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ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-fifth Meeting
Montreal, 5-7 December 2001

CONCESSIONAL LENDING: FOLLOW-UP TO DECISION 34/69

1. Decision 34/69 requested the Secretariat:

“to recirculate its document UNEP/OzL.Pro/ExCom/29/59, as well as the note produced by the representative of Canada, reporting on the informal meeting convened on 23 November 1999 during the 29th Meeting of the Executive Committee at Beijing;

to prepare a report containing a compilation of the experience of the World Bank, which had applied innovative funding modalities to projects financed by the Multilateral Fund in Mexico, Thailand and Turkey, as well as other relevant information that could facilitate the understanding of the process of concessional lending.”

2. Accordingly this submission from the Secretariat contains three annexes, namely:

Annex I	UNEP/OzL.Pro/ExCom/29/59;
Annex II	Informal discussion on the informal meeting on concessional lending, 23 November, 1999;
Annex III	Financing matters: Innovative financing for effective ODS phaseout, an information paper from the World Bank.

ANNEX I

UNEP/OzL.Pro/ExCom/29/59



**United Nations
Environment
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UNEP/OzL.Pro/ExCom/29/59
22 October 1999

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Twenty-ninth Meeting
Beijing, 24-26 November 1999

CONCESSIONAL LENDING

Introduction

This report is prepared in response to Decision 28/48 by which the Executive Committee took note of the four principles presented by Canada and discussed by the Executive Committee and decided to “invite the members of the Executive Committee to submit to the Secretariat comments on these four principles or further such principles required, to be incorporated into a broad framework document to be considered at the Twenty-ninth Meeting of the Executive Committee; and discuss the issue and the principles at the Twenty-ninth Meeting, both as an item on the agenda and in a large-scale informal meeting”.

(Decision 28/48)

This report contains the four principles which were presented by Canada and discussed by the Executive Committee at the 28th meeting, and the comments on the four principles and further principles submitted by Burkina Faso, Italy, Japan and Sweden in accordance with the above decision.

The report also contains a draft framework proposed by the Secretariat for consideration by the Executive Committee at its 29th meeting. The draft framework is based on the principles and the comments thereon from members of the Executive Committee.

Principles presented by Canada and discussed by the Executive Committee at the 28th Meeting

- Recipient Governments should not be required to assume additional official debt as a result of agreeing to Multilateral Fund projects that utilized more innovative financing arrangements;
- If a country agreed to a project which included concessional lending or “innovative funding” arrangements, any funds which are eventually repaid to the project should be used, at the direction of the Executive Committee, to address further related needs within the same country;
- The parameters of innovative financing projects must be tailored to meet the needs of the project being considered and the capacity of the recipient country;
- The operation of concessional loans, or other innovative financing mechanisms, required an appropriate provision for administrative costs.

- (i) Submissions to the 29th Meeting from members of the Executive Committee

Burkina Faso

1. We have engaged ourselves decisively on concessional lending rate. To do so we all need to understand the principles that will guide us.
2. Besides the acceptable principles proposed by Canada there is one that should be added perhaps as principle 5. That the concessional lending rate applies to all enterprises in eligible sectors whatever their size. I want to make reference to the end users and we need to review the cuts for less than US \$500,000, US \$1,000,000 and more than US \$1,000,000 where we had decided they should be reviewed on a case by case basis.
3. Everyone must accept all the principles.

Italy

1. Loans should be complementary to grants rather than replace them.
2. They should be applied to “win/win” solutions, where all stakeholders find something positive.
3. Equitable solutions for disbursing loans to Small Medium Size Enterprises (SMEs) should be sought.

We reserve further comments and inputs once we receive the draft “broad framework documents”.

Japan

Before commenting on each of the four principles, we express our appreciation to the Canadian Government’s initiative on this issue. We believe that all of these principles as identified by Canada are pertinent and conducive to the resolution of the problems involved in concessional lending.

Principle 1 (non assumption of additional official debt by recipient Governments).

This principle is hardly acceptable as a matter of principle as any lending entails the obligation of repayment. The recipient government cannot but eventually incur obligation in some fashion as

long as the lending arrangement is concluded between the recipient government and the Multilateral Fund or the implementing agency on behalf of the Fund. However, as reported by the World Bank, the case of the project it implemented in Thailand indicates that the government can be waived the incurring of direct obligation while the private enterprise commits itself to repaying the costs of purchase of equipment and the related services for which the government provides a guarantee. Such a case suggests the feasibility of developing an acceptable loan arrangement.

Principle 2 (reuse of the funds repaid in the same recipient country).

In view of the objective of the concessional lending e.g. increase the overall amount of aid resources available, it would not be appropriate if it were decided in advance that any funds to be repaid should be ear-marked for the financing of future projects in the same recipient country. Such an arrangement would prevent the Fund from allocating and managing its resources in the most effective way. Even if the Executive Committee admits the reallocation of the funds repaid to the original recipient country, such funds shall be made available on a loan basis.

Principle 3 (parameters of financing conditions depend on the needs and the capacity of the recipient).

We agree to this principle. Nevertheless, the credit worthiness of the recipient country and the beneficiary of the concessional loan is indispensable for loan arrangements in order not to impair the financial base of the Fund.

Principle 4 (provision for administrative costs).

The imposition of the administrative costs is an obvious need. But the 13 per cent programme support cost should not be a basis for determining the level of administrative costs for concessional lending if the level of the lending far exceeds that of normal assistance and investment projects.

Sweden

In relation to the third principle “the parameters of innovative financing”.

In particular conversion projects that lead to savings in operations costs should be considered for concessional lending, where a direct relationship should be sought between the amount of the savings and the term of concessionality.

As a general Swedish principle.

A concessional facility, if established should be accommodated within a total replenishment for 2000-2002 not exceeding the 1997-1999 replenishment, calculated at its net value.

Framework for discussion

Overarching principles for the concessional lending programme

- A lending programme should be complementary to the grant programme and not replace it.
- Use of concessional lending should not result in additional official debt for any Article 5 country whose enterprise(s) may decide to avail itself of the lending programme.

Flexibility in operating the lending programme

The lending programme should be tailored to the needs of projects and the capacity of the recipient country. Therefore there should be flexibility in

- Forms of funding. There could be straight lending from the Multilateral Fund, like in the case of the Thai chiller replacement programme. There could also be grants from the Fund but managed as lending in the country.
Under either form, however, project appraisal and monitoring are necessary to maintain the value of the resources of the Fund.
- Recycling of funds. Funds could revolve within the country, but on lending basis. Funds could also be returned to the Fund for reallocation to maximize efficiency.

Eligibility criteria

- The lending programme should be accessible to all enterprises in eligible sectors irrespective of their size.
- Projects with operating savings should be able to access the lending programme and the concessional terms could be proportional to the amount of savings of the project.
- SMEs should be treated in equitable terms under the concessional lending programme.

Administrative cost

- There should be appropriate level of administrative cost to support any lending programme.

The level of cost should be based on project/programme size and not the current 13 percent support cost regime for the grant programme.

ANNEX II

**INFORMAL DISCUSSION ON THE INFORMAL MEETING ON
CONCESSIONAL LENDING, 23 NOVEMBER 1999**

**INFORMAL DISCUSSION
OF THE INFORMAL MEETING ON CONCESSIONAL LENDING**

23 NOVEMBER 1999

The informal discussion on concessional lending was held on Tuesday, 23 November 1999 from 11:00 a.m. to 1:30 p.m. at the Great Wall Sheraton in Beijing. The convenor of the informal group, Canada, chaired the meeting, which was attended by representatives of several delegations and implementing agencies.

The convenor summarized the following points which were raised at the informal discussion:

- (a) Support was expressed for the four principles discussed at the Twenty-eighth Meeting of the Executive Committee.
- (b) In addition to that, mention was made of the need:
 - (i) for loans to be voluntary;
 - (ii) to examine experience to date, in particular with regard to the World Bank's case studies, copies of which were made available during the discussion;
 - (iii) to continue work on concessional lending, because it was perceived that modalities for implementing loans were still some way off;
 - (iv) to raise awareness among concerned stakeholders and address some current perceptions about concessional loans.
- (c) The framework presented in pages 4 and 5 of the Secretariat's document, UNEP/OzL.Pro/ExCom/29/59, was considered a useful basis for further discussion.
- (d) Article 5 Parties indicated that a number of questions remained, in particular about eligibility issues.
- (e) For loans to work, there needs to be appropriate institutional infrastructure and financial arrangements.
- (f) For projects funded through concessional loans to be successful they need to be designed in the best economic interest of the recipients.

There was a suggestion that, in addition to the four principles noted at the Twenty-eight Meeting of the Executive Committee, there appeared to be a developing consensus on the following points:

1. A lending programme should be complementary to the grant programme and not replace it;
2. Loans should be voluntary in all cases;
3. All relevant experience to date should be examined;
4. Work should continue on pilot initiatives, on a case by case basis, because the development of modalities to apply concessional lending was still some way off.

The Convenor concluded the meeting at 1.30p.m. on Tuesday, 23 November 1999.

ANNEX III

**FINANCING MATTERS: INNOVATIVE FINANCING FOR EFFECTIVE ODS
PHASEOUT, AN INFORMATION PAPER FROM THE WORLD BANK**

INFORMATION PAPER

FINANCING MATTERS: Innovative Financing for Effective ODS Phaseout

THE WORLD BANK
Montreal Protocol Operations Unit
Environment Department

October 2001

FINANCING MATTERS

INNOVATIVE FINANCING FOR EFFECTIVE ODS PHASEOUT

This brochure is intended to present an overview of some current ideas and findings related to “innovative financing.” It aims to highlight key features of this issue and stimulate comment and active participation from different actors for the design and support of future projects and programs. It does not intend to prescribe “magic formulas,” as every country and sector has specific needs and conditions to meet.

1. Evolving Needs for Financial Resources

The Montreal Protocol on Substances that Deplete the Ozone Layer (MP) has been the most comprehensive and successful international environmental agreement to date. Since its creation in 1987, the Montreal Protocol has significantly evolved in response to new scientific findings on the extent of the damage of the stratospheric ozone layer. Many more chemicals have been added to the list of controlled substances under the Protocol. Strong commitments of government and industry all over the world have resulted in a breakthrough in the development of alternative technologies. These factors have contributed to a more stringent phaseout schedule than the one first agreed upon in 1987.

Thus far, almost all production and consumption of virgin chemicals listed in Annex A of the Montreal Protocol have been phased out in the developed world. Similar control measures requiring a gradual end to the production and consumption of these chemicals have started taking effect in Article 5 countries since 1 July 1999. Therefore, the upcoming decade will not only be the latest stage in the evolution of the Montreal Protocol but also a very critical time for the Parties. This is of particular importance as compliance with the upcoming consumption-reduction schedule by Article 5 countries is the key measure of the success of the Montreal Protocol. Already, significant consumption-reduction is underway in most Article 5 countries. The Multilateral Fund (MLF) for the Implementation of the Montreal Protocol has proven to be a successful mechanism in assisting Article 5 countries to phase out ODS in their countries. It is anticipated that all Article 5 countries will have met their first obligation under the Montreal Protocol—the 1999 freeze in consumption and production.

As they move towards the next target groups for the phaseout of various chemicals, including CFCs, halons and methyl bromide, Article 5 countries will face a much more challenging task. The targeted groups are diverse. They include small and medium enterprises, end-users, farmers, agricultural institutes, etc. To achieve sustainable phaseout in these sectors and to maintain the effective use of MLF resources, new ideas and innovative approaches are needed.

Competing Priorities for Funding

As new chemicals (e.g. process agents, hydrochlorofluorocarbons (HCFCs) and methyl bromide) have been added to the list of substances controlled under the Montreal Protocol, an increased demand for funding of the agreed incremental costs for ODS-investment projects has resulted, which could seriously affect the ability of the MLF to respond timely to the needs of Article 5 countries, particularly in the next decade when phaseout obligations are due.

Because of this pressing financial demand to assist Article 5 countries to fulfil their commitment to the Protocol, the Executive Committee of the MLF has seriously discussed and explored new

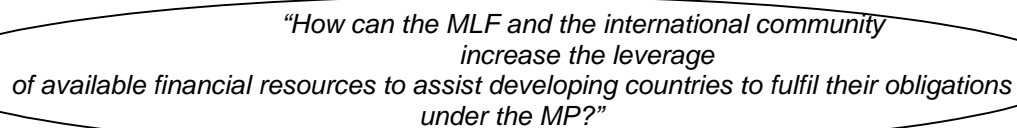
innovative financing approaches to enhance the efficiency of MLF operations.¹ In certain ODS consuming sectors, the outlook for innovative financing is quite promising. A small number of pilot projects that employ innovative financing components have already been supported by the MLF.

It is important that experiences gained from these pilot projects be incorporated in the future planning of ODS phaseout strategies in Article 5 countries. To ensure countries' compliance to the Protocol and to optimize the utilization of the limited resources of the MLF, new financing mechanisms (and how to prioritize their uses) need to be addressed.

Need for New Strategies

Strategic questions for the future are as follows:

On the **global level**:



“How can the MLF and the international community increase the leverage of available financial resources to assist developing countries to fulfil their obligations under the MP?”

And on the **national level**:



“What is the best option for every country and sector to make use of available financial resources for an accelerated phaseout of remaining ODS?”

Financing of future activities requires innovative thinking. In fact, the current grant financing approach (financial and technical assistance) of the MLF already employs an innovative component, the cost-effectiveness threshold,² to leverage additional counterpart funds from Article 5 country enterprises to cover part of the eligible incremental cost of conversion. To increase the leveraging effect, this traditional approach may need to be extended to include non-grant financing in the areas where it is possible. As some ODS phaseout projects have already proven that both environmental and commercial benefits can be rendered, win-win situations should be exploited and used for leveraging additional private and/or public capital.

2. Challenges in ODS-Project Design and Implementation

What to do Next and How?

As the phaseout schedule for Article 5 countries stipulated in the Montreal Protocol comes into effect, countries have to ensure that their annual consumption and production of controlled substances remain within the limits set forth by the Protocol. In order to do so, Article 5 countries have increased their efforts to put necessary policy and regulatory measures in place. The effectiveness of these measures depends on how quickly needed financial support is provided

¹ The mandate is “to meet, on a grant or concessional basis, the agreed incremental costs” of Parties operating under Article 5 of the Protocol (developing countries) to implement the control measures of the Protocol.

² Cost-effectiveness expressed by US\$/kg Ozone Depleting Potential (ODP).

to enable industry and consumers to conform with the initiatives. It is, therefore, necessary for all Parties to explore how the needs of Article 5 countries can be effectively addressed. For the last few years, Article 5 and non-Article 5 countries with a common objective to assure that all Article 5 countries will be able to meet all obligations under the Protocol, have been active in exploring new innovative financing schemes to increase the leverage of the Multilateral Fund.

Developing Countries and the Path to ODS Phaseout



1999	2002	2003	2005	2007	2010	2016	2040
Freeze •CFCs	Freeze • Methyl bromide • Halons	20 % reduction • CFCs Freeze • Methyl chloroform	50 % reduction • CFCs • Halons 85 % reduction • Carbon tetrachloride 30 % reduction • Methyl chloroform	85 % reduction • CFCs	Phaseout • CFCs • Halons • Carbon tetrachloride 70 % reduction • Methyl chloroform	Freeze • HCFCs	Phaseout • HCFCs

Under the grant regime, experience gained from the past years has shown that enterprises in developing countries are facing one major impediment which delays and hampers the timely implementation of projects: the **difficulty of assuring co-financing**. Global and national strategies should try to find and promote feasible options to overcome this barrier and assist stakeholders in identifying additional financial resources and partners.

Some steps in that direction have been undertaken over the past years; documents on financial options have been published, workshops have been organized and a contact group on concessional lending has been established. In addition, the first pilot projects with innovative financing components have been developed, submitted, and approved.

Future Challenges

The closure of global CFC production facilities will have significant impact on CFC phaseout in the consumption sector in Article 5 countries. In addition, the remaining ODS projects in the commercial and domestic refrigeration, methyl bromide, servicing, and end-user sectors, differ by their character from those in the past: most of them are SMEs, which in general have a low cost-efficiency, and are time-consuming to administer. Therefore, new and modified tools and approaches to ensure cost-efficiency and sustainability of these projects are required.

Flexible, tailor-made financial strategies which select and use a range of financial instruments should be developed and implemented in conjunction with timely implementation of government incentive programs, policy and regulatory support and an intense public awareness programs in order to link the ODS consuming sectors with the financial sector.

The Multilateral Fund and its Implementing Agencies could play an important role in acting as **facilitators** or catalysts to enhance and direct co-financing by promoting a financial mix in project design. New partners and capital providers like commercial banks, regional development banks, multilateral organizations and insurance companies could be attracted by new types of projects and potential markets (e.g., SMEs—including in agriculture), especially in projects which could provide a good return on investments.

Box 1: ODS-Phaseout-Related Barriers

In Phaseout Projects:

Cost-Benefit analysis shows that most conversions have a negative return on investment (ROI) and are therefore eligible for grants. As grants cover only the agreed incremental costs, there has not been sufficient consideration of the importance of ensuring complete project financing (counterpart funding) up to date.

Co-financing: Many enterprises point to a shortage of capital and lack of financing in local currency for co-financing, as well as a lack of guarantees and collateral. Insufficient or non-existent involvement from private capital providers, and other business development programs (technical assistance) appear to present yet another obstacle.

In Innovative Financing*

- Exclusion of foreign debt for recipient Governments.
- Uncertainty of ODS market price developments, especially CFCs.
- Perceived capital market distortions.
- Lack of concrete project experiences with innovative schemes due to conventional financing (grants).
- Lack of reliable information for investment opportunities.
- Time horizon concerning repayments of loans.
- The range of transaction costs.

**Some of the mentioned obstacles to innovative financing could be described as “incremental risks.” These are risks that cannot be mitigated by instruments and tools available in conventional project financing, e.g., due to high transaction costs, lack of collateral and small project costs. “Incremental” costs could partially or fully cover these incremental risks.*

Common to All ODS Projects:

- Time needed to meet targets of MP.
- Commercial Banks express imperfect information about capital markets especially targeted for SMEs and high degree of perceived risk (due to inadequate incentive structures) and costs.
- Regulations are not in place or enforced.
- Technology risks.

4. Interest of Different Stakeholders

On the micro-level, needs of the private sector in developing countries:

Enterprises are in general interested in improving their economic and financial situation through, for example, access to capital and financing in local currency. Additional incentives would be assistance in management training and capacity building.

In the case of a business with a potential for high margins, risk diversification and long-term profitability, support for start-up costs, knowledge transfer and institutional capacity can attract commercial banks and other capital providers.

On the macro-level:

Countries and the international community would like to achieve the maximum use of existing resources to enable all Article 5 countries to attain complete ODS phaseout within the timeframe required by the Protocol. Any possibility of increasing the utility level of the existing resources should be investigated. Leveraging the existing resources of the MLF by promoting new partnerships and new project financing mechanisms to

supplement the existing grant financing modality should be explored. New comprehensive financial and economic strategies for ODS phaseout within countries should be considered and developed.

The following table explains the specific objectives and interests of the different actors involved in the implementation of the Montreal Protocol and their decisions about the use and the origin of available resources. It should be clear that this breakdown represents a broad generalization of interests of various stakeholders.

Actors on Different Levels	Goals ³	How Obtained	Resources
MLF	ODS - ODS/US\$+	Political negotiation; political and scientific progress; (innovative) financing; technology transfer; technical assistance and institutional strengthening	MLF conventional (and innovative) financing
Country	ODS - Y + Empl +	Guidelines and criteria; grants; regulation in place; national ODS phaseout action plan; investments; GDP growth.	<ul style="list-style-type: none"> • MLF conventional and innovative financing • Other international/bilateral funds and investments • National funds
Company	Net Profit + Cfl + Costs -	Technology transfer; subsidies (e.g. incremental costs financed by MLF); access to cheap capital; economic benefits through investment; technical assistance; environmental friendly investment to comply with regulation	<ul style="list-style-type: none"> • MLF • Innovative financing <ul style="list-style-type: none"> • Co-Financing

5. What is "Innovative Financing?"

Starting from a more narrow term “concessional loans” as one possibility of financial assistance mentioned in the Montreal Protocol (Article 10), the term under discussion, “innovative financing” encompasses a broader spectrum of financial instruments and approaches.

What can be understood by innovative⁴ financing? There is no ready-made formula available.

However, a “theoretical definition” for innovative financing under the Montreal Protocol could be described as:

<p>Innovative financing for timely ODS phaseout</p>	<p>=</p>	<ul style="list-style-type: none"> • Cost-effective leverage of financial resources on different levels • Technical assistance like management training for enterprises • Support for new partnerships for integrated project financing
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³ + = increase; - = decrease; ODS = Ozone Depleting Substances; ODS/US\$= cost-efficiency of ODS phaseout; Y = GDP; Empl = Employment; Net profit = Profit after tax; Cfl = Cash flow

⁴ Innovation, often described as a function of human capital, technology, market conditions, regulation and institutional culture, is generally inhibited by a lack of competition and an excessive regulation of financial instruments.

Innovative financing should create additional or new sources of finance. To achieve this objective, the approach should be flexible enough to respond to policy and legal frameworks, and, the specific needs and nature of the industry and financial sectors in the country.

Box 2: Financial Terms

In order to ensure a common understanding of financial terms used in this document, the following definitions are provided:

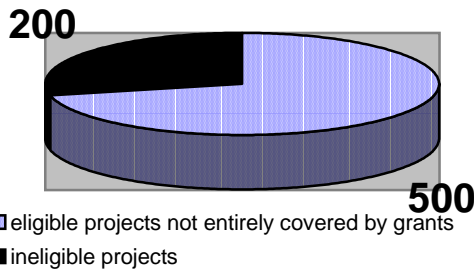
Conventional grant	=	buy-down of incremental costs at a fixed discount rate
Performance grant	=	possibility of disbursement in accordance with satisfactory project milestones (<i>could be a component in lending schemes</i>)
Contingent financing	=	variable discount rates reflecting different risk tolerances and profiles over time and across different actors
➤ Contingent grant	=	unsecured interest rate free “loan”, which has to be repaid if the project achieves its goals. The Thailand Chiller Project is a contingent grant project (see Annex III)
➤ Contingent loan	=	lower interest rates than commercial loans; if project fails, the loan would be partially or fully forgiven (e.g., IFC ⁵ /GEF SME Program, p. 12)
Partial risk or credit guarantee	=	some portion of perceived performance at risk is secured in order to attract equity and / or debt participation (e.g., IFC/GEF Hungarian Energy Efficiency Co-financing Program, p.12)
Leasing	=	alternative to owning the asset through 100% debt finance wherein the lessor grants the use of a fixed asset for a specific amount of time in exchange for payment usually in the form of rent from the leasee.

⁵ IFC = International Finance Corporation / World Bank Group

Box 3: Estimated Market for Potential Financial Demands

An IFC study⁶ concerning non-grant financing for projects under the MLF predicted a total requirement to phase out the remaining ODS in developing countries of **US\$1,500 million**:

- US\$700 million predicted demand for non-grant financing



- **US\$500 million** to finance portions of eligible projects **not covered by grants**, e.g., incremental operating savings (loans on top of grants).
- **US\$200 million** to finance projects that are **currently ineligible** for MLF funding, e.g., policy to be determined.
- Size of potential loan deals:
 US\$100,000 to US\$200,000 = 50%
 US\$ < \$50,000 = 40%
 (ideally for umbrella types)

- US\$800 million predicted demand for grants in projects or portions of projects under MLF rules

Source: IFC Study 1998

6. Innovative Financing Applications

The following is an overview of potential areas where innovative financing components (such as financing by different environmental funds or by country-administered revolving funds) could be employed to accelerate ODS phaseout and to achieve MP obligations:

- Projects with grant-eligible portions which are significantly less than total project costs and which lack counterpart financing.
- Projects which contribute substantially to national ODS consumption and which are (partly) ineligible but still need to be addressed by the Article 5 country, such as projects:
 - with net incremental savings (which compensates incremental investment cost),⁷
 - with exports to non Article 5-countries,
 - with partial or full non-A5-ownership,
 - which do not meet agreed cost-efficiency thresholds,
 - for enterprises beginning operations after 1995.
- Projects where no policy is provided by the ExCom or where final guidance is still pending but where there is a strong need for early action, for example, in the servicing and methyl bromide sectors.

⁶ See list of publications.

⁷ Examples are eligible pilot chiller replacement projects with currently low funding priority that intend to demonstrate energy efficiency and are therefore targeted to achieve dual global environmental benefits (mitigation of climate change and protection of the ozone layer).

- SME umbrella projects could be another possible application. SMEs frequently lack an economy of scale, technologies and human and financial resources for environmental investments and are unlikely to attract capital⁸:

Reasons for SMEs to Convert

- Chemical substitute availability and market price.
- Decrease in costs.
- Regulations.
- Availability of financial and technical assistance.
- Export market needs.
- Environmental protection.

Barriers to SMEs

- Lack of technical capacity.
- Access to funding.
- The substitute is more expensive.
- Significant capital investment is required.

Approach and Use of Innovative Financing

The following ideas are meant to stimulate and motivate creative thinking on the part of decision-makers and project developers and can be a point of departure for future financial schemes:

Under the current framework of the Montreal Protocol and its financial mechanism, the MLF, two approaches for the use of innovative financing are appropriate:

A. Use of an on-lending facility such as a **revolving fund mechanism**, within a country, where the government can leverage part of the grant from the MLF by providing its financial support to enterprises in the form of contingent financing. (Repayment is made in full to the government if the project is successful.) The repayments could, then, be used to finance other activities including institutional strengthening or technical assistance activities. The revolving fund should be designed in a flexible manner to allow a combination of tailor-made (soft) loans and grants (see *“Revolving Funds: Lessons Learned in Turkey”* in Annex I). Integrated comprehensive approaches like the National CFC Phaseout Strategy, aimed to eliminate all remaining uses of ODS in a country, is a candidate for a revolving fund mechanism. Umbrella projects and sector programs are also suited for this type of innovative financing approach.

B. Use of full contingent financing on a **case-by-case basis**.

7. Critical Factors in Successful Innovative Financing Schemes

Innovative financing requires a clear commitment from the country to design a flexible and transparent financing strategy in conjunction with necessary policy support for ODS phaseout. The proposed plan should be compatible with the guidelines and eligibility criteria of the MLF. Acceptability to all stakeholders, ease of introduction, cost-effectiveness, monitoring and enforcement are critical to the success of this approach.

The Right Financial Mix

For every project type and sector investment, barriers have to be carefully assessed in

⁸See UNEP/MLF, “How small and medium-sized enterprises in developing countries can protect the ozone layer”, 1997/1998.

order to choose the right mix of financial and policy instruments. Cost-effectiveness, financial viability, and sustainability of ODS phaseout projects should be used as criteria for developing innovative financing projects.

Technical assistance components should be included in the project design. In addition to technical assistance that has already been funded by the MLF to provide technology transfer to the enterprise, a technical assistance component focusing on the awareness of ODS phaseout activities and their market potential for future lending should be included and addressed specifically to the financial sector in the country. Furthermore, the political acceptability of the intended financial approach has to be assured. Another important key for a successful implementation of the Protocol within a country is the careful selection of economic instruments (market-based instruments)⁹ as well as political instruments and their effective enforcement.

Innovative financing could be used to address financial risks to the commercial provider of capital, lack of credit-worthiness and need for collateral, and other national and international regulatory uncertainties. Institutional and capacity barriers could be overcome as usually done with funds from MLF.

General Recommendations and Lessons for Innovative Financing from Pilot Projects¹⁰:

- Incentives have to be provided, i.e. removing barriers to *conversion (regulations alone do not create markets)*.
- Use of market-based instruments for loans (i.e. auction systems, ceilings for loan amounts (US\$/ODS phaseout per sector)) to ensure cost-effectiveness.
- Implementing and executing agencies and other key players must have strong capabilities in managing financial flow.
- Straightforward products, and, simple administrative structures and procedures have to be put in place. Special consideration has to be made to accommodate institutional constraints and specific needs of the private sector.
- Administrative costs of monitoring and enforcement should be minimized.
- Enforcement of regulations is crucial.
- The time necessary for project approval and implementation should be reduced.
- Ongoing technical assistance programs to enterprises offered by Implementing Agencies and other donor organizations outside the realm of ODS phaseout should be involved in ODS phaseout projects if possible.
- New technical assistance components such as training on credit technology and potential lending markets of ODS phaseout projects should be considered and made available to enterprises, ozone-officers and financial intermediaries.

⁹ The confusing use of the technical terms "economic instruments" and "financial instruments" has to be clarified. The first describes different categories for environmental protection in general such as property rights and liability systems, market creation by trading permits and bonds, fiscal instruments/taxes, charge systems and also includes financial instruments.

¹⁰ Innovative approaches have been designed in pilot projects in China, Chile, Turkey (implemented), Thailand and Mexico.

Box 4: Financial Instruments in Comparison

The following table presents an overview of relevant characteristics of financial instruments for potential use in ODS phaseout projects.

Strengths	Critical Issues
LOANS in general	LOANS in general
*Enables Co-financing and can increase project (financial) sustainability ¹¹ *Leverages MLF resources	*Guarantees *Transaction costs *Definition of grant-loan mix *Currency risks *Repayments and their use
REVOLVING FUND as an approach	REVOLVING FUND as an approach
*Flexible mechanism *Suitable for sector approaches *Leverage effect	*Definition of grant-loan mix *Loan conditions *Institutional capacity to administer funds
GRANTS	GRANTS
*Higher cash flow/liquidity for enterprises *Suitable for technical assistance (e.g. institutional strengthening)	*Cost-efficiency thresholds exclude enterprises (SMEs) *Limited amount of funding
INTEREST BUY-DOWN GRANTS	INTEREST BUY-DOWN GRANTS
*If access to loans exists, easy to implement *Demonstrative effect of commercially viable projects *Strong incentive for enterprises to participate	*Additional costs to MLF
LEASING	LEASING
*Flexible *Short-term purposes *No need for collateral *Repayment if beneficial	*Depends on contract design
GUARANTEE	GUARANTEE
*If loan is in local currency *Export credit agencies as possible partners	*Debt burden *No added relief to the MLF cashflow

8. Support from the World Bank, Implementing Agencies and Other Donors

Article 5 countries should be supported in designing and implementing innovative financing schemes. Montreal Protocol Operations of the World Bank, the International Finance Cooperation (IFC, the private sector partner within the World Bank Group); the Global Environment Facility (GEF), and other financial and business support programs (e.g. Public Private-Partnership programs) of the World Bank Group, other Implementing Agencies and bilateral donors can offer a wide range of expertise and useful experiences:

- Assistance in establishment and use of financial instruments
- Acceleration of market acceptance by promoting financial hybrid instruments (grant + loan) and by demonstrating the possibilities of risk reduction and increased return
- Use of synergies with other programs for sustainable development

¹¹ Loans are frequently needed to ensure the counterpart funding for projects, as MLF financial resources cover only the agreed incremental costs. Enterprises, however, often lack access to credit and loans.

- Development of new products and services for countries and the private sector (technical assistance in energy auditing and performance contracting, certification, management, etc.)

Box 5: Project Examples and Other Milestones

The World Bank as an Implementing Agency of the MLF of the Montreal Protocol, and its client countries have been continuously searching for innovative ideas and approaches to accelerate ODS phaseout in the most cost-efficient and market-oriented way. The following milestones demonstrate this evolution:

1994 Turkey established a **revolving fund** (see Annex I).

1996 Chile developed a market-based **auction approach** for grants (see Annex II).

1998 China implements its **halon sector** phaseout through a **bidding mechanism**.

1998 IFC “Study into the scope for a non-grant financing facility for ODS phaseout” was finalized and presented to the MLF.

1998 Thailand Chiller GEF/MLF Project approved, the first **contingent grant with dual environmental benefits** (climate change mitigation and ozone protection).

1999 Mexico Chiller Project, intended to test various financial schemes within its revolving fund, was approved (see Annex III).

1999 Presentation on innovative financing at the 15th Ozone Operations Resource Group (OORG) Meeting and organization of a side-event at the 11th Meeting of the Parties in Beijing.

9. Summary

Innovative financing has been an important part of MLF financing. In the past, the innovative financing option was limited to counterpart funding from enterprises. As the phaseout schedule for Article 5 countries becomes effective, it is important that not only a phaseout strategy but also a financing strategy be planned at the national level or at the Fund level, in addition to the enterprise level. Due to the changing nature of ODS consumers in Article 5 countries, new innovative financing ideas (on top of grants plus counterpart funding) may be needed. This is to ensure timely implementation of ODS phaseout projects and to ensure countries' full compliance with the Montreal Protocol. It is important that all barriers to ODS phaseout, both technical and financial, be removed.

Innovative financing approaches should attempt to leverage funding from various sources. Consideration should be given to possible synergies among various environmental funds. The project design should provide flexibility to countries to mobilize limited resources to support all activities necessary for them to meet or exceed all the obligations of the Montreal Protocol. A financial mix can only be achieved through full participation of all stakeholders in the country: enterprises, the government, financial sector and the public.

In addition, with regard to the objectives and priorities of Agenda 21, and other current multilateral environmental agreements (like the Climate Change Convention or the Convention to Combat Desertification), the use of economic and financial instruments to protect the global commons need to be more intensively developed and supported. The experiences of the Montreal Protocol will be useful for new treaties and agreements and will enable countries to be prepared for upcoming challenges.

Box 6: Selection of Programs and Initiatives for Synergies, Experience Exchange and Potential Partnerships Outside the MLF**Global Environment Facility (GEF)**

GEF was established to help developing countries deal with ozone depletion, climate change, biodiversity, and international waters. GEF supports projects and activities for phasing-out ODS in countries with economies in transition (CEIT), as these countries are not eligible for MLF assistance. To date, US\$148 million have been approved by the GEF for assistance to CEIT countries. GEF resources in general have been increasingly used to leverage additional funds, especially from the private sector (e.g., by putting small amounts into venture capital funds).

For more information see: www.gefweb.org

Small and Medium Scale Enterprise Program - GEF/IFC

The objective is to stimulate greater involvement of small and medium scale enterprises in addressing two specific GEF objectives, biodiversity and climate change. The program provides concessional, long-term loans to financial intermediaries to be on lend or invested in high risk SMEs where normally priced capital is lacking.

Hungary Energy Efficiency Co-Financing Program

GEF Funds are used for credit guarantees to demonstrate effective and expandable energy efficiency (EE) financing and contracting models, to build capacity and support EE financing activities of local Hungarian private sector financial intermediaries. Private sector capital (including domestic bank capital and credit lines) is intended to be levered.

For more information see: www.ifc.org

Renewable Energy and Energy Efficiency Fund - GEF/IFC

With the support from private capital, this program aims to stimulate financing from commercial sources in investments in grid-connected and off-grid renewables energy and energy efficiency projects which overcome incremental costs and risks of higher transaction costs.

The Committee of Donor Agencies for Small Enterprise Development

(Secretariat c/o Private Sector Development/World Bank)

Forum for exchange of information and for coordination. After having focused on finance in the early 1990s, the attention has since turned to non-financial services like business development. Case studies have been undertaken to seek for “best practices.”

For more information see: www.ilo.org/public/english/65entrep/isep/bds/donor/index.htm

UNEP Financial Services Initiatives Secretariat, Geneva

Financial initiative composed of UNEP, IFC and representatives from member institutions which aims to generate a constructive debate between commercial banks, investment banks, venture capitalists, insurance and reinsurance concerns, multilateral development agencies and asset managers. It tries also to foster private sector investment in environmentally sound technologies and services. For more information see: www.unep.ch/eteu/envr-fin.htm

UNEP Insurance Industry Initiative for the Environment

Founded in 1997, this initiative funds research activities, sponsors awareness meetings and organizes workshops. The most prominent focal area is the climate change debate.

For more information see: www.unep.ch/eteu/envr-fin.htm

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ANNEX I

Revolving Funds: Lessons Learned in Turkey

Overview

Under the current discussions about innovative financing, the need for concrete approaches and experiences has been widely expressed. The ozone depleting substances (ODS) phaseout approach used in Turkey has yielded interesting results through the use of loans provided under a revolving fund established with the assistance of the Multilateral Fund (MLF) for the Implementation of the Montreal Protocol.

Background

In 1992, after preparation of its country programs with the support of the World Bank, Turkey decided to implement an accelerated ODS phaseout program. In 1994, the local project implementation unit (PIU)—the Technology Development Foundation (TDF)* in coordination with the Turkish Ministry of Environment, undertook the management of ODS phaseout funds which were approved by the MLF.

Although Turkey received the funds from the MLF as a grant, Turkey decided, due to the economic health of the first enterprise participating in the program, to use part of the grants as loans to enterprises through a revolving fund. The sectors covered were refrigeration, foam, aerosol, halon and solvents. Eighteen organizations received grants and eight organizations received partial loans. This approach helped to phase out about 1800 tonnes of ozone depleting potential.

The repayment rate has been very high, with more than 93% of the loans paid back up to now. As a result of its excellent performance, Turkey received an award from the United Nations Environment Programme (UNEP) in 1997 for being one of nine countries out of 49 which had most successfully implemented the Montreal Protocol.

Funding Conditions and Terms for Assistance

An important key to the success of the revolving fund in Turkey has been the establishment of clear and transparent terms from the beginning:

Enterprise Requirements

- Eligible for assistance under the MLF
- Active in an MLF-defined sector

Project Requirements

- Compatible with MLF guidelines/criteria
- Consistent with criteria for financial feasibility

* TDF = Technology Development Foundation, a non-profit organization, was founded in 1991 to stimulate private investments in industrial technology development (members: 5% industrial companies, 20% individuals, 13% associations, 10% public sector).

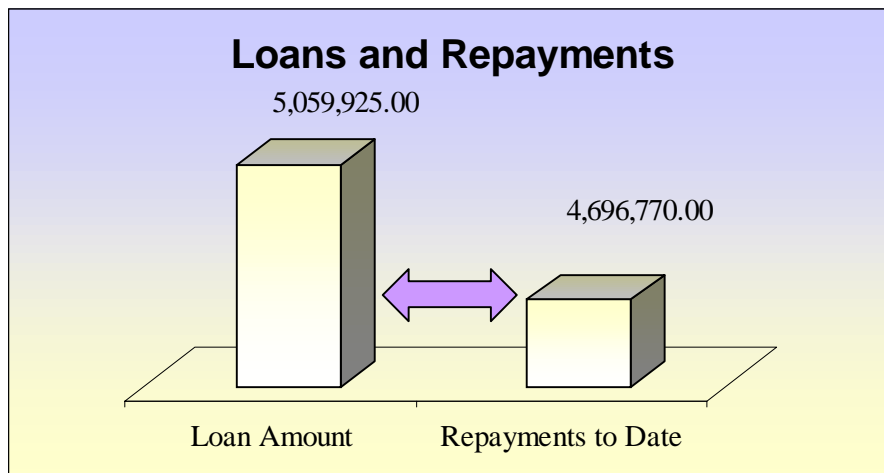
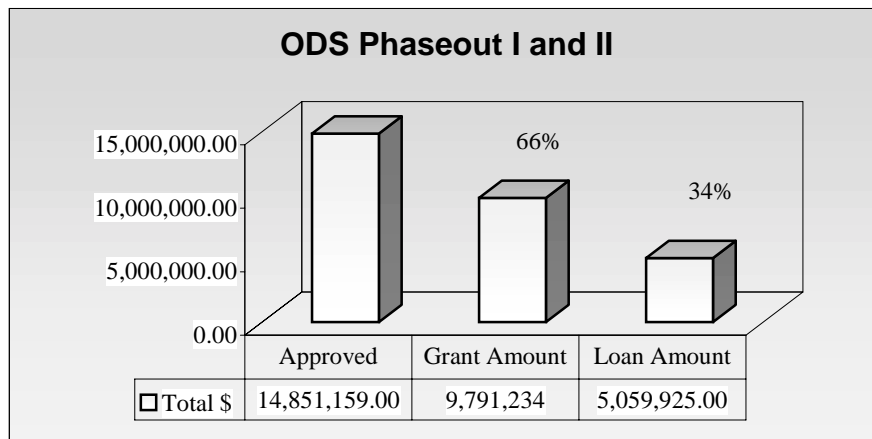
Loan Conditions

Interest	0%
Currency	USD
Maturity period	2 years from completion of project
Terms of payment	4 equal installments

Sector	Grant Component	Loan Component (no ceiling)
Refrigeration	Safety, prototype, testing and training costs. If project budget <US\$100,000, then 100% grant.	Remaining costs (e.g., equipment, civil works).
Foam, solvent, aerosol, halon	Cost up to US\$500,000	Remaining costs.

Role of the Project Implementation Unit

TDF acts as a financial intermediary for the disbursement of funds and administers the revolving fund. TDF developed an introductory kit for participating enterprises (especially SMEs) containing general information about the Montreal Protocol and the MLF, project proposal forms, and information about project requirements, technical options and available funding and assistance. In addition, TDF supported SMEs by offering seminars and by preparing project proposals and demonstration projects. TDF reviews the consistency of project proposals with MLF guidelines and supervises and monitors project implementation.



Lessons Learned

A major finding of the revolving fund approach is that enterprises are interested and willing to participate in mixed financing (loans and grants) for ODS phaseout projects. The high repayment rate demonstrates the feasibility of utilizing on-lending through a country grant to meet environmental challenges.

Another important lesson is that SMEs can be integrated in such an approach as long as there is project design support. More generally, products and services have to be tailor-made to the needs of the private sector. Tools such as guidelines for procurement and information covering monitoring, reporting and certification should be in place to assist participating enterprises. It is important that the PIU, preferably a local partner institution, has a clearly defined role and a lean organizational structure. Administrative procedures should be simple and flexible.

Other key factors in the successful implementation of the program were complementary regulatory policies and the use of economic instruments (e.g., tax on CFC imports).

ANNEX II

Market-Based Instruments: Chile's Grant Auction Mechanism

Overview

The Grant Auction Mechanism in Chile was established as a way to pursue cost-effectiveness in projects that phase out the use of ODS through a competitive allocation of resources. The program is characterized by lower administrative costs for preparing and supervising projects. In addition, it reduces the overall costs to the Multilateral Fund (MLF) for the Implementation of the Montreal Protocol because firms are competing for limited resources and thus have an incentive to reduce their conversion costs. The program is consistent with Chile's preference for market-based solutions to environmental problems.

Design of the Mechanism

The Grant Auction Mechanism utilizes enterprises' information and knowledge to determine the allocation of grant resources. In each auction, companies are invited to bid on cost-effective conversion projects in order to receive co-financing from a limited amount of resources. The bidding process usually lasts two months and companies submit bids based on a cost-effectiveness (CE) threshold announced before each auction by the National Commission on the Environment (CONAMA).*

The intention behind competition is that for each round of bidding a better CE value than the thresholds established by the MLF will be achieved. After the auction closes, the project proposals are evaluated for funding eligibility in terms of MLF requirements, technical feasibility and the financial solvency of the companies involved.

Cost-Effectiveness

Because the auction system was designed to allow participation from all types of enterprises, no specific sectors were delimited nor was project size predetermined. The overall CE goal is to achieve at least 90% of CE values set by the MLF's Executive Committee—*independent of the CE of individual subprojects*. For each auction, all project costs, ODS consumption and sectors involved would first be utilized to determine what the target CE would be in relation to existing MLF CE values per sector involved. Thus, if primarily rigid foam projects were expected (for which the MLF CE is US\$7.83/kg ozone depleting potential (ODP)), the threshold for the auction would be set at approximately US\$7/kg ODP, although some projects in this sector could exceed the value as long as the overall value did not. There was never one predefined cost-effectiveness threshold for each auction, but CE was dependent on the variables mentioned above.

In order to stimulate project demand and better adapt to the conditions and constraints of participating enterprises with different production scales and levels of ODS consumption, the auction mechanism evolved so that CE targets were established according to the ODP consumption levels of the participating companies. Therefore:

- Companies with over 30 MT ODP consumption: CE cap = US\$9/kg
- SMEs with between 3 MT and 30 MT ODP consumption: CE Cap = US\$15/kg
- Very small companies with less than 3 MT ODP consumption: CE Cap = US\$30/kg

* The Ozone Team, in charge of operating the mechanism, falls under CONAMA.

The benefit of this approach to cost-effectiveness extends in particular to small and medium enterprises (SMEs) as they can be assigned affordable CE values.

At the 26th Executive Committee Meeting of the MLF, in order to allocate a second tranche of resources to the program, it was decided that the 90% threshold CE cap would have to be limited per sector.

Project Impact

The Chile Auction Mechanism has led to a decrease in overall CE values. At the end of the third auction in 1998, the CE cap for the entire auction program was at US\$10.89/kg, and by 1999 it decreased to US\$8/kg (a 26.51% improved performance). By 2001, the overall CE value updated has been US\$6.9/kg. Nonetheless, the CE value may drop an additional 10% if the amount disbursed for the whole auction program is adjusted due to an accumulated devaluation of the Chilean currency of 42% between 1997 and 2001.

Up to now, seven auctions with the participation of more than 20 enterprises, have been organized at a cost to the MLF of nearly US\$2.6 million. Although the Chile auction program has directly eliminated over 370 tonnes of ODP, an accompanying set of wider policy measures, which began in 1994 to build momentum among enterprises to voluntarily commit to conversion, has led to an aggressive CFC phaseout. After the ongoing auction project is complete, annual consumption will decrease to approximately 63 tonnes of CFC-11 and 190 tonnes of CFC-12.

Lessons Learned

Auction Mechanism An auction system can lead to lower project costs and reduced administrative expenses. Since the program in Chile only disburses after implementation, less administrative work during the projects is required (i.e., only in cases of technical or financial difficulties). A drawback of the post-project reimbursement mechanism is that companies have to bear the financial risk, causing some projects to stall.

SMEs CE values must be attractive to SMEs for increased participation. Under the “cap” for each auction, SMEs could participate at lower cost-effectiveness than larger companies. This approach could be applied to some extent in sector and umbrella projects or in National CFC Phaseout Strategies.

In addition, project preparation support must be provided for SMEs with low or no technical capacity, otherwise they are unable to participate. In the Chilean case, an independent and neutral consultant helps promote the program and assists companies in putting together the required documentation.

Legislation The overall Chilean ODS program was to be accompanied from the beginning by a regulatory program that would lead to higher ODS prices in the local market and, thus, promote competition for conversion. However, regulation lagged behind conversion projects and only in August 1998 was a bill for restricting CFC imports submitted to congress for approval. This project law is expected to be approved by the Congress before the end of 2001 so that it can be enacted in CY2002. Once the law is in effect, it is expected that the terminal conversion projects can be boosted and implemented faster.

ANNEX III

Innovative Financing: Chiller Replacement in Thailand and Mexico

Overview

The World Bank has developed new, non-grant or partial-grant financing projects as an alternative approach to the existing grant-financing scheme for possible future ODS phaseout projects. The initiatives are in response to the request of the Executive Committee of the Multilateral Fund (MLF) of the Montreal Protocol that new financial mechanisms should be explored for future project implementation in order to include countries and enterprises which might not otherwise be eligible for assistance. The Thailand Chiller Replacement Program and the Mexican Chiller Concessional Lending Pilot Project will replace CFC-chillers (building air conditioning systems) with high-efficiency, non-CFC chillers. The Thailand project will be financed by both the MLF and the Global Environment Facility (GEF) on a loan basis while the Mexico project combines MLF grant funding with counterpart funding from the Mexican government within a newly established revolving fund.

Conversion to new, energy-efficient chillers has the potential to create energy savings as well as to reduce demand for CFC. However, because the benefits are as yet unproven and the up-front capital cost of investment is significant, incentives were needed to encourage building owners to replace old chillers before the end of chillers' product lives. By providing funds for the new chillers, the program allows building owners to make the transition while benefiting from energy savings. The goal of the projects is thus to use contingent financing by separate global environmental financial mechanisms (or in the case of Mexico by a global financial mechanism and an Art. 5 government) to demonstrate the feasibility of engaging in large-scale chiller replacement while minimizing the impact to chiller owners and the overall economy; and, to reduce CFC-11 and CFC-12 demand (which would arise due to leakage) and carbon emissions (i.e. improve energy efficiency). In addition, the projects will test the efficacy and applicability of the innovative financing approach.

Thailand: Identifying Features

The Chiller Replacement Program in Thailand differs from traditional MLF-funded projects in a number of ways. First, it utilizes a unique financing modality. An initial contingent grant of US\$5 million will be used to establish a revolving fund to replace 24 chillers over a three-year period. Investment in the chillers will be repaid through savings earned from their increased energy efficiency. If this demonstration phase is successful, i.e., if the new chillers result in significant energy and ODS savings, the initial sum invested will be used to expand the project, leveraging an additional US\$30 million to purchase 400 more non-CFC chillers. Once conversion has taken place, the CFC recovered from the old chillers will be recycled for other necessary, domestic uses.

Second, the implementation modality will employ a combination of commercial practice prevailing in the country and performance guarantee approach. Based on the performance and loan repayment criteria established under this project, chiller owners are allowed to select their own chiller suppliers. However, chiller suppliers are required to provide guarantees on performance of their new non-CFC chillers.

Finally, the program combines funding from two global environmental financial mechanisms, the MLF, under the auspices of the Montreal Protocol, and the GEF, under

the auspices of the Kyoto Protocol on Climate Change to achieve two separate environmental goals and demonstrate that cooperation between environmental regimes can be more efficient in reaching individual objectives.

Results

The successful implementation of this program will open up a market for energy-efficient technology which is currently blocked by the existence of market, policy, information or other barriers. By making available large quantities of CFCs for servicing the remainder of Thai chillers and thereby arresting the need to import additional CFCs, the program will help Thailand sustain the 1999 freeze on CFC consumption required by the Montreal Protocol. When completed, the project will decrease CFC demand in Thailand by more than 400 ODP tonnes and reduce carbon emission by about 1,390 ktC, and thus, defer the need for over US\$250 million in additional investment in energy infrastructure.

Mexico: Identifying Features

Although it has many of the same goals as the Thailand project, the Mexico Chiller Project differs substantially in its design. The Mexico project combines grant funding from the MLF (through a bilateral grant from the UK) of about US\$500,000 with government co-financing of a similar amount to establish its revolving fund. Loans administered through the revolving fund will bear a 0% real interest rate and be repaid over a three-year period through a standard schedule of principal and interest payments. Other options still under discussion include a US dollar denominated loan repayable in dollars or a loan denominated and repayable in local currency adjusted for inflation.

The project will be implemented in two phases, with ten chillers being replaced in the first phase. A second phase will follow if the first conversions are deemed successful. A well-developed monitoring and evaluation system will be utilized to track progress and assess success. The Energy Efficiency Trust (FIDE) will not only provide the counterpart financing, but will also act as the executing agency. FIDE's involvement in the implementation is expected to yield substantial benefits beyond its financial role as it has close to a decade of experience promoting energy efficient investments and supporting the development of credit and related service markets. In addition, based on demand from building owners, FIDE may be able to supply additional funds for efficiency improvements beyond the chiller systems.

To help ensure enhanced energy efficiency, the project will require chiller suppliers to assess the appropriateness of current capacity of the cooling systems as well as provide a guarantee of energy savings for the new chillers. Flexibility is also built into the project design which will be interactive and adjustable to meet changing needs in both phases.

Results

Successful completion of the project should yield substantial benefits, including helping Mexico to sustain the 1999 freeze in ODS consumption required under the Montreal Protocol; reducing energy consumption and emissions of CO₂; and leveraging MLF funds.