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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Seventy-first Meeting  
Montreal, 2-6 December 2013

**PROJECT PROPOSAL: ZIMBABWE**

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

Phase-out

- HCFC phase-out management plan (stage I, second tranche) Germany

## PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

## Zimbabwe

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
HCFC phase-out management plan ( stage I, second tranche)	Germany

<b>(II) LATEST ARTICLE 7 DATA</b>	Year: 2012	16.2 (ODP tonnes)
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<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>								<b>Year: 2012</b>			
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption		
				Manufacturing	Servicing						
HCFC-123											
HCFC-124											
HCFC-141b					0.06					0.06	
HCFC-141b imported pre-blended		6.48								6.48	
HCFC-142b											
HCFC-22					16.22					16.22	

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009 - 2010 baseline:	17.80	Starting point for sustained aggregate reductions:	
		23.91	
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>			
Already approved:	12.34	Remaining:	
		11.57	

<b>(V) BUSINESS PLAN</b>		2013	2014	2015	2016	2017	2018	2019	2020	Total
Germany	ODS phase-out (ODP tonnes)	3.06	0.00	1.24	0.00	0.00	1.86	0.00	0.62	6.78
	Funding (US \$)	308,935	0	125,398	0	0	188,097	0	62,699	685,129

<b>(VI) PROJECT DATA</b>		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	
Montreal Protocol consumption limits		n/a	n/a	17.8	17.8	16.02	16.02	16.02	16.02	16.02	11.57	n/a	
Maximum allowable consumption (ODP tonnes)		n/a	n/a	17.8	17.8	16.02	16.02	16.02	16.02	16.02	11.57	n/a	
Project cost requested in principle (US\$)	Germany	Project costs	7,474	419,417	275,927	0	112,000	0	168,000	0	0	56,000	1,038,818
		Support costs	972	50,096	33,008	0	13,398	0	20,097	0	0	6,699	124,270
Funds approved by ExCom (US\$)		Project Costs	7,474	419,417	0	0	0	0	0	0	0	0	426,891
		Support Costs	972	50,096	0	0	0	0	0	0	0	0	51,068
Total funds requested for approval at this meeting (US\$)		Project Costs	0	0	275,927	0	0	0	0	0	0	0	275,927
		Support Costs	0	0	33,008	0	0	0	0	0	0	0	33,008

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

1. On behalf of the Government of Zimbabwe, the Government of Germany, as the designated implementing agency, has submitted to the 71<sup>st</sup> meeting a request for funding for the second tranche of stage I of the HCFC phase-out management plan (HPMP)<sup>1</sup> at the amount of US \$275,927, plus agency support costs of US \$33,008. The submission includes a progress report on the implementation of the first tranche of the HPMP, and a tranche implementation plan for 2014 and 2015.

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

2. Zimbabwe's regulations for ODS control were developed in 2004 and revised in 2011 to include accelerated HCFC phase-out, and provide for a licensing and quota system for HCFCs and HCFC-based equipment and blends. The regulations also control the installation, commissioning, decommissioning and destruction of ODS systems. The ban on the import of HCFC-141b pre-blended polyols and on HCFC-based equipment is planned to be implemented by 1 January 2015. Bans on the import of different types of HCFC-based products and equipment have been planned prior to 2020.

3. The first tranche of the HPMP included funding for the conversion of five foam enterprises which manufacture rigid insulation foam for domestic and commercial refrigeration equipment and sandwich panels used in cold rooms using 75.50 mt (8.31 ODP tonnes) in 2010 of HCFC-141b contained in imported pre-blended polyols. This consumption has decreased to 59 mt (6.48 ODPT tonnes) in 2012.

4. The conversion of the five foam enterprises is progressing as planned. Equipment for three companies undertaking conversion to cyclopentane, including high pressure foaming machine, storage and mixing tank, safety equipment and spare parts, have been purchased and delivery is expected by the end of October 2013. Installation, trial and commissioning are planned for December 2013. Counterpart funding of US \$222,635 was provided for *inter alia* part of the equipment cost; civil works related to the installation of underground cyclopentane storage tanks and accessories. Technical assistance, including site evaluation and training, was provided to the remaining two small companies to transfer knowledge and skills on working with water-blown foaming technology. All conversions are expected to be completed by 2013.

5. The following activities were implemented in the refrigeration servicing sector. A workshop for stakeholders was held to provide information about the HCFC phase-out, import quotas and the Montreal Protocol targets. A total of 22 customs officers were trained in controlling imports of ODS, blends and ODS-based equipment. Four ODS identification toolkits were purchased for key ports of entry. Training was provided to 175 service technicians on good servicing practices, including recovering and recycling of HCFC-22, and the safe use of hydrocarbon refrigerants. Servicing tools and basic equipment were purchased and provided to technicians and vocational training centres. Project monitoring and coordination was carried out by the National Ozone Unit (NOU) for the overall implementation of stage I of the HPMP. Annual implementation plans and reports were prepared by the NOU.

6. As of September 2013, of the US \$426,891 approved thus far, US \$378,221 had been disbursed. The balance of US \$48,670 will be disbursed in 2014.

### Annual plans for the second tranche of the HPMP

7. The main activities to be implemented during the second tranche of stage I of the HPMP include: completion of the conversion in all foam enterprises using HCFC-141b pre-blended polyols (US \$166,762); further training of customs and other law enforcement agents through customs training

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<sup>1</sup> The HPMP for Zimbabwe was approved at the 65<sup>th</sup> meeting to reduce HCFC consumption by 35 per cent of the baseline by 1 January 2020.

school for monitoring compliance at border posts (US \$10,000); additional training of 200 refrigeration service technicians, including recovery and recycling of HCFCs, servicing hydrocarbon-based refrigeration and air-conditioning equipment (US \$55,000); purchase of additional 50 sets of tools and 10 refrigerant recovery units (US \$155,000); demonstration of conversion to hydrocarbons (US \$23,600); and monitoring and evaluation of activities in the HPMP (US \$5,065).

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

#### Operational licensing system

8. In line with decision 63/17, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports and exports is in place and that the system is capable of ensuring compliance with the Montreal Protocol HCFC phase-out schedule. The import quota for 2013 has been issued according to the Montreal Protocol control target.

#### HCFC consumption

9. The HPMP for Zimbabwe was approved at the 65<sup>th</sup> meeting with an established baseline of 275.7 mt (15.44 ODP tonnes). Following the approval of the HPMP, the Government of Zimbabwe requested a revision of its reported level of consumption for 2009. The Parties, at their 23<sup>rd</sup> meeting, approved Zimbabwe's request to revise consumption data for 2009 to 303.47 mt (17.1 ODP tonnes (decision XXIII/29)). Accordingly, the baseline has been amended to 314.9 mt (17.8 ODP tonnes). Table 1 shows the level of HCFC consumption for the 2007-2012 period. The funding level approved in principle for stage I of the HPMP for Zimbabwe will not change with the revision of the HCFC baseline for compliance.

**Table.1 Consumption of HCFC-22 in Zimbabwe (Article 7)**

HCFC	2007	2008	2009	2010	2011	2012	Baseline
<b>Metric tonnes</b>							
HCFC-141b	-	0.2	7.1	10.0	4.9	-	8.5
HCFC-22	298.3	157.8	296.4	316.4	350.7	294.5	306.4
Total (mt)	298.3	158.0	303.5	326.4	355.6	294.5	314.9
<b>ODP tonnes</b>							
HCFC-141b	-	0.0	0.8	1.1	0.5	-	0.9
HCFC-22	16.4	8.7	16.3	17.4	19.3	16.2	16.9
Total (mt)	16.4	8.7	17.1	18.5	19.8	16.2	17.8

#### Technology-related issues

10. Upon a request for additional information on hydrocarbon-based refrigerants, Germany reported that, although no survey has been carried out on their use, a transition to hydrocarbon-based equipment is evident in the local market. It is estimated that more than 20 per cent of total equipment is based on hydrocarbon refrigerants, and 70 per cent of the domestic appliances sold are based on hydrocarbons. In the second tranche of the HPMP, the NOU planned a demonstration project to promote the use of hydrocarbon refrigerants in small/medium commercial refrigeration equipment (beverage cabinet, supermarket display cabinet) and small air-conditioning system. A code of practice for the safe use of hydrocarbon refrigerants has been drafted so that it can be enforced when appropriate. The NOU is working with the Standards Association of Zimbabwe to modify international standards for hydrocarbon refrigerants and adopt them as national standards.

Revision to the HPMP Agreement

11. In line with the revised baseline for compliance as approved by the Parties in their decision XXIII/29, the Secretariat has updated the relevant paragraphs of the Agreement between the Government of Zimbabwe and the Executive Committee, and a new paragraph has been added to indicate that the updated Agreement supersedes the one reached at the 65<sup>th</sup> meeting, as shown in Annex I to the present document. The full revised Agreement will be appended to the final report of the 71<sup>st</sup> meeting of the Executive Committee.

Conclusion

12. The Secretariat noted that HCFC-141b (pure) was not imported in 2012 and that the consumption of HCFC-22 decreased by 16 per cent in 2012 as a result of the activities implemented in the HPMP. It further noted that an import licensing and quota system is operational and will enable consumption reductions in line with the Montreal Protocol's phase-out schedule. The conversion of the five foam enterprises is well advanced and the activities in the servicing sector have been developed and implemented with the participation of key stakeholders. Zimbabwe Refrigeration and Air conditioning Association is actively involved in the coordination of training and awareness activities among its members. As reported by the Government of Germany, strengthening the collaboration with the main refrigeration training school and customs training institutions, and incorporating on-going HCFC issues into the curricula of these training institutions will ensure the long-term sustainability of the activities proposed in stage I of the HPMP.

**RECOMMENDATION**

13. The Fund Secretariat recommends that the Executive Committee:

- (a) Takes note of the progress report on the implementation of the first tranche of stage I of the HCFC phase-out management plan (HPMP) in Zimbabwe;
- (b) Notes that the Fund Secretariat had updated paragraph 1, Appendices 1-A and 2-A of the Agreement between the Government of Zimbabwe and the Executive Committee, based on the revised HCFC baseline for compliance, and that a new paragraph 16 had been added to indicate that the updated Agreement superseded that reached at the 65<sup>th</sup> meeting, as shown in Annex I to the present document; and
- (c) Further notes that the revised starting point for sustained aggregate reduction in HCFC consumption was 17.8 ODP tonnes, calculated using actual consumption of 17.1 ODP tonnes and 18.5 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol, plus 6.11 ODP tonnes of HCFC-141b contained in imported pre-blended polyol systems, resulting in 23.91 ODP tonnes.

14. The Secretariat further recommends blanket approval of the second tranche of stage I of the HPMP for Zimbabwe, and the corresponding 2014 – 2015 tranche implementation plan, with associated support costs 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, second tranche)	275,927	33,008	Germany

**Annex I**

**TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF ZIMBABWE 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)

1. This Agreement represents the understanding of the Government of Zimbabwe (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 **11.57** ODP tonnes prior to 1 January 2020 in compliance with Montreal Protocol schedules.

**16. This updated Agreement supersedes the Agreement reached between the Government of Zimbabwe and the Executive Committee at the 65<sup>th</sup> meeting of the Executive Committee.**

**APPENDIX 1-A: THE SUBSTANCES**

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	<b>16.86</b>
HCFC-141b	C	I	<b>0.94</b>
Subtotal	C	I	<b>17.80</b>
HCFC-141b in imported polyol			6.11
Total			<b>23.91</b>

**APPENDIX 2-A: THE TARGETS, AND FUNDING**

		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	<b>17.80</b>	<b>17.80</b>	<b>16.02</b>	<b>16.02</b>	<b>16.02</b>	<b>16.02</b>	<b>16.02</b>	<b>11.57</b>	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	<b>17.80</b>	<b>17.80</b>	<b>16.02</b>	<b>16.02</b>	<b>16.02</b>	<b>16.02</b>	<b>16.02</b>	<b>11.57</b>	n/a
2.1	Lead IA (Germany) agreed funding (US\$)	7,474	419,417	275,927	0	112,000	0	168,000	0	0	56,000	1,038,818
2.2	Support costs for Lead IA (US\$)	972	50,096	33,008	0	13,398	0	20,097	0	0	6,699	124,270
3.1	Total agreed funding (US\$)	7,474	419,417	275,927	0	112,000	0	168,000	0	0	56,000	1,038,818
3.2	Total support cost (US\$)	972	50,096	33,008	0	13,398	0	20,097	0	0	6,699	124,270
3.3	Total agreed cost (US\$)	8,446	469,513	308,935	0	125,398	0	188,097	0	0	62,699	1,163,088
4.1.1	Total phase out HCFC-22 agreed to be achieved under this agreement											<b>5.29</b>
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)											<b>11.57</b>
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this agreement (ODP tonnes)											<b>0.94</b>
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)											0.00
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)											0.00
4.4.1	Total phase-out of HCFC-141b contained in imported pre-blended polyols agreed to be achieved under this Agreement (ODP tonnes)											6.11
4.4.2	Phase-out of HCFC-141b contained in imported pre-blended polyols to be achieved in previously approved projects (ODP tonnes)											0.00
4.4.3	Remaining eligible consumption for HCFC-141b contained in imported pre-blended polyols (ODP tonnes)											0.00