UNITED NATIONS

EP

United Nations Environment Programme

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/64/33
15 June 2011

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Sixty-fourth meeting
Montreal, 25-29 July 2011

PROJECT PROPOSAL: GUATEMALA

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, first tranche) UNEP/UNIDO

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
Guatemala

(I) PROJECT TITLE	AGENCY
HPMP	UNEP, UNIDO (lead)

(II) LATEST ARTICLE 7 DATA	Year: 2009	9.4 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2010
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC123					0.0				0.0
HCFC124					0.1				0.0
HCFC141b*					1.2				1.0
HCFC142b					0.2				0.0
HCFC22					7.9				6.1

*1.7 ODP tonnes of HCFC-141b contained in imported pre-blended polyols.

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline (estimate):	8.3	Starting point for sustained aggregate reductions:	9.7
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	0.0	Remaining:	5.4

(V) BUSINESS PLAN		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
UNIDO	ODS phase-out (ODP tonnes)	2.7		0.2			0.6				0.2	3.7
	Funding (US $)	265,541	0	21,505	0	0	68,815	0	0	0	17,204	373,065
UNEP	ODS phase-out (ODP tonnes)	0.4		0.4			0.4				0.4	1.4
	Funding (US $)	62,164	0	62,164	0	0	44,010	0	0	0	19,004	187,341

(VI) PROJECT DATA			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits (estimate)			n/a	n/a	8.3	8.3	7.5	7.5	7.5	7.5	7.5	5.4	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	8.3	8.3	7.5	7.5	7.5	7.5	7.5	5.4	
Project Costs requested in principle(US$)	UNEP	Project costs	28,250		20,000		35,000			13,250			96,500
		Support costs	3,673		2,600		4,550			1,722			12,545
	UNIDO	Project costs	151,700		37,925		113,775			42,850		33,000	379,250
		Support costs	11,378		2,844		8,533			3,214		2,475	28,444
Total project costs requested in principle (US $)			179,950	0	57,925	0	148,775			56,100		33,000	475,750
Total support costs requested in principle (US $)			15,051	0	5,444	0	13,083			4,936		2,475	40,989
Total funds requested in principle (US $)			195,001	0	63,369	0	161,858			61,036		35,475	516,739

(VII) Request for funding for the first tranche (2011)		
Agency	**Funds requested (US $)**	**Support costs (US $)**
UNEP	28,250	3,673
UNIDO	151,700	11,378

Funding request:	Approval of funding for the first tranche (2011) as indicated above
Secretariat's recommendation:	Individual consideration

PROJECT DESCRIPTION

1. On behalf of the Government of Guatemala UNIDO, as the lead implementing agency, has submitted to the 64th meeting of the Executive Committee stage I of the HCFC phase-out management plan (HPMP) at a total cost of US $568,996 plus agency support costs of US $35,437 for UNIDO and US $12,545 for UNEP, as originally submitted, to implement activities that will enable the country to comply with the Montreal Protocol control targets up to the 35 per cent reduction in HCFC consumption by 2020.

2. The first tranche for stage I being requested at this meeting amounts to US $136,248, plus agency support costs of US $10,219 for UNIDO, and US $28,250 plus agency support costs of US $3,673 for UNEP, as originally submitted.

Background

3. Guatemala, with a total population of about 14.3 million inhabitants, has ratified all the amendments to the Montreal Protocol.

ODS regulations

4. The Government of Guatemala has established a legal framework to regulate CFCs through the implementation of a control system for imports of ODS (2003) and ODS-based equipment (2007). The legal framework governs the issuing of ODS quotas, refrigeration technician training and certification, and the mandatory recycling and recovery of ODS. The current licensing system covers all ODSs, including HCFCs. Although the legal framework authorizes the National Commission of the Environment to issue ODS quotas, it is necessary to adjust it to include import quotas for HCFCs and HCFC-based equipment. Based on the HCFC survey conducted during the preparation of the HPMP, it is expected that HCFC import quotas will be issued by the end of 2011. The Ozone Unit is responsible for implementing ODS phase-out activities.

HCFC consumption and sector distribution

5. According to the survey conducted for the preparation of the HPMP, the two main HCFCs imported into the country are HCFC-22 used for servicing refrigeration and air-conditioning systems, and HCFC-141b also used in the refrigeration sector as a cleaning agent. Small amounts of HCFC-123, HCFC-124 and HCFC-141b contained in refrigerant blends have also been imported (Table 1). The baseline for compliance has been estimated in 8.3 ODP tonnes, based on the actual reported consumption of 9.4 ODP tonnes in 2009 and the estimated consumption of 7.1 ODP tonnes in 2010.

Table 1. 2005-2010 HCFC consumption in Guatemala

HCFC	2005	2006	2007	2008	2009	2010
Metric tonnes						
HCFC-22	105.7	154.3	85.5	156.9	143.8	107.8
HCFC-141b	6.5	9.0	11.2	10.8	10.7	8.9
HCFC-142b	0.6	1.3	0.4	0.8	2.5	2.5
HCFC-123			0.5	-	0.1	
HCFC-124	2.2	7.0	10.4	4.0	6.4	3.6
Total (mt)	115.0	171.6	108.0	172.5	163.5	122.8
ODP tonnes						
HCFC-22	5.8	8.5	4.7	8.6	7.9	5.9
HCFC-141b	0.7	1.0	1.2	1.2	1.2	1.0
HCFC-142b	0.0	0.1	0.0	0.1	0.2	0.2
HCFC-123	-	-	0.0	-	0.0	-
HCFC-124	0.0	0.2	0.2	0.1	0.1	0.1
Total (ODP tonnes)	6.5	9.8	6.1	10.0	9.4	7.2
Article 7 data	5.9	9.2	6.1	10.0	9.4	

6. The differences in the amounts of HCFCs obtained from the survey and those reported under Article 7 of the Montreal Protocol for 2005 and 2006 period are related to the small amounts of HCFCs contained in refrigerant blends.

7. The price per kg of HCFCs and alternative refrigerants is as follows: US $3.90 for HCFC-22; US $8.92 for HFC-134a; US $9.75 for HCFC-141b; US $13.55 for R-404A; and US $14.43 for R-410A.

Refrigeration servicing sector

8. About 56 per cent of the total installed capacity of HCFC-22 in the country is in commercial and industrial refrigeration systems and the remaining 44 per cent is in air-conditioning systems, as shown in Table 2.

Table 2. Installed capacity of refrigeration equipment in Guatemala (2009)

Refrigeration system	Installed capacity (mt)			
	HCFC-22	R-404A	HFC-134a	R-410
Commercial/industrial refrigeration	39.1	22.8	121.0	1.0
Air-conditioning	31.2	0.1	0.2	-
Total installed capacity	70.3	22.9	121.2	1.0

9. The distribution of the installed capacity of HCFC-22-based equipment is presented in Table 3.

Table 3. Installed capacity of HCFC-22 based refrigeration equipment in Guatemala (2009)

Refrigeration systems	Refrigeration	Air-conditioning	Total
Metric tonnes			
Commercial	32.1	6.8	38.9
Industrial	7.1	2.8	9.9
Domestic	-	21.5	21.5
Total (mt)	39.2	31.1	70.3
ODP tonnes			
Commercial	1.8	0.4	2.2
Industrial	0.4	0.2	0.6
Domestic	-	1.2	1.2
Total (ODP tonnes)	2.2	1.7	4.0

10. The 2010-2020 forecast of HCFC consumption is shown in Table 4.

Table 4. 2010-2020 forecast of HCFC consumption in Guatemala

Years	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Metric tonnes											
Unconstrained	121.1	170.2	177.1	180.9	184.9	188.9	192.5	196.6	199.6	201.9	203.9
Constrained	121.1	170.2	177.1	142.2	142.2	128	128	128	128	128	92.5
ODP tonnes											
Unconstrained	7.1	9.9	10.3	10.6	10.8	11	11.2	11.5	11.6	11.8	11.9
Constrained	7.1	9.9	10.3	8.3	8.3	7.5	7.5	7.5	7.5	7.5	5.4

11. There are approximately 2,500 technicians in the country. Most of them service all types of domestic or commercial refrigeration equipment and air-conditioning systems. Industrial refrigeration systems, including refrigerated containers, are usually serviced by the technical staff of the industries concerned. Technicians working in authorized workshops have access to tools and equipment, as well as technical training. However, given their limited purchasing power, many technicians do not have proper tools and equipment.

Foam sector

12. The manufacturing of foams in Guatemala is based on pre-blended HCFC-141b-based polyol systems imported into the country. The two main foam manufacturers are Fogel de Centroamerica, S.A. (Fogel), the sole manufacturer of commercial refrigeration equipment in the country with an annual production capacity of 100,000 units, and Productos Químicos, Representaciones S.A. (PROQUIRSA, S.A.) which imports pre-blended polyols for the construction of insulation panels for cold rooms (an average of 2.3 mt (0.3 ODP tonnes) of HCFC-141b contained in imported polyols over the 2007-2009 period).

13. Fogel has five refrigeration equipment assembly lines. In July 2005, the company converted four of the lines from HCFC-141b to cyclopentane blowing agent with its own resources. Due to the global economic recession in 2009, the fifth production line was temporarily shut down and resumed operation in April 2010, with an estimated production of 11,000 units in 2010 that could increase to over 26,000 units in 2011. This line, which is located in a different building where the other four lines are installed, operates a low pressure foam machine (Cannon B System 60) with an output of 68.1 kg/min, which is not suitable for the use of cyclopentane. The 2007-2011 level of polyol consumption by the enterprise is shown in Table 5.

Table 5. 2007-2011 level of pre-blended HCFC-141b-based polyols imported by Fogel

Year	Polyol	HCFC-141b	
	mt	mt	ODP tonnes
2007	103.8	11.9	1.3
2008	136.8	15.7	1.7
2009*	12.5	1.4	0.2
2010	113.9	13.1	1.4
2011**	398.7	45.9	5.0

(*) Pre-blended polyols in stockpiles were used to continue production of refrigeration equipment.
(**) Estimated.

HCFC phase-out strategy and costs

14. The Government of Guatemala has decided to adopt the following strategy for HCFC phase-out in the country: stage I, to meet the freeze on HCFC consumption in 2013, the 10 per cent reduction from the baseline by 2015, and the 35 per cent reduction from the baseline by 2020; stage II, to completely phase out HCFC consumption by 2030. The overarching phase-out strategy has been based on the

experience gained during the implementation of the refrigerant management plan (RMP) and the terminal phase-out management plan (TPMP), and will be supported by the following activities in the refrigeration servicing sector, at a total cost of US $332,500:

(a) Updating the ODS legal framework to, *inter alia*, establish quotas for HCFCs, include imported pre-blended HCFC-141b polyols in the licensing system, make the certification of refrigeration and air conditioning technicians mandatory, make recording of amounts and types of refrigerants sold mandatory, and establish penalties for non-compliance (US $23,000, UNEP);

(b) Technical assistance in the refrigeration and air conditioning servicing sector, including the training and certification of servicing technicians regarding the use of low-global warming potential (GWP) alternative refrigerants and their relation to energy efficiency, and the establishment of a centralized recovery and recycling centre in Guatemala City (US $169,500, UNIDO);

(c) Strengthening control of ODS traffic to, *inter alia*, continue training and providing information to customs officers and border police, adopt the Central American tariff codes, continue cooperating with the Ozone Units and customs administrations of neighboring countries; and train laboratory staff through refrigerant identification campaigns (US $65,500, UNEP);

(d) Awareness-raising and communication for the general public (US $8,000, UNEP); and

(e) Monitoring and evaluation of the activities proposed in the HPMP (US $66,500, UNIDO).

15. Stage I of the HPMP also includes the conversion of the fifth production line in Fogel to cyclopentane blowing agent, which includes installation of a premixer system, polyol buffer tank and pumps (US $67,000), replacement of the low-pressure foam machine by a high-pressure unit of similar capacity (US $90,000), modification to fixtures (US $15,000), installation of safety-related equipment and systems for the use of cyclopentane (US $87,500); and civil works, technology transfer, trials and contingencies (US $53,450). Incremental operating savings have been estimated at US $26,455. The total cost of the conversion addressing 13.1mt (1.4 ODP tonnes) of HCFC-141b is US $286,496 with a cost-effectiveness of US $21.87/kg. The enterprise is offering to cover US $50,000 of the cost of the project. The project implementation time is 24 months.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

16. The Secretariat reviewed the HPMP for Guatemala in the context of the guidelines for the preparation of HPMPs (decision 54/39), the criteria for funding HCFC phase-out in the consumption sector agreed at the 60th meeting (decision 60/44), subsequent decisions on HPMPs made at the 62nd and 63rd meetings and the 2011-2014 business plan of the Multilateral Fund.

Implementation of activities under the TPMP

17. At its 59th meeting, the Executive Committee approved a total of US $282,000 for the first tranche of the TPMP for Guatemala, which included training programmes for customs officers, enhancement of national capacity to monitor trade and prevent illegal trade of CFCs, certification of refrigeration technicians, an awareness and information campaign (US $33,000 for UNEP) and also a

technical assistance programme for retrofitting CFC-based cold chambers (US $249,000 for UNDP). However, in reviewing the progress reports submitted by bilateral and implementing agencies to the 64th meeting, it was noted that as of December 2010 only US $11,000 had been disbursed from the funding approved for UNEP for training activities. Considering that the current level of CFC consumption should be zero, clarification was sought on whether some of the activities of the TPMP under implementation could be re-focussed to maintain zero consumption of CFCs and to assist in the phase-out of HCFCs. Addressing this issue, UNEP indicated that a detailed work programme for the implementation of the TPMP has been developed with the Government of Guatemala. As of June 2011, US $264,706 has been disbursed or committed. All the activities will be completed by November 2011 and will assist in phasing out HCFC consumption. The service tools, recovery equipment and identification kits to be provided to technicians will be able to be used for both CFCs and HCFCs refrigerants.

HCFC data discrepancies

18. Given the HCFC data discrepancies between Article 7 data submitted by the Government of Guatemala and the data reported in the HPMP for 2005 and 2006 period, as suggested by the Secretariat, UNEP provided assistance to the Government in submitting an official request to the Ozone Secretariat to revise its Article 7 data according to the findings of the HPMP. Since the data reported in the HPMP was obtained from a thorough survey, it is regarded to be more accurate.

Starting point for aggregate reduction in HCFC consumption

19. The Government of Guatemala has agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the average of actual reported consumption of 9.4 ODP tonnes in 2009 and estimated consumption of 7.2 ODP tonnes in 2010, estimated in 8.3 ODP tonnes, plus 1.4 ODP tonnes of HCFC-141b contained in imported pre-blended polyol systems, resulting in a total consumption of 9.7 ODP tonnes.

Issues related to the refrigeration servicing sector

20. Noting that stage I of the HPMP did not include activities to phase-out the 10.7 mt (1.2 ODP tonnes) of HCFC-141b used for flushing refrigeration systems, it was suggested that this consumption be phased out immediately given that the entire amount used for this purpose goes directly into the atmosphere. UNIDO indicated that priority would be given to phasing out this consumption through the technical assistance programme proposed in stage I, including the training of service technicians.

21. With regard to the funding of US $23,000 for updating the ODS legal framework, UNIDO advised that, the additional regulatory measures defined in consultation with major stakeholders during HPMP preparation could not be covered by the funding approved for the preparation of the HPMP. Establishing the quota system and the economic instruments favouring the transition to low-global-warming-potential (GWP) alternatives would be complex, time-consuming and require consensus among stakeholders.

22. Upon a request for clarification, UNIDO indicated that the lessons learnt with regard to training under the RMP and the TPMP would be incorporated into the HPMP. Previous training programmes did not consider the introduction of low-GWP refrigerants and safety issues related to the potential use of hydrocarbon refrigerants, which must now be studied in-depth by refrigeration technicians. Regarding long-term sustainability of training activities, UNIDO indicated that a training module for customs officers would be developed for inclusion in their national curriculum. Similarly, a training module on ODS phase-out and the use of alternative refrigerants would be included in the curricula of vocational and graduate schools in the country and/or through the technicians certification programme.

23. Given that over 90 per cent of total HCFC consumption in the country (measured in metric tonnes) is for servicing refrigeration equipment, it was suggested that a more robust technician training programme be developed. Additional components of such training could include identifying systems for retrofitting; basic service tools; assembling simple recycling machines, including some multi-refrigerant machines for large refrigeration systems; and importing low-cost non-HCFC blends for the various types of refrigeration equipment in operation. UNIDO agreed to incorporate the suggestion as potential activities within the technical assistance component. The main activity would be the recovery of HCFC-22 used in medium and large sized systems. The recovered refrigerant would either be reclaimed and reused (thus reducing the consumption of virgin refrigerant) or, if found to be non-reusable, recovered and stored until the country finds a feasible strategy for its final disposal.

Issues related to the foam sector

24. As Fogel imports polyol systems containing HCFC-141b (not reported under Article 7), conversion of the enterprise would not assist the Government in meeting the control measures of the Montreal Protocol. UNIDO pointed out that in July 2005, the enterprise converted four of its five production lines from HCFC-141b to cyclopentane foam technology with its own resources; the fifth line located in a different building remained using HCFC-141b as a blowing agent. This line has been used for trials and batch production based on market demands. Through the conversion of the fifth line proposed in stage I of the HPMP, the enterprise will completely phase out all ODS consumption in its production lines. The enterprise, which has presence in all the Central American countries, is currently in the process of replacing the HFC-134a refrigerant technology to hydrocarbon. With the conversion of the remaining HCFC-141b production line in Fogel and the technical assistance for other small foam enterprises, the use of HCFC-141b contained in imported pre-blended polyols will be completely phased out.

25. Issues related with the funding levels requested for the premix pump (which was similar to the cost of the premixing unit itself); modification of fixtures and electrical heating modification jigs; the fire protection, lightning protection and grounding and the antistatic floor; and trial and commissioning (given that the company is already manufacturing hydrocarbon-based foam on four other lines) were discussed and satisfactorily addressed by UNIDO. The total cost of the project was agreed at US $220,495 (i.e., US $246,950 for capital cost and US $26,455 for operating savings), resulting in a cost-effectiveness of US $17.46/kg. Since the cost-effectiveness threshold for rigid foam applications using a low-GWP alternative is US $9.79/kg, Fogel has committed to covering US $92,245 from its own resources, i.e., the difference between the agreed level of funding (US $220,495) and the eligible funding (US $128,250). An additional US $15,000 has also been agreed to provide technical assistance to the very small users of imported pre-blended polyols containing HCFC-141b.

26. With regard to the measures to be put in place to avoid reverting to the use of HCFC-141b-based polyols once the foam enterprises have been converted to alternative technologies, UNIDO indicated that the licensing and quota systems are in line with the control measures of the Montreal Protocol, and the Government will be banning imports of controlled substances accordingly. The foaming equipment used for the production of HCFC-141b-based foam insulation in Fogel will be destroyed once the production line is converted. Given that the enterprise is already operating four of its lines with cyclopentane technology, the possibility of reverting to the use of HCFC-141b pre-blended polyol systems is nil.

Cost of stage I of the HPMP

27. The total cost of stage I of the HPMP has been agreed at US $475,749 with the following breakdown: US $332,500 for activities in the refrigeration servicing sector to meet up to and including the 2020 compliance targets; US $128,250 for the conversion of Fogel de Centroameric enterprise to cyclopentane technology, and US $15,000 as technical assistance for all the small users of imported HCFC-141b-based pre-blended polyol systems.

Impact on the climate

28. A calculation of the impact on the climate of HCFC consumption through the conversion of the foam enterprises in Guatemala based only on the GWP values of the blowing agents and their level of consumption before and after conversion is as follows: 14.4 mt of HCFC-141b will be phased out, 7.9 tonnes of cyclopentane will be phased in, and 10,071 tonnes of CO_2 that would have been emitted into the atmosphere will be avoided (Table 6).

Table 6. Calculation of the impact on the climate

Substance	GWP	Tonnes/year	CO_2-eq (tonnes/year)
Before conversion			
Before conversion			
HCFC-141b	713	14.4	10,267
After conversion			
Cyclopentane	25	7.9	197
Net impact			-10,071

29. The proposed technical assistance activities in the HPMP, which include the introduction of better servicing practices and enforcement of HCFC import controls, will reduce the amounts of HCFC-22 and HCFC-141b used for refrigeration servicing. Each kilogram (kg) of HCFC-22 not emitted due to better refrigeration practices results in approximately 1.8 CO_2-equivalent tonnes saved, while the phase-out of 6.1 mt of HCFC-141b from emissive uses and in the servicing sector results in over 4,340 CO_2-equivalent tonnes. Although a calculation of the impact on the climate was not included in the HPMP, the activities planned by Guatemala, in particular its efforts to improve servicing practices and reduce refrigerant and HCFC-141b emissions, indicate that it is likely that the country will achieve the reduction of 10,330.6 CO_2-equivalent tonnes in emissions to the atmosphere as estimated in the 2011-2014 business plan. However, at this time, the Secretariat is not in a position to quantitatively estimate the impact on the climate. The impact might be established through an assessment of implementation reports by, *inter alia,* comparing the levels of refrigerants used annually from the beginning of HPMP implementation, the reported amounts of refrigerants being recovered and recycled, the number of technicians trained and the HCFC-22 based equipment being retrofitted.

Co-financing

30. In response to decision 54/39(h) on potential financial incentives and opportunities for additional resources to maximize the environmental benefits from HPMPs pursuant to paragraph 11(b) of decision XIX/6 of the 19th meeting of the Parties, UNIDO indicated that during stage I of the HPMP, Fogel will contribute US $92,245 for the conversion of the production line to cyclopentane technology.

2011-2014 business plan of the Multilateral Fund

31. UNIDO and UNEP are requesting US $475,750 plus support costs for implementation of stage I of the HPMP. The total value requested for the 2011-2014 period of US $258,370 including support costs is below the total amount in the business plan. Furthermore, based on the estimated HCFC baseline consumption in the servicing sector of 8.3 ODP tonnes, Guatemala's allocation up to the 2020 phase-out should be US $332,500 in line with decision 60/44.

Draft Agreement

32. A draft Agreement between the Government of Guatemala and the Executive Committee for HCFCs phase-out is contained in Annex I of the present document.

RECOMMENDATION

33. The Executive Committee may wish to consider:

(a) Approving, in principle, stage I of the HCFC phase-out management plan (HPMP) for Guatemala for the period 2011 to 2020, at the amount of US $516,739, consisting of US $379,250, plus agency support costs of US $28,444 for UNIDO, and US $96,500, plus agency support costs of US $12,545 for UNEP, on the understanding that:

(i) US $332,500 was provided to address HCFC consumption in the refrigeration servicing sector to reach up to and including the 35 per cent reduction in 2020 in line with decision 60/44; and

(ii) US $143,250 was provided for the investment component for the phase-out of 1.7 ODP tonnes of HCFC-141b used in the foam sector;

(b) Noting that the Government of Guatemala has agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the estimated baseline of 8.3 ODP tonnes, calculated using actual consumption of 9.4 ODP tonnes reported for 2009 and consumption of 7.2 ODP tonnes estimated for 2010, plus 1.4 ODP tonnes of HCFC-141b contained in imported pre-blended polyol systems, resulting in 9.7 ODP tonnes;

(c) Approving the draft Agreement between the Government of Guatemala and the Executive Committee for the reduction in consumption of HCFCs, as contained in Annex I to the present document;

(d) Requesting the Fund Secretariat, once the baseline data are known, to update Appendix 2-A to the draft Agreement to include the figures for maximum allowable consumption, and to notify the Executive Committee of the resulting change in the levels of maximum allowable consumption and of any potential related impact on the eligible funding level, with any adjustments being made when the next tranche was submitted; and

(e) Approving the first tranche of stage I of the HPMP for Guatemala, and the corresponding implementation plan, at the amount of US $195,001, comprising US $151,700, plus agency support costs of US $11,378 for UNIDO, and US $28,250, plus agency support costs of US $3,673 for UNEP.

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Annex I

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF GUATEMALA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS

1. This Agreement represents the understanding of the Government of Guatemala and the Executive Committee with respect to the reduction of controlled use of the Ozone-Depleting Substances (ODS) set out in Appendix 1-A ("the Substances") to a sustained level of 5.4 ODP tonnes by 1 January 2020, in compliance with Montreal Protocol schedules, with the understanding that this figure is to be revised one single time, once the baseline consumption for compliance has been established based on Article 7 data, with the funding to be adjusted accordingly, as per decision 60/44.

2. The Country agrees to meet the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A ("The Targets and Funding") in this Agreement as well as in the Montreal Protocol reduction schedule for all Substances mentioned in Appendix 1-A . The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of the Substances which exceeds the level defined in row 1.2 of Appendix 2-A (maximum allowable total consumption of Annex C, Group I substances) as the final reduction step under this agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances which exceeds the level defined in rows 4.1.3, 4.2.3, 4.3.3 and 4.4.3 (remaining eligible consumption).

3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees in principle to provide the funding set out in row 3.1 of Appendix 2-A (the "Targets and Funding") to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (the "Funding Approval Schedule").

4. In accordance with sub-paragraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A ("The Targets, and Funding") of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.

5. The Executive Committee will not provide the Funding in accordance with the Funding Approval Schedule unless the Country satisfies the following conditions at least 60 days prior to the applicable Executive Committee meeting set out in the Funding Approval Schedule:

(a) That the Country has met the Targets for all relevant years. Relevant years are all years since the year in which the hydrochlorofluorocarbons phase-out management plan (HPMP) was approved. Exempt are years for which no obligation for reporting of country programme data exists at the date of the Executive Committee Meeting at which the funding request is being presented;

(b) That the meeting of these Targets has been independently verified, except if the Executive Committee decided that such verification would not be required;

(c) That the Country had submitted annual implementation reports in the form of Appendix 4-A ("Format of Implementation Reports and Plans") covering each previous calendar year, that it had achieved a significant level of implementation of activities initiated with previously approved tranches, and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent;

(d) That the Country has submitted and received approval from the Executive Committee for a annual implementation plan in the form of Appendix 4-A ("Format of Implementation Reports and Plans") covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen; and

(e) That, for all submissions from the 68th Meeting onwards, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports and, where applicable, production and exports is in place and that the system is capable of ensuring the Country's compliance with the Montreal Protocol HCFC phase-out schedule for the duration of this Agreement.

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A ("Monitoring Institutions and Roles") will monitor and report on Implementation of the activities in the previous tranche implementation plan in accordance with their roles and responsibilities set out in Appendix 5-A. This monitoring will also be subject to independent verification as described in paragraph 4 above.

7. The Executive Committee agrees that the Country may have the flexibility to reallocate the approved funds, or part of the funds, according to the evolving circumstances to achieve the smoothest reduction of consumption and phase-out of the Substances specified in Appendix 1-A.

(a) Reallocations categorized as major changes must be documented in advance in an annual Implementation Plan and approved by the Executive Committee as described in sub-paragraph 5(d). Major changes would relate to issues potentially concerning the rules and policies of the Multilateral Fund; changes which would modify any clause of this Agreement; changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches; and provision of funding for programmes or activities not included in the current endorsed annual implementation plan, or removal of an activity in the annual implementation plan, with a cost greater than 30 per cent of the total cost of the tranche;

(b) Reallocations not categorized as major changes may be incorporated in the approved annual implementation plan, under implementation at the time, and reported to the Executive Committee in the annual implementation report; and

(c) Any remaining funds will be returned to the Multilateral Fund upon closure of the last tranche of the plan.

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sub-sector, in particular:

(a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation; and

(b) The Country and the bilateral and implementing agencies involved will take full account of the requirements of decisions 41/100 and 49/6 during the implementation of the plan.

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNIDO has agreed to be the lead implementing agency (the "Lead IA") and UNEP has agreed to be the cooperating implementing agency (the "Cooperating IA") under the lead of the Lead IA in respect of the Country's activities under this Agreement. The Country agrees to evaluations, which

might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of any of the IA taking part in this Agreement.

10. The Lead IA will be responsible for carrying out the activities of the overall plan with the changes approved as part of the subsequent submissions, including but not limited to independent verification as per sub-paragraph 5(b). This responsibility includes the necessity to co-ordinate with the Cooperating IA to ensure appropriate timing and sequence of activities in the implementation. The Cooperating IA will support the Lead IA by implementing the activities listed in Appendix 6-B under the overall co-ordination of the Lead IA. The Lead IA and Cooperating IA have reached consensus on the arrangements regarding inter-agency planning, reporting and responsibilities under this Agreement to facilitate a co-ordinated implementation of the Plan, including regular co-ordination meetings. The Executive Committee agrees, in principle, to provide the Lead IA and the Cooperating IA with the fees set out in rows 2.2 and 2.4 of Appendix 2-A.

11. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amounts set out in Appendix 7-A in respect of each ODP kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the country did not comply with this Agreement, and take related decisions. Once these decisions are taken, this specific case will not be an impediment for future tranches as per paragraph 5 above.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decision that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee, the Lead IA and the Cooperating IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA and the Cooperating IA with access to information necessary to verify compliance with this Agreement.

14. The completion of the HPMP and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption has been specified in Appendix 2-A. Should at that time activities be still outstanding which were foreseen in the Plan and its subsequent revisions as per sub-paragraph 5(d) and paragraph 7, the completion will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per sub-paragraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A continue until the time of the completion if not specified by the Executive Committee otherwise.

15. All of the conditions set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	6.9
HCFC-141b	C	I	2.5
HCFC-124	C	I	0.2
HCFC-142b	C	I	0.1
Total	C	I	9.7

APPENDIX 2-A: THE TARGETS, AND FUNDING

		2011	2012	2013	2014	2015	2016-2017	2018	2019	2020	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	8.3	8.3	7.5	7.5	7.5	7.5	5.4	
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	8.3	8.3	7.5	7.5	7.5	7.5	5.4	
2.1	Lead IA UNIDO agreed funding(US $)	151,700		37,925		113,775		42,850		33,000	379,250
2.2	Support costs for Lead IA (US $)	11,378		2,844		8,533		3,214		2,475	28,444
2.3	Cooperating IA UNEP agreed funding (US $)	28,250		20,000		35,000		13,250			96,500
2.4	Support costs for Cooperating IA (US $)	3,673		2,600		4,550		1,722			12,545
3.1	Total agreed funding (US $)	179,950		57,925		148,775		56,100		33,000	475,750
3.2	Total support cost (US $)	15,050		5,444		13,083		4,936		2,475	40,989
3.3	Total agreed costs (US $)	195,001		63,369		161,858		61,036		35,475	516,739
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this agreement (ODP tonnes)										1.8
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)										-
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)										5.1
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this agreement (ODP tonnes)										2.5
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)										-
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)										0.0
4.3.1	Total phase-out of HCFC-142b agreed to be achieved under this agreement (ODP tonnes)										-
4.3.2	Phase-out of HCFC-142b to be achieved in previously approved projects (ODP tonnes)										-
4.3.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)										0.2
4.4.1	Total phase-out of HCFC-124 agreed to be achieved under this agreement (ODP tonnes)										-
4.4.2	Phase-out of HCFC-124 to be achieved in previously approved projects (ODP tonnes)										-
4.4.3	Remaining eligible consumption for HCFC-124 (ODP tonnes)										0.1

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval not earlier than the last meeting of the year specified in Appendix 2-A.

APPENDIX 4-A: FORMAT OF IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Tranche Implementation Report and Plan for each tranche request will consist of five parts:

(a) A narrative report regarding the progress since the approval of the previous tranche, reflecting on the situation of the Country in regard to phase out of the Substances, how the different activities contribute to it and how they relate to each other. The report should further highlight successes, experiences and challenges related to the different activities included in the Plan, reflecting on changes in the circumstances in the country, and providing other relevant information. The report should also include information about and justification for any changes vis-à-vis the previously submitted tranche plan, such as delays, uses of the flexibility for reallocation of funds during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes. The narrative report will cover all relevant years specified in sub-paragraph 5(a) of the Agreement and can in addition also include information about activities in the current year;

(b) A verification report of the HPMP results and the consumption of the substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification has to be provided together with each tranche request and will have to provide verification of the consumption for all relevant years as specified in sub-paragraph 5(a) of the Agreement for which a verification report has not yet been acknowledged by the Committee;

(c) A written description of the activities to be undertaken until the planned submission of the next tranche request, highlighting their interdependence, and taking into account experiences made and progress achieved in the implementation of earlier tranches. The description should also include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall plan foreseen. The description should cover the years specified in sub-paragraph 5(d) of the Agreement. The description should also specify and explain any revisions to the overall plan which were found to be necessary;

(d) A set of quantitative information for the report and plan, submitted into a database. As per the relevant decisions of the Executive Committee in respect to the format required, the data should be submitted online. This quantitative information, to be submitted by calendar year with each tranche request, will be amending the narratives and description for the report (see sub-paragraph 1(a) above) and the plan (see sub-paragraph 1(c) above), and will cover the same time periods and activities; it will also capture the quantitative information regarding any necessary revisions of the overall plan as per sub-paragraph 1(c) above. While the quantitative information is required only for previous and future years, the format will include the option to submit in addition information regarding the current year if desired by the country and lead implementing agency; and

(e) An Executive Summary of about five paragraphs, summarizing the information of above sub-paragraphs 1(a) to 1(d).

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The Specialized Technical Ozone Unit of Guatemala (UTOZ), within the Ministry of Environment and Natural Resources, will coordinate the implementation of the project and will be responsible for the national coordination of the whole HPMP program with the assistance of UNIDO as the lead implementation agency and UNEP as cooperating implementation agency.

2. Selected local experts will be trained, as central human resources, for the HPMP preparation and implementation in the advanced technologies areas in the service sector, trends and alternative technologies and experiences attained in other countries for the HPMP.

3. The Unit will be responsible for the monitoring of the phase out implementation plan, of making the follow up of the promulgation, and the enforcement of the policies and legislation. The Unit will support UNIDO and UNEP in the preparation the annual implementation plans and progress reports for the Executive Committee.

4. The implementation of the phase out plan will need to be aligned and closely coordinate with the different general instructions, regulatory, fiscal actions, of capacity creation and awareness that the government of Guatemala executes, to ensure the consistency of the governmental priorities.

5. The phase out plan will be managed by a team dedicated to this job that consists of a coordinator that will be designated by the UTOZ and have the support of the representatives and experts of the implementation agencies and the necessary support infrastructure. The component of support to the management and update of the legal instruments of the phase out plan will include the following activities during the length of the plan:

(a) Management and coordination of the plan implementation with the different actions with respect to government policies related to the refrigeration and air conditioning sector;

(b) Establishment of a policy development and application program, that includes the different legislative, regulatory, promotional, discouraging and punitive actions, to allow the government to exercise the required mandates and ensure the industry fulfillment with the obligations of the ODS consumption reduction;

(c) Development and implementation of training, awareness and capacity creation activities for key departments of the government, legislators, decision makers and other institutional players, to ensure a high level commitment to the Plan objectives and obligations;

(d) Creation of awareness on the Phase Out Plan and the governmental initiatives in the sector, among consumers and the general public, through workshops, media advertising and other information promotion measures;

(e) Preparation of annual implementation plans including the determination of the sequence of participation of the companies in the activities;

(f) Establishment and operation of a report system on the ODS use /substitutes by the users;

(g) Report on the progress of the plan implementation for the annual disbursement based on performance;

(h) Establishment and operation of the decentralized mechanism to monitor and evaluate the plan results, in association with local environmental regulatory entities to ensure

sustainability.

6. The following activities will be considered for the coordination:

(a) The list of shops must be updated in terms of HCFC consumption, equipment necessary for recovery, its capacity to recover HCFC, the commitment with the phase out activity and other relevant factors of the recovery and recycling component.

(b) The refrigerants that cannot be recycled must be kept in the location whilst a new appropriate destruction mechanism is provided.

7. In addition, the local distribution of service equipment that will be purchased through the UNIDO acquisition procedure must also be implemented.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities. These can be specified in the project document further, but include at least the following:

(a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's HPMP;

(b) Assisting the Country in preparation of the Implementation Plans and subsequent reports as per Appendix 4-A;

(c) Providing verification to the Executive Committee that the Targets have been met and associated annual activities have been completed as indicated in the Implementation Plan consistent with Appendix 4-A;

(d) Ensuring that the experiences and progress is reflected in updates of the overall plan and in future annual implementation plans consistent with sub-paragraphs 1(c) and 1(d) of Appendix 4-A;

(e) Fulfilling the reporting requirements for the annual implementation reports, annual implementation plans and the overall plan as specified in Appendix 4-A for submission to the Executive Committee. The reporting requirements include the reporting about activities undertaken by the Cooperating IA;

(f) Ensuring that appropriate independent technical experts carry out the technical reviews;

(g) Carrying out required supervision missions;

(h) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Implementation Plan and accurate data reporting;

(i) Coordinating the activities of the Cooperating IA, and ensuring appropriate sequence of activities;

(j) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country and the Cooperating IA, the allocation of the reductions to the different budget items and to the funding of each implementing or bilateral agency involved;

(k) Ensuring that disbursements made to the Country are based on the use of the indicators; and

(l) Providing assistance with policy management and technical support when required.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent organization to carry out the verification of the HPMP results and the consumption of the substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement and sub-paragraph 1(b) of Appendix 4-A.

APPENDIX 6-B: ROLE OF THE COOPERATING IMPLEMENTING AGENCY

1. The Cooperating IA will be responsible for a range of activities. These activities can be specified in the overall plan further, but include at least the following:

(a) Providing policy development assistance when required;

(b) Assisting the Country in the implementation and assessment of the activities funded by the Cooperating IA, and refer to the Lead IA to ensure a co-ordinated sequence in the activities; and

(c) Providing reports to the Lead IA on these activities, for inclusion in the consolidated reports as per Appendix 4-A.

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US $180 per ODP kg of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the target specified in row 1.2 of Appendix 2-A has not been met.