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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Sixty-eighth Meeting
Montreal, Canada, 3-7 December 2012

PROJECT PROPOSAL: MEXICO

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

Phase-out

- HCFC phase-out management plan (stage I, second tranche) UNIDO/UNDP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Mexico

(I) PROJECT TITLE	AGENCY
HCFC phase out plan (Stage I)	UNDP, UNIDO (lead)

(II) LATEST ARTICLE 7 DATA (Annex C Group l)	Year: 2011	1,083.4 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2011
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123					1.3				1.3
HCFC-124					3.5				3.5
HCFC-141b	33.0	417.6		231.0					681.6
HCFC-141b in Imported Pre-blended Polyol									
HCFC-142b		28.5							28.5
HCFC-22	21.2	26.4		47.9	273.3				368.8

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	1,148.8	Starting point for sustained aggregate reductions:	1,214.8
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	417.3	Remaining:	797.5

(V) BUSINESS PLAN		2012	2013	2014	2015	Total
UNDP	ODS phase-out (ODP tonnes)	88.1	88.1	0.0	26.0	202.2
	Funding (US $)	4,085,000	4,085,000	0	1,206,691	9,376,691
UNIDO	ODS phase-out (ODP tonnes)	16.1	13.4	2.8	5.3	37.6
	Funding (US $)	747,137	621,717	129,000	243,291	1,741,145

(VI) PROJECT DATA			2009	2011	2012	2013	2014	2015	2018	Total
Montreal Protocol consumption limits			n/a	n/a	n/a	1,148.8	1,148.8	1,033.9	1,033.9	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	n/a	1,148.8	1,148.8	1,033.9	804.2	n/a
Agreed Funding (US$)	UNDP	Project costs	2,428,987	2,502,526	3,800,000	3,800,000	0	1,122,503	0	13,654,016
		Support costs	182,174	187,689	285,000	285,000	0	84,188	0	1,024,051
	UNIDO	Project costs	0	2,792,526	695,011	578,341	120,000	226,317	0	4,412,195
		Support costs	0	209,439	52,126	43,376	9,000	16,974	0	330,915
Funds approved by ExCom (US$)		Project Costs	2,428,987	5,295,052	0	0	0	0	0	7,724,039
		Support Costs	182,174	397,128	0	0	0	0	0	579,302
Total funds requested for approval at this meeting (US$)		Project Costs	0	0	4,495,011	0	0	0	0	4,495,011
		Support Costs	0	0	337,126	0	0	0	0	337,126

Secretariat's recommendation:	For individual consideration

PROJECT DESCRIPTION

1. On behalf of the Government of Mexico UNIDO, as the lead implementing agency, has submitted to the 68th meeting of the Executive Committee a request for funding for the second tranche of stage I of the HCFC phase-out management plan (HPMP) at a total cost of US $4,832,137, consisting of US $695,011, plus agency support costs of US $52,126 for UNIDO, and US $3,800,000, plus agency support costs of US $285,000 for UNDP. The submission includes a progress report on the implementation of the first year of the HPMP together with the tranche implementation plans for the remaining of 2012 and 2013.

Background

2. The HPMP for Mexico was approved by the Executive Committee at its 64th meeting, to reduce HCFC consumption by 30 per cent of the baseline by the end of 2018, at a total funding level in principle of US $16,250,031. In addition US $2,428,987 plus agency support costs of US $182,174 for UNDP, for the project for conversion from HCFC-141b and HCFC-22 in the manufacture of polyurethane insulation foam for domestic refrigerators at Mabe, was approved at the 59th meeting; and US $520,916 plus agency support costs of US $39,069 for UNIDO, for the project for phase-out of HCFC-22 and HCFC-141b in aerosol manufacturing at Silimex, was approved at the 63rd meeting. At the 64th meeting, the Executive Committee approved US $2,271,610 plus agency support costs of US $170,371 for UNIDO, and US $2,502,526 plus agency support costs of US $187,689 for UNDP for implementation of the first year of the HPMP.

Progress report on the implementation of the first tranche of the HPMP

3. Stage I of the HPMP for Mexico includes the phase-out of HCFCs in the foam and aerosol manufacturing sector and in the refrigeration servicing sector. The results achieved so far are described below.

Activities in the foam manufacturing sector

4. Implementation of the project for the conversion from HCFC-22 and HCFC-141b to hydrocarbons in the production of insulation foam for domestic refrigerators at Mabe is on-going. Since the enterprise is partially owned by foreign capital, there was a need to secure counterpart funding before the conversation could commence. During this process, new formulations based on cyclopentane had been optimized. The needed equipment will be delivered and installed before July 2013. More than 50 per cent of the total HCFC consumption of HCFCs (i.e., 66.8 ODP tonnes) will be phased out in 2013, and the remaining consumption in 2014.

5. With regard to the phase-out of HCFC-141b in formulated systems at systems houses and their foam customers (UNDP), memorandum of agreements (MOAs) have been signed between the Government of Mexico and the locally-owned systems houses. Alternative blowing agents have been selected by all locally-owned systems houses and trials have been performed in their facilities (Table 1). Substantial funding disbursements by the locally-owned systems houses are expected during the first half of 2013 as the foam equipment in downstream foam enterprises will be converted.

Table 1. Summary of activities implemented with the systems houses

Systems house	Summary of activities
Acsa	The methyl formate technology have been selected and transferred; trials have been conducted at systems house; blending tanks will be fully reconverted by December 2012. Pre-blended polyols based on methyl formate will be available in 2013
Aepsa	The methyl formate technology have been selected and transferred; trials have been conducted at systems house and downstream users; blending tanks will be fully reconverted by December 2012. Pre-blended polyols based on methyl formate will be available in 2013
Bayer	No direct funding is provided as this enterprise is foreign-owned. The HFC technology has been selected which will be replaced by HFO, and will be available by the end of 2013
Comsisa	The methyl formate and methylal technologies have been selected and transferred; trials have been conducted at systems house; blending tanks will be fully reconverted by December 2012. Pre-blended polyols based on methyl formate and methylal will be available in 2013
Dow	No direct funding is provided as this enterprise is foreign-owned. The HFC technology has been selected and will be replaced by HFO, and will be available by the end of 2013. The systems house has also selected the water-blown technology
Eiffel	The water-blown, methyl formate and methylal technologies have been selected and transferred; trials have been conducted at systems house and five downstream users (spray foam); blending tanks will be fully reconverted by December 2012. Pre-blended polyols based on methyl formate will be available in 2013. Further developments of water-blown and methylal would be done in 2013
Huntsman	No direct funding is provided as this enterprise is foreign-owned. The alternative technology has not yet been selected
Maxima	The methyl formate technology has been selected and transferred; trials have been conducted at systems house. Pre-blended polyols based on methyl formate will be available in 2013
Polioles	The hydrocarbon and methyl formate technologies have been evaluated; trials have been conducted at systems house. The systems house has also selected HFC technology which will be replaced by HFO. Blending tanks are being reconverted. Pre-blended polyols systems based on hydrocarbon will be available in 2013. HFO-based systems will be available at a later stage
Pumex	The hydrocarbon, methylal and methyl formate technologies have been selected and transferred; trials have been conducted at systems house; blending tanks are being reconverted. Pre-blended polyols based on hydrocarbon, methylal and methyl formate will be available in 2013
Zadro	The methyl formate and methylal technologies have been selected and transferred; trials have been conducted at systems house and downstream users; blending tanks are being reconverted. Pre-blended polyols based on methyl formate and methylal will be available in 2013
Valcom	The methyl formate technology has been selected and transferred; trials have been conducted at systems house. Pre-blended polyols based on methyl formate will be available in 2013

6. Implementation of the project for the conversion of three commercial refrigeration enterprises, namely Metalfrio, Ojeda Frigopanel, and Fersa Torrey, to hydrocarbon technology has been initiated. The bidding process for the equipment required for Metalfrío was completed and will be installed by October 2013. The full conversion of the enterprise is expected by December 2013. Implementation of the two other enterprises has been delayed: with regard to Frigopanel during the finalization of the technical evaluation, UNIDO cancelled the bidding as it was informed that the enterprise was considering changing the selected technology. Due to the change of management at Fersa Torrey, UNIDO has been unable to visit the enterprise. UNIDO is planning to visit both enterprises to review the final technology, technical

requirements and associated costs no later than March 2013 (a revised project proposal might be submitted to the first or second meeting of the Executive Committee in 2013). Complete phase-out of HCFCs is expected by the end of 2014, prior to the completion of stage I of the HPMP.

Activities in the aerosol manufacturing sector

7. The conversion of Silimex to alternative propellant is going well. The bidding process for the supply of equipment has been completed and is expected to be installed by September 2013. Complete phase-out of HCFCs is expected by December 2013.

Activities in the refrigeration servicing sector

8. Several activities have been initiated in the refrigeration and air-conditioning servicing sector with assistance from UNIDO. The quota and licensing system has been improved to address the entire process of import, export, and sale of all HCFCs including the re-sale and re-export of recovered and reclaimed HCFCs. Customs registration codes for HCFCs have been adopted, and 50 customs officers were trained on ODS identification, intelligence procedures, local and international prosecution procedures and other related environmental issues, and 12 ODS identification kits were procured. Also, a new energy standard for home air-conditioners has been issued that allows for import and manufacturing of non-HCFC-22 based equipment. A training manual in "good practices in cleaning of refrigeration and air conditioning systems and substitutes for HCFC" has been developed to be used in the service sector training activities.

Status of fund disbursement

9. As of November 2012, of the US $7,724,039 approved for the first tranche, US $5,649,426 had been disbursed or committed. The balance of US $2,074,613 will be disbursed in 2013 (Table 2).

Table 2. Financial report associated with the first tranche of the HPMP for Mexico

Description	Funds (US $)			
	Approved	Disbursed*	Committed**	Balance
Mabe foam project	2,428,987	200,000	2,000,000	228,987
Silimex aerosol project	520,916	71,955	240,755	208,206
Three commercial refrigeration	2,046,110	142,243	568,973	1,334,894
Systems houses	2,502,526	700,000	1,500,000	302,526
Servicing sector	100,000	65,319	34,681	0
Project monitoring	125,500	123,624	1,876	0
Total	7,724,039	1,303,141	4,346,285	2,074,613

(*) As of November 2012
(**) As of January 2013

Annual plans for the second tranche of the HPMP

10. The main activities to be implemented for the remaining 2012 and 2013 are presented in Table 1 below.

(a) Completing the conversion of the insulation foam for domestic refrigerators at Mabe, resulting in the phase-out of 55.70 ODP tonnes of HCFCs by the end of 2013;

(b) Completing the conversion of the aerosol project of Silimex, resulting in the phase-out of 11.10 ODP tonnes of HCFCs by the end of 2013;

(c) Complete conversion of the insulation foam for commercial refrigerators at Metalfrío,

resulting in the phase-out of 9.00 ODP tonnes of HCFCs by the end of 2013. Resubmission of project proposals for the conversion of Frigopanel and Fersa (potential change of technology as originally selected), resulting in the phase-out of 14.00 ODP tonnes of HCFCs in 2014;

(d) Continued implementation of the systems houses project component, where safety audits and trials with downstream foam users will be completed and several foam enterprises will be converted;

(e) Phasing out 15.00 ODP tonnes of HCFC-141b used as a solvent for cleaning refrigeration systems;

(f) Undertaking three training courses for 60 trainers who will train 1,500 technicians in good service practices, including proper flushing of refrigeration systems during servicing. Printing 4,000 training manuals and purchasing at least 200 flushing kits for training purposes and distribution to service technicians. Registering the trained technicians in the data base of the monitoring system;

(g) One customs training workshop including the purchase of at least four ODS identifiers; and

(h) Project monitoring and evaluation, including verification of HCFC consumption that will be undertaken in 2014 to verify 2013 HCFC production and consumption.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Operational licensing system

11. In line with decision 63/17 and as required under the Agreement between the Government of Mexico and the Executive Committee, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports, production and exports is in place and that the system is capable of ensuring compliance with the Montreal Protocol HCFC phase-out schedule for the duration of the Agreement.

12. The licensing and quota system in México is based on the National Rules for Imports and Exports of Chemical Substances and Materials issued in 2004. The authorized importer has to explicitly request the General Direction of Air quality Management for an import quota based on the 2009-2010 average amounts imported. This request is reviewed by the National Ozone Office. Following clearance, the importer has to request an import authorization from the Secretariat of Health. An import permit has to be requested through the Hazardous Materials and Substances of the Secretariat of the Environment. The amount of HCFCs to be imported is registered in the Information and Monitoring System (IMS). After ensuring that all import permits are in place, the amounts of HCFCs entering into the country are registered into the IMS by the Customs authorities and the information is passed on to the National Ozone Unit. .

13. The Government of Mexico has already issued HCFC import quotas for 2013 in the amount of 1,141.14 ODP tonnes as shown in Table 3. The total quota for 2013 is 7.65 ODP tonnes below the baseline for compliance.

Table 3. HCFC quotas for 2013

HCFC	HCFC-22	HCFC-141b	HCFC-123	HCFC-124	HCFC-142b	Total
Metric tonnes	8,475.00	6,020.89	65.85	4.50	173.81	14,740.05
ODP tonnes	466.13	662.30	1.32	0.10	11.30	1,141.14

HCFC consumption

14. The HCFC baseline for compliance has been established at 1,148.8 ODP tonnes, based on the actual consumption reported under Article 7 of the Montreal Protocol for 2009 and 2010 as shown in Table 4. The established baseline is equal to that in the Agreement between the Government of Mexico and the Executive Committee; therefore no adjustments to the Agreement are required. Although small reductions in HCFC consumption had occurred in the aerosol, refrigeration manufacturing and servicing sectors due to the economic crises, the manufacturing sector reduced its production output resulting in a reduction of HCFC consumption. For this reason, manufacturing enterprises (locally and foreign-owned) had to sell first their stocks before new production could begin. Based on preliminary data, the HCFC consumption has been estimated at 1,100.22 ODP tonnes in 2012.

Table 4. HCFC consumption in Mexico (2007-2011 Article 7; 2012 estimated)

HCFC	2007	2008	2009	2010	2011	2012	Baseline
Metric tonnes							
HCFC-123	50.1	13.9	54.0	92.1	63.29	50.00	73.1
HCFC-124	46.4	2.7	5.0	10.9	161.30	10.00	8.0
HCFC-141b	6,951.5	7,459.7	5,503.5	6,744.2	6,196.20	6,000.00	6,123.9
HCFC-142b	4.4	16.0	20.0	158.3	437.70	1,000.00	89.2
HCFC-22	11,958.9	7,142.0	9,419.0	7,591.2	6,704.53	6,800.00	8,505.1
Total (mt)	19,011.2	14,634.3	15,001.5	14,596.7	13,563.0	13,860.00	14,799.1
ODP tonnes							
HCFC-123	1.0	0.3	1.1	1.8	1.27	1.00	1.5
HCFC-124	1.0	0.1	0.1	0.2	3.55	0.22	0.2
HCFC-141b	764.7	820.6	605.4	741.9	681.58	660.00	673.6
HCFC-142b	0.3	1.0	1.3	10.3	28.45	65.00	5.8
HCFC-22	657.7	392.8	518.0	417.5	368.75	374.00	467.8
Total (ODP tonnes)	1,424.7	1,214.8	1,125.9	1,171.7	1,083.60	1,100.22	1,148.8

15. With regard to the substantial increase in the consumption of HCFC-142b, UNIDO explained that there are two main enterprises that use HCFC142b mainly for packaging systems for the protection of equipment. One enterprise is foreign-owned and started operations only in 2011, while the other (locally-owned) has not increased its production. It is expected that the foreign-owned enterprise will be converted by 2018 (or earlier) using its own resources. UNIDO also indicated that part of the 1,000 mt will be used in future years (stockpiles).

Issues discussed with implementing agencies

16. With regard to the potential change of the technology originally selected by Frigopanel, UNIDO explained that at the time of submitting the HPMP the two enterprises were fully committed to converting to cyclopentane technology. However, during the bidding process Frigopanel requested that the bidding process be cancelled as it was considering a technology other than the one previously selected. The bidding for Fersa has not started yet since the management was changed soon after the HPMP was approved. Based on preliminary information received by UNIDO, Frigopanel is considering the water-blown technology while Fersa is planning the introduction of HFOs. However, confirmation of the technology selection can only be made once both enterprises have been visited by UNIDO and the National Ozone Unit (possibly during the first quarter of 2013). UNIDO confirmed that funding will not be disbursed for Frigopanel and Fersa enterprises until a revised proposal is submitted to the Secretariat and approved by the Executive Committee.

17. With regard to the modality of the project implementation arrangements (i.e., MOAs) with systems houses, UNDP explained that payments to participating enterprises are based on a milestone-based programme of activities tailored to each enterprise. In the case of conversion of downstream foam enterprises through systems houses, this modality partially delegates implementation rights to the system houses which are better informed than their customers on the technical modifications needed to the equipment that would be using the alternative blowing agent. Each MOA contains detailed implementation plans individually discussed and agreed on with the systems house as well as legal provisions between the Government of Mexico and the systems house. It also describes the monitoring procedures of the system house's conversion programme, including disbursing payments. The funds will be managed by UNDP, with monitoring by the Government of Mexico, and will be transferred to the enterprises in tranches upon achievement and verification of specific implementation milestones (i.e., verification of HCFC consumption and equipment baseline; development of engineering plans, procurement and installation of equipment or retrofitting kits; trials, training and safety audits; starting production with alternative blowing agents; verification of total HCFC phase-out; destruction of obsolete equipment. All policies and guidelines of the Fund will be strictly monitored by UNDP during the conversion of the enterprises.

18. The Secretariat notes that the import/export licensing and quota systems are operational and, together with the phase-out activities proposed in stage I of the HPMP it will enable the Government to progressively reduce its consumption to at least 30 per cent of its baseline by 2018, well in advanced of the Montreal Protocol's phase out schedule. Pre-blended polyols with alternative blowing agents will be available for supplying their downstream foam users during the second half of 2013. Activities in the refrigeration servicing sector under implementation will reduce the consumption of HCFC-141b used as a solvent for cleaning refrigeration circuits as well as HCFC-22 used for servicing.

RECOMMENDATION

19. The Executive Committee may wish to:

(a) Take note of the progress report on the implementation of the first tranche of stage I of the HCFC phase-out management plan of (HPMP) in Mexico; and

(b) Approve the second tranche of stage I of the HPMP for Mexico, and the corresponding annual implementation plans, at the amount of US $4,832,137, consisting of US $695,011, plus agency support costs of US $52,126 for UNIDO, and US $3,800,000, plus agency support costs of US $285,000 for UNDP.

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