Green Institutions Scheme, the banks are obliged to put at least 70 per cent of that money into certified green projects. They may invest the remaining 30 per cent elsewhere to spread the risk and to compensate for financing barely profitable projects. The Dutch Central Bank and the tax authorities supervise the process. Thanks to the banks' efforts, available green capital rose to EUR 5 billion in 2005 of which roughly 85 per cent has actually been invested in green projects. The banks manage these funds and propose projects. In other words, they actively advise on extra environmental measures if this means that projects will become eligible for a green certificate and thus for green funding. Consequently, the banks play a vital role in developing environmental technology and protecting the environment. The Green Funds Scheme has had a catalytic effect on progress towards more Corporate Social Responsibility (CSR) in the banking sector. In fact, Dutch banks are among the world's best when it comes to the environment and CSR.

Companies that take advantage of green funding run projects whose environmental performance is far better than that of their standard counterparts. These projects are of substantial value to the environment for example, agricultural nature management, or have a highly unprofitable top layer of technology due to extra environmental measures for example air treatment over and above that required by law in industry. Some fall into both categories for example innovative water purification technology.

The Green Funds Scheme covers a wide variety of projects and its results are accordingly diverse, from new breeding grounds for birds to sustainable office buildings, and from energy storage in aquifers to fermentation systems for biomass. The immediate advantage for companies operating green projects is an interest rate that is on average 1 per cent less than the market rate, which can be a vital factor in any investment decision. For organic farmers, for instance, just 1 per cent may be the difference between profit and loss. Because green projects often involve innovative environmental technology in the phase just before introduction into the market, companies become technologically advanced in this field, which in many cases improves their international competitiveness. This has led to a growing awareness in the Netherlands that the environment offers profit opportunities, and of how environment and economy can go hand-in-hand.

The banking sector is an obvious intermediary between individual investors and companies, and organizations operating green projects, but the volume of investment has to reach a certain level. This is achieved in the Netherlands by offering the incentive through income and capital gains tax. As a result, everyone who invests in green bonds or green funds is eligible for a tax advantage of 2.5 per cent of the green capital, which generates sufficient capital for active involvement by the banking sector and healthy competition between banks. Once a critical mass has been achieved, the system is self-perpetuating. All the stakeholders have their own particular interest, with that of the government being the importance to society of nature and the environment.

The Green Funds Scheme is operated by four ministries working closely together: Housing, Spatial Planning and the Environment; Finance; Agriculture, Nature and Food Quality and;

Transport, Public Works and Water Management. The Ministry of Housing, Spatial Planning and the Environment is responsible for coordinating implementation. The Applications Department (Dienst Regelingen) at the Ministry of Agriculture, Nature and Food Quality, and SenterNovem, authorized by the Ministry of Housing, Spatial Planning and the Environment, to issue green certificates on behalf of the minister.

The following banks and institutions are recognized by the Government as green institutions, and are described in the scheme as green funds or as banks with a green fund:

- ABN AMRO Groen Fonds, Amsterdam (www.abnamro.nl);
- ABN AMRO Groenbank, Rotterdam (www.abnamro.nl);
- ASN Groenprojectenfonds, The Hague (www.asnbank.nl);
- Fortis Groenbank BV, Rotterdam (www.fortisbank.nl);
- ING / Postbank Groen NV, Amsterdam (www.ingbank.nl);
- Rabo Groen Bank BV, Utrecht (www.rabobankgroep.nl/duurzaamheid);
- Nationaal Groen Beleggingsfonds, Hoevelaken (www.groenfonds.nl);
- Triodos Groenfonds NV, Zeist (www.triodos.nl).

The Green Projects Scheme is geared towards projects that have a positive effect on nature and the environment. Such projects are generally situated in the Netherlands and fall into the following categories.

- *Nature, forests and landscape*: the creation of new forests and projects focusing on creating new nature and landscape values.
- *Organic farming*: in line with the guidelines set out in the Agricultural Quality (Organic Production Methods) Decree.
- *Green Label greenhouses*: greenhouses with low energy consumption and low environmental impact, for cultivating horticultural crops on a commercial basis.
- *Agrification*: industrial processing of agricultural products into goods that are not meant for human or animal consumption. This involves using agricultural raw materials in non-traditional applications, which lead to a significant reduction in environmental impact.
- *Renewable energy*: projects that focus on generating renewable energy as an alternative to fossil based fuels, such as generating electricity from wood and energy rich crops, wind and solar energy, hydropower and the use of heat pumps, heat/cold storage and district heating networks.
- *Sustainable construction*: building or renovating houses and non-residential buildings that meet specific criteria with regard to, material use, insulation, indoor climate and energy/water conservation.
- *Cycle-track infrastructure*: the construction of separate or raised cycle tracks outside built-up areas to connect residential areas, including solving problems in the recreational cycle route network, and making transport nodes more accessible.
- *Voluntary soil decontamination*: voluntary decontamination of seriously contaminated soils.
- *Other projects*: projects that do not fall into one of the above categories, but show significant environmental benefits; generally unique and innovative projects, or projects where the investment is split over several categories.

In 1998, the Dutch Government decided to include projects in developing countries, and projects in Central and Eastern Europe. In the past years, 11 projects in developing countries received a green certificate. This included in particular projects in renewable energy and ecological agriculture.

The majority of the investments are still in the Netherlands, but in principle investments in all non-OECD countries are eligible, provided there is interest by the banks to develop such

projects. Rabobank, Triodos and Fortis are active in countries with NCPCs, and could set up such an initiative.

The Green Funds Scheme could be developed into two directions. UNIDO and SenterNovem could design a product that contains projects related to CP/EST and approved by the NCPCs worldwide or in specific countries/regions. Alternatively, since the tax incentive currently applies only to residents of the Netherlands, larger funds would be able to be generated, if the tax incentive could be made available also in other countries, where the intermediary banks are present.

Additional information:

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www.senternovem.nl/green_funds_scheme

Nordic Environment Finance Corporation (NEFCO)

NEFCO is a risk capital institution financing environmental projects in Central and Eastern Europe. NEFCO was established in 1990 by the five Nordic countries Denmark, Finland, Iceland, Norway and Sweden. Its purpose is to facilitate the implementation of environmentally beneficial projects in the neighbouring region, with trans-boundary effects, which also benefit the Nordic region. NEFCO is located in Helsinki, together with the Nordic Investment Bank (NIB).

The main criteria for NEFCO's participation in projects are:

- The project is located in one of NEFCO's countries of operation i.e. Russia, Estonia, Latvia, Lithuania, Ukraine or Belarus;
- The project has a relevant environmental effect;
- The project is based on long-term cooperation through investments in enterprises, primarily though the formation of joint venture companies or corporate acquisitions;
- The project has a Nordic company or institution as a business partner;
- The project is economically, financially, institutionally and technically viable.

NEFCO can participate in a project through:

- Subscriptions of equity and shares, facilitating mobilization of the necessary equity base for a project. NEFCO then participates as a partner in the project.
- Medium and long-term loans and guarantees, which are usually provided at market rates. In some cases subordinated loans and loans with equity features may be provided. Often the loans are extended in addition to NEFCO's equity participation in the project.
- Since 1996 NEFCO also administers a special Nordic facility for concessional financing of selected environmental projects within the neighbouring region. Through this facility projects can be supported through grants.

Through its participation, NEFCO complements financing from other interested parties and/or financial institutions. The project structure should provide a reasonable balance between the different risks and benefits of the various participants in the project. NEFCO will not take up a majority ownership or a dominating position for itself. The project should have relevant environmental effects. Priority will be given to projects that have substantial environmental effects for the Nordic region, i.e. projects that lead to a reduction of pollution in the Baltic Sea and the Barents Sea, or a reduction of trans-boundary airborne pollution.

Projects resulting in positive environmental effects for the Nordic countries and the surrounding seas can for example be related to modernization of industrial plants and energy utilities. Another group consists of projects carried out in cooperation with municipalities and other authorities to supply environmental services such as purification of wastewater or waste management. A third category consists of companies that manufacture environmental equipment and equipment for more effective use of energy, or companies that supply consulting and engineering services within the field of environment and energy to create better conditions for implementation of environmental measures. To some extent NEFCO also participates in projects of mainly local environmental interest but offering a desirable demonstration effect. A Nordic partner should take part in the project on a long-term basis. Generally this implies participation in an enterprise, and thus acquisitions and joint ventures are typical.

NEFCO administers a range of different funds for a variety of purposes:

NEFCO Investment Fund: the Investment Fund amounts to approximately EUR 113.4 million. The Fund provides loans and equity financing. In some cases subordinated loans and loans with equity features can also be provided. The loans are from medium to long-term, and are provided at market rates.

Nordic Environmental Development Fund (NMF): through this Fund, originally established by the Nordic Ministers of Environment in 1995, NEFCO is endeavouring to support the realization of projects that otherwise would not materialize, or could be realized only later in the future. Local participation in the financing is required. Contributions from the Fund can be provided as grants for the procurement of goods or services (cash subsidies), or to reduce the borrower's debt service costs. The maximum grant is one-third of the total project cost. The capacity of the Fund is approximately EUR 40 million.

Testing Ground Facility (TGF): the Baltic Sea Region Testing Ground Facility (TGF), is a fund that provides financial assistance to projects, primarily by purchasing emission reduction credits. The TGF was established at the end of December 2003 by the Governments of Denmark, Finland, Iceland, Norway and Sweden, pledging an aggregate capital of EUR 10 million. In 2004, Germany committed an additional EUR 5 million. The TGF will invest in projects with a potential for delivering cost effective ERUs and AAUs for the account of the investors.

Cleaner Production Revolving Facility (CPF): the Revolving Facility for CP provides loans for small scale projects that reduce risk to humans and the environment. The loans range from approximately EUR 50,000 to EUR 350,000 and have a fixed interest rate. The projects are required to have a rapid payback.

Energy Saving Credits Facility (ESC): the Energy Saving Credits (ESC) Facility offers subsidized financing for energy saving measures in social issues comprising schools, kindergartens, hospitals, sport facilities and street lighting, in Russian and Ukrainian municipalities. The small scale projects are expected to result in significant environmental effects in the form of reduced emissions to the atmosphere. An eligible investment should generate annual savings of at least 25 per cent of the investment cost, as the repayment is linked to the savings of the investment.

Additional information:

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United States Agency for International Development (USAID)

United States foreign assistance always had the twofold purpose of furthering America's foreign policy interests in expanding democracy and free markets, while improving the lives of the citizens of the developing world. Spending less than 0.5 per cent of the federal budget, USAID works around the world to achieve these goals. USAID's history goes back to the Marshall Plan reconstruction of Europe after World War II and the Truman Administration's Point Four Programme. In 1961, the Foreign Assistance Act was signed into law, and USAID was created by executive order. Since then USAID has been the main United States agency to provide assistance to countries recovering from disaster, trying to escape poverty, and engaging in democratic reforms.

USAID is an independent federal government agency that receives overall foreign policy guidance from the Secretary of State. It supports long-term and equitable economic growth and advances United States foreign policy objectives by supporting:

- Economic growth, agriculture and trade;
- Global health;
- Democracy, conflict prevention and humanitarian assistance.

USAID works in close partnership with private voluntary organizations, indigenous organizations, universities, American businesses, international agencies, other governments, and other United States government agencies. USAID has working relationships with more than 3,500 American companies and over 300 United States-based private voluntary organizations.

Addressing the causes and effects of climate change has been a key focus of USAID's development assistance for over a decade. USAID has funded environmental programmes that have reduced growth in GHG emissions, while promoting energy efficiency, forest conservation, biodiversity, and other development goals. This "multiple benefits" approach to climate change helps developing and transition countries achieve economic development without sacrificing environmental protection. Active in more than 40 developing and transition countries, the programme integrates climate change into the broad range of USAID's development assistance activities.

USAID places particular emphasis on partnerships with the private sector and on working with local and national authorities, communities, and non-governmental organizations to create alliances that build on the relative strengths of each. Bringing together a diverse range of stakeholders helps in avoiding unnecessary duplication and lays the foundation for a sustained, integrated approach. Through training, tools, and other means of capacity-building, USAID helps developing and transition countries address climate-related concerns as a part of their development goals.

Several NCPCs have been established and are working with USAID funds on issues such as voluntary CP agreements and CP policy development. They are also providing specific funds to Comisión Centroamericana de Ambiente y Desarollo (CCAD), which has a specific CP component.

Additional information:

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5. Information networks and tools for finance

This chapter explores information networks and tools available to improve access to, and accountability of funding options. The examples chosen do not strive for completeness, but reflect the recommendations of the interviewed partners, and the results of a web search. Some of the websites need updating on current activities. Additional information can also be found at www.europeaid.eu and www.eco-finance.org for South-East Europe for example.

The chapter presents the following initiatives:

- UNEP Financial Institutions Initiative on the Environment;
- UNIDO IPAs, ITPOs, IPUs and regional networks;
- Africa Investment Promotion Agency Network (AfrIPANet);
- Asia-Africa Investment and Technology Promotion Centre (AAITPC);
- Sustainable Alternatives Network;
- UNEP Sustainable Energy Finance Initiative;
- UNIDO COMFAR tool for investment appraisal.

UNEP Financial Institutions Initiative on the Environment

The UNEP Financial Institutions Initiative on the Environment was founded in 1992 when "The Statement by Banks on the Environment and Sustainable Development" was signed by 30 banks following the Earth Summit in Rio. Currently, over 170 financial institutions are signatories. The Initiative promotes the integration of environmental considerations into all aspects of the financial sector's or individual companies' operations and services, through building awareness, dialogue and understanding, and by fostering private sector investment in ESTs and services. However the current state of activities of the Initiative and its members is not easy to assess via the web pages.

UNEP and UNIDO may consider bringing those financial institutions together again, evaluating the results the Initiative, and promoting further development of innovative financial tools in local markets.

Additional information:

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www.unep.fr

www.uneptie.org/wssd/

www.unepfi.net

www.sustainability-in-finance.com

www.sustainableaternatives.org

www.envirobank.org

www.financingCP.org

UNIDO Investment Promotion Agencies (IPAs), Investment and Technology Promotion Offices (ITPOs) and Investment Promotion Units (IPUs)

UNIDO established Investment Promotion Agencies (IPAs), ITPOs, IPUs and regional networks. The network of former Investment Promotion Service Offices (IPS) has taken on a new strategic orientation in line with UNIDO's programmatic transformation. They are now based on the recognition that investment promotion is interlinked with technology transfer and acquisition. This is reflected in the new name, Investment and Technology Promotion Offices.

ITPOs primarily focus on strengthening the capacities of client countries and institutions to improve their competitiveness, as well as on fostering industrial partnerships, in particular among SMEs throughout the world. ITPOs lie at the hub of the Investment and Technology Promotion Network (ITPN), which is currently at the testing stage. ITPN brings together UNIDO field offices, development finance institutions, investment promotion agencies, technology centres, subcontracting exchanges, and other partners, via the UNIDO website.

ITPOs are one-stop shops for four services crucial to investment promotion and technology transfer:

- Dissemination of investment information;
- Identification and promotion of investment opportunities;
- Provision of training on promotional techniques;
- Matching project sponsors with potential foreign investors.

ITPO staff maintains active links with the business community and development agencies in the Offices' host countries, as well as extensive data banks of companies interested in industrial partnerships in developing countries and countries with economies in transition. At the same time, ITPOs are playing an increasingly important role in developing and carrying out UNIDO's Integrated Programmes (IPs).

To promote investment and technology flow to developing countries, and countries with economies in transition, UNIDO operates a network of ITPOs, which are financed by their host countries, Bahrain, Brazil, China (Beijing and Shanghai), France (Paris and Marseille), Greece, Italy, Japan, Republic of Korea, Mexico, Russian Federation and the United Kingdom. The Walloon Region of Belgium also maintains an ITPO at UNIDO headquarters in Vienna. The ITPO network also includes IPUs in Egypt, Jordan, Morocco, Tunisia and Uganda, all financed by Italy and an associate member (i.e. not financed through a project with UNIDO) in Turkey.

The ITPO network provides a unique combination of value-added services to client institutions and entrepreneurs from developing countries, and countries with economies in transition, which are seeking to forge new alliances in international industrial investment and technology transfer. Entrepreneurs from the SME sector are often unfamiliar with the investment climate and related statutory requirements outside their own countries, and lack first hand knowledge of potential partners abroad. ITPOs fill the gap by offering a full package of the latest information on:

- Screened bankable industrial business opportunities in developing countries;
- Specific manufacturing facilities that enterprises in their host countries seek to establish abroad;
- Investment financing and technology supply sources;
- Partnership promotion.

A list of the UNIDO ITPOs is provided on page 116.

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Africa Investment Promotion Agency (AfrIPANet)

AfrIPANet is the platform for developing and implementing UNIDO's investment-related activities in the sub-Saharan region. It is a network comprised of IPAs from countries of the region, with ongoing UNIDO IPs, plus the UNIDO ITPOs, and an advisory panel composed of chief executives of companies with operations in the region, academic researchers studying the dynamics of FDI in Africa, and international experts. The current 15 member countries of the network are: Burkina Faso, Cameroon, Côte d'Ivoire, Ethiopia, Ghana, Guinea, Kenya, Madagascar, Malawi, Mali, Mozambique, Nigeria, Senegal, Uganda and United Republic of Tanzania.

Membership of AfrIPANet grows as new UNIDO programmes in the region are initiated. The webpage mentions that currently the network is currently being extended to 24 countries. Angola, Burundi, Gabon, Mauritania, Niger, Rwanda and Zambia will be included, and eventually the whole region will be covered.

The network would be helpful in negotiating and promoting funding options for SMEs for CP/EST options.

Additional information:

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Asia-Africa Investment and Technology Promotion Centre (AAITPC)

AAITPC was established to contribute to the economic development of the African continent. AAITPC provides services/information to business people and institutions, such as facilitating collaboration with institutions and business associations, providing training for officials of African investment promotion agencies, development and appraisal of investment projects, providing information on investment environments, and promoting African countries' specific investment projects and sectors.

AAITPC provides Asian business people with project profiles for joint ventures in African industrial projects as well as opportunities for privatization projects, through its website and otherwise. In addition it offers sector analysis reports prepared by UNIDO.

AAITPC organizes business missions to selected African countries, to give Asian business people first hand insight, and information on African countries as investment destinations. A feature of such missions is one-to-one business meetings to initiate contacts, and pursue partnerships such as joint ventures, licensing and dealerships. AAITPC provides African business people with the names and contact addresses of potential investors in Asia, interested in investing in Africa.

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Sustainable Alternatives Network (SANet)

Sustainable Alternatives Network (SANet) is a partnership between DTIE of UNEP and the GEF. With the project's global network of information resources, experts, and financing options, SANet helps businesses innovate with cleaner technologies.

SANet's website says that cleaner technology can generate substantial benefits for the businesses that adopt them. Those benefits come in the form of greater efficiency, cost reductions, higher income, and even access to new markets. Study after study has shown that companies in emerging markets that take the leap, and introduce such technologies into their business processes, reap the rewards. But figuring out the details of a cleaner technology investment can be complicated and that is where SANet can assist.

SANet is designed to simplify the path from idea to implementation. It offers a tailor made advisory service with access to local experts, one-on-one consulting, and a host of online information resources, including case studies of businesses that have successfully switched to cleaner technologies. The term cleaner technologies is used here to mean the tools, methods, and practices necessary to produce goods and deliver services, with less impact on the global environment.

SANet offers a range of online and offline services. The Network offers an online resource library, as well as in-person, local services in selected countries. Whether online or offline, SANet can connect people with the right expertise and tools for each stage of the business planning process. The SANet website offers easy access to hundreds of clean technology case studies from around the world. These examples, along with contact information for experts and research tools, are part of an online library available to all visitors. It contains:

- A directory of case studies documenting successful adoptions of cleaner technologies;
- A directory of experts with clean technology experience and how to contact them;
- A directory of planning tools to help you assess the feasibility of adopting cleaner technology;
- A directory of financing sources and the institutions providing them.

The SANet databank can be accessed for experts, case studies, planning tools, and finance sources all around the world. Unfortunately it is not possible to search by country, just by continent. The databank currently (July 2007) contains 676 experts, 1,473 case studies, 317 planning tools, and 79 finance sources.

For Africa, North America, Oceania and Europe, zero finance sources are listed. For Asia, 19 finance sources are listed in the databank, but most of them are examples from India without further links and information. However, for Latin America, 74 finance sources are listed, which can be further distinguished into the following types of funding:

- Commercial debt (30);
- Commercial equity (2);
- Investment fund (4);
- Leasing (8);
- Public credit guarantee (6);
- Public grant/subsidy (33);
- Public lending (6);

- Revolving and trust funds (1);
- Venture capital fund (3).

There are several duplications on the website, as many finance instruments fall into more than one category. The information is partly in English and partly in Spanish. Links and contacts are not always provided. Unfortunately the information lacks regular update and a standard format.

In addition to the webpage, local desks offer free information and advice on cleaner technologies. They assist personally, over the phone, or by E-mail. SANet local desks are located in Brazil, India, Nicaragua, Peru, and United Republic of Tanzania. In Brazil, India and Nicaragua, the UNIDO NCPCs also cover the function of the local desk under SANet, but not in Peru and United Republic of Tanzania.

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UNEP Sustainable Energy Finance Initiative (UNEP/SEFI)

SEFI is the UNEP Sustainable Energy Finance Initiative, a platform providing financing institutions with tools, support and a global network needed to conceive and manage investments in the complex and rapidly changing market place for clean energy technologies.

The Sustainable Energy Finance Directory is a free-of-charge online database of lenders and investors who actively provide finance to the sustainable energy (renewable energy and energy efficiency) sector worldwide. The directory, which is managed by SEFI, is designed to help project developers and entrepreneurs identify sources of potential project capital easily and quickly.

SEFI serves to:

- Provide financing institutions with the current information needed to begin investing in the sustainable energy sector;
- Facilitate networks of first movers to promote early engagement, industry leadership and, when needed, jointly address specific issues of concern;
- Catalyze strategic public/private partnerships with, as well as within, the finance sector to launch innovative financial products tailored to sustainable energy investments.

To help keep the directory up-to-date, accurate and globally comprehensive, SEFI works with an extensive network of regional partners across the world which provide ongoing and current information on sustainable energy lenders and investors in a specific region. SEFI Regional Partners are listed on page 120.

Additional information:

Jeroen Loosli
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www.sef-directory.net

www.sefi.unep.org

www.energy-base.org

www.ase.org/section/topic/financingee/

UNIDO COMFAR Tool for Investment Appraisal

COMFAR III Expert is a computer programme that supports project pre-investment studies. It facilitates data organization, computations and the production of pro-forma reports on financial and economic performance. The first generation of the Computer Model for Feasibility Analysis and Reporting (COMFAR) was released in 1983, since then this UNIDO software has been further developed to support the economic appraisal of projects.

The main module of the programme accepts financial and economic data, produces financial and economic statements and graphical displays, and calculates performance indicators. Cost-benefit and value-added methods of economic analysis, developed by UNIDO, are included in the programme, and the methods of major international development institutions are accommodated.

An amendment to deal with projects aiming to reduce GHG Emissions is currently under development. The upcoming guidelines are intended to be applied in the planning stages of emission reduction projects, to support the work involved in the preparation of the project design documentation, for registration. The COMFAR III CDM Module facilitates the demonstration of additionality for CDM projects, as required under the financial analysis test of the "Tool for the demonstration and assessment of additionality", published by the Executive Board of the United Nations Framework Convention on Climate Change-Clean Development Mechanism (UNFCCC-CDM.) The COMFAR CDM Module supports the determination of whether the proposed project activity is financially and/or economically less attractive than other alternatives, without the revenue from the sale of CERs. It also provides an analysis of the impact of registration of the proposed project activity, as a CDM project activity.

Financial analysis is normally required to make a decision on any type of investment. In most companies, there is a single capital budgeting pool for all projects. This means that CP investments must compete with other projects. Even though a company may have established environmental objectives, this does not automatically result in a lower "hurdle rate" for environmental projects. Capital budgeting is the decision-making process that prioritizes alternate actions, (investments) on which a company can spend its financial resources.

The financial feasibility analysis can be carried out using different methods of investment appraisal, or a combination of models, such as the Discounted Cash Flow Models (i.e. Net Present Value (NPV) and IRR), or conventional models such as the payback period.

It is necessary to make careful and realistic estimations of avoided costs realizable through CP in order to raise the IRRs, and increase the NPVs to more competitive levels. To correctly appraise CP options in a financial feasibility analysis, and influence the capital budgeting process, management accounting tools need to be sufficiently developed and trace not only end-of-pipe monitoring costs, but also the flows and losses of materials used. Environmental management accounting is the tool recommended for this purpose (IFAC, 2005). Once good quality data is available, the COMFAR tool can assist in the investment decision process.
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Download the trial version at: www.unido.org/en/doc/3390

6. Successful models to finance CP projects and EST investments

The previous chapters have reviewed the diverse options available to finance CP improvements and EST investments. In this section, it is intended to provide stakeholders and NCPC's with a quick guide to access financial resources in CP/EST projects.

The possible instruments for CP funding can be structured as:

- Multilateral and bilateral cooperation and regional development;
- Microcredits;
- General credits for SMEs;
- National grants for environmental protection;
- Tax incentives;
- Equity finance and SRI;
- JI/CDM.

The number of stakeholders in activities related to the promotion of CP investment financing has expanded considerably during the last few years. Some stakeholders have an important role in raising awareness, providing technical advice, disseminating information and training among others. Other stakeholders provide the policy and regulatory framework, and financial resources. Potential stakeholders include:

- International financial institutions both private and public;
- Multilateral financial institutions such as the World Bank, IFC, regional development banks and national development finance institutions in OECD countries.
- Export credit agencies;
- National public and private financial institutions, foundations and funds;
- Ministries of economy and finance;
- Ministries of environmental protection;
- Chambers of industry, chambers of accountants, and other representatives of the business community;
- CP service providers including the NCPCs, technical experts and other national experts, as well as providers of related technologies;
- Academic and educational institutions specialized in finance, business planning and administration, accounting and engineering;
- Media.

The optimal choice of policy and financial instruments depends heavily on local and national conditions. This study does not attempt to provide a "one-size-fits-all" solution. It rather seeks to encourage actors on a local, national and international level, to combine and tailor different policy measures and financial instruments, to provide a balanced and sound policy mix, that meets the objective of mainstreaming resource efficiency, and shifting toward sustainable consumption and production patterns, within the unique context of each local jurisdiction and environment.

It can be seen from this study that there is a lot of funding available, but coordination, making use of synergies, and direct linking and updating of current activities need more

emphasis. It is rather difficult to find out who is doing what, and in which countries, and the activities highlighted on the websites of some institutions that are actually currently being implemented on a national basis.

The previous chapters showed a broad range of financial options and a wide variety of stakeholders involved. Moreover, several countries have specific target countries for their involvement and funding priorities, for which a case-by-case follow-up is needed. In occasions, existing financial schemes leave room for fine-tuning into better funding options for SMEs. In several countries funding has been made available, for example, for municipalities to improve wastewater treatment and waste management. At the same time, microfinance and general funding structures for SMEs are often available. The available instruments and structures should be modified to include funding of CP/EST options for SMEs.

In addition, several NCPCs that took part in the survey reported that the major obstacle to financing CP options was not availability of funding, but availability of information on funding and CP options. Even if the management of a company has the intention to choose a CP option, and the knowledge and the skills to correctly appraise environmentally related costs and benefits, the implementation of such a proposal can still be hindered by lack of financial resources and/or difficulties in accessing such resources. In the finance sector, the credit appraisal by a commercial bank depends not only on the way financial costs and benefits are identified and quantified, but also on the existing relationship between the bank and the company, and on the company's overall creditworthiness.

The different conditions and requirements for financing of investments through different funding channels have been summarized by UNEP (2000c), as shown in table 8.

Table 8. Summary of conditions and requirements for financing investments through different funding channels

Funding channel	General conditions	Requirements for project finance
Commercial credit	• Proof of creditworthiness of borrower (sufficient liquidity, solvency and profitability). • Sound business plan.	• Sufficient collateral value. • Sound repayment plan. • Sound financial projections.
Equity	• Comply with external financial reporting standards. • Proven financial strength and management competence. • Sound business strategy and convincing business plan.	• Proper inclusion of environmental costs and projected savings. • Integration in overall business strategy.
Leasing	• Existence of an at least moderately developed leasing market in the country.	• Sufficient collateral value. • Sufficient business volume (number of potential leasees for certain type of investment).
Special purpose funds	• Capitalization of the fund i.e. willingness of national government to impose pollution charges, or donor interest. • Proper design and management to target priority environmental concerns.	• Proven contribution of the project to address priority environmental concerns. • Requirements may vary by disbursement method e.g. guarantee and grant.
Development assistance	• Comparatively well developed financial infrastructure to administer lending programmes on behalf of international donors and development banks.	• Same as for commercial credit, however lower compared to below market thresholds.

Multilateral and bilateral cooperation and regional development

Development aid is aid given by governmental and economic agencies to support the economic, social and political development of developing countries. Development aid may come from developed or developing country governments, as well as from international organizations such as the World Bank. It differs from humanitarian aid in that it aims at alleviating poverty in the long-term, rather than alleviating suffering in the short term.

The member states of the OECD, made up of the developed nations of the world, have committed to providing a certain level of development assistance to developing countries. This is called Official Development Assistance (ODA), and is given by governments on certain concessional terms, usually as simple donations. It is given by governments through individual countries' international aid agencies (bilateral aid), through multilateral institutions such as the World Bank, or through development charities. Several institutions with a lot of competence are active in this field with some examples having been described in the previous chapters. The Development Assistance Committee (DAC) is the main body through which the OECD cooperates with developing countries. It is a forum for its 23 member states in their role as bilateral donors.

A very common source of capital for CP funding is special purpose funds or soft loans, dedicated to supporting socio-economic development in the respective country, and provided through financial intermediaries in developing countries. Finances for the investments can be provided by national governments, banks and donor agencies. The banks can provide credits directly to industry, for example, through their private sector financing arms. Furthermore banks and donor agencies can provide financial resources for special purpose lending schemes to financial intermediaries such as commercial banks, development banks or non conventional financial intermediaries, which lend these funds to companies, in smaller amounts and below market rates. In addition, the donor agency or financial intermediary may specify special purposes for the funds. There are examples where lending for CP/EST investments is specifically promoted. Furthermore, the finance provider may request a contribution from own financial resources, of the financial intermediary, to leverage the amount of finance made available to the companies.

Innovative instruments have been developed, for instance by the Swiss SECO and KfW, and are functioning well in several countries in Latin America. They tackle the problems of the financial sector and provide an incentive to the financial intermediary as well as to the SMEs.

The Green Credit Trust Fund of SECO initiated in Colombia and Peru increases the attractiveness of CP/EST investments, by reducing the demand on collateral and through a partial reimbursement of the capital invested, based upon the environmental impact resulting from the investment. A similar scheme is planned for Viet Nam by SECO in 2008. The instruments used by the Green Credit Trust to reduce barriers and promote CP/EST investment include:

- Partially guaranteeing the credits, thus reducing the barrier of lack of collateral especially by SMEs and, therefore lower interests from the financial intermediary;
- Partially reimbursing the investment costs, based on the verified environmental impact reduction.

The experiences with these funding schemes should be promoted for other countries as well, where no funding is available.

Microcredits

Microfinance is a term for the practice of providing financial services, such as microcredits, micro savings or micro insurance to poor people. By helping them to accumulate useable large sums of money, this expands their choices and reduces the risks they face. As its name suggests, most transactions involve small amounts of money, frequently less than $US 100. Microfinance is composed of many finance services such as loans, credits and insurance, run on a smaller scale (en.wikipedia.org/wiki/microfinance).

AMN AMRO Real de Brazil quote in their sustainability report, that to become eligible for a microcredit, applicants do not have to show proof of income, but simply have to provide their identification, tax registration number and proof of residence. Loans range from EUR 76 to EUR 3,830. The average amount is EUR 613, with interest rates starting from 2 per cent per month.

The Dutch SNS Institutional Microfinance fund, managed by DWM Asset Management, does not give loans to individual businesses, but lends money to microfinance institutions or invests in their share capital. Those institutions in turn provide loans, mostly ranging between $US 100 and $US 1,500, for a period of six months to one year, which enable micro entrepreneurs to start and expand their small businesses. The majority of these business operators are women who use the micro loans to improve their conditions and the lives of their families.

Several microfinance initiatives started in previous years. The existing structures should be used to develop funding schemes for slightly larger organizations (0 to 50 employees) but still not large enough to be classified as medium-sized companies with the related expectation to provide a balance sheet, business plan and significant collateral.

In countries with no banks specialized in environmental funding, the organizations involved with local management of microcredits would be good partners to develop into a financial intermediary providing additional services in cooperation with the NCPCs.

Additional information:

www.devdir-microfinance

www.microfinancegateway.org

www.mixmarket.org

www.uncdf.org

www.microcredit24.eu

www.mfnetwork.org

www.alternative-finance.org.uk/en/links.html

nt1.ids.ac.uk/eldis/fin/micro.htm

www.bellanet.org/partners/mfn

General credits for SMEs

Commercial banks are the main formal providers of financial services to the business community. They act as financial intermediaries by mobilizing deposits and savings, and then lending these resources as personal and business loans. Commercial banks largely do not distinguish financing opportunities by project type, e.g. CP versus pollution control or regular equipment loans. They review credit applications based on conventional considerations, such as the creditworthiness of the firm, and generation of sufficient cash flow to fulfil the required payback payments. Credit terms such as, maximum amount, interest rate, fees, collateral, payback period and repayment schedule, vary from bank to bank, and country to country, and are to be negotiated on the basis of the banks' appraisal of the credit application.

However, even in developed countries, there remains the necessity to make credits available to SMEs at favourable conditions. Therefore, for example, in Austria and Germany, specialized microfinance institutions in cooperation with partners such as industry organizations, local authorities and government, as well as the financial intermediaries develop tailored funding options for business startups, small scale industries and SMEs.

Such general SME initiatives are available in nearly all countries, and are often heavily promoted by industry representatives and government, and should be actively used for CP/EST projects and investments. Practically all institutions investigated during the course of the study claim that they have a special SME focus, and programmes adapted to their needs. Wherever possible, a specific funding line for environmental projects in small scale industry, should be negotiated by the NCPCs with the national actors.

The results of the survey show that, to overcome SME obstacles for obtaining funding, improving the accounting and finance competence as well as management systems in SMEs, is vital. This relates well with getting on board national industry representatives and Ministries of Economic Affairs, who often have a special SME focus and related programmes, but are generally not so involved when the subject matter is related to environmental protection issues.

National grants for environmental protection

In many European countries, but only in some of the funding schemes elsewhere, companies can apply for a grant (subsidy) for specific environmental investments. These schemes are generally financed by the national Ministry of Environment or bilateral aid, but administered by a specialized financial institution.

Often, only specific credit lines are available, but this incentive does not seem to be strong enough, especially in the early diffusion stages of specific technologies. Currently, many grant schemes relate to improving energy efficiency and climate change impact. Some of the bilateral funding schemes such as SECO, combine an investment grant with favourable credit terms. The grant rate for additional environmental investments, where available, is in the range of 20-40 per cent of total investment costs.

The Tunisian government initiated the industrial environmental fund (FODEP) with the support of KfW, and at the same time required industrial companies to comply with stricter environmental regulation, and to carry the additional costs themselves, according to "the polluters pay" principle. The environmental fund was created to assist companies, by subsidizing the necessary investments needed to ensure legal compliance. Eligible for funding are investments for wastewater treatment, solid waste disposal as well as clean air improvement

and noise protection due to the wide spectrum of environmental problems deriving from these areas.

The following actors are involved in the work of the environmental fund (GTZ et.al, 2006): the Environmental Fund (FODEP) itself, which is a unit within the environmental authority (ANPE), a ministerial consultative commission, the Ministry of Environment, selected Tunisian commercial banks, the Central Bank of Tunisia, the donor agency and the companies.

The structure of the schemes in Austria (see page 52) and in Tunisia are quite similar: the Tunisian company first has to apply for funding from the environmental fund. It thus submits an investment application to one of the commercial banks and the FODEP for appraisal. The bank decides on the applicant's creditworthiness as well as on the financial contributions and the risks taken by the bank. FODEP assesses the technical aspects and proposes the level of grant to be given. It then forwards the application to the commission and the Ministry of Environment, which takes the final decision about approving the funding. Upon the Ministry's and the bank's approval, KfW approves the release of grant funds, provided by German Financial Cooperation. It is then the central bank, acting as an Apex bank to all national banks, that releases the investment grant of up to 20 per cent of the total cost of the sub-project. The company finally receives a credit and a grant to carry out its investment. It can receive a grant of up to 20 per cent of the overall cost and up to 50 per cent in form of a credit. At least 30 per cent of the total investment has to come from the company's sources.

GTZ reports that in the beginning there was a big need to communicate and promote the new financing facility, to gain the interest and confidence of participating banks. The strong legal framework and the transparency of grants and credits proved to be important elements in the success of the offer. Later, demand was so big, although the process was lengthy as the Minister had to decide on every case, that the donor increased its financial engagement twice.

Similar instruments have also been initiated by KfW in Egypt, Morocco, India, Chile, El Salvador, Sri Lanka and the Philippines. This instrument should be made available in all countries, as it is a highly efficient means to achieve environmental protection, legal compliance and industrial development.

Tax incentives

Governments can also introduce policy incentives that reduce the capital cost of the CP investment, for example, by a tax credit or import tax exemption. But, economic instruments such as taxes are hardly used for environmental protection in any of the countries surveyed. There is a vast field for development together with national governments.

Only in 22 per cent (22 per cent) of all responding countries (Colombia, Honduras, India, Mexico) are there tax incentives for CP/EST technologies. They mostly relate to an exemption from customs duty or VAT, (which is a cost factor in most of Latin America and may not be reclaimed as opposed to the system in Europe) or allow accelerated depreciation.

GTZ 2006 reports that in Paraguay, a major part of municipal revenue consists of a trade tax paid by large industries, based on their annual turnover. In close cooperation with three medium-sized cities, Caaguazú, Villarica and Coronel Oviedo, an economic instrument was designed that targeted a step-wise tax reduction, (to a maximum reduction of 20 per cent of tax payable) for those industries that implement CP programmes and can actually demonstrate measurable and independently verified results, such as emission reduction, pollution

minimization or increased efficiency in the use of natural resources. The implementation of the instrument required a modification of the municipal tributary ordinances, so that the reduced municipal tax income may be compensated within the framework of evaluation and verification procedures, and related fees. On the whole, the design of the system provides advantages to enterprises that make steady advances under a CP programme. The introduction of the tax reduction should be accompanied by awareness-raising, and information and training measures for public authorities, industries and independent consultants.

On the other hand, environmental taxes can be levied mostly on energy and some material inputs as well as waste and emission outputs. The environmental taxes are intended to incorporate external effects into the cost structure of the polluting organizations. While environmental taxes are primarily levied on businesses, they induce behavioural changes in all s ectors, including the consumer, through transmitted price signals. All authorities with fiscal responsibilities, including local and regional governments, can in principle apply eco-taxes. However, no examples were found in the countries surveyed.

An important aid to small enterprises has come up in the Brazilian legislation, which fits in well with the request from this study to develop funding schemes between microfinance and normal SME funding. The federal statute of MSEs established a legal framework favourable to small businesses, while the FÁCIL (The Easy One) programme increased the speed and practicality of procedures to open and register a company. The SIMPLES (The Simple One), the single tax for small companies, is sought to reduce the tax and social security burden and simplify bureaucratic processes in a clear manner.

Tax incentives can also be used for fundraising. The Netherlands has a unique method of raising funds for environmental projects. The key element in this model is the Green Funds Scheme, a tax incentive scheme enabling individual investors to put money into green projects. Individuals who invest in a green fund or save money with financial institutions practicing “green banking”, receive a rate lower than the market interest rate, but the tax incentive compensates for this. The banks in turn charge green projects a low interest rate. In the Netherlands, an individual investor would normally pay 1.2 per cent capital gains tax on the amount invested, but green capital is exempt up to a maximum of EUR 53,421 per person (2007). Green investors also pay less income tax on their green capital. Their reduction is 1.3 per cent, so the total tax advantage is 2.5 per cent. This means they can accept a lower interest rate or dividend on their investment.

Equity finance and socially responsible investment (SRI)

An important source of capital to finance CP investments is retained profits and shareholder capital. This capital does not require interest payments. However, shareholders demand a return on equity. Whether or not a company can access shareholder capital is most often not related to the intended use of the capital e.g. for investing in CP. Investment decisions of shareholders are rather based on overall performance of the company, in particular its financial strength and managerial competence, and the confidence it has built in the markets in which it operates.

But to obtain equity financing, companies must comply with stock exchange reporting standards, in order to generate capital through the issuance of shares. Improving the accounting, finance and reporting competence of SMEs is therefore vital.

As public environmental awareness increases, shareholders increasingly consider environmental performance in their investment behaviour. This has led to the emerging of green investment funds. Several financial institutions have launched “sustainability funds” or

"climate change funds", and some specifically invest in "ecological leaders" or "innovators" who display a significant "window" for CP opportunities, as these funds are often also actively searching for small and mid-caps in developing countries.

JI/CDM mechanism

Several countries have launched their JI/CDM programme for the purchase of Emission Reductions generated by JI and CDM projects. They use these emission reductions to meet their Kyoto Protocol target. Article 6 of the Kyoto Protocol defines JI projects as emission reducing projects conducted jointly by two annex-I countries. The CDM governed by article 12 of the Kyoto Protocol denotes the implementation of emission reducing projects in countries which are not listed in annex I of the UNFCCC.

Currently only a few countries are actively making use of the JI/CDM mechanism to foster environmental and economic development. Most of the projects available are in India, China and Brazil. India in particular is actively using the JI/CDM mechanism to promote environmental protection, and at the same time attract foreign money.

The Sustainable Business Assistance Program of the IFC (SBAP) recently published the first investors guide on carbon finance for Africa, developed in partnership with Africa Practice and the Canadian International Development Agency. This guide will raise the awareness of, and educate African countries and international investors in the potential of investments in projects generating carbon credits in Africa, and the requirements of that business.

UNDP and Fortis bank announced an agreement in June 2007, naming Fortis as the financial services provider for UNDP's MDG Carbon Facility. This announcement also marks the operational launch of the facility, an innovative means of harnessing the vast resources of the carbon market, to bring long-term sustainable development to a more diverse share of developing countries.

Under the terms of the partnership UNDP will help developing countries conceive projects intended to reduce emissions of GHGs, and will ensure that these projects meet the Kyoto Protocol's agreed standards, delivering benefits to the environment and broader human development. Fortis will then purchase, and subsequently sell, the emissions reduction credits generated by these projects. The income generated by Fortis' purchases will provide developing countries and communities with a new flow of resources to finance much needed investment, and to promote development.

SMEs could profit from the JI/CDM mechanism if projects in a sector or a region can be clustered (several biomass or small scale power plants in a region), as the average cost of registering a project ranges from EUR 50,000 to EUR 100,000. The possibility of selling the resulting ERUs and CERs covers on average 5-20 per cent of the investment costs, depending on the technology and the market price for ERUs and CERs.

7. Core issues and recommendations

It is obvious from the previous chapters that several initiatives to improve funding for SMEs were started around the year 2000. The survey carried out among all NCPCs investigated their success and revealed significant regional differences. The remaining hindrances of SMEs to obtain funding for their projects can be divided into general SME problems, which are the same all over the world, and problems specifically related to the funding of CP projects and EST investments.

Several studies and the responses of NCPCs to the survey suggest that the problem is not always availability of funding options, but rather the lack of information on CP/EST, as well as on funding options for CP/EST. The main obstacles among SMEs are lack of collateral, inadequate accounting and management systems, and poor preparation of financing proposals.

Similarly Hamner, 2001: As a number of financing institutions have commented, and studies clearly show, there is much more capital available for qualified projects than there are qualified projects.

Improving accounting and finance capacities is therefore a prerequisite not only for SMEs, but also for NCPCs. In addition, awareness, interest and capacities of financial intermediaries must be strengthened.

The statements of India's NCPCs emphasize these issues:

India: "Educating companies, SMEs in particular, and financing institutions will lead to larger acceptance and adoption of CP/EST. In case of SMEs, support is needed to assist them in the preparation of bankable proposals and to improve their accounting systems. For financing institutions, guidance is required for evaluating and appraising CP as a viable investment opportunity".

Typical situation of SMEs worldwide

SMEs' specific barriers to implementation of CP schemes include lack of professional management skills, poor record keeping, resistance by decision makers (exacerbated by the concentration of power with a few people), over-emphasis on production, non-involvement of workers, limited technical capabilities and access to technical information, limited skilled human capital, lack of in-house monitoring, poor maintenance, unstable finances, and high cost and low availability of capital for CP (Cooray, 1999). These are general management issues that challenge SMEs throughout the world, not only in the area of adopting CP strategies (McVay and Miehlbradt, 2000).

The global study of financing mechanisms to promote CP, performed by the ADB (Evans/Hammer, 2003), found that there is no shortage of capital financing available for CP improvements, but that the main obstacles among SMEs are lack of collateral and inadequate preparation of financial proposals.

The first case study in the 2006 IFC Report to the donor community highlights that the company described mainly lacked the capacity to develop a viable business plan, and introduce the needed financial management systems for its expansion. The funding provided by the IFC helped to implement internal financial management and control systems, which was a prerequisite to access financing for the planned investment with positive development and environmental effects.

With a well developed national environmental funding scheme, Colombia also says that the remaining problem for SMEs is that companies have problems identifying CP/EST options that fall within the national funding scheme, and preparing the information requested to apply for funding. Another problem is that financial institutions tend to provide credits to companies that have a solid history and financial records, but the NCPC found that the companies that need funding most to solve their environmental problems sometimes do not qualify for credits because of their poor financial performance and lack of financial records.

The typical situation of SMEs in developing countries seems to comprise of:

- Very poor accounting and management systems and internal control procedures;
- Lack of information on technological as well as on funding options;
- High prices for technologies;
- Low wages and low cost of water, wastewater treatment and waste disposal;
- Lack of enforcement of legal compliance;
- Very old and inefficient production equipment;
- Little access to external capital;
- Quality, price and environmental pressure from customers.

The recommendations from the NCPC survey focused on the following aspects:

- ROI is the selling key argument for CP;
- Promote management accounting and systems;
- Alter the price signals by inducing economic instruments;
- Funding must be organized in addition to CP consulting;
- Technical solution and funding must go hand-in-hand.

Tackling the SME obstacles and hindrances

The following hindrances quoted in the questionnaires are CP/EST specific. (The numbers in the brackets quote the survey results for Latin America):

- 83 per cent (67 per cent) Lack of knowledge on CP/EST options ;
- 83 per cent (78 per cent) Lack of availability of funding options;
- 61 per cent (33 per cent) Lengthy approval process;
- 50 per cent (44 per cent) Difficult application procedure.

The following hindrances can be seen as typical of SME problems worldwide:

- 61 per cent (78 per cent) Lack of knowledge on funding options;
- 56 per cent (56 per cent) Lack of time besides that for “normal business;”
- 56 per cent (67 per cent) Generally not considered “creditworthy” by commercial banks;
- 33 per cent (44 per cent) Too small an amount of money requested.

The suggestions for overcoming the obstacles are as follows:

- Demonstrating the profitability of CP/EST investments;
- Easier access to information for SMEs;
- Availability of one focal information point centralizing all funding options;

- Development of special funding lines for SMEs with better conditions compared to "normal" financing instruments;
- Development of special funding lines for small scale projects and companies (between microfinance and SME finance);
- Improving the accounting and investment appraisal competence of SMEs;
- Providing assistance to SMEs to apply for funding;
- Awareness-raising and capacity-building in financing institutions and governments;
- Providing economic incentives and enforcing legal compliance at government level.

Consulting on funding options is as important as consulting on CP/EST options. Development of a technical solution and identifying sources of funding must go hand in hand when dealing with SMEs. Guatemala for instance emphasized the necessity to assist SMEs in fulfilling the procedures and completing the forms provided by the banks, and preparing the investment proposal, in addition to providing assistance on CP/EST options. Likewise Schaltegger/ Burrit, 2000, emphasize that in many countries, the capacity for preparing financially and environmentally sound projects should be enhanced.

Many of the loans under various programmes through the World Bank, ADB, etc., are actually only applicable to medium and large scale industries, as the requirements to qualify for a credit (collateral, balance sheet, accounting and reporting standards) can hardly be met by small companies. Several countries thus initiated special funding schemes for SMEs, aimed at increasing collateral free flow of credit to small scale industries.

AMN AMRO Real de Brazil quote in their sustainability report that to become eligible for a microcredit, applicants do not have to show proof of income, but simply have to provide their identification, tax registration number and proof of residence. Loans range from EUR 76 to EUR 3,830. The average amount is EUR 613 with interest rates starting at 2 per cent a month.

Appropriate instruments specially targeting companies with 0 to 100 employees should be developed nationally through the cooperation of governments, financial intermediaries and industry representatives.

Regional differences in the availability of funding

Special funding lines for CP/EST are available in 67 per cent of all respondent countries, and in 78 per cent of all Latin American countries. Funding schemes are available in all Latin American countries, except for Guatemala and Nicaragua, but are sometimes hardly used by SMEs.

The SANet databank paints a similar picture. There are no funding options listed for Africa and hardly any for Asia (most of the entries for Asia relate to India), but there is a range of options for Latin America.

China, Guatemala, Lebanon, Nicaragua, Slovakia, United Republic of Tanzania and Viet Nam noted that no special CP/EST funding lines are available. However, in some of these countries, environmental funding is designed for municipalities to install wastewater treatment plants, and does not target SMEs. Only in exceptional circumstances can companies use it for CP/EST options. In some countries, such as Slovakia, the national environmental funding, which addressed municipalities, only recently opened for projects dealing with climate change impact reduction.

Lack of availability of funding options is a clear problem in Africa and parts of Asia. Here, as well, the length of the approval process, and the number of parties involved in obtaining funding, are a problem. But in Latin America the problem seems to be more related to lack

of information on funding options, and lack of appropriate financial and accounting systems. Meanwhile in Africa and some Asian countries the general bureaucracy of local governments and financial intermediaries still need to be addressed. The task in Latin America is simply to fine tune existing instruments to better fit the needs of SMEs and improve their accounting capacities.

The best system is when the NCPC is established as the technical unit of the national environmental funding scheme, while the financial administration is provided by one or more financial intermediaries. This is perhaps the optimal situation for NCPCs and is established in 28 per cent of all respondent countries, and specifically in 44 per cent of all Latin American countries that participated in the survey, i.e. Bolivia, Colombia, El Salvador, Peru and also in Morocco.

Improving the accounting and finance capabilities of SMEs and NCPCs

The IFC organized its TAAS operations into five business lines:

- Business enabling environment;
- Value addition to firms;
- Environment and social sustainability;
- Infrastructure;
- Access to finance.

CP is part of the environmental sustainability business line, but it is important to note that value addition to firms and access to finance have been designed as business lines on their own, due to the significant lack of these competences and structures in the countries where the IFC is present.

Other initiatives emphasized the need to promote costing and environmental management accounting (EMA) as tools to promote CP. Several institutions promoting CP were also involved in the United Nations-led Expert Working Group on "Improving the role of government in the promotion of EMA".

The United Nations Department of Economics and Social Affairs (UN/DESA) published "Environmental Management Accounting Procedures and Principles" (Jasch, 2001). There are several examples of EMA applications in developing countries and economies in transition. In the Philippines, EMA is a key instrument in promoting the CP concept among the business community and is being actively disseminated by accountants.

Huhtala/Cicozzi, 2002 report several examples in developing countries and economies in transition. The NCPC in Zimbabwe used case studies of companies to illustrate the concept of EMA to the Trust Bank, as well as the economic benefits achieved by the companies implementing CP. As a result, the bank's credit line for export-oriented SMEs promotes investments with an environmental management component. In 2004 Costa Rica organized an EMA public workshop, "Train the trainer" seminars and five company case studies, which were followed by several publications to broadly disseminate awareness and tools (Jasch/Danse, 2005).

Environmental issues, along with the related costs, revenues and benefits, are of increasing concern to many countries around the world. But there is a growing consensus that conventional accounting practices simply do not provide adequate information for environmental management purposes. To fill the gap, EMA has been receiving increasing attention. Much of this interest was spurred by the Working Group on EMA of the United Nations Division

for Sustainable Development, and the publications commissioned by it (www.un.org/esa/dsd). The International Federation of Accountants (IFAC) commissioned a guidance document on EMA initiated by the first two publications of the United Nations Division for Sustainable Development Working Group on EMA (IFAC, 2005).

Simply defined, EMA is management accounting with a focus on physical information of the flow of energy, water, products and materials, as well as monetary information on environmental costs and revenues, and projects related to environmental protection. EMA is closely related to process costing, or activity-based costing as well as to environmental performance and management systems. If well designed and implemented, EMA helps to ensure better internal management and decision making e.g. for investment appraisal, CP, improving eco-efficiency and calculating savings within organizations, and also serves as a basis for external accounting and reporting.

On the internal management side, EMA helps the organization to track and manage its physical and associated monetary resources more effectively, and to identify opportunities for cost savings. The benefits of applying EMA include efficiency improvements, better decision making based on consistent information systems, or strategic advantages, e.g. by better assessing the consequences of new regulations such as emission trading. Accountants who work within organizations can play a critical role by providing needed data, and by working with non-accounting colleagues to ensure that the organization's information systems and reports are designed with these goals in mind.

On the external reporting side, EMA provides information to external stakeholders such as shareholders, rating agencies, environmental regulatory agencies and statistical agencies, on organizational performance and risks, both environmental and financial. The reporting ranges from integrating these issues into standard financial reports, to providing information for separate environmental or sustainability reports. Accountants within organizations play a key role in providing the information needed, and external auditors play a key role in verifying the accuracy of the information reported, as well as verifying the information systems and practices from which the information is derived.

The fact that corporate environmental costs are not clearly defined and fully, and systematically recorded, often leads to distorted calculations for improvement options. Environmental protection projects, aiming at preventing or reducing emissions and wastes at source (avoidance option), by better utilizing raw and auxiliary materials and requiring less hazardous raw materials, are not recognized and implemented. Consequently the economic and ecological advantages to be derived from such measures are not used. The people in charge are often not aware that producing wastes and emissions is more expensive than disposing of them. By preventing the generation of waste and emissions through process optimization, the wastage of raw materials, energy and operation time can be reduced and in some cases totally eliminated. Therefore, the issue of treating waste and emissions or their disposal can be eliminated or drastically reduced at the sources.

Management accounting within an organization also includes the development of indicators and statistics based on past organizational performance, calculating savings, as well as more future oriented activities such as budgeting and investment appraisal. All of these activities make use of the data collected in the organization's information systems, such as book keeping and production planning, however different methods are used to determine the costs, earnings, savings and liquidity needs for the future. However, experience shows that these information systems are frequently not checked for consistency, and thus numerous business decisions are calculated on the basis of incorrect or incomplete estimates. This is often fatal from the economic and environmental point of view.

The definition of EMA adopted by the United Nations Expert Working Group on EMA distinctively highlights the physical and monetary side of EMA. According to the United Nations group, EMA is broadly defined as the identification, collection, analysis and use of two types of information for internal decision making:

- Physical information on the use, flows, and fates of energy, water and materials (including wastes);
- Monetary information on environmentally related costs, earnings and savings.

Adding the purchase value of non-product output (material flow costs) to the corporate environmental costs, increases the share of environmental costs in relation to other costs. However, it is not the goal to show that environmental protection is expensive, but rather to highlight the scope for savings potentials. It is also not the most important task to spend a lot of time defining exactly which costs are environmental or not, or what percentage of something is environmental or not. Environmental protection projects not only have effects on nature, but also on neighbours (noise, odours, pollution), and employees (health and safety), if related to material and energy flows. In addition these projects contribute to the reduction of risks to employees, nature and neighbours in case of accidents.

It is often difficult to determine the environmental portion of these costs. As with integrated clean technologies that are often more cost and material efficient, the environmental portion of health and safety or risk prevention activities usually cannot be determined precisely. In general, it may be stated that assets that are allotted 100 per cent to the environment are bad for the environment, as they are often end-of-pipe technologies that do not solve the problem at the source, but rather shift it from one environmental medium to another e.g. from the air to the soil and then into the water. These approaches are expensive and inefficient.

The most important task is to make sure that ALL relevant and significant costs are considered when making business decisions. In other words, corporate environmental costs are just a subset of the bigger cost universe that is necessary for good decision making. Environmental costs are part of an integrated system of materials, energy and money flows through a corporation, and not a separate type of cost. Doing EMA is simply doing better, more comprehensive management accounting, while wearing an environmental hat that opens the eyes to hidden costs. Therefore, the focus of material flow accounting is no longer assessing the total environmental costs, but on a revised calculation of production costs, on the basis of material flows including energy and water.

Some of the general recommendations that came out of the United Nations CP Financing programme reaffirm this (UNEP, 2001c):

- Enterprises should establish practices to measure and reflect the cost of waste management and external environmental costs;
- There is a strong need to measure the economic benefits of CP i.e. what can be the costs and benefits of doing things in a different way.

The results of the survey show the broad agreement of the NCPCs worldwide on these recommendations.

Bolivia: “The experience shows that the implementation of cleaner production practices generates important savings in the operational cost and additional earnings for the companies. Usually, the return over the investment in these kinds of projects is high as well as the internal rate of return and the net present value. Then, these projects are attractive from a financial point of view. Moreover, they have a good impact on the environment since they reduce pollution at source. For these reasons, financial institutions are getting more interested in

providing funds for them. But, usually SMEs don't have financial reports or they are of bad quality. Financial institutions take into account the total operations of SMEs to approve a loan, the lack of accurate accounting information make the evaluation process difficult, even when the CP/EST project is well done".

39 per cent (44 per cent) of all countries reported that the applicants have problems with submitting the information required to obtain funding, as the quality of accounting systems in SMEs is very poorly developed. The statements of two other countries emphasize this major obstacle.

El Salvador: "The remaining hindrances for SMEs are:
- Too little money requested and therefore not of interest to banks;
- Generally not considered "creditworthy" by normal banks;
- The funding application procedure is difficult for SMEs because of lack of awareness on CP options and;
- General SME problems such as lack of time and bad accounting systems."

Morocco: "The major problems of the national environmental fund are the bureaucratic burden and the fact that banks are reluctant to give credits to enterprises having no traceable records."

In order to be able to fulfill the task of improving the accounting and EMA capacity of SMEs, a significant increase in competence of the NCPCs is required. UNIDO should therefore provide tools and training packages which comprise:
- Components of investment promotion, project formulation and appraisal, and technology transfer;
- EMA promotion and application tool;
- Linking EMA with the COMFAR tool.

Strengthening the capacity and interest of financial intermediaries

Only in 28 per cent (33 per cent) of all respondent countries are there national banks specialized in funding environmental projects, i.e. in Bolivia, El Salvador, Honduras, Mexico and Sri Lanka. In Latin America the situation is much better as revealed by the statistics, as several financial intermediaries are distributing the environmental fund set up with bilateral cooperation and the NCPCs. These NCPCs include Bolivia, Colombia, El Salvador and Peru. The Latin American case studies described in chapter 3 were specifically tailored to overcome some of the difficulties associated with CP financing. One of the most innovative aspects of these initiatives is that they target not just the industrial sector, but also banks and other financial institutions. They aim to help financial institutions understand CP, helping companies develop creditworthy CP investment proposals.

As environmental financing can hardly be implemented without the involvement of the financial sector, awareness and assistance may be needed to broaden the services of the domestic financial market. Ministries of Environment usually do not directly manage environmental funds, but provide the necessary resources and cooperate with the financial sector. In many cases a well developed financial sector is not in place, thus assistance to interested financial institutions entering into this new lending field may be required. Creating an economic structure capable of providing long-term financing will eventually establish a financial market, where the necessary funding to subsidize lending will come from sources other than donor agencies.

UNEP (2001c) carried out a study on past investment practices in eight countries, i.e. in Guatemala, India, Lithuania, Mexico, Nicaragua, United Republic of Tanzania, Viet Nam and Zimbabwe. The outcomes of this study are summarized below:

- In many developing countries bank loans are considered unattractive due to high interest rates and unattractive terms. Most companies require low interest, long-term loans for environmental projects.
- The procedure for borrowing money from commercial banks is often complicated and costly.
- In many banks the due diligence process considers mainly the financial aspects of loan applications, without paying much attention to the technical aspects.

The IFC is the cooperation partner needed for the capacity-building of the financial institutions in developing countries, and for transforming MFIs and schemes into full banking services. Expanding access to finance in developing markets is the core of IFC's FM TA department, particularly by fostering the development of domestic financial markets.

With the upswing of microcredits in recent years, these experiences should be taken as a starting point to fine tune financial products for small scale companies of 0 to 100 employees, with conditions and loan requirements "in between a balance sheet and collateral, on the one side and simply showing the social security number on the other side". With well developed national green funding schemes, Bolivia and El Salvador also suggested such instruments.

Bolivia: "There is a need to improve the conditions of access to credit by small industries, and extend technical assistance to industries and financial institutions."

El Salvador: "Develop a special funding special line for SMEs, including attractive conditions regarding guarantees and interest rates."

8. Annex

The questionnaire

The following questionnaire was sent to all NCPCs in April 2007.

Introduction to the questionnaire:

In this questionnaire, we use the term "funding" for the many different CP/EST financing options provided to SMEs (and not as funding to the CP Centres establishment and operation).

Grants or subsidies are funds given by tax-exempt non-profit organizations or governments to foundations, corporations, governments, small business and individuals. Most grants are made to fund a specific project and require some level of reporting. The process involves an applicant submitting a proposal to a potential funder, either on the applicant's own initiative or in response to a Request for Proposals from the funder.[4] Other grants can be given to individuals, who seek to open a small business. This can also include consulting days by a CP specialist, which are offered for free by some institutions. Grants don't need to be paid back.

A loan or credit is a type of debt. Like all debt instruments, a loan entails the redistribution of financial assets over time, between the lender and the borrower. The borrower initially receives an amount of money from the lender, which he pays back, usually but not always in regular instalments, to the lender. This service is generally provided at a cost, referred to as interest on the debt. Acting as a provider of loans is one of the principal tasks for financial institutions. Any movement of financial capital is normally quite dependent on credit, which in turn is dependent on the reputation or creditworthiness of the applicant.

1. Who provides funding to SMEs for CP projects and EST investments?

   Please note: We are not asking for the funding of the CP Centres themselves, but about funding schemes available to SMEs to perform and invest in CP/EST measures and technologies.

1.(a) Who provides funding to SMEs for CP projects and EST investments? Please tick:

- Ministry of Environment ❑
- Ministry of Technology, Science and Research ❑
- Ministry of Finance ❑
- Ministry of Industry ❑

[4] In Austria, grants for CP/EST are provided by the Ministry of Environment and range from 10 to 30 per cent of the investment volume. They are managed by a bank that is specialized in funding for utilities, municipalities and environmental projects, e.g. climate change and cleaner technologies. The Chamber of Commerce provides free initial consulting days on specific issues, e.g. energy efficiency.

Environmental Protection Agency	❑
Chamber of Commerce	❑
Industrial associations	❑
General banking institutions within their normal credit schemes	❑
Banks with specialized CP/EST funding options	❑
Bank specialized in utility funding and environmental issues	❑
Bilateral cooperation	❑
Other institutions, which?	❑

1.(b) Has there been or is there a special funding line for CP/EST projects and investments in your country? What are the experiences?

1.(c) Is there one central national information point for funding options? Who? Please provide contact details:

1.(d) Would it be an option for your CP centre to take over this role? Please explain your answer:

1.(e) Is there a bank in your country specialized in funding environmental projects (administering environmental loans on behalf of national governments, providing credits at favourable rates, evaluating the environmental benefits of applications, managing climate change projects, etc.)?

1.(f) Would it be an option for your CP centre to take over this role? Please explain your answer:

1.(g) Are there tax incentives for CP/EST projects and technologies? Which?

1.(h) Are there tax hindrances for CP/EST projects and technologies? Which (e.g. taxes or import duties on "new technologies" compared to "second hand" equipment)?

2. Obstacles and hindrances

2.(a) What are the main obstacles and hindrances for SMEs?

Lack of knowledge on CP/EST options	❑
Lack of knowledge on funding options	❑
Lack of availability of funding options	❑
Lack of time besides "normal business"	❑
Difficult application procedure	❑
Long time of approval process	❑
Number of involved parties to obtain funding	❑
Generally not considered "creditworthy" by normal banks	❑
Too small amount of money requested and therefor not of interest to banks	❑
Other, please specify:	❑

2.(b) Please comment on the main hindrances in your country:

2.(c) Are there improvement suggestions?

3. Involvement of the CP centre in obtaining funding for SMEs

3.(a) To what degree is the CP centre involved in:

Proving information on funding options? ❑
Calculating the profitability (RoI, NRR, etc.) of the investment? ❑
Evaluating the environmental benefits of the investment? ❑
Preparing the project application for the SME? ❑
Administrating the distribution of money on behalf of government? ❑
Checking the project results and officially approving the final project outcome ❑
Other, please specify: ❑

3.(b) What are your strengths in assisting SMEs to obtain funding for CP/EST options?

3.(c) What are your weaknesses in assisting SMEs to obtain funding for CP/EST options?

3.(d) How do you see your role?

Intermediary between government and SMEs
(information point and funding agency)? ❑
Intermediary between banks and SMEs
(facilitating communication with banks)? ❑
Consulting on CP options to SMEs
(direct consulting like other engineers and environmental experts)? ❑

4. Details on the different funding schemes

Please copy this section and fill it out separately for the different funding schemes available in your country! Please provide additional information in English or Spanish either as inserted text or as an attached pdf-file.

For each national CP/EST funding scheme, please quote:

4.(a) Name of the Scheme:

4.(b) Who is providing the money? (Name, address, telephone number, web page, E-mail)

4.(c) What is being funded?
❑ Only the technology investment?
❑ Also related consulting fees, research work and internal labour?
❑ Also funding for general measures for environmental management e.g. the installation of an environmental management system according to ISO 14001?
❑ Is the CP centre eligible for funding of its consulting services within this scheme?

4.(d) Does the funding scheme make a difference between end-of-pipe and CP/EST options? What difference?

4.(e) What are the financial terms for funding (payback times, interest rate, rate of subsidy, guaranties, securities, maximum amount of money etc.)?

4.(f) Who can apply for funding?

- ❑ Only the company who invests in a certain technology?
- ❑ Also scientists and consultants who assist in the implementation process?
- ❑ Also the CP centre?
- ❑ Other, please explain

4.(g) Is there assistance to prepare an application? Provided by whom?

4.(h) What are the experiences with this funding scheme?

4.(i) What do the applicants have to submit for funding?

Balance sheet	❑
Profitability calculation for the project (RoI, IRR, etc,)	❑
Proof of creditability	❑
Securities	❑
Material input comparison of the old and new technology	❑
Energy input comparison of the old and new technology	❑
Emission outputs of the old and new system	❑
Climate change effect	❑
Other environmental benefit assessment	❑
Other, please specify:	❑

4.(l) Do the applicants have problems in submitting the requested information? With what?

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