



**United Nations
Environment
Programme**

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/74/29
15 April 2015

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-fourth Meeting
Montreal, 18-22 May 2015

PROJECT PROPOSAL: EL SALVADOR

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

Phase-out

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

UNDP/UNEP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

El Salvador

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase out plan (Stage I)	UNDP (lead), UNEP	65 th	35% by 2020

(II) LATEST ARTICLE 7 DATA (Annex C Group I)						Year: 2013	8.08 (ODP tonnes)		
(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2013	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123					0.0				0.0
HCFC-124					0.0				0.0
HCFC-141b					2.4				2.4
HCFC-142b					0.0				0.0
HCFC-22					5.6				5.6

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	11.7	Starting point for sustained aggregate reductions:	16.62
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	9.03	Remaining:	7.59

(V) BUSINESS PLAN		2015	2016	2017	2018	2019	2020	Total
UNDP	ODS phase-out (ODP tonnes)	0.5	0.8	0.0	0.0	0.0	0.1	1.4
	Funding (US \$)	63,348	101,050	0	0	0	17,200	181,598
UNEP	ODS phase-out (ODP tonnes)	0.2	1.4	0.0	0.0	0.0	0.2	1.8
	Funding (US \$)	19,150	175,680	0	0	0	19,520	214,350

(VI) PROJECT DATA			2011	2012	2013	2014	2015	2016	2017-2019	2020	Total
Montreal Protocol consumption limits			n/a	n/a	11.68	11.68	10.51	10.51	10.51	7.59	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	11.68	11.68	10.51	10.51	10.51	7.59	n/a
Agreed funding (US\$)	UNDP	Project costs	530,349				58,928	94,000		16,000	699,277
		Support costs	39,776				4,420	7,050		1,200	52,446
	UNEP	Project costs	166,500				18,500	171,000		19,000	375,000
		Support costs	5,850				650	4,680		520	11,700
Funds approved by ExCom (US\$)	Project costs	696,849	0	0	0	0.0	0.0	0.0	0.0	0.0	696,849
	Support costs	45,626	0	0	0	0.0	0.0	0.0	0.0	0.0	45,626
Total funds requested for approval at this meeting (US\$)	Project costs					77,428					77,428
	Support costs					5,070					5,070

Secretariat's recommendation:	Individual consideration
--------------------------------------	--------------------------

PROJECT DESCRIPTION

1. On behalf of the Government of El Salvador, UNDP as the lead implementing agency, has submitted to the 74th meeting 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 \$82,498, consisting of US \$58,928, plus agency support costs of US \$4,420 for UNDP, and US \$18,500, plus agency support costs of US \$650 for UNEP. The submission includes a progress report on the implementation of the first tranche and the tranche implementation plan for 2015 to 2016.

Report on HCFC consumption

HCFC consumption

2. The Government of El Salvador reported a consumption of 8.08 ODP tonnes of HCFC in 2013 and estimated a consumption of 8.50 ODP tonnes for 2014. The 2010-2014 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in El Salvador (2010-2014 Article 7 data)

HCFC	2010	2011	2012	2013	2014*	Baseline
Metric tonnes						
HCFC-22	161.71	132.08	123.28	101.81	117.20	148.13
HCFC-123	0.30	0.40	0.41	0.09	0.10	2.65
HCFC-124	0.91	1.77	1.09	0.58	0.70	4.89
HCFC-141b	23.26	20.35	22.68	22.21	18.90	30.39
HCFC-142b	0.18	0.0	0.11	0.33	0.00	0.47
Total (mt)	186.36	154.60	147.57	125.02	136.90	186.51
HCFC-141b in imported pre-blended polyols**						44.87***
ODP tonnes						
HCFC-22	8.9	7.27	6.78	5.60	6.40	8.15
HCFC-123	0.0	0.00	0.01	0.01	0.00	0.05
HCFC-124	0.0	0.04	0.02	0.01	0.00	0.11
HCFC-141b	2.6	2.24	2.50	2.44	2.10	3.34
HCFC-142b	0.1	0.00	0.01	0.02	0.00	0.03
Total (ODP tonnes)	11.5	9.55	9.32	8.08	8.50	11.7
HCFC-141b in imported pre-blended polyols **						4.94***

* Preliminary data.

**Consumption of HCFC-141b contained in imported pre-blended polyols has not been reported under Article 7, neither under the CP implementation report. It is estimated that the three foam enterprises in El Salvador used 8.31 ODP tonnes in 2013.

***Average use between 2007 and 2009.

3. The reduction in HCFC consumption since 2011 is partially attributed to training in good refrigeration practices, the introduction of HCFC alternatives into the country, and restricted purchasing of HCFC-22-based equipment in public buildings due to a national energy efficiency policy promoted by the National Energy Board. The increase in HCFC-22 consumption in 2014 was due to one enterprise that increased its stocks before it merged with another one.

Country programme (CP) implementation report

4. The Government of El Salvador reported sector HCFC consumption data under the 2013 CP implementation report, which is consistent with the data reported under Article 7. The 2014 CP report will be submitted by 1 May 2015.

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

Legal framework and institutional strengthening (IS)¹

5. The Government of El Salvador promulgated the legal instrument that set up the baseline for HCFC imports and established the HCFC import licensing and quota system in accordance with the Montreal Protocol reduction targets. Accordingly, HCFC import quotas have been allocated to importers for 2013, 2014 and 2015.

6. A training workshop on the updated HCFC control measures and the prevention of illegal trade was organized with the participation of seven officials from the Risk Management Unit of the National Directorate of Customs. Two refrigerant identifiers were also procured to monitor refrigerant sales by workshops and distributors.

7. The ban on imports of HCFC-141b in bulk or contained in pre-blended polyols entered into force on 1 January 2015 as planned.

Manufacturing sector

8. Two out of three polyurethane (PU) foam manufacturing enterprises using 8.31 ODP tonnes of HCFC-141b contained in imported pre-blended polyols completed their conversions. Unimetal (sandwich panels) converted to cyclopentane technology and Hecasa (foam-injected metal doors) converted to CO₂-water technology. Both enterprises started commercial production based on alternatives, phasing out 87 per cent of the HCFC-141b contained in pre-blended polyols used in the country.

9. The third enterprise, Aislamientos Térmicos de Centroamérica (spray foam) is technically ready to convert but its suppliers are not offering the alternative selected (methyl formate). The project is facilitating the supply of samples of PU foam systems based on water and methyl formate through contacts made with systems houses in Mexico. Given the ban on imports of HCFC-141b in bulk and contained in pre-blended polyols, the enterprise tested, with its own funds, PU foam systems based on HFC-245fa as a temporary measure to continue operating until methyl formate-based formulations are supplied.

Refrigeration servicing sector

Training programme on good refrigeration practices

10. A training manual and a video on good service practices for HCFC-22-based refrigeration and air-conditioning equipment were completed, and 220 technicians were trained. In addition, 38 one-day workshops on the use of alternative refrigerants to HCFCs were completed with the participation of 900 technicians. Ten air-conditioning units were procured and distributed to two training institutions for training purposes.

HCFC consumption reduction through recovery and recycling

11. Eighty-nine cylinders of different capacity were purchased by three ODS reuse centers and the Salvadoran Association of Air Conditioning and Refrigeration. The cylinders are lent to qualified technicians to facilitate recovery of HCFC-22 when performing maintenance activities on refrigeration and air-conditioning systems. Once the service is provided, the technician returns the cylinders to the center for safekeeping and lending to other technicians.

¹ The HPMP for El Salvador was approved by the Executive Committee at its 65th meeting including the institutional strengthening component.

Project implementation and monitoring

12. The project implementation team is supporting the National Ozone Unit (NOU) in implementing HPMP activities. Meetings with authorities from the Ministry of Environment and Natural Resources (MARN) are held regularly to establish annual work plans, monitor the administrative management of the entire programme, and prepare progress reports.

Level of fund disbursement

13. As of March 2015, of the US \$696,849 so far approved (US \$530,349 for UNDP and US \$166,500 for UNEP), US \$475,615 (68.3%) had been disbursed (US \$415,283 for UNDP and US \$60,332 for UNEP). The balance of US \$221,234 will be disbursed in 2015 and 2016.

Implementation plan for the second tranche of the HPMP

14. During the second funding tranche of the HPMP, the Government of El Salvador will implement the following activities:

- (a) *Institutional strengthening (UNEP) (US \$18,500)*: Amendments to the HCFC import regulations, including control in the imports of HCFC-containing equipment; coordination with the National Directorate of Customs to include HCFC-containing equipment in the tariff code; four workshops with stakeholders and standardizing institutions on hydrocarbon management; and training of additional 40 customs officers in chemicals management and the prevention of illegal trade of HCFCs;
- (b) *Training and technical assistance (UNDP) (US \$20,000)*: Training of 400 technicians in good service practices in refrigeration and air-conditioning; and distribution of 300 basic tool kits (including manifold gauges, pliers, and tube cutters).
- (c) *Recovery and recycling (UNDP) (US \$30,000)*: Purchase of 150 cylinders for recovery and re-use of refrigerants, and 150 tool kits including HCFC-free solvent to replace the use of HCFC-141b in cleaning refrigeration systems; and
- (d) *Monitoring, evaluation and control (UNDP) (US \$8,928)*: Programme management and monitoring to support implementation of HPMP activities including implementation reports.

SECRETARIAT'S COMMENTS AND RECOMMENDATION**COMMENTS**

15. The Secretariat noted that the present tranche should have been submitted to the last meeting of 2015 according to the Agreement between the Government of El Salvador and the Executive Committee. Taking into consideration that the tranche has been submitted in the year it was programmed, and that it does not represent any deviation from the 2015-2017 Business Plan, the Secretariat reviewed it at this meeting.

Report on HCFC consumption

16. UNDP was requested to provide more details on the energy efficiency programme in public buildings that contributed with a reduction on HCFC consumption in El Salvador. The programme operates in the context of the existing green public procurement policy; energy efficiency and HCFC-free

technology are the criteria for selecting air-conditioning equipment under the programme. Currently, HCFC-22-based equipment is replaced by HFC-410A-based equipment.

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

Legal framework

17. In line with decision 63/17, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports and exports is in place and that the system is capable of ensuring compliance with the Montreal Protocol. The HCFC import quota for 2015 has been established at 10.46 ODP tonnes. For subsequent years, the annual quota will be based on the levels allowed under the Montreal Protocol.

Manufacturing sector

18. UNDP reported that the main challenge associated with the foam project has been the limited supply of methyl formate-based systems adapted to local conditions. Due to this issue, one of the two already converted enterprises (Hecasa) opted for water-based technology instead at a higher operational cost, as this was the only technology that its polyol supplier could deliver. Given the lack of HCFC-141b contained in pre-blended polyols after the ban on 1 January 2015, the spray foam enterprise Aislamientos Térmicos Centroamérica decided to test HFC-245fa-based polyols with its own funding to replace HCFC-141b-based polyols as an interim solution until the supply of methyl formate-based polyols is ensured. UNDP is working directly with a supplier in Mexico to conduct the tests and trials with methyl formate-based polyols, in order to supply them to “Aislamientos Térmicos Centroamérica” and complete the conversion of the enterprise in 2015. The Secretariat acknowledged the effort being done by UNDP to facilitate access to low-global-warming potential (GWP) technology in El Salvador, and suggested reporting periodically to the Executive Committee on the status of “Aislamientos Térmicos Centroamérica” until the time it has completely converted its production to a low-GWP technology.

19. With regard to the two converted enterprises, UNDP confirmed that all the approved funds were used. In addition Unimetal and Hecasa contributed over US \$50,000 and US \$25,000, respectively, as counterpart funding. Although the consumption of HCFC-141b contained in imported pre-blended polyols by the enterprises was 8.31 ODP tonnes in 2013, the project was funded based on a consumption of 4.94 ODP tonnes (average use between 2007 and 2009).

Refrigeration servicing sector

20. On the work being done by training institutes to ensure the sustainability of training on good practices in refrigeration, UNDP reported that the two training institutes have received funding from the Salvador Institute of Professional Education (UNSAFORP) to provide training to independent technicians with small workshops. Due to the expected introduction of low-GWP technologies in the market, training will continue to be provided under the HPMP. The introduction of technician certification is also being considered, but on a voluntary basis.

21. Regarding the current status of penetration of alternatives to HCFCs, UNDP reported that the main alternatives to HCFCs so far have been HFCs, both pure and in blends, as a large part of imports originate in countries where this technology is dominant. Through the activities being implemented under the HPMP, the Government is disseminating information about low-GWP alternatives and promoting their use.

Modifications to the Agreement

22. In reviewing the tranche request, the Secretariat identified an inconsistency in the Agreement between the Government of El Salvador and the Executive Committee. While the Government committed to a ban on imports of HCFC-141b in bulk and contained in pre-blended polyols by 1 January 2015, Appendix 2-A of the Agreement indicates that by 2020 there is still remaining eligible consumption of 2.29 ODP tonnes of HCFC-141b. In order to resolve the inconsistency, 2.29 ODP tonnes have been deducted from the remaining eligible consumption of HCFC-141b (line 4.2.3 in Appendix 2-A of the Agreement) and added to the remaining eligible consumption of HCFC-22 (line 4.1.3). The changes in Appendix 2-A will not affect the funding approved for El Salvador as HCFC-141b is used in cleaning and flushing refrigeration equipment (i.e. used in the servicing sector). A new paragraph 16 has been added to indicate that the updated Agreement supersedes that reached at the 65th meeting, as shown in Annex I to the present document. The full revised Agreement will be appended to the final report of the 74rd meeting.

Conclusion

23. The Secretariat noted that the implementation of the HPMP of El Salvador is progressing. The Government has introduced an HCFC import licensing and quota system that has allowed the country to achieve and maintain compliance with the Montreal Protocol control measures. As per its commitment with the Executive Committee, the Government has also established the ban on imports of HCFC-141b in bulk and contained in pre-blended polyols since 1 January 2015 and two of the three assisted foam enterprises have successfully completed their conversions to low-GWP alternatives. On the concern regarding the temporary use of HFC-245fa by “Aislamientos Térmicos Centroamérica”, the enterprise expects that methyl formate-based polyols would be available in 2015 and complete the conversion, accordingly. The Government is also progressing in the implementation of activities in the refrigeration servicing sector with the training of technicians and the distribution of equipment to the ODS reuse centres. The level of funds disbursed is over 68 per cent of the total funding so far approved.

RECOMMENDATION

24. The Executive Committee may wish to consider:

- (a) Noting:
 - (i) The progress report on the implementation of the first tranche of stage I of the HCFC phase-out management plan (HPMP) for El Salvador;
 - (ii) That the Fund Secretariat had updated Appendix 2-A of the Agreement between the Government of El Salvador and the Executive Committee, based on the revised remaining eligible consumption, and that a new paragraph 16 had been added to indicate that the updated Agreement superseded that reached at the 65th meeting, as contained in Annex I to the present document;
 - (iii) That one enterprise in the foam sector whose conversion was approved based on a low-global-warming potential (GWP) alternative is using HFC-245fa temporarily due to unavailability of low-GWP polyol systems domestically;
- (b) Requesting UNDP to continue assisting the Government of El Salvador to identify systems houses supplying low-GWP polyols systems, in particular those based on methyl formate, that would supply them in the country;

- (c) Requesting UNDP to report on the status of the conversion of the enterprise mentioned in subparagraph (a)(iii) above, up until the time that this enterprise has switched its production using low-GWP alternatives; and
- (d) Approving the second tranche of stage I of the HPMP for El Salvador and the corresponding 2015-2016 tranche implementation plan, at the amount of US \$82,498 consisting of US \$58,928, plus agency support costs of US \$4,420 for UNDP; and US \$18,500 plus agency support costs of US \$650 for UNEP.

Annex I

TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF EL SALVADOR AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS

(Relevant changes are in bold font for ease of reference)

16. The updated Agreement supersedes the Agreement reached between the Government of El Salvador and the Executive Committee at the 65th meeting of the Executive Committee.

APPENDIX 2-A: THE TARGETS, AND FUNDING

		2011	2012	2013	2014	2015	2016	2017-2019	2020	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	11.68	11.68	10.51	10.51	10.51	7.59	n/a
1.2	Maximum allowable total consumption of Annex C Group I substances (ODP tonnes)	n/a	n/a	11.68	11.68	10.51	10.51	10.51	7.59	n/a
2.1	Lead IA UNDP agreed funding(US \$)	530,349	0	0	0	58,928	94,000	0	16,000	699,277
2.2	Support costs for Lead IA(US \$)	39,776	0	0	0	4,420	7,050	0	1,200	52,446
2.3	Cooperating IA UNEP agreed funding (US \$)	166,500	0	0	0	18,500	171,000	0	19,000	375,000
2.4	Support costs for Cooperating IA (US \$)	5,850	0	0	0	650	4,680	0	520	11,700
3.1	Total agreed funding (US \$)	696,849	0	0	0	77,428	265,000	0	35,000	1,074,277
3.2	Total support cost	45,626	0	0	0	5,070	11,730	0	1,720	64,146
3.3	Total agreed costs (US \$)	742,475	0	0	0	82,498	276,730	0	36,720	1,138,423
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this agreement (ODP tonnes)									0.56
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)									n/a
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)									7.59
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this agreement (ODP tonnes)									3.34
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)									n/a
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)									0.00
4.3.1	Total phase-out of HCFC-142b agreed to be achieved under this agreement (ODP tonnes)									0.03
4.3.2	Phase-out of HCFC-142b to be achieved in previously approved projects (ODP tonnes)									n/a
4.3.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)									0
4.4.1	Total phase-out of HCFC-123 agreed to be achieved under this agreement (ODP tonnes)									0.05
4.4.2	Phase-out of HCFC-123 to be achieved in previously approved projects (ODP tonnes)									n/a
4.4.3	Remaining eligible consumption for HCFC-123(ODP tonnes)									0
4.5.1	Total phase-out of HCFC-124 agreed to be achieved under this agreement (ODP tonnes)									0.11
4.5.2	Phase-out of HCFC-124 to be achieved in previously approved projects (ODP tonnes)									n/a
4.5.3	Remaining eligible consumption for HCFC-124(ODP tonnes)									0
4.6.1	Total phase-out of HCFC-141b in imported pre-blended polyols agreed to be achieved under this agreement (ODP tonnes)									4.94
4.6.2	Phase-out of polyols to be achieved in previously approved projects (ODP tonnes)									n/a
4.6.3	Remaining eligible consumption for polyols (ODP tonnes)									0
