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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Ninety-first Meeting  
Montreal, 5-9 December 2022  
Item 9(c) of the provisional agenda<sup>1</sup>

**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 II, second tranche) UNIDO and UNEP

<sup>1</sup> UNEP/OzL.Pro/ExCom/91/1

## PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

## Serbia

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (stage II)	UNIDO (lead), UNEP	85 <sup>th</sup>	67.5% phase-out by 2025

(II) LATEST ARTICLE-7 DATA (Annex C Group I)	Year: 2021	4.57 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2021	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22					4.48				4.48
HCFC-142b					0.09				0.09

(IV) CONSUMPTION DATA (ODP tonnes)			
2009-2010 baseline:	8.40	Starting point for sustained aggregate reductions:	8.37
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	5.64	Remaining:	2.73

(V) ENDORSED BUSINESS PLAN		2022	2023	2024	Total
UNIDO	ODS phase-out (ODP tonnes)	0.9	0.0	0.0	0.9
	Funding (US \$)	101,860	0	0	101,860
UNEP	ODS phase-out (ODP tonnes)	0.2	0.0	0.0	0.2
	Funding (US \$)	24,860	0	0	24,860

(VI) PROJECT DATA			2020	2021	2022	2023	2024	2025	Total
Montreal Protocol consumption limits			5.46	5.46	5.46	5.46	5.46	2.73	n/a
Maximum allowable consumption (ODP tonnes)			5.46	5.46	5.46	5.46	5.46	2.73	n/a
Funding agreed in principle (US \$)	UNIDO	Project costs	124,175	0	93,450	0	0	30,875	248,500
		Support costs	11,176	0	8,410	0	0	2,779	22,365
	UNEP	Project costs	22,000	0	22,000	0	0	0	44,000
		Support costs	2,860	0	2,860	0	0	0	5,720
Funds approved by ExCom (US \$)		Project costs	146,175						146,175
		Support costs	14,036						14,036
Total funds recommended for approval at this meeting (US \$)		Project costs			115,450				115,450
		Support costs			11,270				11,270

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

1. On behalf of the Government of Serbia, UNIDO as the lead implementing agency has submitted a request for funding for the second tranche of stage II of the HCFC phase-out management plan (HPMP), at a total cost of US \$126,720, consisting of US \$93,450 plus agency support costs of US \$8,410 for UNIDO, and US \$22,000, plus agency support costs of US \$2,860 for UNEP.<sup>2</sup> The submission includes a progress report on the implementation of the first tranche, verification reports on HCFC consumption for 2019 to 2021, and the tranche implementation plan for 2023 to 2024.

### Report on HCFC consumption

2. The Government of Serbia reported a consumption of 4.57 ODP tonnes of HCFC in 2021, which is 46 per cent below the HCFC baseline for compliance. The 2017-2021 HCFC consumption is shown in table 1.

**Table 1. HCFC consumption in Serbia (2017-2021 Article 7 data)**

HCFC	2017	2018	2019*	2020	2021	Baseline
<b>Metric tonnes (mt)</b>						
HCFC-22	109.88	113.78	108.73	95.58	81.47	141.0
HCFC-123	0.9	0.0	0.0	0.0	0.0	1.1
HCFC-141b	4.08	2.18	1.63	0.0	0.0	0.0
HCFC-142b	2.32	1.67	3.24	0.0	1.39	9.1
<b>Total (mt)</b>	<b>117.18</b>	<b>117.63</b>	<b>113.60</b>	<b>95.58</b>	<b>82.86</b>	<b>151.2</b>
<b>ODP tonnes</b>						
HCFC-22	6.04	6.26	5.98	5.26	4.48	7.8
HCFC-123	0.02	0.0	0.00	0.0	0.0	0.0
HCFC-141b	0.45	0.24	0.18	0.0	0.0	0.0
HCFC-142b	0.15	0.11	0.21	0.0	0.09	0.6
<b>Total (ODP tonnes)</b>	<b>6.66</b>	<b>6.61</b>	<b>6.37</b>	<b>5.26</b>	<b>4.57</b>	<b>8.4</b>

\* To be updated as noted in paragraph 5 below.

3. Consumption of HCFC-22, which is used exclusively to service refrigeration and air-conditioning (RAC) equipment, continues to decrease given the 2018 ban on the import of HCFC-22 equipment, implementation of HPMP project activities and anticipation of the HCFC control measures. Intermittent consumption of HCFC-142b is due to its use as component of a blend (R-406A)<sup>3</sup> that 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 ceased using HCFC-141b for flushing and cleaning RAC circuits following awareness-raising activities that targeted this use.

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

4. The Government of Serbia reported HCFC sector consumption data under the 2021 CP implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

### *Verification report*

5. The verification report confirmed that the Government was implementing a licensing and quota system for HCFC imports and exports, that there were no cases of illegal imports during the period 2019 to 2021, and that the annual consumption of HCFCs for 2019 to 2021 was lower than the targets in the Agreement. In 2019, 0.02 ODP tonnes (0.9 mt) of HCFC-123 consumption had been inadvertently omitted

<sup>2</sup> As per the letter of 25 March 2022 from the Ministry of Environmental Protection of Serbia to UNIDO.

<sup>3</sup> R-406A, consisting of 41 per cent HCFC-142b, 55 per cent HCFC-22, and 4 per cent R-600a.

from the data reported under Article 7 of the Montreal Protocol. The national ozone unit (NOU) confirmed that it would submit a request to the Ozone Secretariat to correct that omission.

6. The verification report recommended *inter alia* that the inventory of RAC equipment should include refrigerant type and quantity; the consolidation of regulations for ODS and fluorinated greenhouse gases; regular updates of RAC certification training materials with individual manuals for each certification category; the accelerated establishment and eventual monitoring of the recovery and recycling (R&R) scheme including additional R&R centres; further customs trainings and the provision of refrigerant identifiers; and awareness programmes/activities that specifically address technical-related issues. UNIDO confirmed that the recommendations have already been or would be addressed under the second tranche of stage II.

### Progress report on the implementation of the first tranche of stage II of the HPMP

#### *Legal framework*

7. A legal consultant reviewed regulations relevant to ODS and fluorinated greenhouse gases and the certification of RAC technicians and made proposals for amendments to existing regulations in line with European Union (EU) legislation. The Government of Serbia ratified the Kigali Amendment on 8 October 2021 and plans to amend existing regulations to take into account fluorinated greenhouse gases in accordance with the obligations of the Kigali Amendment.

8. Following an assessment, the structure of the existing database that includes registries for equipment operators, certified RAC technicians, and licensed RAC service enterprises was found to be a suitable basis for the development of the web-based electronic reporting system and inventory of RAC equipment, which will be undertaken under the second tranche.

9. Three online training sessions were conducted in January 2021 for 53 customs officers from central customs and six other offices that focused on national regulations for the control of HCFC trade and refrigerant identification; sessions included demonstrations on the use of refrigerant identifiers and inspection exercises. Training material and the complete set of ten videos on refrigerant analyses are available on the customs portal. Customs training could not be organized during 2020 due to the COVID-19 pandemic.

#### *Refrigeration servicing sector*

10. The following activities were completed:

- (a) A trainer training session for 26 trainers, which resulted in proposals for updates to RAC certification training materials and a list of necessary tools and equipment for hydrocarbons (HC) (including demonstration units, ATEX certified fans,<sup>4</sup> portable refrigerant monitors, cylinders, and electronic HC leak detectors); and a draft updated training manual;
- (b) Two workshops in the context of World Refrigeration Day on alternatives for flushing and cleaning of RAC circuits (21 participants), and flammable refrigerants (nine participants); brochures on the ban of HCFC-141b for flushing and natural refrigerants were prepared and distributed;
- (c) Two workshops for 94 technicians on flammable refrigerants, mandatory reporting of recovered and recycled refrigerants, national certification, mandatory leak checks, and

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<sup>4</sup> A fan that has been constructed in accordance with the mandatory EU directive 2014/34 relating to equipment intended for use in potentially explosive atmospheres.

alternatives to HCFC-141b for flushing RAC systems; brochures on the ban of HCFC-141b for flushing and natural refrigerants were distributed at the workshops;

- (d) An assessment of the functionality of the reclamation units in training centres; and the preparation of draft guidelines for R&R; and
- (e) In cooperation with the Serbian RAC association (KGH), awareness-raising activities included organization of an online refrigeration roundtable and exhibition booth at the annual KGH congress, publishing of “Ozone Pages” in the quarterly KGH journal, and preparing educational materials and drawing accessories on the HCFC phase-out for students participating in the country’s Ozone Day celebration.

#### *Project implementation, monitoring and reporting*

11. The NOU, established within the Ministry of Environmental Protection (MEP), is responsible for the overall coordination of activities under stage II. The NOU works with UNIDO, UNEP, and stakeholders to implement stage II activities. No additional funding was allocated for this purpose.

#### Level of fund disbursement

12. As of August 2022, of the US \$146,175 approved so far (US \$124,175 for UNIDO and US \$22,000 for UNEP), US \$46,935 (32 per cent) had been disbursed (US \$39,239 for UNIDO and US \$7,696 for UNEP). The balance of US \$99,240 would be disbursed in 2023.

#### Implementation plan for the second tranche of stage II of the HPMP

13. The following activities will be implemented between January 2023 and December 2024:
- (a) Policy instruments: through legal consultants, amending regulations for ODS, fluorinated greenhouse gases, and certification of RAC technicians; leaflet on the amended regulations; further development of the web-based electronic reporting system for end-users, importers, and RAC technicians (UNIDO) (US \$14,200);
  - (b) Four training workshops for customs and enforcement officers in 2023 and 2024 (up to 20 participants at each workshop); annual update of enforcement-related training materials in advance of the workshops (UNEP) (US \$5,500);
  - (c) Servicing sector: monitoring the organization of training for RAC certification; upgrading training centres to support the RAC certification scheme; provision of four refrigerant identifiers for four customs points; guidelines for the R&R and leak check schemes; a training for trainers on the use of reclaiming units; and four training workshops for 15 service technicians, 15 equipment owners, and eight importers on the R&R reporting system (UNIDO) (US \$67,250);
  - (d) Low-GWP alternatives: updating training manual to address safe practices on the handling of flammable and high-pressure refrigerants; procurement of tools for training on HC and CO<sub>2</sub> units (UNIDO) (US \$12,000); and
  - (e) Public awareness: organization of a technology roundtable and exhibition booth in 2023 and 2024 on ozone- and climate-friendly technologies; and the publishing of “Ozone Pages” in the quarterly KGH journal in 2023 and 2024 (UNEP) (US \$16,500).

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

#### Verification report

14. The validity of an import permit for one importer issued on 5 October 2018 had been extended to January 2019. UNIDO clarified that any request for the extension of a permit must be approved by the MEP in accordance with the ODS regulation. In this case, the validity of the permit was extended to 2019, and the allocated 2019 quota for the importer was reduced accordingly; the imported amount was duly reported as consumption in 2019. The NOU monitors any changes in quotas to ensure there is no possibility of the country exceeding the agreed consumption targets.

#### Progress report on the implementation of the first tranche of stage II of the HPMP

##### *Legal framework*

15. The Government of Serbia issued the HCFC import quota for 2022 at 4.63 ODP tonnes (84.09 mt), which is lower than the Montreal Protocol control target for 2022.

16. The amendment to the ODS regulations, including the HCFC-141b import ban, was delayed due to the COVID-19 pandemic; the ban is expected to be implemented in 2024. Alternatives to HCFC-141b, used in Serbia for flushing cooling systems, were promoted through workshops and awareness activities under the first tranche of stage II of the HPMP; no HCFC-141b was imported in 2020 or 2021.

##### *Refrigeration servicing sector*

17. The RAC certification system is functioning well through the four training centres funded under stage I of the HPMP and two other centres established in 2021 without HPMP funds. As of April 2022, the six centres had conducted 42 training sessions; 653 RAC service technicians had completed the training and 585 candidates had passed the final exam to gain category A-I certification (stationary RAC equipment). The MEP had issued 196 Category A-I (RAC) certificates, and 50 permits to RAC service shops as at September 2022. In addition, training materials for the certification category B (mobile air-conditioning (MAC)) were updated and 302 MAC service technicians were trained between April and June 2022 without funding from the HPMP; support for that training was provided by MEP in preparation for the country to meet its obligations under the Kigali Amendment.

18. Reporting on recovered and recycled refrigerants is mandatory and the RAC certification training includes training on completing the required forms. With regard to delays in activities relating to the establishment of the R&R scheme, UNIDO confirmed that the procurement process for portable R&R machines, leak detectors, cylinders, and refrigerant identifiers was planned for the first quarter of 2023. The process for the establishment of the R&R scheme would involve testing the R&R units in training centres, training service technicians on use of equipment, and creating awareness. The assessment of reclamation units in the training centres concluded that the existing units could be used for reclamation of HCFC-22 and R-134a without modification, but not for R-404A or R-410A. The NOU would determine the quantity of refrigerants that can be handled by the units and the legal barriers related to their use; performance would be tested with virgin, reclaimed, and contaminated refrigerants.

#### Impact of the COVID-19 pandemic on HPMP implementation

19. As a result of the COVID-19 pandemic, there had been a delay in the implementation of activities, resulting in a delay in the submission of the second tranche, which had been expected at the 90<sup>th</sup> meeting. UNIDO informed that it was possible to reschedule and reprogramme activities, and noted that an important

lesson learned was the importance of continuous cooperation and communication with the NOU and experts. UNEP noted that the country had responded to the challenge by organizing a virtual technology roundtable and exhibition in December 2020 and online training for customs and enforcement officers in January 2021.

#### Gender policy implementation<sup>5</sup>

20. In line with decisions 84/92(d) and 90/48(c), stage II of the HPMP considers project outcomes, outputs, and activities to meet the different needs and priorities of women and men. The national ozone officer, senior NOU advisor, and six trainers in training centres are women, and there are several female directors in RAC servicing enterprises. Two female RAC service technicians have obtained licences, and women are actively involved in the organization of training activities, workshops, public awareness, and the issuance of import/export permits for controlled substances. Efforts are being made to encourage women to train as RAC technicians.

#### Sustainability of the HCFC phase-out and assessment of risks

21. Serbia has a licensing and quota system in place to monitor and control HCFC imports and has banned the import of HCFC-based equipment as of April 2018. These legislative steps, together with training, certification and capacity-building of technicians and training centres, have contributed to the long-term sustainability of HCFC phase-out. The country has an experienced NOU with access to local and international experts, and which provides support to stakeholders. UNEP considered Serbia could face project implementation risks related to natural disaster, epidemics, and political changes. While natural disasters would have to take priority, changes in Government could be addressed through briefing new staff. Despite the implementation challenges due to constraints imposed by the COVID-19 pandemic, including low turnout at workshops and the postponement of customs training, UNEP noted that the country had responded to the challenge through the adoption of online meetings and training workshops.

#### Conclusion

22. The Government of Serbia achieved compliance with its HCFC consumption targets for 2019, 2020, and 2021, as corroborated by the verification report. In 2021, consumption of HCFCs was 46 per cent below the country's Montreal Protocol target and the maximum allowable consumption specified in the Agreement. Despite the challenges of the COVID-19 pandemic, progress continues to be made in the HPMP activities, albeit with some delays, including the implementation of the ban on imports of HCFC-141b, which is now expected to be implemented in 2024; consumption of HCFC-141b has nonetheless been phased out. A sufficient level of implementation of the first tranche of the HPMP has been achieved, and plans are in place to reprogramme delayed activities. UNIDO and UNEP met the 20 per cent disbursement threshold for the previous tranche and disbursed 32 per cent of the overall approved funds.

### **RECOMMENDATION**

23. The Fund Secretariat recommends that the Executive Committee takes note of the progress report on the implementation of the first tranche of stage II of the HCFC phase-out management plan (HPMP) for Serbia; and further recommends blanket approval of the second tranche of stage II of the HPMP for Serbia, and the corresponding 2023-2024 tranche implementation plan, at the funding levels shown in the table below.

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<sup>5</sup> In line with decision 84/92(d), decision 90/48(c) encouraged bilateral and implementing agencies to continue ensuring that the operational gender mainstreaming policy was applied to all projects, taking into consideration the specific activities presented in table 2 of document UNEP/OzL.Pro/ExCom/90/37.

	<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 II, second tranche)	93,450	8,410	UNIDO
(b)	HCFC phase-out management plan (stage II, second tranche)	22,000	2,860	UNEP

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