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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Seventy-fifth Meeting  
Montreal, 16-20 November 2015

### PROJECT PROPOSAL: GUATEMALA

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, third tranche)

UNIDO and UNEP

**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**

**Guatemala**

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase out plan (Stage I)	UNIDO (lead), UNEP	64 <sup>th</sup>	35 per cent by 2020

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2014	4.75 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2014	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123									
HCFC-124					0.01				0.01
HCFC-141b					1.18				1.18
HCFC-141b in imported pre-blended polyol		1.94							1.94
HCFC-142b									
HCFC-22					3.56				3.56

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	8.30	Starting point for sustained aggregate reductions:	9.7
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	4.3	Remaining:	5.4

(V) BUSINESS PLAN		2015	2018	2020	Total
UNIDO	ODS phase-out (ODP tonnes)	0.52	0.42	0.32	1.26
	Funding (US \$)	57,808	46,064	35,475	139,347
UNEP	ODS phase-out (ODP tonnes)	0.44	0.23		0.67
	Funding (US \$)	50,850	26,273		77,123

(VI) PROJECT DATA			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits			n/a	n/a	8.3	8.3	7.5	7.5	7.5	7.5	7.5	5.4	n/a
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	n/a
Agreed funding (US\$)	UNIDO	Project costs	118,087	97,925	0	0	53,775	0	0	42,850	0	33,000	345,637
		Support costs	8,857	7,344	0	0	4,033	0	0	3,214	0	2,475	25,923
	UNEP	Project costs	28,250	0	0	0	45,000	0	0	23,250	0	0	96,500
		Support costs	3,673	0	0	0	5,850	0	0	3,023	0	0	12,546
Funds approved by ExCom (US\$)	Project costs		146,337	97,925	0	0	0	0	0	0	0	0.0	244,262
	Support costs		12,530	7,344	0	0	0	0	0	0	0	0.0	19,874
Total funds requested for approval at this meeting (US\$)	Project costs		0	0	0	0	98,775	0	0	0	0	0	98,775
	Support costs		0	0	0	0	9,883	0	0	0	0	0	9,883

<b>Secretariat's recommendation:</b>	For individual consideration
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## PROJECT DESCRIPTION

1. On behalf of the Government of Guatemala, UNIDO as the lead implementing agency, has submitted to the 75<sup>th</sup> meeting a request for funding for the third tranche of stage I of the HCFC phase-out management plan (HPMP), at a total cost of US \$108,658, consisting of US \$53,775, plus agency support costs of US \$4,033 for UNIDO, and US \$45,000, plus agency support costs of US \$5,850 for UNEP. The submission includes a progress report on the implementation of the second tranche, the verification report on HCFC consumption and the tranche implementation plan for 2016 to 2018.

### Report on HCFC consumption

#### *HCFC consumption*

2. The Government of Guatemala reported a consumption of 4.75 ODP tonnes of HCFC in 2014. The 2010-2014 HCFC consumption is shown in Table 1.

**Table 1. HCFC consumption in Guatemala (2010-2014, Article 7 data)**

HCFC	2010	2011	2012	2013	2014	Baseline
<b>Metric tonnes</b>						
HCFC-22	110.0	130.00	131.00	134.89	64.65	126.9
HCFC-123	0.1	0.20	0.00	0.05	0.05	0.1
HCFC-124	4.0	2.60	0.00	0.87	0.43	5.2
HCFC-141b	9.0	23.00	13.40	21.79	10.76	9.8
HCFC-142b	1.0	2.50	0.00	0	0	1.7
<b>Total (metric tonnes)</b>	<b>124.1</b>	<b>158.30</b>	<b>144.40</b>	<b>157.6</b>	<b>75.89</b>	<b>143.8</b>
<b>ODP tonnes</b>						
HCFC-22	6.0	7.15	7.21	7.42	3.56	7.0
HCFC-123	0.0	0.00	0.00	0.00	0.00	0.0
HCFC-124	0.1	0.06	0.00	0.02	0.01	0.1
HCFC-141b	1.0	2.53	1.47	2.40	1.18	1.1
HCFC-142b	0.1	0.16	0.00	0.00	0.00	0.1
<b>Total (ODP tonnes)</b>	<b>7.2</b>	<b>9.90</b>	<b>8.68</b>	<b>9.84</b>	<b>4.75</b>	<b>8.3</b>

\* On 12 October 2015, the country has submitted to both the Ozone Secretariat and the Multilateral Fund Secretariat revised data for 2013 and 2014

3. The HCFC consumption of 9.84 ODP tonnes reported for 2013 was 1.54 ODP tonnes above the established baseline for compliance. This situation was mainly associated with a delay in establishing the consumption quota for 2013. Consequently, the Parties to the Montreal determined, at their 26<sup>th</sup> meeting, that Guatemala was in non-compliance with the control measures under the Protocol for HCFCs. The Parties noted with appreciation the submission by Guatemala of a plan of action, without prejudice to the operation of the financial mechanism of the Protocol, under which Guatemala specifically committed to reducing its consumption of HCFC to no greater than 4.35 ODP tonnes in 2014, and the levels allowed under the Montreal Protocol in 2015 and subsequent years (decision XXVI/16).

4. In response to decision XXVI/16, the Government of Guatemala established import quotas of 4.35 ODP tonnes for 2014.

#### *Verification report*

5. The verification report confirmed that the licensing and quota system for HCFC imports and exports is currently in operation; that the verified consumption of HCFCs of 9.84 ODP tonnes for 2013 was slightly below the 9.98 ODP tonnes that the Government had previously reported under Article 7 of the Montreal Protocol; and that the verified consumption of 4.75 ODP tonnes for 2014 was higher than

the 4.26 ODP tonnes previously reported under Article 7 and the 4.35 ODP tonnes established pursuant to decision XXVI/16. The verification report concluded that Guatemala did not comply with the allowable levels of HCFC consumption for 2013 and 2014.

*Country programme (CP) implementation report*

6. The Government of Guatemala resubmitted the revised 2013 and 2014 CP implementation reports based on the verified data for HCFCs. The CP report included a consumption of 1.94 ODP tonnes of HCFC-141b contained in imported pre-blended polyols which was not included in the verification report. According to UNIDO, HCFC-141b contained in imported pre-blended polyols was not considered because it was not part of the consumption targets as per Appendix 2-A of the Agreement between the Government of Guatemala and the Executive Committee.

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

Legal framework

7. At the 68<sup>th</sup> meeting, Guatemala reported that it had an enforceable national licensing system for HCFC imports and exports since 2003. The licensing system is controlled and managed by the National Ozone Unit (NOU) in cooperation with the Ministry of Environment and Natural Resources. Import quotas for HCFCs were expected to be established in January 2013; however, they were established only in 2014.

8. Prior to the issuance of quotas, UNEP as the cooperating agency organized two missions to Guatemala to sensitize Government officials on the urgency of establishing the HCFC quota system.

*Foam manufacturing sector*

9. In 2013, the domestic refrigerator producer, Fogel completed the conversion of the insulation foam for domestic and commercial refrigeration equipment, replacing 13.10 mt (1.44 ODP tonnes) of HCFC-141b contained in pre-blended polyols with cyclopentane. Counterpart funding by Fogel amounted to US \$190,000; however, it is not possible to assess whether this funding is associated with incremental costs.

*Refrigeration servicing sector*

10. The phase-out activities implemented under the second tranche are summarized below:

- (a) Purchase and delivery of equipment to six training centres of the Technical Institute for Training and Productivity (“Instituto Técnico de Capacitación y Productividad), and to a Foundation Kinal (a technical training school for workers) located in Guatemala City. Equipment delivered included *inter alia*, a refrigerant reclaiming unit (in view of establishing a recovery and recycling centre in one of the training centres), a few cylinders of hydrocarbon-based refrigerants for trials and tests, refrigerant detectors, hand held electronic leak detectors, vacuum pumps, and service tools);
- (b) Training and certification of 523 refrigeration technicians in good servicing practices, including recovery and recycling practices and leak detection. The use of hydrocarbon-based refrigerants as a drop-in for HCFC-based equipment was demonstrated; and
- (c) Study tour for trainers to two manufacturers” one producing CO<sub>2</sub>-based commercial refrigerators and the other producing R-290 and R-600a-based domestic and commercial refrigerator equipment, and one company dismantling refrigeration equipment, located in Mexico.

*Project implementation and monitoring unit*

11. The Specialized Technical Ozone Unit (NOU) within the Ministry of Environment and Natural Resources, with the assistance of UNIDO and UNEP coordinated the implementation of the HPMP.

Level of fund disbursement

12. As of September 2015, of the US \$244,262 so far approved, US \$213,986 had been disbursed (for UNIDO only). The balance of US \$30,276 will be disbursed in 2016-2017 (Table 2).

**Table 2. Financial report of stage I of the HPMP for Guatemala (US \$)**

Agency	First tranche		Second tranche		Total approved	
	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed
UNIDO	118,087	118,087	97,925	95,899	216,012	213,986
UNEP	28,250	0	0	0	28,250	0
<b>Total</b>	146,337	118,087	97,925	95,899	244,262	213,986
<b>Disbursement rate (%)</b>	80.7		97.9		87.6	

Implementation plan for the third tranche of the HPMP

13. The third funding tranche of the HPMP will be implemented between January 2016 and December 2018. During this period the following activities will be implemented:

- (a) *Technical assistance for the control of trade of HCFC-based substances and equipment:* To update the legislation framework to control the consumption of HCFCs and HCFC-based refrigeration and air-conditioning equipment; to develop standards for flammable refrigerants and a unified database of refrigerant importers and trader companies; to train 100 customs and other enforcement officers on control of ODS, including the use of refrigerant blend identifiers; and awareness activities (UNEP) (US \$45,000);
- (b) *Technical assistance in reducing the use of HCFC:* To disseminate the use of hydrocarbon-based refrigerant as an alternative to the HCFC-22; to implement the refrigeration and certification programme with the support of the training centres, and standardize the training programmes and technician certification requirements; to purchase and deliver service equipment and tools (e.g., refrigerant identifiers, laboratory items and pumps for the reclaim centre, vacuum pump and leak detectors) (UNIDO) (US \$43,775); and
- (c) *HPMP implementation, monitoring and control:* To coordinate the implementation of all activities of the HPMP (UNIDO) (US 10,000).

**SECRETARIAT'S COMMENTS AND RECOMMENDATION****COMMENTS**Non-compliance issue

14. In decision XXVI/16 on non-compliance by Guatemala with the consumption control for HCFCs in 2013, noted *inter alia* that to the degree that Guatemala was working towards meeting the Protocol control measures, Guatemala should continue to receive international assistance to enable it to meet those commitments. In reviewing the issue of non-compliance, the Secretariat noted that with assistance provided by UNEP, the Government has already established a quota system and that the HCFC import quota for 2014 was issued in line with decision XXVI/16. In 2015, the Government of Guatemala issued HCFC import quota in accordance with the Montreal Protocol control targets.

15. Noting the difference in the HCFC consumption reported under Article 7 in 2013 and 2014 and the data in the verification report for the same years, the Secretariat suggested to UNIDO to further discuss the issue with the Government of Guatemala including the submission of the verified data to the Ozone Secretariat. Consequently, the verified data was submitted to the Ozone Secretariat to revise the HCFC consumption levels for 2013 and 2014.

16. With the consumption of 9.84 ODP tonnes of HCFCs reported under Article 7 of the Protocol for 2013, and given that the maximum allowable consumption was 8.30 ODP tonnes for that year, the country was in non-compliance with its Agreement with the Executive Committee. The Agreement contained the penalty clause informing that the amount of funding of the HPMP may be reduced by US \$180 per ODP kg of consumption beyond 8.30 ODP tonnes for 2013, resulting in a penalty of US \$277,200, representing over 62 per cent of the funding agreed in principle of US \$442,137 for stage I of the HPMP.

#### Progress report on the implementation of the second tranche

17. In approving stage I of the HPMP for Guatemala, the Executive Committee *inter alia*, encouraged the Government to consider issuing a ban on the import of HCFC-141b in bulk and contained in imported pre-blended polyols prior to completion of stage I and requested UNIDO to report thereon to the Executive Committee when submitting subsequent tranche funding requests (decision 68/25(c) and (d)). In response to this decision, UNIDO indicated that the Government is considering issuing a ban on the import of HCFC-141b in bulk and in pre-blended polyols in 2018.

18. With regard to the servicing sector, the Secretariat noted that no activities were implemented under UNEP's component of technical assistance for enhanced control of trade of HCFC-based equipment. UNEP advised that following the electoral process in Guatemala in September 2011, UNEP was requested to cancel all agreements signed by the former administration. Since then, the Government of Guatemala has not been able to open a bank account to receive resources from the Multilateral Fund, but suggested using the UNDP country office to manage the payment services. UNEP reported that a draft Agreement was prepared and submitted to the Division of International Cooperation of the Ministry of Environment but it is not yet signed. Meanwhile, UNEP has revised the action plan for the implementation period 2016-2017 as shown in Table 3.

Table 3. Revised implementation plan for UNEP activities

<b>Activities</b>	<b>2016</b>	<b>2017</b>	<b>Total</b>
Update of ODS legislation	5,000	4,250	9,250
Public awareness workshops	8,500	8,500	17,000
Development of standards for flammable refrigerants	4,000	0	4,000
Development of database	2,000	6,000	8,000
Customs and other enforcement officers training	12,500	12,500	25,000
Travel to customs training and monitoring HCFC imports	6,000	4,000	10,000
<b>Sub-Total</b>	<b>38,000</b>	<b>35,250</b>	<b>73,250</b>

19. The revised action plan proposed by UNEP, combined with the technical assistance to be provided by UNIDO, will ensure long-term sustainability of the training programme for customs officers and refrigeration service technicians in Guatemala.

20. Upon a request for information on whether retrofits of HCFC-based equipment to hydrocarbon-based refrigerants are being promoted by the HPMP, UNIDO indicated that some trials were carried out and the lessons learned were shared with the stakeholders. However, UNIDO's policy does not allow the replacement of HCFC-22 via drop-in with hydrocarbon refrigerants; moreover, there are no specific regulations or codes in place allowing the use of hydrocarbon-based refrigeration and air-conditioning systems. Nevertheless, the HPMP will continue promoting the use of hydrocarbon as an

alternative with an emphasis in safety and good practices. With regard to this practice UNIDO confirmed that the Government of Guatemala was fully aware of decisions 72/17<sup>1</sup> and 73/34<sup>2</sup> on retrofit of refrigeration systems with flammable refrigerants.

### Conclusion

21. Guatemala has so far implemented its plan of action to return to compliance through the halting of HCFC imports during the second half of 2014 and the establishment of import quotas for 2015 in line with the Montreal Protocol's phase-out schedule. The largest HCFC-based manufacturing enterprise has been successfully converted to a low-global-warming potential alternative foam blowing agent. The activities implemented to date and those planned under the third tranche of stage I of the HPMP including training and certification, technical assistance to training centres and awareness raising activities, will further strengthen the servicing sector and ensure the long term sustainability of the phase-out activities. The Government is fully aware that it will assume all responsibilities and risks associated with the retrofit of HCFC-based refrigeration and air-conditioning equipment with flammable refrigerants.

22. The country has fulfilled the requirements for approval of the second tranche which are linked to the progress in implementation; however, with the apparent non-compliance with both the Agreement and the Montreal Protocol, the country has not met the targets set out in the Agreement. In the view of the Secretariat, the main underlying cause for non-compliance seems to have been addressed by the country.

### **RECOMMENDATION**

23. The Executive Committee may wish to consider:

(a) Noting:

- (i) The progress report on the implementation of the second tranche of stage I of the HCFC phase-out management plan of (HPMP) for Guatemala;
- (ii) The verification report on the HCFC consumption for Guatemala in the years 2013 and 2014;
- (iii) That in decision XXVI/16 the Parties to the Montreal Protocol noted with appreciation the submission by Guatemala of a plan of action, without prejudice to the operation of the financial mechanism of the Protocol, under which Guatemala specifically committed to reducing its consumption of HCFC to no greater than 4.35 ODP tonnes in 2014, and the levels allowed under the Montreal Protocol in 2015 and subsequent years; and that to the degree that Guatemala was working towards meeting the Protocol control measures, Guatemala should continue to receive international assistance to enable it to meet those commitments;
- (iv) That the Government of Guatemala had established an import quota of 4.35 ODP tonnes for 2014 in line with decision XXVI/16 and issued HCFC import quotas

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<sup>1</sup> To include in the approval of HPMPs, tranches, projects or activities that proposed the retrofit of HCFC based refrigeration and air conditioning equipment to flammable or toxic refrigerants that the Executive Committee notes that, if the country engages in retrofitting HCFC-based refrigeration and air-conditioning equipment to flammable or toxic refrigerants and associated servicing, it does so on the understanding that they assume all associated responsibilities and risks.

<sup>2</sup> If a country were to decide, after taking into account decision 72/17, to proceed with retrofits that used flammable substances in equipment originally designed for non-flammable substances, it should be done only in accordance with the relevant standards and protocols.

in accordance with the Montreal Protocol control targets in 2015;

- (b) Whether to apply a reduction in funding as per paragraph 11 and Appendix 7-A of the Agreement calculated at US \$180 for each ODP kg of consumption over the maximum allowable consumption limit, resulting in a penalty of up to US \$277,200;
- (c) Whether to approve the third tranche of stage I of the HPMP for Guatemala, and the corresponding 2016-2018 tranche implementation plans, at the amount of US \$108,658 consisting of US \$53,775, plus agency support costs of US \$4,033 for UNIDO; and US \$45,000, plus agency support costs of US \$5,850 for UNEP on the understanding that:
  - (i) If Guatemala were to decide to proceed with retrofits and associated servicing to flammable and toxic refrigerants in refrigeration and air-conditioning equipment originally designed for non-flammable substances, it would do so assuming all associated responsibilities and risks and only in accordance with the relevant standards and protocols; and
  - (ii) The Treasurer will not disburse the funding for UNEP until confirmation was received at the Secretariat that the Agreement between the Division of International Cooperation of the Ministry of Environment and UNEP has been signed.

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