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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-seventh Meeting
Montreal, 28 November – 2 December 2016

PROJECT PROPOSAL: MALAWI

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, third tranche) UNEP and UNIDO

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Malawi

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

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2015	8.91 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2015	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Serviceing				
HCFC-123									
HCFC-124									
HCFC-141b									
HCFC-142b									
HCFC-22					8.91				8.91

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:		10.80	Starting point for sustained aggregate reductions:
			10.80
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:		3.78	Remaining:
			7.02

(V) BUSINESS PLAN		2016	2017	2018	2019	2020	Total
UNEP	ODS phase-out (ODP tonnes)	0.4		0.4		0.4	1.2
	Funding (US \$)	45,200		45,200		39,550	129,950
UNIDO	ODS phase-out (ODP tonnes)	0.7	0.0	0.0	0.0	0.0	0.7
	Funding (US \$)	65,400	0	0	0	0	65,400

(VI) PROJECT DATA			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits			n/a	n/a	n/a	10.80	10.8	9.72	9.72	9.72	9.72	9.72	7.02	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	n/a	10.80	10.8	9.72	9.72	9.72	9.72	9.72	7.02	n/a
Agreed funding (US\$)	UNEP	Project costs	60,000	0	0	55,000	0	0	40,000	0	40,000	0	35,000	230,000
		Support costs	7,800	0	0	7,150	0	0	5,200	0	5,200	0	4,550	29,900
	UNIDO	Project costs	60,000	0	0	0	0	0	60,000	0	0	0	0	120,000
		Support costs	5,400	0	0	0	0	0	5,400	0	0	0	0	10,800
Funds approved by ExCom (US\$)	Project costs		120,000	0	0	55,000	0	0	0.0	0	0	0	0	175,000
	Support costs		13,200	0	0	7,150	0	0	0.0	0	0	0	0	20,350
Total funds requested for approval at this meeting (US\$)	Project costs		0	0	0	0	0	0	100,000	0	0	0	0	100,000
	Support costs		0	0	0	0	0	0	10,600	0	0	0	0	10,600

Secretariat's recommendation:	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of Malawi, UNEP as the lead implementing agency, has submitted to the 77th meeting a request for funding for the third tranche of stage I of the HCFC phase-out management plan (HPMP), at a total cost of US \$110,600, consisting of US \$40,000, plus agency support costs of US \$5,200 for UNEP, and US \$60,000, plus agency support costs of US \$5,400 for UNIDO¹. The submission includes a progress report on the implementation of the second tranche, the verification report on HCFC consumption and the tranche implementation plan for 2017 to 2018.

Report on HCFC consumption

HCFC consumption

2. The Government of Malawi reported a consumption of 8.91 ODP tonnes of HCFC in 2015, which is approximately 8 per cent below the allowable level of 9.72 ODP tonnes for that year. The country uses HCFC mostly for servicing refrigeration and air-conditioning equipment.

3. The 2011-2015 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Malawi (2011-2015 Article 7 data)

HCFC-22	2011	2012	2013	2014	2015	Baseline
Metric tonnes	231.00	228.00	185.00	170.00	162.00	196.36
ODP tonnes	12.71	12.54	10.18	9.35	8.91	10.8

Verification report

4. The verification report confirmed that the Government is implementing a licensing and quota system for HCFC imports and exports and that the total consumption of HCFC for 2015 was 8.98 ODP tonnes, which is 0.07 ODP tonnes slightly higher than that reported under Article 7 of the Montreal Protocol. The discrepancy was identified during the process of validation of the data with the customs authority.

5. The verification concluded that Malawi was in compliance with the Montreal Protocol HCFC reduction schedule and with its Agreement with the Executive Committee.

Country programme (CP) implementation report

6. The Government of Malawi reported HCFC sector consumption data under the 2015 CP implementation report which is consistent with the data reported under Article 7 of the Montreal Protocol.

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

Legal framework

7. The licensing and quota system has been established for all ODS, including HCFCs. The Government has amended the legislation to include the accelerated phase-out schedule for HCFCs and a quota system for HCFCs has been introduced since 2008. The Government of Malawi further adopted Environmental Impact Assessment (EIA) guidelines which also contribute to projects that might use ODS.

¹ As per the letter of 3 October 2016 from the Environmental Affairs Department of Malawi to UNEP.

Refrigeration servicing sector

8. The following activities were implemented:

- (a) Three workshops for 50 Customs Officers on control and identification of ODS and ODS-based equipment including HCFCs and HCFC-based equipment;
- (b) Three workshops for 60 refrigeration technicians on good refrigeration practices, safe handling of hydrocarbon (HC) and servicing of HCFC air-conditioning equipment;
- (c) Procurement and distribution to the retrofit centres of basic equipment (e.g., portable refrigerant recovery machines, vacuum pump, refrigerant identifiers, refillable cylinders), as part of the first tranche implementation plan; and
- (d) Awareness campaigns to promote the regional retrofitting centres and their services.

Project implementation and monitoring unit (PMU)

9. The National Ozone Unit (NOU) recruited a consultant to assist in monitoring the implementation of all the HPMP activities and to collect data.

Level of fund disbursement

10. As of September 2016, of the US \$175,000 so far approved, US \$150,000 had been disbursed (US \$90,000 for UNEP and US \$60,000 for UNIDO). The balance of US \$25,000 will be disbursed by March 2017 (Table 2).

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

Agency	First tranche		Second tranche		Total approved	
	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed
UNEP	60,000	60,000	55,000	30,000	115,000	90,000
UNIDO	60,000	60,000	0	0	60,000	60,000
Total	120,000	120,000	55,000	30,000	175,000	150,000
Disbursement rate (%)	100		55		86	

Implementation plan for the third tranche of the HPMP

11. The following activities will be implemented:

- (a) Three workshops for 65 customs officers and law enforcement agents on control and identification of HCFCs and HCFC-based equipment; strengthening of customs training schools including purchase of three refrigerant identifiers and spares; and dissemination of ODS policy and regulations (UNEP) (US \$15,000);
- (b) Three workshops for 60 participants to assess and review the teaching curricula for refrigeration mechanics courses; three workshops for 60 non-registered refrigeration technicians on good refrigeration practices including safe handling of HC refrigerants (UNEP) (US \$20,000);
- (c) Strengthening of three regional retrofitting centres and academic institutions through the procurement and delivery of HC-based equipment including tools, kits, spare parts and HC-based air-conditioners, and the training of the technical staff. Trainers from the academic institutions will be trained on the installation and maintenance of HC

air-conditioners. If funding permits, a small pilot project for replacement of existing HCFC-based air-conditioners with new HC air-conditioners will be undertaken (UNIDO) (US \$60,000); and

- (d) Monitoring and evaluation of the implementation of HPMP (UNEP) (US \$5,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Report on HCFC consumption

12. In 2013 and 2014, the verified HCFC consumption was lower than that reported under Article 7. However, in 2015, the verified consumption was slightly higher (0.07 ODP tonnes) than that reported under Article 7. The verifier recommended the necessity to ensure that refrigerant identifiers are distributed and Customs officers trained regularly; to establish regular communication and crosschecking on the import permits issued by the NOU and those presented at the Customs entry points; to ensure that copies of issued licenses are used by endorsing actual imports against allocated quotas; to review and reconcile issued quotas and actual imports; and to ensure that the refrigerants are specified before endorsing the importing permits.

13. In addressing these issues, UNEP advised that the collaboration among the NOU, Customs department and importers are being strengthened. The Ministry of Environment and Climate Change has set up a task force for the implementation of all the recommendations in the verification report noting that the Government has already taken necessary steps to address the recommendations related to the establishment of regular communication and crosschecking on the import permits issued by the NOU and those presented at the Customs entry points, and ensuring that copies of issued licenses are used by endorsing actual imports against allocated quotas.

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

Legal framework

14. The Government of Malawi has already issued HCFC import quotas for 2016 at 8.36 ODP tonnes.

Refrigeration servicing sector

15. Due to the change of the ozone officer and the need to open a new account, implementation of activities was delayed. Fifty-five per cent of the second tranche funding has been disbursed. Of the 150 Customs and law enforcement agents and 100 refrigeration servicing technicians to be trained under the second tranche, 50 and 60 have been trained, respectively. The remaining Customs and law enforcement agents will be trained at the various borders, thus reducing the overall training cost (i.e. travel costs, daily subsistence allowance, conference room rentals, etc.). For the remaining technicians, the refrigeration and air-conditioning (RAC) association will organize most of the training workshops in participants' areas to ensure a larger number of technicians participate.

16. The implementation of the incentive programme for commercial and industrial refrigeration end-users under UNIDO's first tranche implementation plan was deferred because of lack of suitable alternatives; consequently, all funds under this tranche have been used for the strengthening of the regional retrofitting centres. However, a small pilot replacement incentive could be envisaged as part of the training on installation and maintenance of HC air-conditioners under UNIDO's second tranche if

there are remaining funds balances. If not, the incentive programme will be deferred to stage II of the HPMP.

17. With regard to the long-term sustainability of the training programmes, UNEP indicated that the Government has strengthened the RAC association over the years and the association has taken up several activities including capacity building for technicians, some training activities outside the HPMP, and ensures that most of the technicians are registered with the association to benefit from such training activities. The Government has also reviewed and updated the training curricula for vocational training colleges to include modules on good refrigeration practices. All the new technicians who graduate from vocational training colleges have been trained on the implementation of the good refrigeration practices and the safe handling of HC refrigerants. In addition, the Customs school is training Customs officers on the implementation of ODS legislation and on the identification and control of ODS imports.

18. In respect of the retrofitting activities to HC refrigerants, UNEP reported that the Government is well aware of the relevant decisions of the Executive Committee². UNEP advised that the Government is not promoting retrofitting of HCFC-based equipment to HC refrigerants outside the HPMP. However, it has embarked on a training campaign, in collaboration with the RAC association, for technicians on safe handling of HC refrigerants. The country has started the process of establishing standards and codes to regulate handling of HC refrigerants.

19. The Government is also promoting awareness activities to ensure that consumers are well informed of the alternative technologies to HCFC-22. Majority of the new air-conditioners being imported recently use HFC-410A refrigerant and very few use HC-290 refrigerant. The alternative technologies that are replacing HCFC-22 in cold rooms and other applications include HFC-404, R407, HFC-134a and HC-600.

Conclusion

20. The Secretariat noted that the country's import licensing and quota system is operational. The verified 2015 consumption levels were below the maximum allowable consumption in the Agreement with the Executive Committee. The planned activities for the HPMP, although experienced some delays, were progressing and 55 per cent of the funds approved for the second tranche have been disbursed. The activities already implemented and those planned under the third tranche will further strengthen the servicing sector and ensure the long term sustainability of the activities.

RECOMMENDATION

21. The Fund Secretariat recommends that the Executive Committee takes note of the progress report on the implementation of the second tranche of stage I of the HCFC phase-out management plan (HPMP) in Malawi, and further recommends blanket approval of the third tranche of stage I of the HPMP for Malawi, and the corresponding 2017-2018 tranche implementation plan, with associated support costs at the funding level shown in the table below, on the understanding:

- (a) UNEP will report on the progress in implementing the recommendations in the verification report in the next tranche submission; and
- (b) That if the Government of Malawi 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

² Decisions 72/17 and 73/34.

associated responsibilities and risks and only in accordance with the relevant standards and protocols:

	Project title	Project funding (US \$)	Support cost (US \$)	Implementing agency
(a)	HCFC phase-out management plan (stage I, third tranche)	40,000	5,200	UNEP
(b)	HCFC phase-out management plan (stage I, third tranche)	60,000	5,400	UNIDO
