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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Seventy-seventh Meeting  
Montreal, 28 November - 2 December 2016

**PROJECT PROPOSAL: ARMENIA**

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

Phase-out

- HCFC phase-out management plan (stage II, first tranche) UNDP and UNEP

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

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

**Armenia**

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
HCFC phase-out plan (Stage II)	UNDP (lead)/UNEP

<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>	Year: 2015	2.34 (ODP tonnes)
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<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA</b>							<b>Year: 2015</b>		
<b>(ODP tonnes)</b>									
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturi	Servicin				
HCFC-22					2.33				2.33
HCFC-123					0.01				0.01

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009 - 2010 baseline:	7.0	Starting point for sustained aggregate reductions:	7.83
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>			
Already approved:	2.23	Remaining:	5.6

<b>(V) BUSINESS PLAN</b>		<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>
UNDP	ODS phase-out (ODP tonnes)	0.5	0	0.5	0	0.1	1.2
	Funding (US \$)	52,700	0	52,700	0	11,700	117,100
UNEP	ODS phase-out (ODP tonnes)	0.2	0	0.2	0	0.2	0.5
	Funding (US \$)	16,600	0	16,600	0	16,500	49,700

<b>(VI) PROJECT DATA</b>		<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>	
Montreal Protocol consumption limits		6.30	6.30	6.30	6.30	4.55	n/a	
Maximum allowable consumption (ODP tonnes)		[5.04] [3.34]	[4.48] [3.34]	[3.92] [3.34]	[3.64] [3.34]	[3.36] [2.34]	n/a	
Project costs requested in principle (US \$)	UNDP	Project costs	108,000	0	0	21,600	129,600	
		Support costs	9,720	0	0	1,944	11,664	
	UNEP	Project costs	35,000	0	51,400	0	0	86,400
		Support costs	4,550	0	6,682	0	0	11,232
Total project costs requested in principle (US \$)		143,000	0	51,400	0	21,600	216,000	
Total support costs requested in principle (US \$)		14,270	0	6,682	0	1,944	22,896	
Total funds requested in principle (US \$)		157,270	0	58,082	0	23,544	238,896	

<b>(VII) Request for funding for the first tranche (2016)</b>		
<b>Agency</b>	<b>Funds requested (US \$)</b>	<b>Support costs (US \$)</b>
UNDP	108,000	9,720
UNEP	35,000	4,550

<b>Funding request:</b>	Approval of funding for the first tranche (2016) as indicated above
<b>Secretariat's recommendation:</b>	Individual consideration

## PROJECT DESCRIPTION

1. On behalf of the Government of Armenia, UNDP as the lead implementing agency, has submitted to the 77<sup>th</sup> meeting stage II of the HCFC phase-out management plan (HPMP) at a total cost of US \$238,896, consisting of US \$129,600 plus agency support costs of US \$11,664 for UNDP, and US \$86,400 plus agency support costs of US \$11,232 for UNEP, as originally submitted<sup>1</sup>. The implementation of stage II of the HPMP will phase out 1.02 ODP tonnes of HCFCs resulting in a 35 per cent reduction in HCFC consumption baseline by 2020.
2. The first tranche for stage II of the HPMP being requested at this meeting amounts to US \$157,270, consisting of US \$108,000, plus agency support costs of US \$9,720 for UNDP, and US \$35,000, plus agency support costs of US \$4,550 for UNEP, as originally submitted.

### Status of stage I

3. Stage I of the HPMP for Armenia was approved at the 62<sup>nd</sup> meeting to meet 10 per cent reduction from the baseline by 2015 at a total cost of US \$601,838, plus support costs, to phase out 2.23 ODP tonnes.

### HCFC consumption

4. The Government of Armenia reported a consumption of 2.34 ODP tonnes of HCFCs in 2015, equivalent to approximately 34 per cent of the HCFC baseline. The 2011-2015 HCFC consumption is shown in Table 1.

**Table 1. HCFC-22 consumption in Armenia (Article 7 data)**

Substance	2011	2012	2013	2014	2015	Baseline
<b>Metric tonnes</b>						
HCFC-22	136.40	103.00	82.62	57.33	42.36	126.69
HCFC-123	0.00	0.00	0.00	0.00	0.50	0
<b>Sub-total</b>	<b>136.40</b>	<b>103.00</b>	<b>82.62</b>	<b>57.33</b>	<b>42.86</b>	<b>126.69</b>
HCFC-141b pre-blended polyols (*)	0.00	0.00	0.00	0.00	0.00	7.55
<b>ODP tonnes</b>						
HCFC-22	7.50	5.67	4.54	3.15	2.33	7.00
HCFC-123	0.00	0.00	0.00	0.00	0.01	0.00
<b>Sub-total</b>	<b>7.50</b>	<b>5.67</b>	<b>4.54</b>	<b>3.15</b>	<b>2.34</b>	<b>7.00</b>
HCFC-141b-pre-blended polyols (*)	0.00	0.00	0.00	0.00	0.00	0.83

\* Not reported under Article 7 of the Montreal Protocol.

5. The country's HCFC consumption has been decreasing since 2011 attributed largely to the phase-out associated with the consumption in SAGA (an enterprise manufacturing commercial refrigeration equipment), promotion of ozone depleting substances (ODS) alternatives and the recovery and reuse of refrigerant. The economic recession might also had an impact on the low consumption reported in 2015. The small quantity of HCFC-123 was imported by the international airport for use in chiller equipment.

<sup>1</sup> As per the letter of 3 August 2016 from the Ministry of Nature Protection of the Republic of Armenia to UNDP and UNEP.

6. A verification report<sup>2</sup> for 2013 and 2014 consumption was received by the Secretariat confirming compliance with the Montreal Protocol target, hence funding for the third tranche was subsequently released in March 2016.

#### ODS policy and regulatory framework

7. The Government of Armenia has established a legal framework to support the phase-out of ODS, including HCFCs. Government resolution 2007/327-N set out the overall quota for the import of ODS throughout 2040. Armenia joined the Eurasian Economic Union (EEU) in October 2014. A ban on the import of HCF-141b contained in pre-blended polyols and on HCFC-based equipment was introduced in January 2015 in order to meet the binding requirements of the EEU. The Government will continue to harmonize its legal framework with EEU regulations, to introduce, *inter alia*, a system for managing ODS movement within the EEU region. The system will allow Armenia to control HCFC imports and keep the imported amount within the country to meet domestic needs.

8. The licensing and quota system for the import/export of HCFCs has been effectively enforced. Detailed procedures for quota issuance, monitoring and data reporting have been implemented. In 2016, the quota for HCFCs has been issued at 6.30 ODP tonnes (114.53 mt) in accordance with Montreal Protocol phase-out schedule.

#### Foam manufacturing sector

9. The investment project to phase out 7.50 mt (0.83 ODP tonnes) of HCFC-141b contained in imported pre-blended polyols and 25.50 mt (1.40 ODP tonnes) of HCFC-22 in the manufacturing of commercial refrigeration equipment at the enterprise SAGA was cancelled<sup>3</sup> at the 74<sup>th</sup> meeting, as the enterprise had gone bankrupt after the equipment was delivered. The HCFC consumption associated with the enterprise has been phased out.

10. Since the 74<sup>th</sup> meeting, UNDP has been exploring various options for utilizing the equipment, including transferring the equipment to other ongoing eligible projects under the Multilateral Fund. After unsuccessful attempts to transfer the equipment and in order to avoid any deterioration of the equipment, in September 2016 UNDP put the equipment on its website for auction following UNDP rules and procedures. The process of sale is still on-going; the funds obtained from the auction will be returned to the Multilateral Fund. UNDP will provide an update on this matter at the 77<sup>th</sup> meeting.

#### Servicing sector

11. In collaboration with the Customs Service, the harmonized customs code (HS code) has been introduced to better identify HCFCs. Two training workshops were conducted for 40 customs officers on imports control of HCFCs and HCFC-based equipment.

12. Training in good servicing practices, refrigerant recovery and reuse was provided to 42 technicians; 25 sets of servicing tools were distributed to the trained technicians and four sets to the Refrigeration Association of Armenia.

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<sup>2</sup> The third tranche was approved on the understanding that the transfer of the approved funds to implementing agencies would occur only after receipt by the Secretariat of the verification reports confirming that the country had been in compliance with the Montreal Protocol and the Agreement between the Government of Armenia and the Executive Committee as stated in paragraphs 12 and 25 of document UNEP/OzL.Pro/ExCom/74/20.

<sup>3</sup> Paragraphs 15 to 18 of document UNEP/OzL.Pro/ExCom/74/20.

Status of disbursements

13. As of August 2016, of the US \$99,000 (US \$39,000 for UNEP and US \$60,000 for UNDP) approved for the servicing sector, US \$96,051 (US \$39,000 for UNEP and US \$57,051 for UNDP) has been disbursed (97 per cent). The balance of US \$2,949 will be disbursed in 2017.

14. Of the US \$534,353 approved for the investment project (SAGA), US \$458,965 has been disbursed; the funding of US \$31,515 associated with the third tranche was cancelled at the 74<sup>th</sup> meeting; and the remaining balance (i.e. US \$43,873) from the approved tranches plus any funds resulting from the sale of the equipment that was purchased for SAGA will be returned to the Multilateral Fund.

15. The implementation of stage I is expected to be completed by the end of 2016.

**Stage II of the HPMP**Remaining consumption

16. After approval of stage I, the remaining consumption eligible for funding in Armenia is 5.60 ODP tonnes of HCFC-22.

17. The activities proposed in stage II will further strengthen the national capacity to limit the supply of HCFCs, promoting good servicing practices to reduce the demand for new HCFCs, and adopting low-GWP and energy-efficient alternative technologies to sustain HCFC phase-out.

Regulatory actions

18. The ODS legislation are under current review; once they are approved, a guide will be developed to *inter alia* enable customs officers, law enforcement personnel and importers/exporters to navigate through the revised legislation. Accordingly, the following activities will be implemented by UNEP:

- (a) Development of an electronic licensing and quota system; implementation of the Harmonized System Codes (HS Code); and development of labelling standards for monitoring of ODS imports and exports (US \$12,000);
- (b) Harmonizing the domestic ODS import/export policy with the EEU ODS legislation and stakeholders consultation workshops (US \$28,000);
- (c) Two training workshops for 40 customs and enforcement officers and distribution of four multiple refrigerant identifiers to strengthen border controls and prevent illegal trade and movement of ODS and ODS-based equipment (US \$15,000); and
- (d) Provision of four refrigerant identifiers (UNDP) (US \$20,000).

19. To ensure the long-term sustainability of training of customs officers, training courses will be integrated into the curriculum of the Armenia State University of Economics. Mandatory certification of technicians will be considered after the full implementation of the training course in the vocational institutes.

Servicing sector

20. The following activities will be implemented:

- (a) Update training manuals to include voluntary use of a logbook and safe handling of flammable refrigerants (UNEP) (US \$7,000);
- (b) Four training workshops on good servicing practices and safe handling of flammable refrigerants for 80 technicians (UNEP) (US \$20,000);
- (c) Procurement of 25 sets of tools and equipment for selected technicians to enable training (UNDP) (US \$36,000);
- (d) Provision of training equipment (e.g. charging station, welding and vacuum test stand, multi-gas analyzer, reclamation machine) to three vocational institutes (UNDP) (US \$64,000); and
- (e) Project monitoring and reporting. The NOU assisted by a national consultant will coordinate and report on the overall progress of HPMP implementation (US \$4,400 for UNEP and US \$9,600 for UNDP).

Total cost of stage II of the HPMP

21. The total cost of stage II of the HPMP for Armenia has been estimated at US \$216,000, to phase-out 3.26 ODP tonnes of HCFCs representing 47 per cent of the HCFC baseline. Detailed activities and cost break down are shown in the table below:

**Table 2. Overall cost of stage II of the HPMP for Armenia (US \$)**

Project activity	Agency	Funding (US \$)			
		2016-2017	2018-2019	2020	Total
<b>Policy, regulations and enforcement</b>					
Regulatory actions	UNEP	25,000	15,000	0	40,000
Development of training manuals and training of customs and enforcement officers	UNEP	3,000	12,000	0	15,000
Provision of refrigerant identifier (four sets)	UNDP			20,000	20,000
<b>Training of technicians in good servicing practices</b>					
Development of training material, handbook on safe use of natural refrigerants	UNEP	5,000	2,000	0	7,000
Training of refrigeration and air-conditioning (RAC) technicians in good practices and safe handling of natural refrigerants	UNEP	0	20,000	0	20,000
<b>Provision of tools and equipment</b>					
Training equipment for vocational training institutes	UNDP	36,000	0	0	36,000
Tools and equipment for good practices and safe handling of natural refrigerants	UNDP	64,000	0	0	64,000
National expert for refrigerant recovery and reporting	UNDP	8,000	0	1,600	9,600
<b>Project management and monitoring</b>					
Project monitoring and reporting	UNEP	2,000	2,400	0	4,400
<b>Total</b>		<b>143,000</b>	<b>51,400</b>	<b>21,600</b>	<b>216,000</b>

### **Implementation plan for the first tranche**

22. The first tranche of stage II of the HPMP at the total cost of US \$143,000 and include the following activities:

- (a) Develop e-licensing system, harmonize legislation and develop an ODS legislation guide (UNEP) (US \$25,000);
- (b) Develop training manuals for customs officers and technicians, handbook on safe use of flammable refrigerants and voluntary logbook for technicians (UNEP) (US \$8,000);
- (c) Procurement of equipment for technicians and training institutes (UNDP) (US \$100,000);
- (d) National expert for HCFC recovery monitoring and reporting (UNDP) (US \$8,000); and
- (e) Monitoring and reporting on HPMP implementation (UNEP) (US \$2,000).

### **SECRETARIAT'S COMMENTS AND RECOMMENDATION**

#### **COMMENTS**

23. The Secretariat reviewed stage II of the HPMP for Armenia in light of the implementation of stage I, the policies and guidelines of the Multilateral Fund, including the criteria for funding HCFC phase-out in the consumption sector for stage II of HPMPs (decision 74/50), and the 2016-2018 business plan of the Multilateral Fund.

#### **Proposed activities in stage II**

##### Refrigeration servicing sector

24. UNEP advised that the Government of Armenia will promote the introduction of new RAC equipment based on natural refrigerants, as retrofitting of HCFC-22-based equipment to flammable refrigerants was not envisaged in stage II. Accordingly, the training for technicians and tools to be purchased will focus on installation, servicing and maintenance of RAC equipment designed for natural refrigerants.

25. In response to the Secretariat's concern about the lack of safety standards for the use of flammable alternatives, UNEP reported that the Government would finance the development of these standards as an in-kind contribution to stage II of the HPMP.

##### Impact on the climate

26. The proposed activities in the servicing sector, which include better containment of refrigerants through training and the provision of equipment, will reduce the amount of HCFC-22 used for refrigeration servicing. Each kilogramme of HCFC-22 not emitted due to better refrigeration practices results in savings of approximately 1.8 CO<sub>2</sub> equivalent tonnes. Although a calculation of the impact on the climate was not included in the HPMP, the activities planned by Armenia, in particular its efforts to promote the introduction of new equipment based on low-GWP refrigerants, indicate that implementation of the HPMP will reduce the emission of high-GWP refrigerants into the atmosphere, therefore resulting in benefits for the climate.

## Co-financing

27. In response to decision 54/39(h)<sup>4</sup>, UNEP reported that the Government would finance the development of the safety standards for using flammable and toxic refrigerants as an in-kind contribution to stage II of the HPMP.

## 2016 2018 business plan of the Multilateral Fund

28. UNEP and UNDP are requesting US \$216,000, plus agency support costs, for the implementation of stage II of the HPMP. The total value requested of US \$215,352 including support costs for the period 2016 to 2018 is US \$76,752 above the amount in the business plan for the period. The amount requested (US \$216,000) by the Government for the phase-out of 1.96 ODP tonnes is in line with decision 74/50, noting that US \$99,000 had been approved for stage I of the HPMP.

## Draft Agreement

29. The Secretariat noted however, that the consumption of HCFC-22 has shown a decreasing trend since 2011, i.e., from 7.50 ODP tonnes in 2011 to 2.34 ODP tonnes in 2015. This reduction has been associated with the phase-out of 1.40 ODP tonnes of HCFC-22 used by SAGA (the only manufacturing enterprise in Armenia) that went bankrupt in 2014; the activities in the refrigeration servicing sector implemented during stage I; and the support by the Government to introduce new refrigeration and air-conditioning equipment based on low-GWP refrigerants.

30. The Secretariat further noted that stage II of the HPMP included activities for further reducing HCFC-22 consumption at a total cost of US \$216,000. However, the Government was proposed to establish the maximum allowable levels of HCFC consumptions at 6.30 ODP tonnes between 2016 and 2019, and 4.55 ODP tonnes in 2020, while the consumption in 2015 was only 2.34 ODP tonnes.

31. Noting that the economic recession in the country in 2015 could have partially contributed to the low level of the consumption reported for that year under Article 7 of the Montreal Protocol, the Secretariat proposed a maximum level of consumption of 3.34 ODP tonnes between 2016 and 2019, and 2.34 ODP tonnes in 2020 (similar to the consumption in 2015). Subsequently, UNDP indicated that the Government did not agree with the proposal and proposed a staged phase-out from 5.04 ODP tonnes in 2016 to 3.36 ODP tonnes in 2020.

32. The different proposed stage II reduction on HCFC consumption between 2016 and 2020 are summarized in Table 3.

**Table 3: Proposed stage II reduction on HCFC consumption for Armenia**

Proposed reduction	HCFC-22 (ODP tonnes)				
	2016	2017	2018	2019	2020
As per reduction schedule	5.04	5.04	5.04	5.04	3.64
As original submitted for stage II	6.30	6.30	6.30	6.30	4.55
As proposed by the Secretariat	3.34	3.34	3.34	3.34	2.34
As revised by the Government of Armenia	5.04	4.48	3.92	3.64	3.36

33. The draft Agreement between the Government of Armenia and the Executive Committee for the phase-out of HCFCs in stage II of the HPMP has been prepared based on the revised maximum allowable total consumption of HCFCs between 2016 to 2020 (i.e., row 1.2 of the Agreement). Given the successful

<sup>4</sup> Countries and agencies were encouraged to explore 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 Nineteenth Meeting of the Parties.



status of implementation of the activities in the refrigeration servicing sector included in stage I and that the proposed activities in stage II will continue reducing HCFC consumption in the country and will favour the introduction of refrigeration and air-conditioning equipment based on low-GWP refrigerants, a recommendation for consideration by the Executive Committee has been drafted.

## **RECOMMENDATION**

34. The Secretariat is unable to recommend approval of a project that would increase substantially the current consumption of HCFCs for the entire duration of the project. Accordingly, the Secretariat is seeking the advice from the Executive Committee on a way forward. The decision on the approval of stage II of the HCFC phase-out management plan (HPMP) for Armenia and the draft Agreement between the Government of Armenia and the Executive Committee for the phase-out of HCFCs in stage II of the HPMP would be revised based on the outcomes of the discussions by the Executive Committee at its 77<sup>th</sup> meeting.

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