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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninetieth Meeting
Montreal, 20-23 June 2022
Items 9(a) and (d) of the provisional agenda¹

PROJECT PROPOSAL: CAMBODIA

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

Phase-out

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

¹ UNEP/OzL.Pro/ExCom/90/1

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Cambodia

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out management plan	UNDP, UNEP (lead)	61 st	Total by 2035

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2020	6.65 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2021	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22	0.00	0.00	0.00	0.00	5.48	0.00	0.00	0.00	5.48
HCFC-123	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HCFC-141b in imported pre-blended polyol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	15.0	Starting point for sustained aggregate reductions:	15.0
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	15.0	Remaining:	0

(V) BUSINESS PLAN		2022	2023	2024	Total
UNEP	ODS phase-out (ODP tonnes)	1.90	0.00	0.00	1.90
	Funding (US \$)	226,000	0	0	226,000
UNDP	ODS phase-out (ODP tonnes)	0.00	0.00	0.00	0.00
	Funding (US \$)	0	0	0	0

(VI) PROJECT DATA			2010	2011-2012	2013	2014	2015	2016	2017-2018	2019	2020-2021	2022	2023-2024	2025	2026-2029	2030	2031	Total
Montreal Protocol consumption limits			n/a	n/a	15.0	15.0	13.5	13.5	13.5	13.5	9.75	9.75	9.75	4.88	4.88	0.38	0.38	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	15.0	15.0	13.5	13.5	13.5	13.5	9.75	9.75	9.75	4.88	4.88	0.38	0.38	n/a
Agreed funding (US \$)	UNDP	Project costs	200,000	0	200,000	0	0	100,000	0	150,000	0	0	0	0	0	0	0	650,000
		Support costs	15,000	0	15,000	0	0	7,500	0	11,250	0	0	0	0	0	0	0	48,750
	UNEP	Project costs	150,000	0	100,000	0	0	150,000	0	100,000	0	200,000	0	200,000	0	0	50,000	950,000
		Support costs	19,500	0	13,000	0	0	19,500	0	13,000	0	26,000	0	26,000	0	0	6,500	123,500
Funds approved by ExCom (US \$)		Project costs	350,000	0	300,000	0	0	250,000	0	250,000	0	0	0	0	0	0	0	1,150,000
		Support costs	34,500	0	28,000	0	0	27,000	0	24,250	0	0	0	0	0	0	0	113,750
Total funds requested for approval at this meeting (US \$)		Project costs	0	0	0	0	0	0	0	0	0	200,000	0	0	0	0	0	200,000
		Support costs	0	0	0	0	0	0	0	0	0	26,000	0	0	0	0	0	26,000

Secretariat's recommendation:	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of Cambodia, UNEP as the lead implementing agency has submitted a request for funding for the fifth tranche of the HCFC phase-out management plan (HPMP), at the amount of US \$200,000, plus agency support costs of US \$26,000 for UNEP only.² The submission includes a progress report on the implementation of the fourth tranche, the verification report on HCFC consumption for 2019 to 2021 and the tranche implementation plan for 2022 to 2025.

Report on HCFC consumption

2. The Government of Cambodia reported under country programme (CP) implementation report a consumption of 5.48 ODP tonnes of HCFC in 2021, which is 63 per cent below the HCFC baseline for compliance. The 2017-2021 HCFC consumption is shown in Table 1.

Table 1. HCFC consumption in Cambodia (2017-2021 Article 7 data)

HCFC	2017	2018	2019	2020	2021*	Baseline
Metric tonnes						
HCFC-22	84.28	90.53	143.96	120.95	99.63	388.8
HCFC-123	0.00	0.00	8.17	0.00	0.00	0.0
Total (mt)	84.28	90.53	152.13	120.95	99.63	388.8
HCFC-141b in imported pre-blended polyols*	8.40	28.64	2.64**	0.00	0.00	-
ODP tonnes						
HCFC-22	4.64	4.98	7.92	6.65	5.48	15.0
HCFC-123	0.00	0.00	0.16	0.00	0.00	0.0
Total (ODP tonnes)	4.64	4.98	8.08	6.65	5.48	15.0
HCFC-141b in imported pre-blended polyols*	0.92	3.15	0.29**	0.00	0.00	-

* CP data.

** Data from the verification report as this had not been reported in the CP data for that year; the CP data will be revised to account for this.

3. HCFC-22 consumption in Cambodia, while within the compliance targets of the Montreal Protocol and the Agreement with the Executive Committee had been fluctuating from 2017-2021; the reduction in 2021 is attributed to the implementation of HPMP activities and the import of non-HCFC-based air-conditioning equipment. The increasing consumption of HCFC-22 from 2017 to 2019 was due to the rapid expansion in the construction sector as some condominiums installed HCFC-22 air-conditioners (AC). To address this issue Cambodia limited the import of HCFC-22 based AC units starting in 2019 and by consequence a decrease in consumption is shown in 2020 and 2021.

4. Consumption of HCFC-141b in imported pre-blended polyols was reported in 2017 and 2018 due to one enterprise manufacturing sandwich panels. The enterprise converted to cyclopentane technology on its own in March 2019. A small quantity of HCFC-141b in imported pre-blended polyols was also imported in 2019; although a regulation to ban HCFC-141b in imported pre-blended polyols has not been introduced, the Government of Cambodia has decided not to issue any further import licenses for pre-blended polyols containing HCFC-141b from 2020.

5. The consumption of HCFC-123 reported in 2019 was used in the servicing of refrigeration and air-conditioning (RAC) equipment. Although a quota for the import of this substance was issued to one importer in 2020 and 2021, there were no imports for these years.

² As per the letter of 11 April 2022 from the Directorate of Environmental Protection of Cambodia to UNEP.

CP implementation report

6. The Government of Cambodia reported HCFC sector consumption data under the 2020 CP implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol. The Article 7 data for 2021 had not been reported at the time of issuance of the present document.

Verification report

7. 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 reported under Article 7 of the Montreal Protocol for 2019-2020 and the CP data reported for 2019-2021 was correct, except for 2019 for which a consumption of 0.29 ODP tonnes of HCFC-141b in imported pre-blended polyols was verified, but had not been reported under the CP implementation report (as shown in Table 1 above). The verification concluded that Cambodia has a workable and enforceable HCFC licensing and quota system in place to enable Cambodia to be in compliance with the HCFC phase-out obligations.

Progress report on the implementation of the fourth tranche of the HPMP*Legal framework*

8. The Ministry of Environment (MOE) of the Government of Cambodia continues to implement the licensing and quota system for the import and export of ODS and ODS-based equipment through the Sub-decree on Ozone Depleting Substances (ODS) Management No. 47 (2005). The HCFC quota system and a mandatory labelling requirement for HCFC cylinders have been implemented since 2013. A compulsory HFC licensing system as well as an electronic system for quota and license applications for HCFCs, HFCs, and alternatives controlled under the Sub-decree on ODS Management have been in place since March 2020.

9. The Sub-decree on ODS Management was amended as of 30 September 2021.³ The revision includes a restriction on upgrading or establishing new production capacity using any type of ODS or HFC; the addition of HFCs to the quota system; a provision on the licensing, reporting and monitoring of HFCs and any other refrigerants except ammonia in bulk and RAC equipment relying on substances controlled under the Sub-decree; and a provision requiring servicing workshops, sellers, stocking, storage, and recovery, recycling and reclamation centers, and distributors of refrigerants to employ at least one technician that holds a certification related to cooling appliances. The Government of Cambodia expects to implement the HFC quota system from 1 January 2023. The ban on the import of all types of HCFC-based equipment has been finalized and is currently undergoing legal review and is expected to be in place by December 2022.

10. The ISO standards on refrigeration systems and heat pumps-safety were adopted as the national standards for Cambodia. The MOE continued working with the Institute of Standards of Cambodia and the Ministry of Labor and Vocational Training to determine how to strengthen the adoption of the ISO standard on installation of RAC equipment. Enforcement of these standards will be in conjunction with the certification of RAC technicians.

11. Two training workshops were held for 75 enforcement officers (including 12 women) on monitoring and controlling HCFC import and export. Two consultation meetings were held with the General Department of Customs and Excises to build capacity of enforcement officers on the proper declaration of HCFC shipments, Harmonized System (HS) codes of HCFCs and the potential to arrange

³ The amended law is now referred to as the Sub-decree on ODS and Refrigerant Management No. 192 (2021).

specific HS codes for HFCs (with 13 participants) and to discuss next steps for linking the HCFC electronic licensing system with the National Single Window system (16 participants).

Refrigeration servicing sector

12. The following activities were implemented:

- (a) One train-the-trainer workshop was held virtually for 39 trainers and nine training workshops (eight in-person and one virtual) were organized for a total of 315 RAC technicians (including 27 women);
- (b) Work was undertaken with the Department of Standard and Curriculum, the Ministry of Labor and Vocational Training, and the Vocational Training School to develop an agreement for the effective implementation of the competency-based certification; a short session on the upcoming competency-based assessment was included in the HPMP training workshops for RAC technicians; the development of the database of RAC graduates from vocational training schools was continued;
- (c) The legal framework for RAC technician certification is in place through the Cambodia Qualification Framework (CQF) and is directly implemented by the National Training Board. The MOE continued to work with relevant stakeholders to finalize the Guidelines for skill standards and certificate testing for RAC technicians which was approved by the Council of Ministers in September 2020, and the competency standard and training curriculum was approved in March 2021; the certification programme is expected to be in place in 2023;
- (d) Recovery units, accessories and tools were procured and provided to 50 servicing workshops, and six training centres to enable them to carry out good service practices and recycle and recovery (R&R) activities; support was provided on use and maintenance of the recovery equipment including organizing one training workshop for 35 participants; an awareness raising campaign on the reclamation programme targeting technicians and workshops was undertaken;
- (e) Under the replacement support project for end-users, 321 units of HCFC-22 equipment have been replaced with HFC-32 units in the residential AC sector; a meeting was held with the authorized incentive centres to identify gaps and challenges for the servicing centres on the programme implementation; and
- (f) Four awareness workshops on the reduction of HCFC consumption through the adoption of RAC equipment with non-ODS and climate friendly technology and on the OzonAction tools and materials were organized for a total of 578 participants (including 212 women); four meetings were held to disseminate information and seek feedback regarding the ban on HCFC-based equipment which is under development with a total of 178 participants (including 57 women) and two meetings with representatives from the vocational training schools were held to promote the certification of RAC technicians with a total of 48 participants.

Project implementation and monitoring unit (PMU)

13. The PMU is embedded within the National Ozone Unit (NOU) and consists of one full-time assistant and three part-time staff to support the implementation of the HPMP activities. Of the US \$25,000 approved in the fourth tranche, US \$12,750 was for staff, US \$6,000 was for travel and monitoring activities and US \$6,250 was for overhead expenses and meetings.

Level of fund disbursement

14. As of March 2022, of the US \$1,150,000 approved so far, US \$1,069,902 had been disbursed (US \$459,902 for UNEP and US \$610,000 for UNDP), as shown in Table 2. The balance of US \$80,098 will be disbursed in 2022.

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

Tranche		UNEP	UNDP	Total	Disbursement rate (%)
First	Approved	150,000	200,000	350,000	100
	Disbursed	150,000	200,000	350,000	
Second	Approved	100,000	200,000	300,000	100
	Disbursed	100,000	200,000	300,000	
Third	Approved	150,000	100,000	250,000	100
	Disbursed	150,000	100,000	250,000	
Fourth	Approved	100,000	150,000	250,000	68
	Disbursed	59,902	110,000	169,902	
Total	Approved	500,000	650,000	1,150,000	93
	Disbursed	459,902	610,000	1,069,902	

Implementation plan for the fifth tranche of the HPMP

15. The following activities will be implemented between July 2022 and December 2025:

- (a) *Policy initiatives and amendment of regulations:* continue working with the MOE to implement a ban on the import of all types of HCFC-based equipment under the Natural Resources and Environment Code; and with the General Department of Industry, Sciences, Technology and Innovation on the implementation of the requirements for RAC servicing workshop to have at least one certified RAC technician to be eligible for registration or renewal of its business license (UNEP) (US \$8,000);
- (b) *Training of enforcement officers:* seven training workshops for 210 customs and enforcement officers on the new provisions under the Sub-decree on ODS and Refrigerant Management; four consultation workshops for 80 brokers and importers on the use of the electronic licensing system for HCFCs; support the MOE in the implementation of the mandatory labelling requirement of HCFC cylinders to monitor illegal import of HCFCs in the domestic market (UNEP) (US \$40,000);
- (c) *Training of RAC technicians:* one training workshop for 30 trainers and 12 training sessions for 360 RAC technicians on good service practice in handling HCFCs and low-global-warming-potential (GWP) alternative technologies and safety in handling of flammable refrigerants; a consultation meeting with the Department of Standard and Curriculum and training centres to review and revise the training agenda of the HPMP (UNEP) (US \$60,000);
- (d) *Certification of RAC technician:* continue working with the Department of Standard and Curriculum to develop Recognition of Prior Learning (RPL) assessment criteria; overseas training and competency-based certification for four master assessors; expert-led training on competency assessment for 15 assessors; consultation to develop the implementation plan for competency-based assessment; launching of the competency-based certification programme and initial certification of 50 RAC technicians (UNEP) (US \$35,000);
- (e) *Replacement support project for end-users:* conduct awareness programmes to promote the use of low-GWP equipment and the replacement incentive programme; continue the

implementation of the incentive programme to reach the targeted replacement of 900 HCFC-22 based residential units with HFC-32-based units (UNDP) (balance from the previous tranche);

- (f) *Outreach and awareness raising*: continue awareness seminars and workshops for effective implementation of the HPMP and demonstration of OzonAction tools and materials; outreach to the general public and targeted stakeholders on the launch of the competency-based assessment on good service practice and the certification programme for RAC technicians and the promotion of the database of trained and certified RAC technicians (UNEP) (US \$27,000); and
- (g) *Project monitoring* (UNEP) (US \$30,000): to plan, implement and monitor activities under HPMP including US \$13,750 for staff, US \$8,750 for travel and monitoring activities and US \$7,500 for overhead expenses and meetings.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Report on HCFC consumption

16. The verification report confirmed the import of 0.29 ODP tonnes of HCFC-141b in pre-blended polyols in 2019 which was not reported in the CP implementation report; UNEP indicated that the Government would revise the 2019 CP data after the 90th meeting. UNEP also mentioned that with the implementation of the revised Sub-decree on ODS and refrigerant management, the importation of HCFC-141b contained in imported pre-blended polyols will be strictly controlled and eventually banned.

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

Legal framework

17. The Government of Cambodia has already issued HCFC import quotas for 2022 at 8.65 ODP tonnes, which is lower than the Montreal Protocol control targets.

18. Regarding the training of customs and enforcement officers, UNEP confirmed that newly adopted HS Codes for 2022 are included in the training programme as it is still essential for the customs officers to have an understanding on the categorization of the HS codes of controlled substances under the Montreal Protocol to ensure that shipments are properly declared and accurately recorded in Customs statistics to strengthen monitoring of import and export of controlled substances.

Refrigeration servicing sector

19. When asked whether the incentive programme to replace domestic AC equipment in selected beneficiaries would consider the use of R-290-based equipment in addition to HFC-32, UNEP responded that while equipment using R-290 is an option, there is hardly any market penetration and that there is a consumer preference for HFC-32-based AC.

20. The Secretariat also reminded UNEP that in line with decision 84/84(d), a detailed assessment and report on the results of the project will need to be prepared upon project completion.

Gender policy implementation

21. In line with decision 84/92(d),⁴ the Ministry of Environment has encouraged women to participate in all HPMP-related training programmes, meetings and workshops and sex disaggregated data have been collected for inclusion in reporting.

Sustainability of the HCFC phase-out

22. The Government of Cambodia has put in place and continues to strengthen regulations to ensure that the phase-out of HCFCs is sustainable over time. In 2021, amendments to the Sub-Decree on ODS and Refrigerant Management included restrictions on the upgrade and establishment of new manufacturing capacity using ODS including HFCs, and included control on the import of the HFCs. Further, the requirement for servicing workshops and refrigerant dealers to employ at least one certified technician through the training and certification programmes funded under the Multilateral Fund ensures the sustainability of these programmes. The Government is also reviewing a ban on the import of HCFC-22-based equipment, which is expected to be in place by December 2022.

Conclusion

23. The Secretariat noted that Cambodia has an effective licensing and quota system and continues to progress in the implementation of the activities approved under the HPMP. The verification report confirmed that the country is in compliance with the controlled measures of the Montreal Protocol and the Agreement with Executive Committee. The finalisation and eventual approval of the new Sub-decree on ODS and Refrigerant Management puts in place several regulations such as the control of all refrigerants including HFCs, where quotas for imports are expected to be in place by 1 January 2023. The competency-based assessment certification programme will further reduce the use of ODS refrigerants through good service practice as it will limit the maintenance of RAC equipment to certified technicians. Sustainability of the training on good service practice in refrigeration will be assured through the strengthened vocational institutes and the refrigeration associations. The level of fund disbursement from the previous four tranches is at 93 per cent. The activities planned for the fifth tranche of the HPMP will continue to support the strategy for the servicing sector in Cambodia.

RECOMMENDATION

24. The Fund Secretariat recommends that the Executive Committee take note of the progress report on the implementation of the fourth tranche of the HCFC phase-out management plan (HPMP) for Cambodia; and further recommends blanket approval of the fifth tranche of the HPMP for Cambodia, and the corresponding 2022-2025 tranche implementation plan, at the funding level shown in the table below.

	Project title	Project funding (US \$)	Support cost (US \$)	Implementing agency
(a)	HCFC phase-out management plan (stage I, fifth tranche)	200,000	26,000	UNEP

⁴ Decision 84/92(d) requested bilateral and implementing agencies to apply the operational policy on gender mainstreaming throughout the project cycle.