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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Seventieth Meeting  
Bangkok, 1-5 July 2013

**PROJECT PROPOSAL: MALAWI**

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)

UNEP/UNIDO

**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**

**Malawi**

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
HCFC phase out plan (Stage I)	UNEP (lead), UNIDO

<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>	Year: 2011	12.7 (ODP tonnes)
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<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>								<b>Year: 2011</b>	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22					12.7				12.7

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009 - 2010 baseline:	10.8	Starting point for sustained aggregate reductions:	n/a
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>			
Already approved:	3.78	Remaining:	7.02

<b>(V) BUSINESS PLAN</b>		<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>
UNEP	ODS phase-out (ODP tonnes)		0.5			0.4		0.4		0.3	1.5
	Funding (US \$)		62,150			45,200		45,200		39,550	192,100
UNIDO	ODS phase-out (ODP tonnes)					0.53					0.53
	Funding (US \$)					65,400					65,400

<b>(VI) PROJECT DATA</b>			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	
Montreal Protocol consumption limits			n/a	n/a	n/a	10.80	10.80	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	10.80	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	0	120,000
		Support costs	5,400	0	0	0	0	0	5,400	0	0	0	0	0	10,800
Funds approved by ExCom (US\$)		Project Costs	120,000	0	0	0	0	0	0	0	0	0	0	120,000	
		Support Costs	13,200	0	0	0	0	0	0	0	0	0	0	0	13,200
Total funds requested for approval at this meeting (US\$)		Project Costs	0	0	0	55,000	0	0	0	0	0	0	0	55,000	
		Support Costs	0	0	0	7,150	0	0	0	0	0	0	0	0	7,150

<b>Secretariat's recommendation:</b>	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 70<sup>th</sup> meeting of the Executive Committee a request for funding for the second tranche of stage I of the HCFC phase-out management plan (HPMP) at a total cost of US \$55,000, plus agency support costs of US \$7,150 for UNEP only. The submission includes a progress report on the implementation of the first tranche of the HPMP, and tranche implementation plans for 2013-2016.

### Background

2. The HPMP for Malawi was approved by the Executive Committee at its 62<sup>nd</sup> meeting to meet the 35 per cent reduction of the HCFC consumption baseline by 1 January 2020 for the joint implementation of UNEP and UNIDO, at a funding level approved in principle of US \$350,000, plus agency support costs of US \$40,700. At this meeting, the Executive Committee also approved the first tranche of stage I of the HPMP, at the amount of US \$133,200, consisting of US \$60,000 plus agency support costs of US \$7,800 for UNEP and US \$60,000 plus agency support costs of US \$5,400 for UNIDO.

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

3. The Government of Malawi has established a licensing and quota system that supports the country's HCFC phase-out activities. This included the control of the import of HCFC-based equipment, as well as the registration of importers and certification of technicians. The quotas for importers are determined by the National Ozone Committee and implemented by the Customs Department in consultation with the National Ozone Unit (NOU). The quota for 2013 has been set at 190 metric tonnes (mt).

4. Training of the trainers and two training workshops for customs officers were conducted to strengthen the national capacity for HCFC import control. A total of 90 customs and other law enforcement officers were trained on the implementation of the licensing and quota system, monitoring imports and enforcing quotas. Refrigerant identifiers were procured and distributed to key entry points of the country.

5. Training of 10 trainers and 92 technicians was conducted on good servicing practices, refrigerant recovery and reuse, retrofit and the use of hydrocarbon refrigerants. The Refrigeration Association certified technicians who were assessed and met the qualifications required for certification including using and servicing equipment of hydrocarbon refrigerant. Codes of practice for technicians using hydrocarbon refrigerant were adopted by the Refrigeration Association for implementation.

6. A workshop was also held to launch the HPMP implementation. Awareness raising activities were conducted for policy makers, customs officers, refrigerant importers, suppliers, technicians and the general public. Equipment and tools were purchased and delivered to the retrofitting centres. Training was provided to 35 refrigeration experts on safe handling, retrofitting and working with hydrocarbon refrigerant. Following on the training, 12 refrigeration and air-conditioning units were retrofitted to hydrocarbon.

7. As of April 2013, total funding of US \$120,000 approved for the first tranche had all been disbursed or obligated. A financial report of the activities conducted in the first tranche was submitted to the Secretariat and supports the full usage of the funds.

Annual plans for the second tranche of the HPMP

8. The activities to be implemented between 2013 and 2016 are listed below:
- (a) Further training of 100 refrigeration servicing technicians on good servicing practices, refrigerant recovery and recycling, safe handling and working with hydrocarbon refrigerant;
  - (b) Further training of 150 customs officers on HCFC import control and on identification of HCFC refrigerants and blends;
  - (c) Integration of awareness raising activities into the various components of the HPMP implementation, and conducting awareness raising for the general public under the institutional strengthening project;
  - (d) Strengthening the regional retrofitting centres, and implementing an incentive programme for commercial and industrial refrigeration end users; and
  - (e) Monitoring and evaluation, including conducting an annual performance audit, assisting in an independent verification if required, and producing an annual progress report and implementation plan.

**SECRETARIAT'S COMMENTS AND RECOMMENDATION**

**COMMENTS**

Operational HCFC licensing system

9. In line with decision 63/17 confirmation has been received from the Government of Malawi indicating that an enforceable national system of licensing and quotas for HCFC imports and exports is in place and that the Government is confident of meeting the Montreal Protocol control targets for HCFC phase-out for the duration of the Agreement.

HCFC consumption

10. The HCFC baseline for compliance has been established at 10.8 ODP tonnes, based on the actual consumption reported under Article 7 of the Montreal Protocol for 2009 and 2010. The established baseline is 1.9 ODP tonnes higher than that of 8.9 ODP tonnes estimated at the time when the HPMP for Malawi was approved. However this has no impact on the funding level approved at the 62<sup>nd</sup> meeting. The starting point will be adjusted based on the established baseline.

Technical issues

11. In responding to a question from the Secretariat with regard to the meaningful pre-conditions to be met for retrofitting and using hydrocarbons as refrigerants, UNEP indicated that currently the price of HCFC-22 is US \$10.2/kg while that for the hydrocarbon HC-290 is US \$15.3/kg and HC-600 is US \$15/kg. Taking into account the fact that the charge amount of HC-290 for identical refrigeration systems is usually 40 per cent to 50 per cent less than that of HCFC-22, the use of hydrocarbon refrigerant

seems more economically favourable to end-users. The NOU is also working with the Ministry of Finance on waving the import duties for those HCFC alternatives with low global warming potential (GWP).

12. The Secretariat noticed that the licensing and quota system in Malawi already included controls on HCFC-based equipment, and a ban on import of HCFC-based equipment will be implemented from 2015. These measures will limit the introduction of new HCFC-based equipment to the market. With regard to the safety use of the flammable refrigerants, the progress report indicated (paragraph 5) that codes of practice for technicians using hydrocarbon refrigerants had been adopted. Only those technicians who received training and a certificate are allowed to work with hydrocarbon refrigerants. Given the HPMP was approved with the strategy of establishing safe use of hydrocarbon and natural refrigerants to maximise climate benefit, the promotion of hydrocarbon refrigerant appears to be a reasonable choice.

13. The Secretariat noted that the implementation of the first tranche has been satisfactory. The Government of Malawi has integrated HCFC related issues into the curriculum of a professional training institute and the certification of technicians is also being implemented. This arrangement will enable the training to be sustainable. The quota system is operational and will allow the Government to meet the Montreal Protocol control measures for the phase-out of HCFCs from 2013 onwards.

#### Revision to the Agreement of the HPMP

14. Stage I of the HPMP for Malawi was approved prior to the establishment of the HCFC baseline for compliance. Accordingly, in approving the HPMP, the Executive Committee requested the Secretariat to, *inter alia* update Appendix 2-A (“The targets, and funding”) to the Agreement with the figures for the maximum allowable consumption, and to notify the Committee of the resulting levels accordingly (decision 62/45(d)). Based on the data reported by the Government of Malawi under Article 7 and its revised phase-out schedule, the relevant paragraphs of the Agreement have been updated, and a new paragraph has been added to indicate that the updated Agreement supersedes the original Agreement reached at the 62<sup>nd</sup> meeting, as shown in Annex I to this document. The full revised Agreement will be appended to the final report of the 70<sup>th</sup> meeting.

#### **RECOMMENDATION**

15. 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) for Malawi;
- (b) Notes that the Fund Secretariat had updated paragraph 1, Appendices 1-A and 2-A of the Agreement between the Government of Malawi and the Executive Committee, based on the established HCFC baseline for compliance, and that a new paragraph 16 had been added to indicate that the updated Agreement superseded the Agreement reached at the 62<sup>nd</sup> meeting, as contained in Annex I to the present document; and
- (c) Further notes that the revised starting point for sustained aggregate reduction in HCFC consumption was 10.8 ODP tonnes, calculated using the consumption of 8.6 ODP tonnes and 13.0 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol.

16. The Fund Secretariat further recommends blanket approval of the second tranche of stage I of the HPMP for Malawi, and the corresponding 2013 to 2016 tranche implementation plans, 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)	55,000	7,150	UNEP

**Annex I**

**TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF MALAWI 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 Malawi (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 **7.02** 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 Malawi and the Executive Committee at the 62<sup>nd</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>10.80</b>

**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	n/a	<b>10.80</b>	<b>10.80</b>	<b>9.72</b>	<b>9.72</b>	<b>9.72</b>	<b>9.72</b>	<b>9.72</b>	<b>7.02</b>	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	n/a	<b>10.80</b>	<b>10.80</b>	<b>9.72</b>	<b>9.72</b>	<b>9.72</b>	<b>9.72</b>	<b>9.72</b>	<b>7.02</b>	n/a
2.1	Lead IA (UNEP) agreed funding (US \$)	60,000	0	0	55,000	0	0	40,000	0	40000	0	35000	230,000
2.2	Support costs for Lead IA (US \$)	7,800	0	0	7,150	0	0	5,200	0	5200	0	4550	29,900
2.3	Cooperating IA (UNIDO) agreed funding (US \$)	60,000	0	0	0	0	0	60000	0	0	0	0	120,000
2.4	Support costs for Cooperating IA (US \$)	5,400	0	0	0	0	0	5400	0	0	0	0	10,800
3.1	Total agreed funding (US \$)	120,000	0	0	55,000	0	0	100,000	0	40000	0	35000	350,000
3.2	Total support costs (US \$)	13,200	0	0	7,150	0	0	10,600	0	5200	0	4550	40,700
3.3	Total agreed costs (US \$)	133,200	0	0	62,150	0	0	110,600	0	45200	0	39550	390,700
4.1.1	Total phase-out of HCFC-22 under this agreement (ODP tonnes)												<b>3.78</b>
4.1.2	Phase-out of HCFC-22 in previously approved projects (ODP tonnes)												0.0
4.1.3	Remaining eligible consumption for HCFCs												<b>7.02</b>

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