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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Eightieth Meeting
Montreal, 13-17 November 2017

PROJECT PROPOSAL: ZIMBABWE

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) Germany

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

ZIMBABWE

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (stage I)	Germany (lead)	65 th	35% by 2020

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2016	9.49 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2016	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22				0.25	9.24				9.49

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	17.8	Starting point for sustained aggregate reductions:	23.91
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	12.34	Remaining:	11.57

(V) BUSINESS PLAN		2017	2018	2019	2020	Total
Germany	ODS phase-out (ODP tonnes)	2.0	0.0	0.0	0.67	2.67
	Funding (US \$)	188,097	0	0	62,699	250,796

(VI) PROJECT DATA			2011	2012	2013	2014	2015	2017	2019	2020	Total
Montreal Protocol consumption limits			n/a	n/a	17.80	17.80	16.02	16.02	16.02	11.6	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	17.80	17.80	16.02	16.02	16.02	11.6	
Agreed funding (US\$)	Germany	Project costs	7,474	419,417	275,927		112,000	168,000		56,000	1,038,818
		Support costs	972	50,096	33,008		13,398	20,097		6,699	124,270
Funds approved by ExCom (US\$)		Project costs	7,474	419,417	275,927	0	112,000	0.0	0.0	0.0	814,818
		Support costs	972	50,096	33,008	0	13,398	0.0	0.0	0.0	97,474
Total funds requested for approval at this meeting (US\$)		Project costs	0	0	0	0	0	168,000	0	0	168,000
		Support costs	0	0	0	0	0	20,097	0	0	20,097

Secretariat's recommendation:	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 a request for funding for the fourth tranche of stage I of the HCFC phase-out management plan (HPMP), at the amount of US \$168,000, plus agency support costs of US \$20,097.¹ The submission includes a progress report on the implementation of the third tranche, the verification report on HCFC consumption and the tranche implementation plan for 2017 to 2019.

Report on HCFC consumption

HCFC consumption

2. The Government of Zimbabwe reported a consumption of 9.49 ODP tonnes of HCFC in 2016, which was already 40.7 per cent below the limit established in the Agreement and 46.7 per cent below the HCFC consumption baseline. The 2012-2016 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Zimbabwe (2012-2016 Article 7 data)

HCFC	2012	2013	2014	2015	2016	Baseline
Metric tonnes						
HCFC-22	294.54	286.46	241.40	256.80	172.58	306.55
HCFC-141b	0.00	0.00	0.41	0.35	0.00	8.54
(Sub-total) (mt)	294.54	286.46	241.81	257.15	172.58	314.94
HCFC-141b in imported pre-blended polyols*	58.95	54.86	54.60	0.00	0.00	55.55**
Total (mt)	353.49	341.32	296.41	257.15	172.58	370.49
ODP tonnes						
HCFC-22	16.20	15.76	13.28	14.12	9.49	16.86
HCFC-141b	0.00	0.00	0.04	0.04	0.00	0.94
(Sub-total) (ODP tonnes)	16.20	15.76	13.32	14.16	9.49	17.80
HCFC-141b in imported pre-blended polyols*	6.48	6.03	6.01	0.00	0.00	6.11**
Total (ODP tonnes)	22.68	21.79	19.33	14.16	9.49	23.91

*Country programme data

**As per Agreement with the Executive Committee

3. HCFC consumption has decreased since 2012 due to import control measures and increased availability of equipment with alternative technologies. The use of HCFC-141b in bulk in the servicing sector was eliminated through training and awareness activities. The import of HCFC-141b in pre-blended polyols has stopped following conversions in the foam sector. HCFC-22 is used in air-conditioning (AC) and commercial refrigeration with HFCs gradually emerging as alternatives (R-410a and R-407C in the AC sector, and R-404a and R-507A in commercial refrigeration).

Country programme (CP) implementation report

4. The Government of Zimbabwe reported HCFC sector consumption data under the 2016 CP implementation report that is consistent with the data reported under Article 7.

Verification report

5. The verification report confirmed that the Government is implementing a licensing and quota system for HCFC imports and exports. The issues identified in the verification report are discussed in paragraphs 14-15 below.

¹ As per the letter of 18 September 2017 from the Ministry of Environment, Water and Climate of Zimbabwe.

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

Legal framework

6. The ODS regulations were updated with, introducing a ban on imports of HCFC-141b in bulk and in pre-blended polyols, effective 1 November 2016; labelling and packaging of ODS; a list of prohibited and controlled ODS and ODS-containing equipment; requirements for certification and training of refrigeration and air-conditioning (RAC) technicians; and the requirement for the National Ozone Unit (NOU) to keep a database of importers, including cases of permit violations.

7. The HCFC import quota for 2016 was established at 11 ODP tonnes and at 9.9 ODP tonnes for 2017.

8. The process of ratification of the Kigali Amendment has been initiated by the NOU, and an HFC import and licensing system will be discussed following ratification.

Polyurethane (PU) manufacturing sector

9. The conversion of five PU foam enterprises to cyclopentane was completed in July 2015 (prior to the approval of the third tranche), resulting in the phase-out of 55.50 mt (6.11 ODP tonnes) of HCFC-141b contained in imported pre-blended polyols.

Refrigeration servicing sector

10. Two training workshops for 55 customs officers (one joint workshop with Botswana) were organized; over 250 refrigeration technicians were trained in good practices and the safe handling of hydrocarbon (HC) (i.e., storage, transportation, risk assessments and correct charges); standard SAZ 1012 for technician certification was developed based on the European standard EN 133131; eighteen demonstration conversions of HCFC-22-based AC systems to HC-290 were implemented; and six sets of domestic refrigerators based on R-600a and small commercial display cabinets based on R-600a are being purchased for vocational training centers (VTCs).

Project implementation and monitoring unit (PMU)

11. The monitoring and reporting tasks are shared between the NOU and the Government of Germany.

Level of fund disbursement

12. As of September 2017, of the US \$814,818 approved so far, US \$798,052 had been disbursed, as shown in Table 2. The balance of US \$16,766 will be disbursed by December 2017.

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

Agency	First and second tranches		Third tranche		Total approved	
	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed
The Government of Germany	702,818	700,885	112,000	97,167	814,818	798,052
Disbursement rate (%)	99.7		86.8		97.9	

Implementation plan for the fourth tranche of the HPMP

13. The following activities will be implemented between 2017 and 2019:

- (a) Training of 45 customs officers in controlling imports of ODS and ODS-based equipment

(US \$24,500);

- (b) Training of 150 RAC technicians in good practices and HC safe handling; certification of 500 technicians; purchase of HC tools (i.e., charging stations and gas detector) for VTCs; and advertising of the certification scheme (US \$80,500);
- (c) Purchase of 30 HC tool sets (e.g., HC gauge set and piercing pliers) for RAC servicing enterprises, and assistance to the Zimbabwe Refrigeration and Air-conditioning Association (ZRAA) (US \$33,000); and
- (d) Project monitoring (US \$30,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Verification report

14. Data inconsistencies between the verification report and the consumption reported under Article 7 of the Montreal Protocol from 2014 were not clearly explained. For instance, the reported data for HCFC 22 in the verification report was lower than that reported under Article 7 (i.e., 1.21 ODP tonnes lower for 2014; 2.39 ODP tonnes lower for 2015; and 1.58 ODP tonnes lower for 2016). The verification report also identified the import of R-406a (consisting of 55 per cent of HCFC-22, 41 per cent of HCFC-142b and 4 per cent of R-600a) that was not reported under Article 7; and the import of HCFC-141b in bulk or contained in imported pre-blended polyols was not included in the report. The verification seems to have focused on areas outside the scope of this type of verification, while a concrete assessment of the reliability of data for all substances, reasons for inconsistencies and status of compliance could not be extracted from the report.

15. In addition, the Secretariat noted that the 2016 HCFC consumption was already 46.7 per cent below the baseline, and given the magnitude of this reduction it was unclear to what extent the reduction was attributed to the implementation of the HPMP or to a potential overestimation of the baseline for consumption, as it has occurred in other countries. In view of this, the Secretariat suggested that the verification be extended up to the baseline years, which were used as basis to estimate the starting point for aggregate reductions in HCFC consumption. In the event an adjustment to the starting point is considered necessary based on the results of the verification report, the case would be considered at the time of the approval of the last tranche and the funding level would be adjusted accordingly, if appropriate.

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

Legal framework

16. The HCFC imports license and quota system in Zimbabwe is operational. An electronic licensing system to allow importers to apply online is being developed by the NOU with funding from the Government of Zimbabwe; it currently covers HCFCs and will expand to HFCs.

Refrigeration servicing sector

17. The Secretariat noted that 18 demonstration conversions from HCFC-22 to HC-290 took place and recalled that the Government of Germany reported to the 75th meeting² that retrofits to HC are done on the

² UNEP/OzL.Pro/ExCom/75/75.

understanding that liability lies solely with the technician, who is expected to comply with HC safe handling practices and the code of practice developed by the Refrigeration Association. The responsibility in case of an accident is clearly specified in the certificates issued to technicians who successfully pass the certification exam. Furthermore, it was confirmed by the Government of Germany that the Government of Zimbabwe is fully aware of decisions 72/17 and 73/34 on retrofit of refrigeration systems with flammable refrigerants. Consequently, the third tranche was approved on the understanding that if Zimbabwe were to decide to proceed with retrofits and associated servicing to flammable and toxic refrigerants in RAC equipment originally designed for non-flammable substances, it would do so assuming all associated responsibilities and risks and only in accordance with the relevant standards and protocols (decision 75/29(a)).

18. According to the Government of Germany, the ZRAA is now fully constituted and counts 900 members out of which 600 attended HC training workshops. On certification standard SAZ 1012, the Government of Germany clarified that it establishes four levels of certification based on the qualifications of the technicians. The green card is issued to technicians who complete HC safe-handling training conducted by the NOU and receive national certificate level 1 (the highest). The standard will be further improved according to international practices, along with the update of the curricula.

Conclusion

19. The reported 2016 HCFC consumption of 9.49 ODP tonnes was already 46.7 per cent below the country's baseline. The country's import licensing and quota system is operational, the ban on HCFC-141b in bulk and imported pre-blended polyols is in place, five PU foam enterprises were converted to cyclopentane phasing out 6.11 ODP tonnes of HCFC-141b, activities in the servicing sector are well advanced and assistance is provided to Customs to further strengthen ODS control. However, a number of issues have been identified in the verification report. In this respect, the Government of Germany has committed to submit a revised verification report by the end of 2017. The level of disbursement is 97.9 per cent of the funds approved so far. The activities planned under the fourth tranche will further strengthen the servicing sector, ensure the long-term sustainability of the activities, and will enable the country to maintain its compliance obligations under the Montreal Protocol.

RECOMMENDATION

20. The Fund Secretariat recommends that the Executive Committee take note of the progress report on the implementation of the third tranche of stage I of the HCFC phase-out management plan of (HPMP) in Zimbabwe.

21. The Fund Secretariat further recommends blanket approval of the fourth tranche of stage I of the HPMP for Zimbabwe, and the corresponding 2017-2019 tranche implementation plan, at the funding level shown in the table below, on the understanding that:

- (a) If Zimbabwe were to decide to proceed with retrofits and associated servicing to flammable and toxic refrigerants in refrigeration and air-conditioning equipment originally designed for non-flammable substances, it would do so assuming all associated responsibilities and risks and only in accordance with the relevant standards and protocols; and

- (b) The approved funds will not be transferred to the Government of Germany until the Secretariat has received a revised verification report on the consumption of HCFCs covering the baseline years, which was used as the basis to estimate the starting point for aggregate reduction on HCFC consumption, on the understanding that if an adjustment of the starting point was considered at the time of the approval of the last tranche of stage I of the HPMP, the funding level would be adjusted accordingly.

	Project title	Project funding (US \$)	Support cost (US \$)	Implementing agency
(a)	HCFC phase-out management plan (stage I, fourth tranche)	168,000	20,097	Germany