



**United Nations
Environment
Programme**

Distr.
Limited

UNEP/OzL.Pro/ExCom/33/24/Mexico
27 February 2001

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-third Meeting
Montreal, 28-30 March 2001

PROJECT PROPOSAL: MEXICO

This document consist of the comments and recommendation of the Fund Secretariat on the following project proposal:

Foam

- Foam Sector Terminal ODS Phaseout

UNDP

PROJECT EVALUATION SHEET MEXICO

SECTOR: Foam ODS use in sector (1999): 435 ODP tonnes

Sub-sector cost-effectiveness thresholds: Integral skin US \$16.86/kg
 Rigid US \$7.83/kg

Project Title:

(a) Foam Sector Terminal ODS Phaseout

Project Data	Multiple-subsectors
	Foam Sector (Final)
Total enterprise consumption (ODP tonnes)	592.3
Total project impact (ODP tonnes)	543.4
Total project duration (months)	60
Total incremental capital cost	3,033,500
Total project management cost	260,000
Total contingency cost	329,350
Total project cost	3,622,850
Local ownership (%)	100%
Export component (%)	0%
Project cost disbursement plan (number of tranches)	5
Amount requested for 1 st tranche (US \$)	833,150
National coordinating agency	National Institute of Ecology (INE)
Implementing agency	UNDP

<i>Secretariat's Recommendations</i>	
Amount recommended (US \$)	
Project impact (ODP tonnes)	
Cost effectiveness (US \$/kg)	
Implementing agency support cost (US \$)	
Total cost to Multilateral Fund (US \$)	

PROJECT DESCRIPTION

Sector Background

- Latest available total ODS consumption (1999)	5,008.2 ODP tonnes
- Baseline consumption of Annex A Group I substances (CFCs)	4,624.9 ODP tonnes
- Consumption of Annex A Group I substances for the year 1999	2,837.9 ODP tonnes
- Baseline consumption of CFCs in foam sector	1,016.7 ODP tonnes
- Consumption of CFCs in foam sector in 1999	435 ODP tonnes
- Funds approved for investment projects in foam sector as of end of 2000	US \$8,670,465
- Quantity of CFC to be phased out in approved projects in foam sector as of end of 2000	1,464.8 ODP tonnes
- Quantity of CFC phased out in approved projects in foam sector as of end of 2000	862.2 ODP tonnes

Other Relevant Sector Background Information

1. The foam sector ODS consumption of 435 ODP tonnes reported by Mexico for 1999 is forty-three percent below the sector baseline consumption. This remaining consumption has been fully addressed by approved projects which have not been completed. However, UNDP's foam sector survey conducted in December 2000 is reported to have identified additional ODS consumers, mainly SME's in the sector, accounting for additional estimated consumption in 1999 of 592.3 ODP tonnes CFC-11. These consumers are served mainly by six indigenous systems houses which have already been assisted to convert their operations to provide CFC-substitute systems. Thus, all the systems houses have been enabled of providing substitute systems for the remaining users of ODS-based systems. Separate surveys by the government and by the implementing agency have resulted in different consumption data. Thus, it is difficult to determine the remaining consumption in the sector with any degree of certainty on the basis of currently available data.

Foam Sector Phase-out (Terminal)

Background Information

2. The project was submitted to the 32nd Meeting in fulfilment of the Executive Committee's Decision 30/52 which enjoined the implementing agency to try and find a way forward for Mexico which respected both the rules of the Multilateral Fund and the unique situation in Mexico. This decision is a consequence of some policy actions taken in Mexico which had led to CFC-11 price increases well above its more frequently used substitute, HCFC-141b. Under these circumstances a project submitted by UNDP to the 30th Meeting for the phase-out of the remaining CFC consumption which had been prepared based on the traditional method of presenting project proposals was found not to be consistent with the rules of the Multilateral Fund.

3. UNDP with the cooperation of the Government of Mexico conducted a survey which formed a basis for a terminal sector phase-out plan prepared in accordance with Decision 25/15 on terminal umbrella projects. This project document was then submitted for consideration of the 32nd Meeting of the Executive Committee. It was reviewed by the Secretariat and submitted as document UNDP/OzL.Pro/ExCom/32/30/Mexico. Copies of this document may be provided on request. However, in view of the issues that arose, particularly regarding the reliability of the ODS consumption of the remaining enterprises eligible for funding, UNDP requested that the project be deferred to enable further actions to be taken to confirm the consumption data.

4. UNDP subsequently has conducted an audit of 42 enterprises out of the original population of 242 enterprises. Based on the audit UNDP has revised the project proposal and has resubmitted it to the 33rd Meeting for consideration. The Secretariat has reviewed the revised proposal and informed UNDP of some issues identified from the results of the audit as well as from the revised project document itself. These are summarized in the Secretariat's comments below.

5. The main outcomes in the revised phase-out plan are as follows:

- A total amount of US \$3,622,850 is calculated as the total cost of the project to be implemented in five years from 2000-2004 to phase-out 543.4 tonnes of CFC-11 instead of the original US \$3,951,750 to phase-out 890 tonnes. The total amount will be requested in five tranches to phase-out the CFCs within the period of four years. The funding request and phase-out plan is shown in the table below.

	Year					Total
	2000	2001	2002	2003	2004	
Project Cost US \$:	666,500	805,000	782,000	780,000	--	3,033,500
Project Management Costs US \$:	100,00	50,000	50,000	50,000	10,000	260,000
Contingencies (10%) US \$:	76,650	85,500	83,200	83,000	1,000	329,350
Total Project Costs US \$:	843,150	940,500	915,200	913,000	11,000	3,622,850
ODP Phase-out per year (tonnes):		108.5	185.0	180.4	69.5	543.4
Remaining ODP in Sector (tonnes):	543.4	434.9	249.9	69.5	0	0

- Mexican systems houses have used HCFC-141b in some systems supplied to their customers. The systems houses, including those which have completed Multilateral Fund funded projects to provide non-CFC systems do provide CFC-based systems also to enterprises that have not received funding from the Multilateral Fund.
- One systems house is said to have provided systems containing 70% HCFC-141b mixed with 30% CFC-11 to enterprises that have not yet received funding from the Multilateral Fund and that assistance is needed to allow these enterprises (23 out of the 42 audited) to completely convert to 100% HCFC-141b.
- 220 Enterprises were identified as eligible for funding (using CFC-11 or HCFC-141b mixed with CFC-11), instead of the original 242.

- The total consumption of 592.3 tonnes of foam sector consumption identified was still higher than 435 tonnes reported by Mexico in 1999 but UNDP stated that this is easier to justify.

6. The cost of the project was calculated by:

- Grouping the enterprises into four categories which puts together the 171 sprayfoam enterprises with 34 enterprises in automotive and pipe insulation applications;
- Making certain assumptions to establish the ratio of enterprises that would receive retrofit costs and those that would receive equipment replacement cost;
- From (a) and (b) above calculating the “standard unit cost” of each category of enterprises;
- Calculating the overall costs of each group based on the total number of enterprises in the group;
- In accordance with Decision 25/50, incremental operating costs or savings are not taken into account.

The table below shows the calculated standard costs.

Category	Standard unit cost per enterprise US \$
Sprayfoam, automotive and pipe insulation	11,500
Panels and miscellaneous rigid foam	19,500
Shoe sole applications	37,000
Integral skin applications	12,000

7. On the basis of the revised plan UNDP is requesting payment of a first tranche of US \$843,150.

Impact of the Project

8. When completed the project will eliminate the remaining consumption of ODS in the foam sector in Mexico.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The Secretariat reviewed the revised document as well as the copies of the completed questionnaires from the audit provided with the project document and made the following observations:

- (a) The original concept of calculating the cost of the phase-out plan discussed between UNDP and the Secretariat prior to the 32nd Meeting was not supported by the information obtained through the audit of the sample of the enterprises and was therefore not in the interest of the Multilateral Fund to be further pursued;
- (b) With regard to the CFC-11 and HCFC-141b reported to have been preblended together by a systems house for use by some enterprises, advice received from all the industry experts consulted by the Secretariat was that while feasible, there was no technical difference between using 70% HCFC-141b with 30% CFC-11 and using 100% HCFC-141b. It was rarely an industry practice, and unless dictated by economic motive or other production exigencies there was no technical justification for it because HCFC-141b was a virtual drop-in for CFC-11 for the main application i.e. spray foam using the type of machines predominantly used by the enterprises, i.e. Gusmer FF-1600. UNDP stressed that this approach was adopted mainly by the systems house (Eiffel) due to high fluctuations in the supply and prices of the two chemicals in Mexico;
- (c) Although the results of the audit were intended to provide a sample of the sector this did not appear to be the case. The Secretariat's analysis of the information provided in the questionnaires indicated that the amount of US \$3,632,850 would likely be higher than the eligible costs under the policies and guidelines of the Fund, as follows;
 - (i) Experience from previously approved projects showed that Mexican spray foam enterprises predominantly used Gusmer dispensers which required only minor, inexpensive retrofits. The audit results confirmed this, showing that all the sprayfoam manufacturers in the sample used Gusmer sprayfoam machines and 41 of the total of 66 machines used by the 42 enterprises for all applications were Gusmer machines;
 - (ii) 22 of the 66 foam dispensers including 9 of 13 low pressure dispensers were procured after 25 July 1995 mostly in 1996-1999. The cost of replacement of such machines would not be eligible;
 - (iii) 25 of the 66 foam dispensers, including three of four low pressure machines eligible for replacement, were 15-28 years old. Under existing rules replacement of such old machines would be subject to discount on account of age;

- (iv) At least four of the 42 companies audited appeared to have been established after 25 July 1995.

2. On account of the observations made in paragraph 2 above and extrapolation that could be made from the results of the audit it could be concluded that the methodology for costing the project proposed in the phase-out plan based on the defined categories and standard costs based on ratio of equipment replacement to retrofit and/or cost of new equipment was not accurate and could result in the funding of ineligible costs. Also, implementation of the project based strictly on such categorization could potentially restrict expeditious phase-out, especially in the sprayfoam sub-sector that would not require substantial external input in terms of capital expenditure or technology transfer.

3. Additionally, the four year period for phasing out CFCs of the sprayfoam could restrict the ability of enterprises to phase-out earlier, since the issue is not the market availability of HCFC-141b systems, but the apparent reluctance of the systems houses to supply HCFC-141b systems to a certain category of foam producers, including sprayfoam producers, which they consider may not be capable of using the systems and so required assistance from the Multilateral Fund.

4. Normally, systems suppliers are obliged to provide directions to their customers on the use of their systems. In the sprayfoam application where the HCFC-141b is a virtual drop-in and where the operators predominantly use Gusmer machines which require simple inexpensive retrofit, eligible enterprises should be encouraged to phase-out if they are capable, willing or ready to do so. In this situation and subject to accurate and verified audits, their incremental capital cost could be paid retroactively on the basis of agreed retrofit or replacement costs for the relevant application. This could take place during the implementation of subsequent tranches.

5. The audit conducted has demonstrated that such audits are feasible and are a more realistic means of identifying eligible costs. Since all the enterprises are grouped around the six systems houses (already funded by the Multilateral Fund) it should be possible to conduct further audits for the remaining 178 enterprises without much difficulty or delay provided funds are made available.

6. The estimated levels of funding for shoe sole and integral skin foam applications appear reliable based on previous experience, and the Government could initiate implementation of the phase-out in these sub-sectors if it so wished.

7. Given the possible reduction in the incremental cost of the project, the total of US \$260,000 (US \$286,000 including contingency) proposed for project management funding will also need to be reviewed when preparing the final plan.

8. UNDP is requesting a first tranche of US \$843,150, which includes US \$100,000 (plus 10% contingency for a total of US \$110,000) as project management costs. The Executive Committee may wish to advance this amount (excluding the 10% contingency of US \$10,000 charged on the project management cost) on the basis that UNDP will:

- (a) further develop and implement an initial phase of the phase-out of ODS of enterprises that have been identified through an audit;
- (b) conduct further audit or audits of the remaining enterprises;
- (c) On the basis of the audit:
 - (i) report to the Executive Committee at its 36th Meeting in 2002 on the progress of implementation of this first tranche;
 - (ii) submit the final plan for the phase-out of ODS use of the remaining enterprises, bearing in mind the need to achieve the phase-out in a more expeditious manner. UNDP may, however, submit this plan earlier than the 36th Meeting.

This will ensure that the Committee receives a plan that could assure a reasonably accurate level of Multilateral Fund assistance without delaying the desire of the Mexican Government to phase-out the remaining CFC consumption in the foam sector.

9. The project is thus submitted for individual consideration on account of Decision 30/52 (b) and (d), taking into consideration the Secretariat's comments in paragraphs 1-8 above.

RECOMMENDATIONS

1. The Executive Committee may wish to:
- (a) Take note with appreciation of the Foam Sector Phase-out Plan for Mexico;
 - (b) Approve the amount of US \$833,150 including US \$100,000 as project management funding on the basis that UNDP and the Government of Mexico will:
 - (i) implement an initial phase of the plan for enterprises which should be identified through an audit of their baseline conditions. In implementing the project, while exercising flexibility, UNDP and the Government should take due care to ensure that funding of the enterprises selected is consistent with the policies and guidelines of the Multilateral Fund;
 - (ii) prepare final audit(s) of the remaining enterprises and on the basis of such audit or audits, to prepare the final phase of the plan, including incremental costs, taking into account comments in paragraphs 1-8 under the Secretariat's comments and recommendations, for submission to the Executive Committee not later than its 36th Meeting.

- (c) Request UNDP to reflect fully the amount of US \$833,150 approved at this meeting in the final plan to be prepared and include a report on the status of implementation of this initial phase in the submission on the final plan;
- (d) Request UNDP to communicate to the Secretariat the results of the audits to be conducted and all other relevant information used to determine the eligible costs of the plan.
