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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Eighty-fourth Meeting
Montreal, 16–20 December 2019

PROJECT PROPOSAL: SERBIA

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, fourth tranche) UNIDO and UNEP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
Serbia

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase out plan (stage I)	UNEP, UNIDO (lead)	62nd	35% by 2020

(II) LATEST ARTICLE 7 DATA (Annex C Group l)	Year: 2018	6.61 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2018
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22					6.26				6.26
HCFC-141b					0.24				0.24
HCFC-142					0.11				0.11

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	8.4	Starting point for sustained aggregate reductions:	8.37
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	2.94	Remaining:	5.43

(V) BUSINESS PLAN		2019	2020	Total
UNEP	ODS phase-out (ODP tonnes)	0	0.02	0.02
	Funding (US $)	0	8,531	8,531
UNIDO	ODS phase-out (ODP tonnes)	0	0.08	0.08
	Funding (US $)	0	27,628	27,628

(VI) PROJECT DATA			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*	Total
Montreal Protocol consumption limits			n/a	n/a	n/a	8.4	8.4	7.56	7.56	7.56	7.56	7.56	5.46	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	n/a	8.4	8.4	7.56	7.56	7.56	7.56	7.56	5.46	n/a
Agreed funding (US $)	UNEP	Project costs	26,000	0	0	27,500	0	0	14,450	0	0	7,550	0	75,500
		Support costs	3,380	0	0	3,575	0	0	1,879	0	0	981	0	9,815
	UNIDO	Project costs	360,130	0	0	444,130	0	0	67,800	0	0	25,700	0	897,760
		Support costs	27,010	0	0	33,310	0	0	5,085	0	0	1,928	0	67,333
Funds approved by ExCom (U S$)		Project costs	386,130	0	0	471,630	0	0	0	82,250	0	0	0	940,010
		Support costs	30,390	0	0	36,885	0	0	0	6,964	0	0	0	74,239
Total funds requested for approval at this meeting (US $)		Project costs										33,250		33,250
		Support costs										2,909		2,909

*The fourth and final tranche was expected to be submitted in 2020 as per Agreement updated at the 71st meeting, but an advance request was accepted in order to approve funding for the final tranche as stage II is expected to be requested at the 85th meeting.

Secretariat's recommendation:	For individual consideration

PROJECT DESCRIPTION

1. On behalf of the Government of Serbia, UNIDO as the lead implementing agency, has submitted a request for funding for the fourth and final tranche of stage I of the HCFC phase-out management plan (HPMP), at a total cost of US $36,159, consisting of US $25,700, plus agency support costs of US $1,928 for UNIDO, and US $7,550, plus agency support costs of US $981 for UNEP.[1] The submission includes a progress report on the implementation of the third tranche, the verification report on HCFC consumption for 2017 and 2018 and the tranche implementation plan for 2019 to 2020.

Report on HCFC consumption

2. The Government of Serbia reported a consumption of 6.61 ODP tonnes of HCFC in 2018, which is 21 per cent below the HCFC baseline for compliance. The 2014-2018 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Serbia (2014-2018 Article 7 data)

HCFC	2014	2015	2016	2017	2018	Baseline
Metric tonnes						
HCFC-22	133.23	114.52	107.82	109.88	113.78	141.0
HCFC-123	0.0	0.9	0.9	0.9	0.0	1.1
HCFC-141b	3.26	3.81	4.08	4.08	2.18	0.0
HCFC-142b	5.28	2.85	0.0	2.32	1.67	9.1
Total (metric tonnes)	**141.77**	**122.08**	**112.8**	**117.18**	**117.63**	**151.2**
ODP tonnes						
HCFC-22	7.33	6.30	5.93	6.04	6.26	7.76
HCFC-123	0.00	0.02	0.02	0.02	0.0	0.02
HCFC-141b	0.36	0.42	0.45	0.45	0.24	0.00
HCFC-142b	0.34	0.19	0.0	0.15	0.11	0.59
Total (ODP tonnes)	**8.03**	**6.92**	**6.4**	**6.66**	**6.61**	**8.37**

3. Consumption of HCFC-22, which initially decreased substantially between 2014 and 2015 due to the conversions in the refrigeration and air-conditioning (RAC) manufacturing sector, has remained steady as demand for servicing, the sole use of HCFC-22 in 2018, continues. HCFC-142b is imported as a blend (R-406a, consisting of 41 per cent HCFC-142b, 55 per cent HCFC-22 and 4 per cent R-600a), which is used as a drop-in for CFC-12-based equipment; that consumption is expected to be phased out with improved servicing practices and retirement of CFC-based equipment. Serbia started consuming HCFC-141b in 2011 for flushing and cleaning; awareness-raising activities are targeting this consumption. A small amount of HCFC-123 was consumed intermittently to service a small number of chillers.

Country programme (CP) implementation report

4. The Government of Serbia reported HCFC sector consumption data under the 2018 CP implementation report which is consistent with the data reported under Article 7 of the Montreal Protocol.

Verification report

5. 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 reported under Article 7 of the Montreal Protocol for 2017 to 2018 were correct. The verification concluded that Serbia 2017 and 2018 consumption was below the targets specified in its Agreement with the Executive Committee, and that the necessary legislation is in place to enable the country to continue to meet its targets. A ban on import of

[1] As per the letter of 3 October 2019 from the Ministry of Environmental Protection of Serbia to UNIDO.

refrigerants in disposable cylinders, as suggested by the verifier, is being considered under the revision on the Law on Amendments to the Law on Air Protection.

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

Legal framework

6. The only ODS for which imports are permitted are HCFCs. A license to import HCFCs is issued only if the applicant has been assigned the import quota for a year of import. The national custom codes are in compliance with the standards of the World Customs Organization, the European Union (EU), and the informal Prior Informed Consent (iPIC) mechanism. A ban on the manufacture or assembly of equipment, and the import of products and equipment, containing or relying on HCFCs was implemented on 15 April 2018.

7. The regulation on certification of personnel performing certain activities related to controlled substances and certain fluorinated greenhouse gases (GHG) (Official Gazette of RS No. 24/16) was adopted in March 2016. It is partially aligned with EU regulations on minimum certification requirements for stationary refrigeration, air-conditioning (AC) and heat pump equipment, and minimum training requirements for the recovery of certain fluorinated GHG from AC systems in motor vehicles. Draft amendments on the regulation on ODS management and on conditions for license issuance are still under review, as to harmonize regulations with the EU, including restrictions on the use of high-global warming potential (GWP) HFCs for certain uses.

8. Imports are subject to customs control; suspicious shipments are detained and the NOU and environmental inspectors informed. Shipments found to be in contravention to applicable regulations are returned to the sender and the NOU notifies the exporting country through (iPIC); and the importer may be charged with a customs offense, an economic offense or with an administrative offense, depending on the circumstances. Depending of the offense, the penalty could be a fine, a ban on business activities, or imprisonment. To date, no suspicious shipments have been found to contain CFC-11 or CFC-12.

9. A database for registered users, service shops, service technicians and equipment containing refrigerants was established in 2016. Service shops that received recovery and recycling equipment are tracked in a separate software.

10. Two workshops to train five customs officers, 23 environment inspectors, and 24 representatives from the Ministry of Environmental Protection were held in 2017 and 2018 with a focus on updates in the legislation and on practical inspection exercises (simulated inspections) at four AC and refrigeration installations.

Manufacturing sector

11. Stage I included the conversion of four enterprises in manufacturing RAC equipment to ammonia and R-410A. Those conversions have been completed, resulting in the phase-out of 2.27 ODP tonnes. While the converted enterprises also manufacture high-GWP-based equipment, such equipment was not manufactured using equipment funded by the project; rather, the enterprises imported ready-made systems and components existing on the market for which assembly and commissioning was offered.

12. The status of use of alternative technologies at the four enterprises is as follows:

(a) Alfa Klima manufactured R-407C heat pumps and consumes R-404A for servicing of refrigeration systems. The enterprise is developing an R-290 heat pump prototype; development of that prototype is expected to continue through 2020;

(b) Eko Elektrofrigo manufactured and sold two ammonia-based refrigeration systems, and manufactures R-410A AC systems, and R-404A and R-449A RAC equipment. The enterprise consumes HFC-134a for car servicing, and plans to replace R-404A with R-448A in the near future;

(c) SENA manufactured and sold ammonia-based refrigeration systems (fruit freeze tunnel) with capacity of 300-400 kW, and manufactured a trans-critical CO_2 system that has not yet been sold. The enterprise also manufactures R-410A and R-407C AC systems, HFC-134a chillers and R-404A and R-448A refrigeration systems; and

(d) Soko Inzingiering manufactured an ammonia-CO_2 cascade system, which was donated and installed at the Faculty of Mechanical Engineering in Belgrade, and has manufactured (but not sold) a trans-critical CO_2 cascade system. The enterprise imports R-290 and R-600A display units, for which it provides servicing. It also manufactures R-404A refrigeration systems and R-449A RAC equipment.

Refrigeration servicing sector

13. The following activities were completed:

(a) In accordance with the requirements of the March 2016 regulation on certification of personnel, additional tools (e.g., tube bender, cutter, flare tools, HFC leak detectors, two-valve cylinders, portable refrigerant recovery units, and two-stage vacuum pumps) were distributed to training centres, and a new training manual for RAC service technicians was finalized in 2018;

(b) A workshop for 22 trainers was organized based on the new manual and updated theoretical and practical training; and

(c) Between 2018 and 2019 a total of 24 three-day training session, combining theoretical and practical exercises for 429 service technicians in four training centres were held. Each training session included eight hours of theoretical training and sixteen hours of practical training on good refrigeration servicing practices.

14. In cooperation with the Serbian RAC association (KGH), awareness-raising activities included organization of refrigeration roundtables and exhibition booths at the annual KGH congress in 2017 and 2018; the publishing of "Ozone Pages" in the quarterly KGH journal; and participation of the national ozone unit (NOU) at the 2017, 2018 and 2019 EcoFair where presentations on the Montreal Protocol and Kigali Amendment were made.

Project implementation and monitoring unit (PMU)

15. Out of US $10,000 allocated for project monitoring under the third tranche, US $8,200 had been disbursed for independent verification (US $6,000), NOU staff field visits (US $800) and stakeholder consultations (US $1,400). The remaining balance of US $1,800 was committed for a short-term consultant to assist project implementation and monitoring.

Level of fund disbursement

16. As of October 2019, of the US $940,010 approved so far, US $915,892 had been disbursed (US $862,963 for UNIDO and US $52,929 for UNEP) as shown in Table 2. The balance of US $24,118 will be disbursed in 2020.

Table 2. Financial report of stage I of the HPMP for Serbia (US $)

Tranche		UNIDO	UNEP	Total	Disbursement rate (%)
First tranche	Approved	360,130	26,000	386,130	98
	Disbursed	354,346	25,030	379,376	
Second tranche	Approved	444,130	27,500	471,630	99
	Disbursed	442,671	25,227	467,898	
Third tranche	Approved	67,800	14,450	82,250	83
	Disbursed	65,946	2,672	68,618	
Total	Approved	872,060	67,950	940,010	97
	Disbursed	862,963	52,929	915,892	

Implementation plan for the fourth and final tranche of the HPMP

17. The following activities will be implemented in 2020:

(a) Enforcing and updating ODS regulations and web-based electronic reporting system for end-users (UNIDO) (US $10,000);

(b) Continued training of approximately 40 customs officers, focusing on monitoring and control of HCFC trade, illegal trade in ODS, and practical training on the use of refrigerant identifiers (UNEP) (US $5,000);

(c) Continued training and certification of service technicians with theoretical and practical components in compliance with F-gas and natural refrigerants standards (UNIDO) (US $13,700);

(d) Organizing of refrigeration roundtables for alternatives as part of the annual KGH congress (UNEP) (US $2,550); and

(e) Project management and monitoring, including independent verification of consumption and NOU staff field visits (UNIDO) (US $2,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

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

Legal framework

18. The Government of Serbia has already issued HCFC import quotas for 2019 at 6.48 ODP tonnes, which is lower than the Montreal Protocol control targets.

19. The verifier recommended strengthened enforcement measures, including increased inspection and testing of imports, developing a checklist for customs officers for easier control of imports and exports, providing newer refrigerant analysers for custom officers, updating the customs training manual and additional training of customs officers, and strengthened communication between customs and the NOU in cases where a suspicious import is found. Those recommendations, as well as those related to continued strengthening of the servicing sector, will be addressed under stage II of the HPMP, to be submitted at the 85th meeting.

Manufacturing sector

20. The four RAC manufacturing enterprises have completed their conversion. While their manufacture of low-GWP-based equipment remains limited, continued efforts by the industry and the Government will facilitate the introduction of such equipment into the market. The alignment of regulations as part of the process for EU accession, and ratification of the Kigali Amendment, will further facilitate the market introduction of low-GWP-based equipment.

Revision to HPMP Agreement

21. In line with Appendix 3-A of the Agreement, the request for the fourth tranche of the HPMP was expected at the 86th meeting. In reviewing the request for the fourth tranche at the 84th meeting, the Secretariat considered the advanced state of implementation of the project, the high level of disbursement, the limited remaining funding (US $24,118), the benefit of continued implementation, and maintaining the momentum through the submission of stage II of the HPMP, expected at the 85th meeting. The Government requested to amend the Agreement to reflect the submission of the fourth and final tranche to the last meeting of 2019, adding an updated paragraph 16 to indicate that the updated Agreement superseded that reached at the 71st meeting, and modifying paragraph 14 to specify that stage I would be completed by 31 December 2020. Those modifications to the Agreement are presented in Annex I to the present document. The full revised Agreement will be appended to the final report of the 84th meeting.

Sustainability of the HCFC phase-out

22. The Secretariat noted that further to the completion of the RAC manufacturing sector conversion, the Government of Serbia implemented the 15 April 2018 ban on the manufacture or assembly of equipment, and the import of products and equipment, containing or relying on HCFCs. A combination of monitoring and control of HCFC imports, training and capacity-building of technicians and training centers, and the ban on HCFC-based equipment and manufacturing would contribute to long-term sustainability of HCFC phase-out.

Conclusion

23. The HPMP is progressing, the country's import licensing and quota system is operational and will enable HCFC consumption reductions in line with the Montreal Protocol's phase-out schedule, and the verified 2017 and 2018 consumption are below that specified in the Montreal Protocol. The level of disbursement for the third tranche is 83 per cent, and 97 per cent of the overall funding approved. The Secretariat considers the revision of the Agreement, and approval of the fourth tranche at the present meeting, to be a meaningful mechanism to ensure continued implementation of the phase-out activities. Were it not for those changes, the Secretariat would have recommended the tranche for blanket approval; in addition to the benefit of continued implementation, the Secretariat' recommendation also took into account the limited funding requested and the resources available at the present meeting. The stage II of the HPMP, expected to be submitted to the 85th meeting, will take into account the recommendations from the verification report. The conversions in the RAC manufacturing sector have been completed, though the market introduction of low-GWP-based systems remains challenging. The Government and KGH are actively promoting low-GWP-based systems, including through awareness-raising activities. The activities so far implemented and those planned under the fourth tranche will further strengthen the servicing sector, ensure the long-term sustainability of the activities, and continue to help enable the country to meet its compliance obligations under the Protocol.

RECOMMENDATION

24. The Executive Committee may wish to consider:

(a) Noting:

(i) The progress report on the implementation of the third tranche of stage I of the HCFC phase-out management plan (HPMP) in Serbia;

(ii) That the Fund Secretariat had updated the Agreement between the Government of Serbia and the Executive Committee, specifically paragraph 14 and Appendix 2-A to reflect that the stage I would be completed by 31 December 2020 and the fourth tranche requested in 2019, and that paragraph 16 had been updated to indicate that the revised updated Agreement superseded that reached at the 71st meeting, as contained in Annex I to the present document;

(b) Requesting the Government of Serbia, UNIDO and UNEP to submit a progress report on the implementation of the work programme associated with the final tranche and the project completion report to the first meeting of the Executive Committee in 2021; and

(c) Approving the fourth and final tranche of stage I of the HPMP for Serbia, and the corresponding 2019-2020 tranche implementation plan, in the amount of US $36,159 consisting of US $25,700, plus agency support costs of US $1,928 for UNIDO; and US $7,550, plus agency support costs of US $981 for UNEP.

Annex I
TEXT TO BE INCLUDED IN THE REVISED UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF SERBIA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS
(Relevant changes are in bold font for ease of reference)

14. The completion of the HPMP and the associated Agreement will take place by **31 December 2020.** The reporting requirements as per Appendix 4-A (a), (b), (d) and (e) continue until the time of the completion if not specified by the Executive Committee otherwise.

16. This **revised** updated Agreement supersedes the Agreement reached between the Government of Serbia and the Executive Committee at the **71st** meeting of the Executive Committee.

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2010	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	n/a	8.4	8.4	7.56	7.56	7.56	7.56	7.56	5.46	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	n/a	8.4	8.4	7.56	7.56	7.56	7.56	7.56	5.46	n/a
2.1	Lead IA (UNIDO) agreed funding (US $)	360,130	0	0	444,130	0	0	67,800	0	0	**25,700**	**0**	897,760
2.2	Support costs for Lead IA (US $)	27,010	0	0	33,310	0	0	5,085	0	0	**1,928**	**0**	67,333
2.3	Cooperating IA (UNEP) agreed funding (US $)	26,000	0	0	27,500	0	0	14,450	0	0	**7,550**	**0**	75,500
2.4	Support costs for Cooperating IA (US $)	3,380	0	0	3,575	0	0	1,879	0	0	**981**	**0**	9,815
3.1	Total agreed funding (US $)	386,130	0	0	471,630	0	0	82,250	0	0	**33,250**	**0**	973,260
3.2	Total support cost (US $)	30,390	0	0	36,885	0	0	6,964	0	0	**2,909**	**0**	77,148
3.3	Total agreed costs (US $)	416,520	0	0	508,515	0	0	89,214	0	0	**36,159**	**0**	1,050,408
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)												2.94
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)												0.00
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)												4.82
4.2.1	Total phase-out of HCFC-123 agreed to be achieved under this Agreement (ODP tonnes)												0.00
4.2.2	Phase-out of HCFC-123 to be achieved in previously approved projects (ODP tonnes)												0.00
4.2.3	Remaining eligible consumption for HCFC-123 (ODP tonnes)												0.02
4.3.1	Total phase-out of HCFC-142b agreed to be achieved under this Agreement (ODP tonnes)												0.00
4.3.2	Phase-out of HCFC-142b to be achieved in previously approved projects (ODP tonnes)												0.00
4.3.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)												0.59