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Executive Committee of
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Cairo, 11-13 November 1998

PROJECT PROPOSALS: MEXICO

This document consists of the comments and recommendations of the Fund Secretariat on the following projects:

Foam

- Phaseout of CFC-11 by conversion to HCFC-141b technology in the manufacture of rigid polyurethane foam (spray) at Group Project Valcom — UNDP

Fumigant

- Alternatives to methyl bromide for structural fumigation in Mexico — UNDP

PROJECT EVALUATION SHEET
MEXICO

SECTOR: FOAM ODS use in sector (1989): 1,629 ODP tonnes

Sub-sector cost-effectiveness thresholds: Rigid US $7.83/kg

Project Title:
Phaseout of CFC-11 by conversion to HCFC-141b technology in the manufacture of rigid polyurethane foam (spray) at (Valcom) Group Project.

Project Data	**Rigid**
	Valcom Group Project
ODS phase-out (ODP tonnes)	49
Proposed project duration (months)	24
Incremental capital cost (US $)	134,200
- including contingency (%)	10
Incremental operational cost (US $)	180,761
Total project cost (US $)	345,211
Local ownership (%)	100
Export component (%)	0
Amount requested (US $) {Original}	314,961
{Revised}	
Cost effectiveness (US $/kg)	7.10
National Coordinating Agency	Ozone Protection Unit, National Institute of Ecology (INE)
Implementing Agency	UNDP
Technical review completed?	Yes

Secretariat's Recommendations:	
Amount recommended (US $)	314,961
Project impact (ODP tonnes)	44.35
Cost effectiveness (US $/kg)	7.1
Implementing Agency support cost (US $)	40,945
Total cost to Multilateral Fund (US $)	355,906

PROJECT DESCRIPTION

Phaseout of CFC-11 by conversion to HCFC-141b technology in the manufacture of rigid polyurethane foam (spray) at Valcom group project.

1. Mexico's reported consumption of CFCs for 1996 was 4,859 ODP tonnes. It is indicated in the project document that a recent survey showed that CFC consumption in the foam sector was 935 ODP tonnes.

2. Regarding the relevance towards meeting the 1999 freeze and other Montreal Protocol requirements, UNDP stated that the Government informed them that the projects being submitted at the 25th Executive Committee meeting were considered vital for the Government to reach its goal of phasing out an additional 2,100 ODP tonnes by the year 1999. The Government further noted that this was in accordance with the strategic considerations of the three-year business plan of the Multilateral Fund.

3. Twenty foam projects amounting to US $8.9 million have so far been approved for Mexico to phase out 1,308 tonnes CFC-11. 517 tonnes have been phased out.

4. The justification for the use of HCFC-141b is described in the overview of available technologies. UNDP further indicates as follows:

> In spray foam applications, options are limited to water-blown foam (medium/low insulation requirements), or HCFC-141b or HCFC-141b/22 (high insulation requirements). Valcom will offer HCFC-141b initially due to the thermal insulation requirements under this project, with later conversion to an ODS-free system.
>
> The enterprise has been informed of the available technical options. They have also been informed that HCFC's are transitional substances, and that under present Multilateral Fund rules, they will not be able to seek additional funding from the Multilateral Fund later to convert to zero-ODP technologies.

5. Valcom Sistemas Poliuretano S.A. de C.V. is the exclusive distributor for Dow spray foam systems in Mexico. Five spray foam manufacturers will phase out the use of CFCs in the manufacture of polyurethane with the support of Valcom. They are Uriel, Limas, Tecknipol, Anzaldua, and Negrete. These five companies use in total 12 Gusmer type medium-high pressure dispensers, installed between the years 1983 and 1993. The companies will phase out the use of the forty-nine tonnes per year of CFC-11 by converting to HCFC-141b as an interim solution. The costs will cover the retrofit of all existing medium-high pressure machines at a total of US$ 85,000, while Valcom will acquire an evaluation dispenser at US$ 25,000 and a field K-factor tester at US$ 5,000. Technology transfer, trials and training costs amount to US$ 34,500. The incremental operating cost for two years, which includes the cost of a 10% increase in foam density amounts to US $180,761.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The Secretariat discussed the following comments on the project with UNDP.

   (a) Valcom's operation is as a distributor of systems of major systems houses to the five companies. Therefore, for the necessary spray foam systems, which are already proven, the actual systems suppliers should provide the necessary back stopping to Valcom.

   (b) Among the six (downstream) companies (in the project) there are twelve machines (all the same make – Gusmer) in the field. If Valcom needed to verify its formulation before sale to these customer companies, it would have access to such machines. Therefore, the requested amount of US $25,000 for Valcom for foaming machine was not recommended as an eligible incremental capital cost.

   (c) The amount of US $1,500 for the survey was not eligible since the existing equipment had been identified for the participating enterprises.

   (d) The total technology transfer, training and trial costs should be US $32,000.

2. Based on the above considerations, the total project cost was agreed as US $314,961, which includes incremental capital cost of US $134,200 and incremental operational cost of US $180,761.

RECOMMENDATION

The Fund Secretariat recommends blanket approval of the Valcom project with the funding level and associated support cost indicated below.

Project Title	Project Cost US $	Support Cost US $	Implementing Agency
Phaseout of CFC-11 by conversion to HCFC-141b technology in the manufacture of rigid polyurethane foam (spray) at (Valcom) Group Project.	314,961	40,945	UNDP

PROJECT EVALUATION SHEET
MEXICO

SECTOR: FUMIGANT ODS use in sector (1997): 1,878 ODP tonnes

Sub-sector cost-effectiveness thresholds: N/A

Project Titles:

Alternatives to methyl bromide for structural fumigation

Project Data	**Methyl Bromide**
	Instituto Nacional de Ecología
ODS phase-out (ODP tonnes)	-
Proposed project duration (months)	24
Incremental capital cost (US $)	498,300
- including contingency (%)	10
Incremental operational cost (US $)	498,300
Total project cost (US $)	
Local ownership (%)	100
Export component (%)	-
Amount requested (US $) {Original}	669,350
{Revised}	498,300
Cost effectiveness (US $/kg)	-
National Coordinating Agency	Instituto Nacional de Ecología
Implementing Agency	UNDP
Technical review completed?	Yes

Secretariat's Recommendations:	
Amount recommended (US $)	498,300
Project impact (ODP tonnes)	N/A
Cost effectiveness (US $/kg)	N/A
Implementing Agency support cost (US $)	64,779
Total cost to Multilateral Fund (US $)	563,079

PROJECT DESCRIPTION

Alternatives to methyl bromide for structural fumigation

1. In 1997, total methyl bromide consumption in Mexico was estimated at 3,130 metric tonnes, 500 tonnes of it used for structures and other post-harvest domestic storage including facilities such as grain silos, warehouses, and other similar structures. The major post-harvest use is for grain (corn, wheat, rice, and beans) storage. Fumigants are used primarily during grain handling and storage phases.

2. Methyl bromide for structures and storage is primarily used in the more humid regions of Mexico, in the south and south-eastern region, where other alternatives (such as phosphine) have not been adequately evaluated. At least sixty-two storage sites in the south-east region use methyl bromide regularly. Phosphine and combinations of chemical pesticides (deltamethrin, malathion and fungicides) have replaced methyl bromide in some parts of the country, especially in the less humid areas.

3. The project is to demonstrate best management practices and seven alternatives to methyl bromide fumigation (phosphine alone and in combination, integrated pest management (IPM), diatomaceous earth (DE), deltamethrin, heat, and cold treatments) in a range of storage and structural facilities in Mexico. The project will also evaluate the technical and economic feasibility and environmental effects where possible of the alternatives under local conditions, and results will be disseminated of the most promising alternatives to local operators and clients.

4. During project preparation, an ad-hoc multi-stake holder working group was set up with representatives from industry, academia, government agencies and environmental groups, to discuss the pest problems in storage, experiences with methyl bromide and other alternatives.

5. The project will be implemented in three different regions (North, Central/West, and South/Southeast), based on commercial patterns and environmental conditions (areas with specific temperature, humidity, and biodiversity). The type of storage structures to be tested include open storage; warehouses with closed sides; warehouses with open sides; silos and subterranean storage, especially in some rural areas.

6. A report including analysis of demonstration sites will be developed to contrast and compare all alternatives evaluated against methyl bromide. Manuals for best management practices and for each of the most promising alternatives will also be prepared. A workshop to bring together practitioners for structural pest control and the users and owners/managers of structures and storage facilities will be held to present and discuss results of the demonstration projects.

7. The project will be coordinated by Instituto Nacional de Ecología (INE) and implemented by UNDP in cooperation with national institutions. UNDP will draw up subcontracts with national institutions for the implementation of the demonstration projects.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The project concept follows the Executive Committee's guidelines.

2. Mexico ratified the Copenhagen Amendment on 16 September 1994.

3. The Secretariat and UNDP discussed the range of tasks proposed under subcontract for coordination of work and implementation of proposed activities, as well as the number of professionals included at the national and international levels. Initially, 32 work-months of staff resources were proposed to be included in the cost of the project. Subsequently, UNDP reduced these costs by 40 percent.

4. The Secretariat and UNDP discussed issues regarding proposed funding for the equipment to be used in fumigation, renting of facilities for demonstration of alternatives, sealing of structures and the number of chemical and physical analyses of samples. Subsequently, UNDP agreed to rent rather than purchase some pieces of equipment (i.e., aeration system), reduce the costs of chemicals and laboratory analysis and sealing of structures (a total reduction of US $122,000 was agreed).

RECOMMENDATION

Taking into consideration the above comments, the Fund Secretariat recommends blanket approval of the project with associated support costs at the funding level shown in the table below:

Project Title	Project Cost US $	Support Cost US $	Implementing Agency
Alternatives to methyl bromide for structural fumigation	498,300	64,779	UNDP