



**United Nations
Environment
Programme**

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/72/32
14 April 2014

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-second Meeting
Montreal, 12-16 May 2014

PROJECT PROPOSAL: MAURITIUS

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

Phase-out

- HCFC phase-out management plan (second tranche)

Germany

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Mauritius

(I) PROJECT TITLE	AGENCY
HCFC phase-out management plan (second tranche)	Germany (lead)

(II) LATEST ARTICLE 7 DATA	Year: 2012	7.14 (ODP tonnes)
-----------------------------------	------------	-------------------

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP)								Year: 2012	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123									
HCFC-124									
HCFC-141b					0.2				0.2
HCFC-142b									
HCFC-22					6.9				6.9

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	8.0	Starting point for sustained aggregate reductions:	8.0
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	8.0	Remaining:	0.0

(V) BUSINESS PLAN			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Germany	ODS phase-out (ODP tonnes)					1.3	0.0	0.0	3.7	0.0	0.0	1.9	6.9
	Funding (US \$)					147,168	0	0	400,680	0	0	208,656	756,504

(VI) PROJECT DATA*			2011	2012	2013	2014	2015-2016	2017	2018-2019	2020	2021	2022	2023	2024	2025	2030	Total
Montreal Protocol consumption limits (estimate)			n/a	n/a	8.0	8.0	7.20	7.20	7.20	5.20	5.20	5.20	5.20	5.20	2.80	0.20	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	8.0	8.0	7.14	7.14	7.14	4.00	4.00	4.00	1.57	1.57	0.16	0.0	
Revised funding (US\$)	Germany	Project costs	157,050			131,400		332,750		161,300			67,500			100,000	950,000
		Support costs	18,846			15,851		40,140		19,458			8,143			12,062	114,500
Funds approved by ExCom (US \$)		Project costs	157,050			0		0		0			0			0	157,050
		Support costs	18,846			0		0		0			0			0	18,846
Total funds requested for approval at this meeting (US\$)		Project costs				131,400											131,400
		Support costs				15,851											

*The figures in this table correspond to the draft updated agreement submitted to the 72nd meeting.

Secretariat's recommendation:	Blanket approval
--------------------------------------	------------------

PROJECT DESCRIPTION

1. On behalf of the Government of Mauritius, the Government of Germany as the designated implementing agency, has submitted to the 72nd meeting of the Executive Committee a request for funding for the second tranche of the HCFC phase-out management plan (HPMP)¹ at the amount of US \$131,400, plus agency support costs of US \$15,851. The submission includes a progress report on the implementation of the first tranche of the HPMP and the tranche implementation plan for 2014 to 2017.

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

2. The following activities had been implemented during the first tranche of the HPMP: purchase of three identifiers for customs and port authorities; training of 15 trainers from the Government, university and industry on ammonia systems; organizing a regional training of trainers from five African countries on safe handling of hydrocarbons in air-conditioning systems; procurement of a CO₂ demonstration unit for training on CO₂ cascade system for refrigeration; purchase of six sets of hydrocarbon (R-290)-based air-conditioning units and 20 servicing kits (five sets of R-290-based air-conditioning units and six servicing kits already distributed to training institutions); revision of the curriculum to include safe handling of hydrocarbons; and sensitisation and awareness activities under Government's resources.

3. The National Ozone Unit (NOU) has been overseeing the implementation of the HPMP with the assistance of the Government of Germany.

Status of funds disbursed

4. As of February 2014, of the US \$157,050 approved for the first tranche, US \$154,725 (98.5 per cent) had been disbursed. The balance of US \$2,325 (1.5 per cent) is being disbursed in 2014.

Annual plans for the second tranche of the HPMP

5. The main activities to be implemented during the second tranche include:

- (a) Organizing a training workshop with customs, ports and other enforcement agencies on the role of the enforcement agencies, and means by which enforcement can be made more effective and distribution of the three identifiers procured under the first tranche to the main entry points of the ports (US \$5,000);
- (b) Training of about 120 technicians from the refrigeration and air-conditioning sector (US \$7,835);
- (c) Installation of a CO₂ cascade system (US \$88,462), and training of selected trainers and staff from the industry on the system (using funds from the first tranche);
- (d) Purchase and distribution of 10 recovery units to the industry (US \$10,000); and
- (e) Monitoring and reporting (US \$20,103).

¹ The HPMP of Mauritius was approved by the Executive Committee at its 63rd meeting to reduce HCFC consumption by 97.5 per cent and 100 per cent of the baseline by 2025 and 2030 respectively.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

HCFC imports licensing and quota system

6. 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 is in place and that the system is capable of ensuring compliance with the Montreal Protocol phase-out schedule.

7. The NOU is in charge of the review and clearance of the requests for imports of HCFCs and recommends the imports to the Ministry of Health (Dangerous Chemical Control Board). The HCFC import quota for 2014 is 7.9 ODP tonnes.

HCFC consumption

8. The HCFC baseline for compliance has been established at 8.0 ODP tonnes, based on the actual consumption reported under Article 7 of the Montreal Protocol as shown in Table 1. The established baseline is 2.2 ODP tonnes lower than the estimated baseline of 10.2 ODP tonnes in the HPMP submitted to the 63rd meeting. For 2013, Mauritius indicated in the tranche request a consumption of 5.5 ODP tonnes of HCFCs which is 31 per cent below the maximum allowable consumption of 8.0 ODP tonnes for that year.

Table 1: HCFC consumption in Mauritius (2009 – 2012 Article 7; 2013 estimated)

Year	HCFC consumption (ODP tonnes)				HCFC consumption (metric tonnes)			
	All HCFCs	HCFC-22	HCFC-141b	HCFC-123	All HCFCs	HCFC-22	HCFC-141b	HCFC-123
2009	10.7	10.6	0.1	0	193.9	192.1	1.4	0.4
2010	5.3	5.2	0.1	0	96.11	94.41	1.2	0.5
2011	8.8	8.5	0.3	0	157.4	154.1	3.1	0.2
2012	7.1	6.9	0.2	-	127.84	125.94	1.9	-
2013	5.5*	n/a	n/a	n/a	n/a	n/a	n/a	n/a

*Estimated.

Technical issues

9. The data of HCFCs shows a high level of imports in 2011 and 2012 resulting from the industry shift to non-HCFC alternatives, it should be highlighted that since 2011, the industry was aware of the ban on import of HCFC-based equipment in 2013. The Secretariat discussed the technologies that have substituted HCFC-22 and the country's policy to promote the use of more climate-friendly alternatives to HCFCs. The Government of Germany advised that HFCs are currently the main alternative being used. However, a supply chain is being developed for R-290, which is being used in air-conditioning systems. Moreover, the import of R-290 air-conditioning-based systems, ammonia and CO₂ is supported by the Government of Mauritius with the view of reducing HFC uses.

10. While the introduction of CO₂ could be an interesting initiative that could potentially reduce the introduction of high global-warming-potential (GWP) HFC-based installations in supermarkets, so far only few Article 5 countries have opted for a similar initiative due to concerns of the technology performance in high-ambient temperatures; complexity to handle; and lack of availability of know-how, compressors and related components. On this basis, the Secretariat requested additional information on whether this activity would be limited to training because the technology is already in the country, or if there was broader initiative to facilitate the introduction of this technology in the country. The Government of Germany explained that beyond the training aspect, this activity will enable Mauritius to see how CO₂ systems operate in its local weather conditions. The data collected from CO₂ supermarket project in South Africa, with similar weather conditions as Mauritius, revealed an energy savings of 15 to 20 per cent. The success of this activity will foster the shift in the local market and particularly in

supermarkets and other applications including fisheries. Moreover, this activity was included in the HPMP to respond to a local supermarket request to demonstrate the use of this technology. It is expected that the supermarket chain will convert, with its own resources, its equipment to CO₂, which is considered as an acceptable alternative in Mauritius.

Revision to the HPMP Agreement

11. The HPMP for Mauritius was approved at the 63rd meeting, prior to the establishment of its HCFC baseline for compliance. At the time of the approval of the HPMP, the Executive Committee requested the Secretariat, “once the baseline data were known, to update Appendix 2-A to the Agreement to include the figures for maximum allowable consumption, and to notify the Executive Committee of the resulting change in the levels of maximum allowable consumption and of any potential related impact on the eligible funding level, with any adjustments needed being made when the next tranche was submitted” (decision 63/45(d)).

12. The revised baseline for compliance of 8.0 ODP tonnes results in a change in funding eligibility. Consequently, Mauritius’ total funding will be reduced from US \$1,000,000 to US \$950,000 (excluding support costs) in line with decisions 60/44(f)(xii) and 62/10. The relevant paragraph and Appendices of the Agreement have been updated, and a new paragraph has been added to indicate that the updated Agreement supersedes that reached at the 63rd meeting, as shown in Annex I to the present document. The full revised Agreement will be appended to the final report of the 72nd meeting.

13. The Government of Germany noted that although the Government of Mauritius had committed to an early phase-out of HCFCs and made significant efforts to reduce its HCFC consumption level in the recent past, the level of funding of its HPMP has been reduced.

Conclusion

14. The Secretariat notes that an enforceable system of licensing and quotas for HCFC imports is in place. The estimated consumption in 2013 is already 31 per cent below the allowable consumption under the Montreal Protocol. The HPMP is progressing. Under the first tranche, Mauritius focussed on the training of trainers and the procurement and distribution of equipment to local training institutes for the implementation of the training programmes on natural refrigerants, ammonia, hydrocarbons and CO₂. Additional activities proposed with the second tranche, including technician training and the procurement and distribution of additional equipment, will further strengthen the servicing sector. Several supermarkets will introduce the CO₂ technology, with their own resources if proven technically feasible.

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 the HCFC phase-out management plan (HPMP) for Mauritius;
 - (b) Notes that the Fund Secretariat had updated paragraph 1, Appendices 1-A and 2-A of the Agreement between the Government of Mauritius and the Executive Committee, based on the established HCFC baseline for compliance and the revised funding level, and that a new paragraph 16 had been added to indicate that the updated Agreement superseded that reached at the 63rd 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 8.0 ODP tonnes, calculated using actual consumption of 10.7 ODP tonnes and 5.3 tonnes reported for 2009 and 2010, respectively, under Article 7 of the

Montreal Protocol, and that the revised funding level for the HPMP for Mauritius was US \$950,000, plus agency support costs, in accordance with decisions 60/44(f)(xii) and 62/10.

16. The Fund Secretariat further recommends blanket approval of the second tranche of the HPMP for Mauritius, and the corresponding 2014-2017 tranche implementation plans, with associated support costs at the funding level shown in the table below:

Project title	Project funding (US \$)	Support cost (US \$)	Implementing agency
HCFC phase-out management plan (second tranche)	131,400	15,851	Germany

Annex I

TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF MAURITIUS 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 Mauritius (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 **0.16 ODP** tonne prior to 1 January 2025 and zero ODP tonne prior to 1 January 2030 in compliance with Montreal Protocol schedules.

16. This updated Agreement supersedes the Agreement reached between the Government of Mauritius and the Executive Committee at the 63rd meeting of the Executive Committee.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	7.87
HCFC-141b	C	I	0.13
Total			8.00

APPENDIX 2-A: THE TARGETS, AND FUNDING

		2011	2013	2014	2015	2017	2020	2023	2025	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)		8.00	8.00	7.20	7.20	5.20	5.20	2.80	0.20	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)		8.00	8.00	7.14	7.14	4.00	1.57	0.16	0	n/a
2.1	Lead IA Germany agreed funding (US \$)	157,050		131,400		332,750	161,300	67,500		100,000	950,000
2.2	Support costs for Lead IA (US \$)	18,846	0	15,851	0	40,140	19,458	8,142	0	12,063	114,500
3.1	Total agreed funding (US \$)	157,050		131,400		332,750	161,300	67,500		100,000	950,000
3.2	Total support cost (US \$)	18,846	0	15,851	0	40,140	19,458	8,142	0	12,063	114,500
3.3	Total agreed costs (US \$)	175,896	0	147,251	0	372,890	180,758	75,642	0	112,063	1,064,500
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this agreement (ODP tonnes)										7.87
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)										0
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)										0
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this agreement (ODP tonnes)										0.13
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)										0
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)										0