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PROJECT PROPOSAL: MEXICO

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

Foam:

- Foam sector ODS phaseout plan

UNDP

**PROJECT EVALUATION SHEET
MEXICO**

SECTOR: Foam ODS use in sector (1999): 890 ODP tonnes

Sub-sector cost-effectiveness thresholds:

Project Titles:

(a) Foam sector ODS phaseout plan

Project Data	Multiple-subsectors
Enterprise consumption (ODP tonnes)	890.00
Project impact (ODP tonnes)	826.00
Project duration (months)	60
Initial amount requested (US \$)	700,150
Final project cost (US \$):	
Incremental capital cost (a)	3,592,500
Contingency cost (b)	359,250
Incremental operating cost (c)	0
Total project cost (a+b+c)	3,951,750
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US \$)	578,050
Cost effectiveness (US \$/kg.)	4.78
Counterpart funding confirmed?	
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

Foam sector ODS phaseout plan

1. It is proposed to phase out the remaining consumption of CFC-11 in the foam sector in Mexico by the end of 2005 by means of a sector plan. The plan has been prepared making use of Decision 25/50 on terminal umbrella projects where there are significant numbers of small enterprises. Two hundred and forty two enterprises will phase out the use of 890 ODP tonnes of CFC-11 (additional to the consumption of enterprises with projects currently under implementation) at a total proposed cost of US \$5,099,740 and with a cost-effectiveness of US \$5.55/kg. The proposed incremental costs are for capital equipment (US \$4,695,900) and management (US \$310,000) plus contingency costs at 10 percent. Under Decision 25/50, incremental operating costs and savings are not taken into account. Funding is proposed in five tranches commencing in December 2000, to be approved annually based on the achievement of annual performance targets which include proposed activities and phase-out targets.

2. The proposal indicates that data on the numbers of remaining enterprises and their consumption was established through a survey of the seven domestic foam chemicals suppliers, which together supply most of the foam industry, and the international chemicals suppliers serving the Mexican market. The survey was conducted this year, together with a national industry workshop. The survey results were audited and reconciled by UNDP experts and resulted in a list of remaining ODS foam sector users. The proposal notes that the CFC-11 consumption indicated in the survey is more than double the reported 1998 sector consumption of 390 tonnes and suggests that contributing factors could be: lack of inclusion in government figures of imported foam chemicals containing CFC-11; illegal imports; disruption of phase-out momentum because of a recent lack of funded projects, and; inclusion in consumption figures of enterprises which use CFC replacements. It is pointed out that double counting of non-CFC-using enterprises will be addressed in the final qualification audit undertaken within the project. The proposal suggests that, apart from this, there is little reason to question the reports from the suppliers.

3. A comprehensive discussion of available technologies is provided. The technologies selected for the various foam applications are:

Rigid Foam (Insulating):	HCFC-141b
Rigid Integral Skin Foam:	Water
Shoe-soles:	Water, Hexane or HFC-134a

4. The incremental capital costs are based on the typical costs of retrofit or replacement of foam production equipment found in Mexico for the various application groups identified. These costs are readily established on the basis of approved projects. Also on the basis of information from approved projects a projection was made of the relative proportions of retrofitting and provision of new equipment likely to be required in the listed enterprises. The standard

incremental capital costs per enterprises for the four classes of applications identified are indicated in Table 1 below:

Table 1

Category	Action	Equipment Cost	Trials	Training	TOTAL
RPF – Sprayfoam, Transportation, Pipe insulation	25% replacement by small-medium HP dispenser, 75% retrofit of existing dispenser	\$12,500	1,000	1,000	14,500
RPF – panels, miscellaneous	25% replacement by medium HP dispenser, 75% retrofit	\$17,500	1,000	1,000	19,500
ISF – other applications	Retrofit for water blown	\$10,000	1,000	1,000	12,000
Shoe-soles	Costs based on hexane conversion, as per existing hexane retrofit package in Mexico	\$35,000	1,000	1,000	37,000

5. The proposal includes a detailed modality for implementation of the project in which the roles of the Government of Mexico, local consultants, UNOPS and UNDP are indicated, together with the activities they will undertake and the relevant target dates. The modality is based on: an awareness campaign to ensure all eligible users have the opportunity to participate; verification visits to all enterprises to confirm eligible ODS use and commitment to phase out; preparation and implementation of regulatory support, and; provision of technical and financial assistance to each eligible user to complete the phase-out.

6. The key implementation milestones and the phase-out proposed to be achieved each year of the programme is indicated in Table 2 below:

Table 2

Year	Performance target	Amount (grant)	ODP eliminated	Number of enterprises
2000	Sector plan approved by ExCom Request for first disbursement	US\$ 700,150	--	--
2001	- Steering committee installed - Awareness workshops conducted - Qualification activities for pipe insulation and transportation completed - Implementation of sub-projects "Pipe" and "Transportation" - Request for second disbursement	US\$ 1,291,125	100	37
2002	- Qualification activities for spray completed - Compliance verification for pipe insulation and transportation completed - Implementation of the first batch of sprayfoam sub-projects - Request for third disbursement	US\$ 1,291,125	265	75
2003	- Compliance verification for spray-I completed - Implementation of the second batch of sprayfoam sub-projects - Request for fourth disbursement	US\$ 1,267,750	270	80
2004	- Qualification activities for the remaining sub-projects completed - Compliance verification for spray-II completed - Implementation of the remaining sub-projects - Finalisation of regulatory action program - Request for final disbursement	US\$ 35,200	191	50
2005	- Compliance verification for remaining sub-projects completed Preparation of Project Completion Report - Promulgation of regulation to forbid the use of CFCs in the foam sector - Completion of post-monitoring arrangements	--	826	242

7. The costs proposed for institutional support and management are indicated in Tables 3 and 4 below together with a summary of the total incremental capital costs for conversion based on the standard costs identified above.

Table 3: Management Plan

Description	Requested MLF grant in US\$		
	QTY	Unit cost	Total cost
Supervisory Activities			
Steering Committee Meetings	2/yr for 4 years	1,000	8,000
Sundries		2,000	2,000
Supporting Activities			
Advertisements			5,000
Workshops	3	5,000	15,000
Regulatory Activities			10,000
Technical Assistance and Monitoring			
Enterprises	242	1,000	242,000
Subtotal			282,000
Contingency 10%			28,200
Total			310,200

Table 4: Individual Enterprise Group Project Summary

Description	Requested MLF grant in US		
	# of companies	Unit cost	Total cost
RPF – Spray, Transportation, Pipe Insulation	192	14,500	2,784,000
RPF – Panels, Miscellaneous	37	19,500	721,500
ISF – Other	4	12,000	48,000
Shoe-soles	9	37,000	333,000
Subtotal			3,886,500
Contingency 10%			388,650
Total			4,275,150

8. The proposed total projects costs, the schedule of annual approvals and the associated ODS phase-out schedule are indicated in Table 5 below:

Table 5

Year of approval	2000	2001	2002	2003	2004	Total
Annual CFC-11 Phase-out (ODS tonnes)	Nil	100	265	270	191	826
Max remaining consumption (ODS tonnes)	890	790	525	255	64	n.a.
Project Cost US \$	700,150	1,291,125	1,291,125	1,267,750	35,200	4,585,350

9. It is indicated in the proposal that no further funding will be requested for the foam sector in Mexico.

SECTOR BACKGROUND

10. In the original Country Programme of Mexico (1990), ODS use in the foam industry was indicated as 1,629 tonnes (1989), with a breakdown of 35% CFC-11 (thermoplastic foams) and 65% CFC-11 (polyurethane foams). No further breakdown of the use per application was provided at that time.

11. Recent consumption of CFCs in Mexico has been reported by the Government as follows:

CFC 11 only ODP tonnes	1989	1995	1996	1997	Baseline 95-97	1998
Foam	1,629	1,250	1,000	800	1,017	390
Refrigeration	NA	886	815	487	729	276
Other	NA	50	50	66	55	86
Total	2,106	2,186	1,865	1,353	1,801	752
All CFCs						
Total	8,048	4,875	4,896	4,159	4,643	3,496

12. A phase-out strategy for the Mexican foam industry was presented in 1996, followed by a sub-strategy paper for the shoe-sole industry in the same year. From 1991 to 2000 inclusive, 21 projects in the foam sector (excluding foam used in the refrigeration sector) were approved for funding through the Multilateral Fund, resulting in the phase-out of 1,465 ODP tonnes. MLF grants totalling US\$ 8.68 million were approved for these projects. Most of the large foam manufacturers have completely phased out the use of CFCs, either through funded projects or without assistance as a result of market and regulatory conditions. The remaining enterprises using CFCs are small and medium sized enterprises.

13. Consumption of CFC-11 in the foam sector in 1998 was reported to be only 390 ODP tonnes. Data provided by the Government of Mexico in April 2000 indicates that the 1999 consumption was 435 ODP tonnes.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The Secretariat is recommending this project for individual consideration principally because consumption figures from project preparation data are over double the reported foam sector consumption not yet addressed by funded projects, and with a similar increase in the anticipated number of enterprises remaining. This introduces an element of uncertainty in approving funding based on enterprise numbers (notwithstanding the flexibility incorporated in Decision 25/50 on terminal phase out for small enterprises).

2. The Secretariat is also recommending that an undertaking be sought from the Government of Mexico that (a) the data when verified will be reconciled with data already reported under Article 7 and progress with implementation of country programmes and (b) the consumption phased-out under the project, if approved, will at the time of implementation be fully taken into account in reporting future reductions in Annex A Group 1 consumption.

3. The Secretariat and UNDP have agreed on all cost aspects of the proposal.

4. Detailed comments are as follows.

5. The apparent consumption in the foam sector of 890 tonnes identified by UNDP during project preparation is more than double the 1999 consumption reported by the Government of Mexico in April this year. Reported consumption in 1998 was lower, being 390 tonnes. Additionally, an analysis of consumption undertaken by the Secretariat in March 2000 on the basis of data reported by Mexico (country programme implementation and Article 7 data) implementing agencies' progress reports and a (January 1998) Mexico SME study prepared with UNDP assistance, indicated that the likely consumption in the foam sector remaining to be addressed (after all funded projects were completed) was around 100-120 tonnes in, possibly, 75-100 small enterprises.

6. Noting that the list of enterprises now identified was intended to exclude all those for whom projects have been approved but not yet implemented (total consumption of which at the beginning of 2000 was an additional 610 tonnes), the Secretariat raised with UNDP the consistency and reliability of the new data. The project document stated that the survey had been audited and reconciled by UNDP experts to avoid duplication within the current list and with enterprises which were part of previously approved projects. The Secretariat's review indicated that of the 242 enterprises on the list some 19 duplications appeared to remain.

7. The Secretariat also noted that all six domestic foam chemicals suppliers had already received Multilateral Fund projects and sought advice as to why the enterprises they supplied had not been identified during preparation of these previous projects and why they were still supplying CFC-based chemicals.

8. In view of the above, the Secretariat requested additional information on survey criteria and methods and on enterprise consumption levels

9. It was also noted that since Mexico was a producer of CFCs with only a low level of imports, the CFC-11 used in the foam sector was likely to have been counted in Mexico's overall CFC consumption reported under Article 7. If the consumption in the foam sector was higher than previously predicted by more than 500 tonnes, it appears that this would have to be offset by equivalent lower consumption for other applications. Additionally the annual consumption phased out in this project at the time it is implemented will need to be fully taken account of in future reports on consumption in Mexico.

10. UNDP advised the Secretariat that chemicals suppliers were bound through previous projects not to supply CFCs to customer enterprises that were listed in the various projects, but that to other customers they could still supply CFC-based foam chemicals. No costs from the current proposal were allocated to chemicals suppliers as they have all received projects. UNDP further advised that previous projects dealt only with small numbers (10-25) of consumers per supplier usually in specific foam applications. Thus full listings of all customers were not obtained in earlier surveys.

11. UNDP said that the six chemicals suppliers had been contacted, briefed on the purpose of the survey and requested to provide information on all enterprises/customers still using CFCs. About 20-25 enterprises were contacted by telephone because their aggregate consumption from various suppliers raised questions. No site visits were conducted. UNDP said that the design of the project submitted under Decision 25/50 which provided for circumstances where the quality of data was not high, enabled details of each enterprise including all eligibility requirements, to be checked by site visits during the project implementation. Those not eligible would not be funded. UNDP acknowledged the duplications with previous project enterprises which accounted for about 25 tonnes of CFC-11, and the duplication of new enterprises on the lists of more than one chemicals supplier. UNDP said that in this checking process an additional 5 apparently eligible enterprises had registered for the project. The minimum consumption of any enterprise was 50kg of CFC-11 per year, corresponding to 1.2 tonnes of foam chemicals used. Approximately 50 enterprises (25 percent) had consumption of less than one tonne of CFC-11 per year. UNDP provided the original lists from the national consultant indicating the sales of foam chemicals by each supplier to each enterprise.

12. Bearing in mind the magnitude of the discrepancy in sector consumption, UNDP agreed to undertake immediately a site visit survey of 10 percent of the enterprises to provide additional corroboration of the information collected in the survey. The Sub-Committee on Project Review will be advised of the outcome of the additional survey. UNDP also agreed to represent to the Government of Mexico the need to reconcile the data from this project with country data on consumption and, if the project were approved, the need to account for the phase-out achieved

when the project is implemented in all relevant future reports of sector and national consumption.

13. The Secretariat discussed with UNDP the enterprise conversion costs, in particular the proportion of enterprises which would be likely to need only retrofit compared to provision of new equipment. It was agreed that information from previous projects indicated that a proportion of 75 percent retrofit to 25 percent new equipment was justified. Eligible capital costs were determined on this basis. With this adjustment, the Secretariat and UNDP agreed on all elements of the proposed projects costs.

14. UNDP is seeking approval of the first annual payment at this meeting. UNDP confirmed that the performance indicators in Table 2 above would be the criteria for consideration of each year's funding request.

RECOMMENDATION

1. The project is recommended for individual consideration.