



**United Nations
Environment
Programme**

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/62/47
4 November 2010

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Sixty-second Meeting
Montreal, 29 November - 3 December 2010

PROJECT PROPOSAL: SERBIA

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

Phase-out

- HCFC phase-out management plan (Stage I, first tranche)

UNIDO/UNEP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Serbia

(I) PROJECT TITLE	AGENCY
HCFC Phase Out Management Plan	UNEP, UNIDO (lead)

(II) LATEST ARTICLE 7 DATA	Year: 2009	9.0 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2009	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC123									
HCFC124									
HCFC141b									
HCFC142b					0.8				0.8
HCFC22				1.9	5.5				7.4

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline (estimate):	9.6	Starting point for sustained aggregate reductions:	9.6
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	0.0	Remaining:	3.4

(V) BUSINESS PLAN		2010	2011	2012	2013	2014	Total
UNEP	ODS phase-out (ODP tonnes)	0.1		0.1			0.1
	Funding (US \$)	89,634		89,634			179,269
UNIDO	ODS phase-out (ODP tonnes)	1		0.3		0.2	1.5
	Funding (US \$)	143,844		23,616		11,808	179,268

(VI) PROJECT DATA			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits (estimate)			n/a	n/a	n/a	9.6	9.6	8.7	8.7	8.7	8.7	8.7	6.3	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	n/a	9.6	9.6	8.7	8.7	8.7	8.7	8.7	6.3	
Project Costs requested in principle(US\$)	UNIDO	Project costs	360,130		520,130					35,000				915,260
		Support costs	27,010		39,010					2,625				68,645
	UNEP	Project costs	26,000		27,500					22,000				75,500
		Support costs	3,380		3,575					2,860				9,815
Total project costs requested in principle (US \$)			386,130		547,630					57,000				990,760
Total support costs requested in principle (US \$)			30,390		42,585					5,485				78,460
Total funds requested in principle (US \$)			416,520		590,215					62,485				1,069,220

(VII) Request for funding for the first tranche (2010)			
Agency	Funds requested (US \$)	Support costs (US \$)	ODS phase-out (ODP tonnes)
UNEP	26,000	3,380	
UNIDO	360,130	27,010	

Funding request:	Approval of funding for the first tranche (2010) as indicated above
Secretariat's recommendation:	Individual consideration

PROJECT DESCRIPTION

1. On behalf of the Government of Serbia UNIDO, as the lead implementing agency, has submitted to the 62nd Meeting of the Executive Committee Stage I of the HCFC phase-out management plan (HPMP) at a total cost as originally submitted of US \$1,738,619 plus agency support costs of US \$138,976. The HPMP will be implemented jointly with UNEP. The Government of Serbia is requesting US \$1,582,619 plus agency support costs of US \$118,696 for UNIDO and US \$156,000 plus support costs of US \$20,280 for UNEP to implement activities that will meet compliance with the 35 per cent reduction of HCFC consumption in 2020.

2. As originally submitted, UNIDO is requesting US \$ 1,234,619 plus support costs of US \$92,596 and US \$28,000 plus support costs of US \$3,640 for UNEP for the first tranche of this HPMP.

Background

ODS regulations

3. The country has ratified the Vienna Convention, the Montreal Protocol and all its amendments including the Beijing Amendment. In Serbia, protection of the ozone layer is an important component of the overall national environmental regulations, which form the basis of the ODS regulations in the country. In 2010 a general regulation on ODS management and conditions for import/export including a licensing system was issued. It also includes a ban on production of ODS including HCFCs and requires the registration of end-users, among others. The Serbian ODS legislation also included several measures for controlling HCFCs in line with the accelerated phase-out schedule agreed in 2007, facilitating the HCFC phase-out process. The Ministry of Environment and Spatial Planning (MoESP) is the main body responsible for the implementation of the above regulations, as well as monitoring the country's progress in meeting compliance with the Montreal Protocol. Its implementation arm is the National Ozone Unit (NOU) located in the Department of Air Protection.

4. The Republic of Serbia officially applied for European Union (EU) membership on 22 December 2009, but the application is still under consideration. Following this application, the country has put in place a strategic goal to update regulations and to harmonise them with EU regulations in accordance with National Plan of Integration (NPI).

HCFC consumption

5. The collection of HCFC consumption data was conducted through direct contact with major stakeholders (i.e., customs administration, importers, exporters, distributors of refrigeration equipment, refrigeration service workshops, and end-users). The country uses HCFC-22 for both servicing and manufacturing refrigeration and air conditioning equipment. Table 1 shows the 2005-2009 levels of HCFC consumption in Serbia.

Table 1: HCFC level of consumption in Serbia based on Article 7

Year	Article 7 data (tonnes)									
	HCFC-22		HCFC-123		HCFC-141B		HCFC-142b		Total	
	MT	ODP	MT	ODP	MT	ODP	MT	ODP	MT	ODP
2005	252.77	13.9	0	0	0	0	89	5.8	341.77	18.8
2006	162.74	8.9	0	0	0.24	0.026	10.01	0.65	172.99	9.1
2007	177.16	9.7	0.57	0.11	0	0	7.39	0.48	185.12	9.2
2008	121.88	6.7	0	0	5.1	0.561	2.32	0.15	129.3	7.4
2009	148.16	8.1	0	0	0	0	12.69	0.8	160.85	9

6. In the HPMP, Serbia used the average of actual reported 2009 consumption plus the forecast for 2010 to estimate its baseline, based on the table below. This resulted in a starting point/estimated baseline of 172.91 metric tons (mt) (9.64 ODP tonnes). A 10 per cent average increase is foreseen for the post freeze years.

Table 2: Forecast consumption of HCFC in mt/ ODP tonnes and estimated baseline consumption

Consumption of HCFCs	2007	2008	2009	2010	2011	2012	Baseline
MT	185.12	129.3	160.85	184.98	203.48	223.83	172.91
ODP tonnes	9.2	7.4	8.97	10.32	11.35	12.48	9.64

Servicing Sector

7. In Serbia, the dominant use of HCFCs in the servicing sector is for servicing refrigeration and air-conditioning equipment which is growing due to the general economic growth resulting in more handling of chilled and frozen food as well as in increased demand for air conditioning. A large percentage of this use is for air-conditioning systems (47 per cent), approximately 29 per cent for chillers (air-conditioning and industrial refrigeration), 20 per cent in commercial refrigeration and 4 per cent in the transport refrigeration sector. The servicing sector uses predominantly HCFC-22, and some HCFC-142b for flushing.

8. The table below summarizes the sectoral distribution of HCFC use in Serbia in the servicing sector:

Table 3: Distribution of HCFC-22 in refrigeration systems for servicing

Equipment		Charge Size [kg]	Loss Rate[%]	Number of units [pcs]	R-22 installed quantity [Mt]	Estimated annual needs for servicing [Mt]	
Mobile air-conditioning	Ships	28	28	170	4.76	1.33	
	Railcars	6	40	380	2.28	0.91	
Stationary air-conditioning	Unitary air-conditions	Split systems	1	10	727.50	727.50	72.70
		Packaged units	2	10	3,820	7.64	0.76
	Chillers	35	8	3,960	138,600	11.09	
	Dehumidifiers	8	10	930	7.44	0.74	
	Heat pumps	38	12	2,620	99.56	11.95	
	Windows air-conditioners	0.8	10	114	91.2	9.12	
Refrigerated transport	Ships	180	28	27	4.86	1.36	
	Trucks	5	30	870	4.35	1.30	
Industrial process refrigeration	Chemical industries	60	12	120	7.2	0.86	
	Food processing	260	12	218	56.68	6.80	
	Pharmaceutical	32	12	105	3.36	0.40	
	Petrochemical	230	12	10	2.3	0.28	
Commercial refrigeration	Cold storages	1	15	57.40	57.40	8.61	
	Retail food systems	3	15	23.80	71.40	10.71	
	Self-contained retail units	0.7	10	89.00	62.30	6.23	
Total				1,024.930	1,348.83	145.15	

9. The refrigeration and air-conditioning sector servicing sector consists of a large number of small and medium enterprises (SMEs) where some work closely with international companies and receive up to date training. The majority however need training in good practice and assistance to upgrade their equipment. There are approximately 2,500 technicians in the refrigeration and air-conditioning sector in Serbia employed in 1,300 service enterprises. Many of these have received some training under the National Phase-out Plan (NPP) but the capability of the training centres needs to be improved to deal with the specifics of HCFC-22 alternatives.

10. There is some use of some refrigerant mixtures like R-401a, R-402a and R-406a, but the volumes are very little and are therefore not considered in this HPMP.

Manufacturing sector

11. In the manufacturing sector, HCFC-22 is used to manufacture and assemble systems and components that include unitary condensing units, compact refrigeration systems, heat pumps, heat exchangers, primary and secondary refrigeration systems and process measuring and control systems. These components and systems are produced at 4 small and medium refrigeration and 5 components manufactures with different structure selected out of the 28 equipment manufacturers in the refrigeration sector and air-conditioning manufacturing companies. These companies are located mainly in special industrial development zones in greater Belgrade, Kragujevac, Nis, Sevojno, Pozega and Smederevo.

12. The current HPMP proposes to phase out the use of 41.34 mt of HCFC-22 by converting to natural refrigerants, thereby contributing to the country's obligation to freeze the HCFC consumption by 2013 and to reduce it by 10 per cent by 2015 and 35 per cent by 2020. The enterprises' HCFC-22 consumption is significant compared to the country's total HCFC consumption, and it is expected that the reduction from this project may comprise the major part of the country's reduction obligation in 2015 and 2020.

HCFC phase-out strategy and costs

13. The Government of Serbia plans to address compliance with the 2020 control measures under this HPMP through the following strategic objectives:

- (a) Strengthening policy instruments needed to reduce the supply and/or demand of HCFCs through the introduction of an import quota for HCFCs and HCFC based equipment and the improvement of an electronic licensing and reporting system to closely monitor the movement of ODS;
- (b) Implement measures in servicing sector that would include support to a recovery and reclamation facility for HCFC refrigerants, training for service technicians to enable better refrigeration practices, customs training to facilitate strict implementation of the HCFC regulations and public awareness to ensure a wider understanding of the need to phase-out HCFCs;
- (c) Conversion of the refrigeration manufacturing sector to non-HCFC technology through an investment project

Servicing sector

14. The activities in the servicing sector foresee the continuation of those that have already been implemented under the NPP. The component to update legislation is intended to improve and develop the existing regulations for a better control on HCFCs. Serbia also foresees that the measures to be implemented in the servicing sector will lead to the strengthening of national reclamation centres in Serbia, a few of which were established under the NPP. The existing infrastructure will form the basis for which other activities will be implemented. The main objectives for these measures include the improvement of good practices to reduce leakage, provide additional tools to service technicians for them to carry out these practices after training is completed, and strengthen the vocational centres for continued training.

15. Activities related to customs training will also be implemented in order to ensure that the strengthened HCFC legislation can be implemented and enforced very strictly. The component will also enhance the capacity of customs and other law enforcement officers on monitoring, control and identification of HCFCs and HCFC-containing equipment. It will further strengthen the capacity of the trainers and customs training schools through the provision of necessary training materials and identification tool kits.

Manufacturing sector

16. The submitted HPMP identified nine companies that are manufacturing refrigeration systems or components of refrigeration systems. All nine companies were established prior to 2007, and fall into three groups: four enterprises using HCFC-22 to charge refrigeration equipment manufactured at the enterprises; three companies producing components specific to or optimized for the use of HCFC-22 and not usable with alternative substances without changes in the manufacturing process; and two enterprises manufacturing products with potential use for refrigeration systems that were not specific to any one particular technology used. These nine companies comprise a sub-set of the 28 manufacturers related to the refrigeration and air-conditioning sector, which had been identified in the country.

17. The HPMP foresees the conversion of manufacturing of larger refrigeration and air-conditioning units to ammonia (R-717) a natural refrigerant with zero global warming potential (GWP) which is already used in many applications in Serbia, and for which the related infrastructuring in terms of standards, requirements, and service personnel is as such available. The remaining manufacturing will be converted to the use of HFC-410a.

18. The original proposal submitted for the investment component of the HPMP included a broad concept for the reorientation of all companies in the plan towards manufacturing refrigeration systems and their components, which would minimise greenhouse gas emissions. This included the introduction of new heat exchanger technologies for ammonia equipment, broad use of ammonia for the refrigeration applications and upgrading of different components of refrigeration and air conditioning systems in general. The project proposal included for the nine companies covered a detailed list of average production in the last three years, the eligible component of that production taking into account export to non-Article 5 countries and the ownership factor in the companies, as well as a detailed list of the baseline equipment available. The project proposal also contained full information about the HCFC-22 consumption of the nine enterprises in the years 2004 until 2009. Finally, the project included a full description of the different products and their levels of manufacture. The cost calculation was provided on an enterprise-by-enterprise basis, with a total cost originally requested of US \$1.19 million to phase out an annual consumption of 41.34 mt (2.27 ODP tonnes).

HPMP costs

19. The total cost of the HPMP for Serbia is US \$1,738,619, with the breakdown as shown in Table 4 below.

Table 4: Total cost of the HPMP for Serbia (US \$) as submitted

Activity	UNIDO	UNEP	Total
Activities in the servicing sector			
Improve the legislative framework	110,000		110,000
Refrigeration Technicians training	150,000		150,000
Customs officers training		96,000	96,000
Support to vocational schools	26,500		26,500
Awareness raising		60,000	60,000
Project coordination and monitoring	102,000		102,000
Sub-Total			544,000
Investment Project			
Phase-out of HCFC in the Refrigeration and Air-Conditioning Equipment Manufacturing Sector of the Republic of Serbia	1,194,619		
Sub-total			1,194,619
Grand total			1,738,619

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

20. The Secretariat reviewed the HPMP for Serbia in the context of the guidelines for the preparation of HPMPs (decision 54/39), and the criteria for funding HCFC phase-out in the consumption sector agreed at the 60th Meeting (decision 60/44), including the investment component for the phase-out of HCFCs used in the manufacturing of refrigeration and air-conditioning equipment. The description, comments and recommendations of the Secretariat are found below. The HPMP is submitted to cover only Stage I which is to meet the reduction in HCFC consumption by 35 per cent in 2020.

Issues related to HCFC consumption and starting point for aggregate reduction in HCFC consumption and HCFC baseline

21. The Secretariat sought clarification from UNIDO on the forecast consumption provided in Table 2 above, and the methodology used to calculate the estimated baseline. UNIDO explained that during the preparation of the HPMP, Serbia assessed the historical consumption of bulk R-22 imports and the installed market capacities, and believes that the current HCFC consumption is lower than the market needs due to difficult economic circumstances. It indicated that a more relevant year for the baseline would be rather 2007 than 2009, when the economy was under recovery. Based on this, the 2010 consumption was calculated based on historically recorded consumption data and on the estimation of the installed capacities, as alternatives are slowly penetrating the market. However the figure is significantly higher than the last reported consumption in 2009.

22. The Secretariat also sought further clarification on the amount indicated for funding eligibility for the servicing sector of 133.83 mt (7.48 ODP tonnes), noting that if the amount to be phased out from the investment component is 41.34 mt (2.27 ODP tonnes), the total phase-out in Serbia would reach 175.17 mt (9.63 ODP tonnes), which is higher than the estimated baseline consumption of 172.91 mt (9.64 ODP tonnes). UNIDO indicated that the servicing sector value was based on the actual amount used for the

servicing sector during 2009, and was used as a basis to calculate funding in the sector. The consumption used to calculate the investment component was likewise based on the same principle. It also mentioned that the amount to be phased out would be based on the calculated baseline and this additional amount would not necessarily impact on the total funding as the servicing sector funding eligibility under decision 60/44 was fixed. UNIDO indicated that the final baseline would be calculated by 2011 and these figures will be adjusted accordingly.

Servicing sector

23. Issues related to the ODS regulation in place, the establishment of quotas for HCFCs were satisfactorily addressed. UNIDO reported that quotas should be in place by 2013. In response to a query about the use of infrastructure built from the NPP, UNIDO also explained that the recovery and recycling centres will be used for HCFCs. This reason was cited for the need for additional equipment for the technicians to enable these centres to deal with HCFCs and operate more effectively.

24. In discussing the total cost for the servicing sector to reach the 35 per cent reduction in 2020, the Secretariat noted that Serbia would be eligible for up to a maximum funding of US \$332,500 based on its estimated consumption in the servicing sector of 133 mt (7.48 ODP tonnes). It requested that the overall cost be adjusted to this amount as the current submission of US \$544,000 is not in line with decision 60/44. The Secretariat also reminded UNIDO that technical assistance activities are generally not eligible for funding unless included as a priority in the servicing sector, especially in sectors where the country has not recorded any HCFC consumption (i.e. technical assistance for the foam sector). The overall cost of the HPMP for Serbia was discussed and agreed as shown in Table 5.

Table 5: Revised level of funding for the servicing sector in the HPMP for Serbia* (US \$)

Activity	UNIDO	UNEP	Total
Activities in the servicing sector			
Improve the legislative framework	45,000		45,000
Refrigeration Technicians training	122,000		122,000
Customs officers training		52,000	52,000
Support to vocational schools	45,000		45,000
Awareness raising		23,500	23,500
Project coordination and monitoring	45,000		45,000
Sub-Total	257,000	75,500	322,500

Manufacturing sector

25. The Secretariat undertook a detailed review of the sector plan for Serbia. Based on the results of the review, the Secretariat advised UNIDO regarding the cost-effectiveness threshold applicable for this particular activity, which stands at US \$15.21/kg HCFC with a possible 25 per cent increase of that threshold, in line with decision 60/44. The Secretariat advised UNIDO that this 25 per cent increase would be applicable for conversion to the use of ammonia; however, given the description of equipment using HCFC-22, the conversion to ammonia could, in the view of the Secretariat, be carried out only for some products due to limitations in the use of ammonia for small scale refrigeration equipment, to which the majority of the HCFC-22 consumption in Serbia is related.

26. Other issues raised by the Secretariat were:

- (a) The use of ammonia and the existing infrastructure in Serbia. UNIDO informed that the infrastructure is existing and well suited for the use of ammonia;
- (b) Issues related to the equipment requested by UNIDO, such as the eligibility for automatic charging systems, technical information regarding strength test equipment and circuit

tightness control, the eligibility of circuit and analysis equipment, the necessity of a refrigerant analyser for the conversion to HFC-410a, and the level of installation cost for conversion.

27. The original project proposal had requested significant equipment for performance testing and calibration for three of the companies; the costs for this equipment was reduced to 30 per cent of the original request in recognition of the fact that the companies will have to undertake increased development efforts which might necessitate capacity increases of the existing equipment; existing equipment as such is technically capable of handling alternative refrigerant as well as HCFC-22.

28. The Secretariat raised the issue of using hydrocarbons for the smaller equipment produced by some of the manufacturers. UNIDO informed that the equipment range produced in Serbia relates predominantly to medium-sized commercial refrigeration equipment using semi-hermetic compressors, as well as medium-sized air-conditioning equipment. For this type of equipment and for the low quantities sought by the companies, UNIDO advised that no compressors designated for HC-290 could be found in the market. For the particular capacity range, and given that the predominant part of the commercial products are using condensing units, this claim appears to be consistent with the Secretariat's information regarding the compressor market at this time.

29. The issue of eligibility of the companies was also discussed in detail. The Secretariat and UNIDO agreed that only four companies should be beneficiaries under the sector plan instead of nine; these four companies manufacture refrigeration equipment. Three of the four companies can produce refrigeration equipment with ammonia, and will receive the related support. All four companies will also receive support for the conversion to HFC-410A for the smaller equipment manufactured by them. UNIDO reoriented its sector plan and took the related comments into account when determining the final budget.

30. An overview of the agreed budget for the sector plan is provided in the following table:

Table 6: Revised level of funding for the manufacturing sector (investment component) in the HPMP for Serbia* (US \$)

Item \Company	Technology	Alfa Klima	Eko Elektro Frigo	Sena	Soko	Total
Refrigerant supply and charging (tank, charging systems, strength test, leak test)	HFC-410A	29,590	30,750	4,470	17,470	82,280
Recovery equipment (recovery machine, balance)	HFC-410A	1,080	2,900	2,900	2,900	9,780
Refrigerant supply and charging (vacuum pump set, charging equipment, leak test)	R-717	0	11,100	11,100	11,100	33,300
Safety related costs (gas detection system, ventilation system, personal protection equipment, respiratory protection equipment)	R-717	0	36,700	36,700	36,700	110,100
Performance testing and calibration	R-717	0	40,000	40,000	40,000	120,000
Tools	n/a	1,000	2,200	2,200	2,200	7,600
Spares, misc.	n/a	1,584	6,183	4,869	5,519	18,155
Delivery and installation	n/a	3,167	12,365	9,737	11,037	36,306
Training	n/a	2,500	12,500	12,500	12,500	40,000
Contingency (10%)		3,892	15,470	12,448	13,943	45,752
Total ICC	-	42,813	170,168	136,924	153,369	503,274
IOC	Using costs for HFC-410A and R-717					154,986
Total						658,260

Table 7: Total agreed funding for Stage I HPMP for Serbia

Activity	UNIDO	UNEP	Total
Activities in the servicing sector			
Improve the legislative framework	45,000		45,000
Refrigeration Technicians training	122,000		122,000
Customs officers training		52,000	52,000
Support to vocational schools	45,000		45,000
Awareness raising		23,500	23,500
Project coordination and monitoring	45,000		45,000
Sub-Total	257,000	75,500	332,500
Investment Project			
Phase-out of HCFC in the Refrigeration and Air-Conditioning Equipment Manufacturing Sector of the Republic of Serbia	658,260		658,260
Sub-total	658,260	-	658,260
Grand total	915,260	75,500	990,760

Impact on the climate

31. The technical assistance activities in the HPMP addressing the servicing sector, supported by the introduction of better service practices (through training of refrigeration technicians) will reduce the current amount of HCFC-22 used in the servicing sector (each kg of HCFC-22 not emitted due to better refrigeration practices, results in about 1.8 CO₂-equivalent tonnes saved). Additional CO₂-equivalent tonnes could be avoided through retrofitting HCFC-22 based equipment to HFC-407C refrigerant which represents the most technically viable option currently available (i.e., each kg of HCFC-22 retrofitted to HFC-407C results in about 0.11 CO₂-equivalent tonnes saved). If 10 per cent of the current service need of 145.15 mt of HCFC-22 (see table 3) is replaced with HFC-407C, the potential CO₂ equivalent saved could be 1,596.65 tonnes.

32. It is important to note that these reductions are associated with the activities being proposed in the HPMP (which are known). However, it does not take into consideration the new non-HCFC-based equipment that could be imported into the country (which is not known). In general, it can be assumed that the new refrigeration systems have been designed using more up-to-date technology (i.e., lower refrigerant charge, more robust construction, and stricter brazing procedures) than those being replaced, substantially reducing leakage rates and servicing needs.

33. With regard to the potential CO₂-equivalent saved in the conversion projects for the manufacturing sector, the Secretariat has provided a simple calculation. Taking into account that each kg of HCFC-22 replaced with ammonia results in 1.8 CO₂-equivalent tonnes saved (i.e. using the GWP of ammonia of 0.5), the conversion of 41.3 mt of HCFC-22 could result in potential savings of 74,340 t-CO₂-eq.

Adjusted 2010-2014 business plans

34. UNIDO and UNEP are requesting US \$990,760 plus support costs for meeting the 35 per cent reduction in HCFCs by 2020. The total value requested for the period 2010-2014 of US \$1,006,735 including support cost is US \$648,198 above the total amount in the adjusted business plan. The difference in the figures is because the HCFC baseline for compliance estimated for the business plan was based on the 2008 (latest reported) consumption data (129.3 mt) while that in the HPMP was based on the submitted estimated baseline using the average of actual reported 2009 consumption and estimated 2010 consumption. Based on the estimated consumption for Serbia in the servicing sector of 129.3 mt in the

business plan, the country's allocation up to the 2020 phase-out should be US \$332,500 in line with decision 60/44 plus funding for the investment project for which it is eligible for.

Draft agreement

35. A draft agreement between the Government of Serbia and the Executive Committee for phase-out of consumption of HCFCs is contained in Annex I to the present document. The agreement includes both components of the servicing and manufacturing sector.

RECOMMENDATION

36. The HPMP for Serbia is submitted for individual consideration. The Executive Committee may wish to consider:

- (a) Noting with appreciation the submission of Stage I of the HCFC phase-out management plan (HPMP) for Serbia to achieve the 35 per cent reduction in HCFC consumption by 2020 at an estimated cost of US \$990,760 (excluding agency support costs); on the understanding that:
 - (i) US \$332,500 is for the servicing sector and in line with decision 60/44 to reach the 35 per cent reduction of HCFC in 2020; and
 - (ii) US \$658,260 is for the investment project for the phase-out of 41.34 metric tonnes of HCFC-22 in the refrigeration and air-conditioning manufacturing sector;
- (b) Noting that the Government of Serbia agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the estimated baseline of 172.91 metric tonnes calculated using actual consumption reported in 2009 and estimated 2010 consumption;
- (c) Approving, in principle, the HPMP for Serbia for the period 2010-2020, at the amount of US \$915,260 plus agency support costs of US \$68,645 for UNIDO and US \$75,500 plus agency support cost of US \$9,815 for UNEP;
- (d) Approving the Agreement between the Government of Serbia and the Executive Committee for the reduction in consumption of HCFCs, as contained in Annex I to the present document;
- (e) Requesting the Secretariat, once the baseline data is known, to update Appendix 2-A to the Agreement to include the figures for maximum allowable consumption, to notify the Executive Committee of the resulting levels of maximum allowable consumption, and of a potential related impact on the eligible funding level with any adjustments needed being made at the submission of the next tranche;
- (f) Approving the first implementation plan for 2011-2012, and the first tranche of the HPMP for Serbia at the amount of US \$360,130 plus agency support costs of US \$27,010 for UNIDO and US \$26,000 plus support costs of US \$3,380.

Annex I

DRAFT AGREEMENT BETWEEN GOVERNMENT OF SERBIA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUROCARBONS

1. This Agreement represents the understanding of the Government of Serbia Republic (the “Country”) and the Executive Committee with respect to the reduction of controlled use of the ozone-depleting substances (ODS) set out in Appendix 1-A (“The Substances”) to a sustained level of 6.27 ODP tonnes prior to 1 January 2020 in compliance with Montreal Protocol schedules with the understanding that this figure is to be revised one single time in 2011, when the baseline consumption for compliance would be established based on Article 7 data, with the funding to be adjusted accordingly, as per decision 60/44.
2. The Country agrees to meet the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A (“The Targets and Funding”) in this Agreement as well as in the Montreal Protocol reduction schedule for all Substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of the Substances which exceeds the level defined in row 1.2 of Appendix 2-A (maximum allowable total consumption of Annex C, Group I substances) as the final reduction step under this agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances which exceeds the level defined in rows 4.1.3 and 4.2.3, (remaining eligible consumption).
3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees in principle to provide the funding set out in row 3.1 of Appendix 2-A (the “Targets and Funding”) to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (the “Funding Approval Schedule”).
4. The Country will meet the consumption limits for each of the Substances as indicated in Appendix 2-A. It will also accept independent verification, to be commissioned by the relevant bilateral or implementing agency, of achievement of these consumption limits as described in sub-paragraph 5(b) of this Agreement.
5. The Executive Committee will not provide the Funding in accordance with the Funding Approval Schedule unless the Country satisfies the following conditions at least 60 days prior to the applicable Executive Committee meeting set out in the Funding Approval Schedule:
 - (a) That the Country has met the Targets for all relevant years. Relevant years are all years since the year in which the hydrochlorofluorocarbon phase-out management plan (HPMP) was approved. Exempt are years for which no obligation for reporting of country programme data exists at the date of the Executive Committee Meeting at which the funding request is being presented;
 - (b) That the meeting of these Targets has been independently verified, except if the Executive Committee decided that such verification would not be required;
 - (c) That the Country had submitted tranche implementation reports in the form of Appendix 4-A (the “Format of Tranche Implementation Report and Plan”) covering each previous calendar year, that it had achieved a significant level of implementation of

activities initiated with previously approved tranches, and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent; and

- (d) That the Country has submitted and received approval from the Executive Committee for a tranche implementation plan in the form of Appendix 4-A (the “Format of Tranche Implementation Reports and Plans”) covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (the “Monitoring Institutions and Roles”) will monitor and report on Implementation of the activities in the previous tranche implementation plan in accordance with their roles and responsibilities set out in Appendix 5-A. This monitoring will also be subject to independent verification as described in sub-paragraph 5(b).

7. The Executive Committee agrees that the Country may have the flexibility to reallocate the approved funds, or part of the funds, according to the evolving circumstances to achieve the smoothest phase-down and phase-out of the Substances specified in Appendix 1-A. Reallocations categorized as major changes must be documented in advance in a Tranche Implementation Plan and approved by the Executive Committee as described in sub-paragraph 5(d). Major changes would relate to reallocations affecting in total 30 per cent or more of the funding of the last approved tranche, issues potentially concerning the rules and policies of the Multilateral Fund, or changes, which would modify any clause of this Agreement. Reallocations not categorized as major changes may be incorporated in the approved Tranche Implementation Plan, under implementation at the time, and reported to the Executive Committee in the Tranche Implementation Report. Any remaining funds will be returned to the Multilateral Fund upon closure of the last tranche of the plan.

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sub-sector, in particular:

- (a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation; and
- (b) The Country and the bilateral and implementing agencies involved will take full account of the requirements of decisions 41/100 and 49/6 during the implementation of the plan.

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfill the obligations under this Agreement. UNIDO has agreed to be the lead implementing agency (the “Lead IA”) and UNEP-DTIE has agreed to be cooperating implementing agencies (the “Cooperating IA”) under the lead of the Lead IA in respect of the Country’s activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of any of the IA taking part in this Agreement.

10. The Lead IA will be responsible for carrying out the activities of the plan as detailed in the first submission of the HPMP with the changes approved as part of the subsequent tranche submissions, including but not limited to independent verification as per sub-paragraph 5(b). This responsibility includes the necessity to co-ordinate with the Cooperating IA to ensure appropriate timing and sequence of activities in the implementation. The Cooperating IA will support the Lead IA by implementing the activities listed in Appendix 6-B under the overall co-ordination of the Lead IA. The Lead IA and

Cooperating IA have entered into a formal agreement regarding planning, reporting and responsibilities under this Agreement to facilitate a co-ordinated implementation of the Plan, including regular co-ordination meetings. The Executive Committee agrees, in principle, to provide the Lead IA and the Cooperating IA with the fees set out in rows 2.2 and 2.4 of Appendix 2-A.

11. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amounts set out in Appendix 7-A in respect of each ODP tonne of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the country did not comply with this Agreement, and take related decisions. Once these decisions are taken, this specific case will not be an impediment for future tranches as per paragraph 5.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decision that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee, the Lead IA and the Cooperating IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA and the Cooperating IA with access to information necessary to verify compliance with this Agreement.

14. The completion of the HPMP and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption has been specified in Appendix 2-A. Should at that time activities be still outstanding which were foreseen in the Plan and its subsequent revisions as per sub-paragraph 5(d) and paragraph 7, the completion will be delayed until the end of the year following the implementation of the remaining activities. 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.

15. All of the agreements set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

APPENDICES**APPENDIX 1-A: THE SUBSTANCES**

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	8.76
HCFC-142b	C	I	0.88
Total			9.64

APPENDIX 2-A: THE TARGETS, AND FUNDING

		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	9.6	9.6	9.6	8.7	8.7	8.7	8.7	8.7	6.3	
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	9.6	9.6	9.6	8.7	8.7	8.7	8.7	8.7	6.3	
2.1	Lead IA UNIDO agreed funding (US \$)	360,130		520,130					35,000				915,260
2.2	Support costs for Lead IA (US \$)	27,010		39,010					2,625				68,645
2.3	Cooperating IA UNEP agreed funding (US \$)	26,000		27,500					22,000				75,500
2.4	Support costs for Cooperating IA (US \$)	3,380		3,575					2,860				9,815
3.1	Total agreed funding (US \$)	386,130		547,630					57,000				990,760
3.2	Total support cost (US \$)	30,390		42,585					5,485				78,460
3.3	Total agreed costs (US \$)	416,520		590,215					62,485				1,069,220
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this agreement (ODP tonnes)												3.37
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)												n/a
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)												0
4.2.1	Total phase-out of HCFC-142b agreed to be achieved under this agreement (ODP tonnes)												0
4.2.2	Phase-out of HCFC-142b to be achieved in previously approved projects (ODP tonnes)												0
4.2.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)												0

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval not earlier than the last meeting of the year specified in Appendix 2-A.

APPENDIX 4-A: FORMAT OF TRANCHE IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Tranche Implementation Report and Plan will consist of five parts:
 - (a) A narrative report regarding the progress in the previous tranche, reflecting on the situation of the Country in regard to phase out of the Substances, how the different activities contribute to it and how they relate to each other. The report should further highlight successes, experiences and challenges related to the different activities included in the Plan, reflecting on changes in the circumstances in the country, and providing other relevant information. The report should also include information about and justification for any changes vis-à-vis the previously submitted tranche plan, such as delays, uses of the flexibility for reallocation of funds during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes. The narrative report will cover all relevant years specified in sub-paragraph 5(a) of the Agreement and can in addition also include information about activities in the current year;
 - (b) A verification report of the HPMP results and the consumption of the substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification has to be provided together with each tranche request and will have to provide verification of the consumption for all relevant years as specified in sub-paragraph 5(a) of the Agreement for which a verification report has not yet been acknowledged by the Committee;
 - (c) A written description of the activities to be undertaken in the next tranche, highlighting their interdependence, and taking into account experiences made and progress achieved in the implementation of earlier tranches. The description should also include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall plan foreseen. The description should cover the years specified in sub-paragraph 5(d) of the Agreement. The description should also specify and explain any revisions to the overall plan which were found to be necessary;
 - (d) A set of quantitative information for the report and plan, submitted into a database. As per the relevant decisions of the Executive Committee in respect to the format required, the data should be submitted online. This quantitative information, to be submitted by calendar year with each tranche request, will be amending the narratives and description for the report (see sub-paragraph 1(a) above) and the plan (see sub-paragraph 1(c) above), and will cover the same time periods and activities; it will also capture the quantitative information regarding any necessary revisions of the overall plan as per sub-paragraph 1(c) above. While the quantitative information is required only for previous and future years, the format will include the option to submit in addition information regarding the current year if desired by the country and lead implementing agency; and
 - (e) An Executive Summary of about five paragraphs, summarizing the information of above sub-paragraphs 1(a) to 1(d).

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The National Ozone Unit (NOU) is the central administrative unit established within the administrative structure of MoESP, responsible for the coordination of governmental activities with respect to the ozone layer protection and facilitation of ODS phase-out.
2. The Ozone Unit within the MoESP -Serbia will be responsible for the overall coordination of national activities towards the HPMP Phase-out Plan implementation.
3. The management of the implementation of the planned project activities will be allocated to the NOU in cooperation with UNIDO as a lead Implementing Agency.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities. These can be specified in the project document further, but include at least the following:
 - (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's phase-out plan;
 - (b) Assisting the Country in preparation of the Tranche Implementation Plans and subsequent reports as per Appendix 4-A;
 - (c) Providing verification to the Executive Committee that the Targets have been met and associated annual activities have been completed as indicated in the Tranche Implementation Plan consistent with Appendix 4-A;
 - (d) Ensuring that the experiences and progress is reflected in updates of the overall Plan and in future Tranche Implementation Plans consistent with sub-paragraphs 1(c) and 1(d) of Appendix 4-A;
 - (e) Fulfilling the reporting requirements for the tranches and the overall Plan as specified in Appendix 4-A as well as project completion reports for submission to the Executive Committee. The reporting requirements include the reporting about activities undertaken by the Cooperating IA;
 - (f) Ensuring that appropriate independent technical experts carry out the technical reviews;
 - (g) Carrying out required supervision missions;
 - (h) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Tranche Implementation Plan and accurate data reporting;
 - (i) Co-ordinating the activities of the Cooperating IA, and ensuring appropriate sequence of activities;
 - (j) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country and the co-ordinating implementing agencies, the allocation of the reductions to the different budget items and to the funding of each implementing or bilateral agency involved;
 - (k) Ensuring that disbursements made to the Country are based on the use of the indicators;

and

- (l) Providing assistance with policy, management and technical support when required.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent organization to carry out the verification of the HPMP results and the consumption of the substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement and sub-paragraph 1(b) of Appendix 4-A.

APPENDIX 6-B: ROLE OF COOPERATING IMPLEMENTING AGENCY

1. The Cooperating IA will be responsible for a range of activities. These activities can be specified in the respective project document further, but include at least the following:

- (a) Providing policy development assistance when required;
- (b) Assisting the Country in the implementation and assessment of the activities funded by the Cooperating IA, and refer to the Lead IA to ensure a co-ordinated sequence in the activities; and
- (c) Providing reports to the Lead IA on these activities, for inclusion in the consolidated reports as per Appendix 4-A.

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US \$2,500 per metric ton of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the target specified in row 1.2 of Appendix 2-A has not been met.
