



**United Nations
Environment
Programme**

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/75/55
19 October 2015

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-fifth Meeting
Montreal, 16-20 November 2015

PROJECT PROPOSAL: MALDIVES

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

Phase-out

- HCFC phase-out management plan (third tranche) UNEP and UNDP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Maldives

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase out plan	UNDP, UNEP (lead)	60 th	100 per cent by 2020

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2014	3.32 (ODP tonnes)
--	------------	-------------------

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2014	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22					3.3				3.32

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	4.6	Starting point for sustained aggregate reductions:	3.7
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	3.6	Remaining:	0

(V) BUSINESS PLAN		2015	2016	2017	Total
UNEP	ODS phase-out (ODP tonnes)	0.3	0	0.2	0.5
	Funding (US \$)	113,746	0	56,500	170,246

(VI) PROJECT DATA			2010	2011-2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits			n/a	n/a	4.6	4.6	4.1	4.1	4.1	4.1	4.1	2.9	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	3.3	3.3	3.0	2.4	2.4	1.2	1.2	0.1	n/a
Agreed funding (US\$)	UNDP	Project costs	400,000	0	20,000	0	0	0	0	0	0	0	420,000
		Support costs	30,000	0	1,500	0	0	0	0	0	0	0	31,500
	UNEP	Project costs	355,940	0	173,400	0	100,660	0	50,000	0	0	0	680,000
		Support costs	46,272	0	22,542	0	13,086	0	6,500	0	0	0	88,400
Funds approved by ExCom (US\$)	Project costs	755,940	0	193,400	0	0	0	0	0	0	0	0	949,340
	Support costs	76,272	0	24,042	0	0	0	0	0	0	0	0	100,314
Total funds requested for approval at this meeting (US\$)	Project costs	0	0	0	0	100,660	0	0	0	0	0	0	100,660
	Support costs	0	0	0	0	13,086	0	0	0	0	0	0	13,086

Secretariat's recommendation:	Individual consideration
--------------------------------------	--------------------------

PROJECT DESCRIPTION

1. On behalf of the Government of Maldives, UNEP as the lead implementing agency, has submitted to the 75th meeting a request for funding for the third tranche of the HCFC phase-out management plan (HPMP) at the amount of US \$100,660, plus agency support costs of US \$13,086 for UNEP only. 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 2016 to 2017.

Report on HCFC consumption

HCFC consumption

2. The Government of Maldives reported a consumption of 3.32 ODP tonnes of HCFC in 2014. The 2010-2014 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Maldives (2010-2014 Article 7 data)

HCFC	2010	2011	2012	2013	2014	2015*	Baseline
Metric tonnes							
HCFC-22	49.1	66.65	67.00	57.94	60.28	44.50	70.2
HCFC-141b	12.1	0	0	0	0	0	6.2
Total (mt)	61.2	66.65	67.00	57.94	60.28	44.50	76.4
ODP tonnes							
HCFC-22	2.7	3.67	3.64	3.19	3.32	2.45	3.9
HCFC-141b	1.3	0	0	0	0	0	0.7
Total (ODP tonnes)	4.0	3.67	3.64	3.19	3.32	2.45	4.6

*Estimate as at September 2015 as submitted by the country.

3. The 2014 HCFC consumption (3.32 ODP tonnes) reported under Article 7 is approximately 28 per cent lower than its baseline consumption (4.6 ODP tonnes) and equal to the maximum allowable consumption for that year. As of 2011, there has been no consumption of HCFC-141b; this has been associated with strict regulations on imports. In accordance with its Agreement with the Executive Committee, the Government of Maldives agreed to reduce its HCFC consumption baseline of 4.6 ODP tonnes to 3.70 ODP tonnes. The estimated consumption reported by the country, based on the quotas issued for 2015 of 2.95 ODP tonnes, was 2.45 ODP tonnes as of September 2015.

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 HCFCs for 2014 (3.32 ODP tonnes) was consistent with its Agreement with the Executive Committee.

Country programme (CP) implementation report

5. The Government reported HCFC sector consumption data under the 2014 CP implementation report which is consistent with the data reported under Article 7.

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

Legal and regulatory framework and capacity building

6. The HCFC licensing and quota system has been operational since 2011. The Government sets the HCFC import quota lower than the maximum allowable consumption under the Montreal Protocol to enable accelerated phase-out in accordance with its Agreement with the Executive Committee.

7. Tax incentives and disincentives on the import of non-HCFC equipment and refrigerants were approved in 2014 through the amendment to the import/export act. Under this act, a five per cent reduction in tax on import and/or purchase of ammonia (and other low-global warming potential (GWP) alternative refrigerants) will be implemented while import taxes for HCFCs and blends will be increased 100 per cent of its current rate.

8. The ban on import of HCFC-based equipment is currently awaiting final approval by the Parliament and will be implemented in December 2015.

9. Four training sessions on capacity building for 122 enforcement officers were conducted in 2013 and 2014. These trainings emphasised the importance of mandatory reporting requirement to enable customs officers to cross check and verify actual imports against quotas. Six portable refrigerant identifiers were also provided to the Maldives Customs Office.

Refrigeration servicing sector

10. Three training workshops on good service practices for 45 refrigeration and air-conditioning (RAC) technicians in the tourism and fisheries sectors were held between 2013 and 2014. The recovery and reclamation programme continued in the second tranche, where 36 mechanics from 19 service workshops were trained; and recovery units were procured and distributed to technicians.

Technical assistance for the servicing sector

11. Incentives to convert from HCFC-22 to R-438A (a refrigerant blend of HFCs with a global warming potential (GWP) of 2,265) were provided to five enterprises in the fisheries sector, two of which have been converted. Consultations continued with key stakeholders focusing on the best technology options for retrofitting existing equipment both for fishing vessels and on-shore packing operations.

Project implementation and monitoring unit (PMU)

12. Project implementation and monitoring unit was managed by the national ozone unit (NOU) which operates under the Ministry of Environment and Energy (MEE). The PMU is responsible for the implementation of country programmes and interaction with stakeholders on project implementation and information outreach.

13. Awareness raising activities undertaken included a workshop on the HCFC phase-out schedule and HCFC-free technologies in February 2013; distribution of two booklets on environmental law and regulations in the local language. The first national Refrigeration and Air-Conditioning Association of Maldives was established; and a recovery and reclamation centre was launched.

Level of fund disbursement

14. As of August 2015, of the US \$949,340 so far approved, US \$653,242 had been disbursed (US \$412,527 for UNEP and US \$240,670 for UNDP). The balance of US \$296,098 will be disbursed in 2016 (Table 2).

Table 2. Financial report of the HPMP for Maldives (US \$)

Agency	First tranche		Second tranche		Total approved	
	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed
UNEP	355,940	350,738	173,400	61,834	529,340	412,572
UNDP	400,000	240,670	20,000	0	420,000	240,670
Total	755,940	591,408	193,400	61,834	949,340	653,242
Disbursement rate (%)	78		32		69	

Implementation plan for the third tranche of the HPMP

15. The third funding tranche of the HPMP will be implemented between January 2016 and December 2017, and the following activities will be undertaken:

- (a) HCFC phase-out policies and enforcement (UNEP) (US \$40,660);
 - (i) Two one-day training workshop on new regulations for 30 law enforcement officers (US \$15,000);
 - (ii) Three two-day training workshops on new regulations in the servicing sector for 20-30 technicians (US \$17,660);
 - (iii) Implementation of an electronic data collection platform for monitoring ODS/HCFC imports (US \$8,000);
- (b) Plan for gradual reduction of HCFC consumption (UNEP) (US \$30,000) with the following activities:
 - (i) Three train-the-trainer workshops for 45 trainers (US \$10,000);
 - (ii) Two in-house training for fishing vessels and tourist resorts for 40 participants (US \$11,000);
 - (iii) Initiation of a technician certification programme (US \$9,000);
- (c) Enhanced awareness and outreach, including awareness campaign and print materials (UNEP) (US \$20,000); and
- (d) Project coordination monitoring and management (UNEP) (US \$10,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION**COMMENTS**Progress report on the implementation of the second tranche of the HPMP*Legal and regulatory framework and capacity building*

16. The Government has already issued HCFC import quotas for 2015 at 53.6 mt (2.95 ODP tonnes), which is 35 per cent lower than the Montreal Protocol allowable consumption and 20 per cent below the maximum allowable consumption under the Agreement.

17. UNEP explained that the delay in the enforcement of the ban on imports of HCFC-based equipment, initially planned for 2014, was due to the need to develop a comprehensive Ozone Protection Act to better support the country's accelerated phase-out plan, rather than one that would just ban imports.

Refrigeration servicing sector

18. The long-term sustainability of the training programme for refrigeration technicians is supported by the establishment of the country's first refrigeration association and the agreement with the national university to design and help in training delivery.

19. The Secretariat noted the country's efforts, through UNDP's assistance, to facilitate the implementation of the pilot retrofit incentive for the fisheries sector. With regard to the two enterprises that completed retrofits, the Secretariat sought clarification on the reasons for selecting R-438A, a refrigerant with a GWP of 2,265 as compared to 1,810 for HCFC-22; how the Executive Committee's decisions related to retrofitting (decisions 72/17¹ and 73/34²) had been considered; what equipment was retrofitted; and why these activities were implemented when the Technology and Economic Assessment Panel (TEAP) had indicated that there is a lack of low-GWP retrofit and replacement alternatives for these specific applications.

20. In responding, UNDP explained as follows:

- (a) The criteria used to select R-438A as the alternate refrigerant was based on an assessment of the fisheries sector and included the remaining lifespan of the equipment, the leak rate, cost of retrofit including cost of alternative refrigerants, and current and future availability, flammability and compatibility with the equipment;
- (b) The regulatory and operational safety requirements for the sector did not allow the use of flammable refrigerants; therefore, there is no risk of retrofitting equipment with these alternatives;
- (c) Maldives faced a major challenge to reduce the consumption of HCFC-22 in the fisheries sector which is an important part of the country's economy, and constitutes 20 per cent of its overall HCFC consumption. Further to consultations with technical experts and with the industry between 2010 and 2013, R-438A was selected as an interim solution, noting that the industry has agreed to adopt a low-GWP option when it becomes commercially available and technically feasible, at their own cost; and
- (d) The Government of Maldives is conscious of its approach to phase-out HCFC and not have an impact on its low carbon growth path, and is therefore, taking other measures to reduce the climate impact of HCFC phase-out where feasible. Delaying the retrofit of equipment used in the fisheries sector put the country at risk of not complying with its HCFC phase-out targets, and therefore, the Government agreed to introduce R-438A as an interim refrigerant for the industry.

Conclusion

21. The Secretariat notes that the implementation of the accelerated phase-out of HCFCs for Maldives is progressing. The activities in the refrigeration servicing sector continue to be implemented as planned; assistance is being provided to the fisheries sector; the sustainability of the training of technicians and customs officers will be based on institutional arrangements finalised after the completion of the first two tranches. In view of activities underway; the fact that the 2014 reported and verified consumption of HCFCs (3.32 ODP tonnes) is equal to the maximum allowable consumption (i.e., 10 per cent below the country's starting point of 3.7 ODP tonnes); the operational licensing and quota system in place; the progress achieved during the second tranche for the servicing sector; and the overall level of

¹ To include in the approval of HPMPs, tranches, projects or activities that proposed the retrofit of HCFC-based refrigeration and air-conditioning equipment to flammable or toxic refrigerants that the Executive Committee notes that, if the country engages in retrofitting HCFC-based refrigeration and air-conditioning equipment to flammable or toxic refrigerants and associated servicing, it does so on the understanding that they assume all associated responsibilities and risks.

² If a country were to decide, after taking into account decision 72/17, to proceed with retrofits that used flammable substances in equipment originally designed for non-flammable substances, it should be done only in accordance with the relevant standards and protocols.

disbursement (69 per cent), the Secretariat recommends approval of the funding for the third tranche. The request is submitted for individual consideration due to the retrofit of equipment to a refrigerant with a higher GWP than HCFC-22.

RECOMENDATION

22. The Executive Committee may wish to consider:

- (a) Noting:
 - (i) The progress report on the implementation of the second tranche of the HCFC phase-out management plan of (HPMP) in Maldives;
 - (ii) That equipment used by some enterprises in the fisheries sector have been retrofitted to HFC-438A as an alternative refrigerant on an interim basis;
 - (iii) That these enterprises will convert to a low-global warming potential (GWP) alternative when commercially available and technically feasible at their own cost;
 - (b) Requesting UNDP to continue assisting the Government of Maldives during implementation of its HPMP in identifying low-GWP alternatives for the fisheries sector;
 - (c) Requesting UNDP to report to the Executive Committee on the status of use of the interim technology selected by the Government at each meeting until another technology with a low-GWP has been fully introduced; and
 - (d) Approving the third tranche of the HPMP for Maldives, and the corresponding 2016-2017 tranche implementation plan, in the amount of US \$100,660 plus agency support costs of US \$13,086 for UNEP.
-