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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Seventy-sixth Meeting  
Montreal, 9-13 May 2016

**PROJECT PROPOSAL: BOSNIA AND HERZEGOVINA**

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

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

**Bosnia and Herzegovina**

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase out plan (Stage I)	UNIDO (lead)	66th	35% by 2020

<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>	Year: 2014	3.37 (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-22				0.51	2.75				3.26
HCFC-142b					0.11				0.11
HCFC-141b in imported pre-blended polyol		1.21							1.21

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	4.70	Starting point for sustained aggregate reductions:	8.17
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	6.58	Remaining:	1.59

(V) BUSINESS PLAN		2016	2017	2018	2019	2020	Total
UNIDO	ODS phase-out (ODP tonnes)	0.8	0.0	0.2	0.0	0.2	1.2
	Funding (US \$)	125,930	0	33,170	0	32,100	191,200

(VI) PROJECT DATA			2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits			n/a	4.70	4.70	4.23	4.23	4.23	4.23	4.23	3.06	n/a
Maximum allowable consumption (ODP tonnes)			n/a	4.70	4.70	4.23	4.23	4.23	4.23	4.23	3.06	n/a
Agreed funding (US \$)	UNIDO	Project costs	631,282	0	143,310	0	117,692	0	31,000	0	30,000	953,284
		Support costs	47,346	0	10,032	0	8,238	0	2,170	0	2,100	69,886
Funds approved by ExCom (US \$)		Project costs	631,282	0	143,310*	0	0					774,592
		Support costs	47,346	0	10,032*	0	0					57,378
Total funds requested for approval at this meeting (US \$)		Project costs					117,692					117,692
		Support costs					8,238					8,238

\*10 per cent funding withheld in line with decision 72/31.

<b>Secretariat's recommendation:</b>	For blanket approval
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## PROJECT DESCRIPTION

1. On behalf of the Government of Bosnia and Herzegovina, UNIDO, as the designated implementing agency, has submitted to the 76<sup>th</sup> meeting a request for funding for the third tranche of stage I of the HCFC phase-out management plan (HPMP), at the amount of US \$117,692, plus agency support costs of US \$8,238. The submission includes a progress report on the implementation of the second tranche, the verification report on HCFC consumption for 2014 and 2015 and the tranche implementation plan for 2016 to 2018.

### Report on HCFC consumption

#### *HCFC consumption*

2. The Government of Bosnia and Herzegovina reported a consumption of 3.37 ODP tonnes of HCFC in 2014. The verification shows a consumption of 2.11 ODP tonnes in 2015. The 2011-2015 HCFC consumption is shown in Table 1.

**Table 1. HCFC consumption in Bosnia and Herzegovina (2011-2015 Article 7 data)**

HCFC	2011	2012	2013	2014	2015*	Baseline
<b>Metric tonnes</b>						
HCFC-22	60.9	73.88	88.73	59.23	37.19	57.15
HCFC-141b	0	0	0	0	0	13.5
HCFC-142b	0	0	3.86	1.72	0.94	0
<b>Sub-total (mt)</b>	<b>60.9</b>	<b>73.88</b>	<b>92.59</b>	<b>60.95</b>	<b>38.13</b>	<b>70.65</b>
HCFC-141b in imported pre-blended polyols**	67.73	64.82	30.00	11.00	0	31.55
<b>Total (mt)</b>	<b>128.63</b>	<b>138.7</b>	<b>122.59</b>	<b>71.95</b>	<b>38.13</b>	<b>111.65</b>
<b>ODP tonnes</b>						
HCFC-22	3.35	4.06	4.88	3.26	2.05	3.14
HCFC-141b	0	0	0	0	0	1.49
HCFC-142b	0	0	0.25	0.11	0.06	0
<b>Sub-total (ODP tonnes)</b>	<b>3.35</b>	<b>4.06</b>	<b>5.13</b>	<b>3.37</b>	<b>2.11</b>	<b>4.70</b>
HCFC-141b in imported pre-blended polyols**	7.45	7.13	3.3	1.21	0	3.47
<b>Total (ODP tonnes)</b>	<b>10.8</b>	<b>11.19</b>	<b>8.43</b>	<b>4.58</b>	<b>2.11</b>	<b>8.17</b>

\*Data from the verification report submitted to the Secretariat on 2 April 2016.

\*\*CP implementation report.

3. The HCFC consumption in 2015 was 55 per cent below the baseline. This is due to the implementation of the activities in the HPMP, particularly the investment projects in the foam and refrigeration assembly sectors, which reduced the demand for HCFCs.

#### *Verification report*

4. The verification report confirmed that the Government is implementing a licensing and quota system for HCFC imports and exports, and that the total consumption of HCFCs for 2015 was 2.11 ODP tonnes. The verification concluded that the country has met the consumption targets specified in the Agreement for 2014 and 2015.

#### *Country programme (CP) implementation report*

5. The Government of Bosnia and Herzegovina reported HCFC sector consumption data under the 2014 CP implementation report that is consistent with the data reported under Article 7. The 2015 CP report is expected to be submitted by 1 May 2016.

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

*Legal framework*

6. The Government of Bosnia and Herzegovina has issued a decision of Council of Ministers on the procedures for the implementation of the Montreal Protocol that supports an enforceable licensing and quota system for the import and export of HCFCs. In August 2015, amendments to the decision were adopted to introduce licenses for HFCs, and establish a ban on the import of equipment using HCFCs and HCFC blends. A ban on the import of pure HCFC-141b (as of 1 January 2015) as well as HCFC-141b contained in imported pre-blended polyols (as of 1 January 2016) has already been implemented.

7. A workshop was organized to discuss the European Union F-gas legislation and certification of service technicians. A list of certified service providers, training centres and mobile R&R centres has been published on the Government's website.

*Manufacturing sector*

8. The conversion of the polyurethane (PU) foam manufacturing line at Alternativa was completed in January 2016 with the phase-out of 43.5 metric tonnes (mt) (4.78 ODP tonnes) of HCFC-141b in pre-blended polyols. The enterprise has been using cyclo-pentane for its sandwich panel production. Verification and certification of conversion was conducted by an independent institute.

9. The conversion of six commercial refrigeration enterprises included phase-out of HCFC-141b in insulation foam using methyl formate (MF), and replacement of HCFC-22 refrigerant with R-410A and R-404A<sup>1</sup>. The refrigeration component for conversion of six commercial refrigeration manufacturing enterprises from HCFC-22 to R-410A and R-404A has been completed, resulting in a phase-out of 14.7 mt (0.81 ODP tonnes) of HCFC-22. Equipment and tools for refrigerant recovery, reuse and containment were delivered, which will assist in reducing leakage and improving refrigerant containment during equipment assembly and maintenance.

10. The conversion of HCFC-141b contained in imported pre-blended polyols to MF in four enterprises manufacturing insulation foam for commercial refrigeration has been completed resulting in the phase-out of 8.5 mt (0.935 ODP tonnes) of HCFC-141b, PU foam injection machines were delivered; installation, commissioning and on-the-job training were performed. The four enterprises are manufacturing insulation foam with MF. The conversion at Frigoklima manufacturing insulation foam for commercial refrigeration with a total consumption 1.0 mt of HCFC-141b has been delayed, as the foam dispenser was damaged in a heavy flood and a complete overhaul was needed. The supplier has evaluated the damage and the repair work is expected to be completed by June 2016. The conversion of insulation foam manufacturing at SOKO using 4.0 mt (0.44 ODP tonnes of HCFC-141b in pre-blended polyols), originally planned through a retrofit using the original software for controlling dosage, was not feasible, as pumps, hoses and mixing head were required to be modified to enable operating the machines normally with various outputs and chemical ratios. This work has been planned in the third tranche.

*Refrigeration servicing sector*

11. A training workshop was held in May 2014 and 130 technicians were trained and certified. Equipment for demonstrating good practices was delivered to 20 training centers. During the implementation of the regional strategy for ODS waste management and disposal in Eastern and Central Asia approved at the 69<sup>th</sup> meeting, a workshop on refrigerant recovery and recycling (R&R), ODS

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<sup>1</sup> Paragraph 23 of document UNEP/OzL.Pro/ExCom/63/30.

collection and ODS disposal was organized in October 2014, with participation by 20 R&R centers in the country. A licensed R&R center has been equipped to become an ODS waste management center. A Refrigeration and Air-conditioning (RAC) Association was established in June 2015.

*Project implementation and monitoring unit (PMU)*

12. The national ozone unit (NOU) has been coordinating the activities in the HPMP. The annual report and tranche progress reports are prepared by the NOU with the assistance of UNIDO.

Level of fund disbursement

13. As of March 2016, of the US \$774,592 approved so far, US \$677,609 had been disbursed as shown in Table 2. The balance of US \$96,983 will be disbursed in 2016.

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

Agency	First tranche		Second tranche*		Total approved	
	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed
UNIDO	631,282	630,973	143,310	46,636	774,592	677,609
<b>Disbursement rate (%)</b>	100		36.2		89.1	

\*10 per cent of approved funding (US \$14,331) was withheld as per decision 72/31

Implementation plan for the third tranche of the HPMP

14. The total cost of the activities to be implemented amounts to US \$195,000, including balance from the second tranche:

- (a) Repairing the PU foam machine in Frigoklima with an HCFC-141b consumption of 1.0 mt (US \$5,000) and retrofitting the PU foam machine in SOKO with an HCFC-141b consumption of 4.0 mt (US \$30,000) for conversion to MF. Both enterprises will be converted by end of 2016;
- (b) Updating legislation to include HCFCs in the customs tariff and classification of goods, initiate a new Act for determining the border crossing points for ODS import/export with neighbouring countries and establishing national codes of good practice in the RAC sector (US \$25,000);
- (c) Training of 40 customs officers, inspectors and shipping agents on the National Legislative Act on HCFC phase-out, HCFC import control, and the identification of refrigerants (US \$30,000);
- (d) Supporting vocational schools and universities through the provision of training equipment (US \$20,000);
- (e) Training of 90 technicians in good servicing practices, refrigerant recovery and recycling, and certification of technicians (US \$60,000); and
- (f) Conducting awareness-raising activities; project monitoring, coordination and reporting (US \$25,000).

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

#### Report on HCFC consumption in 2013 and funding withheld from the second tranche

15. Bosnia and Herzegovina was in non-compliance with the Montreal Protocol control target in 2013. When it approved the second tranche, the Executive Committee decided to withhold 10 per cent of the agreed funding for the second tranche of stage I of the HPMP in line with decision 54/34 until the consumption for 2013 has been established, and to consider whether and at what level a penalty would have to be applied, up to the limit of the funds withheld from the second tranche (decision 72/31(d)).

16. The HCFC consumption in 2013 has been reported and verified as 5.13 ODP tonnes by the Government of Bosnia and Herzegovina, which exceeded the maximum allowable consumption of 4.7 ODP tonnes<sup>2</sup>. The penalty of US \$132,010, calculated based on Appendix 7-A of the Agreement between the Government of Bosnia and Herzegovina and the Executive Committee, exceeds the amount of US \$14,331 withheld. Therefore, the amount of US \$14,331 will be the maximum penalty applied in this case.

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

##### *Legal framework*

17. The Government of Bosnia and Herzegovina has already issued HCFC import quotas for 2016 at 2.42 ODP tonnes, which is below the Montreal Protocol control targets.

##### *Manufacturing sector*

18. With regard to the cost of the retrofit of the PU foam machine in SOKO, which is similar to a new machine purchased for the other five enterprises, UNIDO explained that the existing foam machine in SOKO is a high-pressure machine, hence the cost of a new machine of similar capacity and performance would be higher than that of the new low-pressure foam machines purchased for the other five enterprises.

##### *Refrigeration servicing sector*

19. Activities in the servicing sector were limited during the second tranche because priority was given to conversion of the manufacturing sectors, and because some technician training under the national phase-out plan, which was implemented late, was only carried out in 2013. It was decided that further training of technicians would be postponed to the second half of 2016 when the national code of good practices in RAC sector is established and the certification system is fully introduced. Postponing the training will make it possible to include new technologies and alternative refrigerants that will have become commercially available.

#### Conclusion

20. The implementation of the second tranche is progressing well. Bosnia and Herzegovina has been in compliance with the Montreal Protocol control targets set in the Agreement with the Executive Committee. An enforceable licensing and quota system has been established to enable compliance with the Montreal Protocol control targets. The ban on HCFC-141b in pure and in pre-blended polyols has been implemented from 1 January 2015 and 2016 respectively. The conversion of a foam enterprise, foam

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<sup>2</sup> Decision XXVII/10.

manufacturing in four commercial refrigeration enterprises and refrigeration component in six commercial refrigeration enterprises has been completed resulting in a phase-out of 6.53 ODP tonnes; the conversion projects in the remaining two refrigeration enterprises will be completed in 2016. Training courses were conducted for technicians and a certification programme is being implemented. Centres for refrigerant R&R have been established to facilitate the sustainable use of refrigerants. The overall funding disbursement has reached 89 per cent.

## RECOMMENDATION

21. The Fund Secretariat recommends that the Executive Committee takes note of the progress report on the implementation of the second tranche of stage I of the HCFC phase-out management plan (HPMP) for Bosnia and Herzegovina; and further recommends blanket approval of the third tranche of stage I of the HPMP for Bosnia and Herzegovina, and the corresponding 2016-2018 tranche implementation plan, at the funding level shown in the table below:

	<b>Project title</b>	<b>Project funding (US \$)</b>	<b>Support cost (US \$)</b>	<b>Implementing agency</b>
(a)	HCFC phase-out management plan (stage I, third tranche)	117,692	8,238	UNIDO