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EXECUTIVE COMMITTEE OF
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IMPLEMENTATION OF THE MONTREAL PROTOCOL
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Item 9(c) of the provisional agenda¹

PROJECT PROPOSAL: CAMBODIA

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

Technical assistance

- Additional activities to maintain energy efficiency for the servicing sector under decision 89/6(b)

UNEP

¹ UNEP/OzL.Pro/ExCom/94/1

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

PROJECT DESCRIPTION

1. Cambodia's HCFC phase-out management plan (HPMP) was approved at the 61st meeting² to phase out HCFC consumption by 100 per cent from the baseline by 2030, on the understanding that the country would consume up to 0.38 per year prior to 2035,³ at a total cost of US \$1,600,000, plus agency support costs. Cambodia's HPMP was prepared as a single stage and funding will be released in seven tranches from 2010 until 2031. Since its approval, five tranches have been released to Cambodia with timely implementation and completion. The fifth tranche was approved at the 90th meeting.⁴

2. On behalf of the Government of Cambodia, UNEP as the designated implementing agency, has submitted a request for funding additional activities to strengthen energy efficiency in the refrigeration and air-conditioning (RAC) servicing sector and promote the use of energy-efficient, low-GWP refrigerants in line with decisions 89/6 and 92/22,⁵ in the amount of US \$120,000, plus agency support costs of US \$15,600.⁶ The submission includes a description of specific activities, targets, and performance indicators and an implementation plan from June 2024 to May 2026.

Report on HCFC consumption

3. The Government of Cambodia reported under the country programme (CP) implementation report a consumption of 6.90 ODP tonnes of HCFCs in 2023, which is 54 per cent below the country's HCFC baseline for compliance and 29 per cent below the maximum allowable consumption for the same year in the Agreement between the country and the Executive Committee. The Article 7 data for 2023 had not been reported at the time of issuance of the present document. The 2019-2023 HCFC consumption is shown in table 1.

Table 1. HCFC consumption in Cambodia (2019-2023 Article 7 data)

HCFC	2019	2020	2021	2022	2023**	Baseline
Metric tonnes						
HCFC-22	143.96	120.95	99.63	58.44	125.54	388.8
HCFC-123	8.17	0.00	0.00	0.00	0.00	0.0
Total (mt)	152.13	120.95	99.63	58.44	125.54	388.8
HCFC-141b in imported pre-blended polyols	2.64*	0.00	0.00	0.00	0.00	-
ODP tonnes						
HCFC-22	7.92	6.65	5.48	3.21	6.90	15.0
HCFC-123	0.16	0.00	0.00	0.00	0.00	0.0
Total (ODP tonnes)	8.08	6.65	5.48	3.21	6.90	15.0
HCFC-141b in imported pre-blended polyols	0.29*	0.00	0.00	0.00	0.00	-

*CP data 2019 for Cambodia has been updated to reflect this consumption.

**CP data

4. A small quantity of HCFC-141b contained in pre-blended polyols was imported in 2019; although a regulation to ban them has not been introduced, the Government of Cambodia decided not to issue any further import licenses for pre-blended polyols containing HCFC-141b from 2020.

² Decision 61/40

³ Consistent with decision 86/51 on consideration of the servicing tail in the context of the HPMP for the total phase-out of HCFCs.

⁴ Decision 90/32

⁵ Decision 92/22 allows for the submission of requests for activities referred to in decision 89/6(b) separately from HCFC phase-out management plan tranche requests, including a revised Agreement between the Government of the Article 5 country concerned and the Executive Committee, on the understanding that those activities were integrated into the ongoing tranche implementation plans.

⁶ As per the letter of 18 March 2024 from the Ministry of Environment of Cambodia to UNEP.

5. The consumption of HCFC-123 reported in 2019 was used in the servicing of refrigeration and air-conditioning (RAC) equipment. Although annual quotas for the import of this substance were issued to one importer between 2020 and 2023, there were no imports for these years. The National Ozone Unit (NOU) has not issued any HCFC-123 quota in 2024.

Country programme implementation report

6. The Government of Cambodia reported HCFC sector consumption data under the 2022 country programme (CP) implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

Project description

7. Cambodia has been making efforts to enhance energy efficiency while phasing out HCFCs and preparing for the phase-down of HFCs. The country ratified the Kigali Amendment on 8 April 2021, and it is expected that this project will help the country to sustain the HCFC phase-out and support the implementation of the Kigali Amendment, while maintaining/enhancing energy efficiency in the RAC sector.

8. In 2023, following the adoption of the National Energy Efficiency Policy, which sets out the government's energy efficiency target to reduce the country's total energy consumption by 19 per cent by 2030, the Government of Cambodia enacted Sub-Decree No. 254 on Management and Promotion of Energy Efficiency of Electrical Appliances, which provides the legal framework to implement and enforce the Minimum Energy Performance Standard (MEPS) for electrical appliances such as air-conditioners and refrigerators. Sub-decree No. 254 provides for energy efficiency standards, product registration (for which approval is granted only if the relevant standards are met) and energy efficiency labelling requirements for electrical appliances. The Sub-decree has a twelve-month grace period from 11 August 2023 before its provisions are enforced.

9. The Ministry of Mines and Energy, authority responsible for energy in the country, is drafting the "Prakas", i.e., the official ministerial subsidiary regulation to the sub-decree, to define MEPS and other relevant provisions to enforce the sub-decree provisions on air-conditioners, refrigerators, lamps, rice cookers and fans; and Standard Operating Procedures for the implementation of the sub-decree. This project will raise awareness of the Ministry of Mines and Energy on the linkage between HCFC phase-out/HFC phase-down and energy efficiency and enhance coordination among key national stakeholders including government authorities, private sector and consumers to promote energy-efficient low-GWP alternatives in the RAC sector. The project will also support the integration of refrigerant information as part of the MEPS and energy labelling, for the government to monitor the use of low-GWP energy efficient technology and for the public to have access to information on refrigerants and energy performance. A key output of this project is the creation of synergy between the Montreal Protocol (refrigerant phase-out/phase-down) and energy efficiency (MEPS and energy labelling) and its integration into the workstreams of all stakeholders involved in the enforcement of regulation, capacity building and awareness raising, to streamline implementation at the national level.

10. The proposed project is comprised of four activity areas and is expected to be completed in 24 months after approval. Details on the activities to be implemented under each of the areas, their expected outputs and requested funding are provided in table 2.

Table 2. Activities, expected outputs and requested funding for the project proposed to maintain energy efficiency for the servicing sector in Cambodia

Activity area	Activities and expected outputs	Budget (US \$)
Technical assistance in the development of Prakas	1. Development and finalization of Prakas on MEPS and energy labelling of air-conditioners to include refrigerant information.	10,000
	2. Two public consultations to inform relevant government agencies and the public on the inclusion of refrigerant information in MEPS and energy labelling.	10,000
	3. Development of energy labelling to include refrigerant information (type, GWP value and safety classification) to inform consumers of air-conditioners.	5,000
Activity area total		25,000
Inclusion of refrigerant information and safety classification in product registration database and energy labelling	1. Adoption of the United for Efficiency (U4E) product registration system with modifications to include information on refrigerant, and development of detailed procedures and criteria on acceptance and verification of the performance of air-conditioners through the testing results of an accredited laboratory.	15,000
	2. Three-day study visit ⁷ for 6 staff members from the NOU, Ministry of Mines and Energy; Ministry of Industry, Science, Technology and Innovation; General Department of Customs and Excise; and Ministry of Commerce, to a country of the Association of Southeast Asian Nations (ASEAN) that has established MEPS and energy labelling. The lessons learned and recommendations from the study visit will be used for decision making on inclusion of refrigerant information in the MEPS and energy labelling.	18,000
Activity area total		33,000
Capacity-building of government and other stakeholders	1. Four training workshops for 20 participants per session for customs authorities, back-to-back with training planned under the HPMP, aiming at enhancing specific knowledge on import control procedures and how to examine type of refrigerant and energy performance of inspected products to ensure compliance with HCFC phase-out/HFC phase-down and energy efficiency regulations.	12,000
	2. Two-day training workshop for 20 participants per session for importers of air-conditioners on the government regulations on refrigerant and energy efficiency, registration, application, validation, and inspection process, to enhance knowledge on refrigerant technology and energy performance of air-conditioners.	5,000
	3. Two-day training workshop for 20 participants of the Ministry of Commerce on market inspection of refrigerant and energy efficient appliances.	5,000
	4. In collaboration with the Technical and vocational education and training authority, review and update the training programme to integrate dedicated session on maintaining/enhancing energy efficiency of air-conditioners and regulations related to MEPS and energy labelling into the existing good servicing practices curriculum developed under the HPMP.	10,000
	5. One pilot training for 25 RAC technicians to assess suitability of the revised training programme.	7,000
Activity area total		39,000
	1. A public awareness campaign to educate consumers on energy-efficiency ratings and refrigerant types, to raise awareness on the implications of higher	13,000

⁷ Considering that all products are imported and there is no testing laboratory in Cambodia, the study visit will allow the national experts to better understand how to handle administrative and regulatory requirements and procedures to approve registration of air-conditioning equipment, the recognition of testing laboratories in other countries and the verification of testing results conducted by those laboratories, as well as how to enforce the MEPS and energy labelling requirements in Cambodia.

Activity area	Activities and expected outputs	Budget (US \$)
Outreach and market assessment	energy consumption and emissions of ODS/GWP refrigerants on climate and the environment. Development of outreach materials including one awareness video and two infographics to help consumers drive the demand for more environmentally sound equipment, based on the understanding of the benefits of higher energy efficiency and lower GWP alternatives, on how to read the energy labels and the ozone depletion potential and GWP values of the refrigerants, and on the cost and environmental benefits of consumer choices.	
	2. Assessment of consumer behaviour and market barriers, consisting of an evaluation and survey to collect data to measure consumer awareness levels to make decisions on energy efficient and low GWP technology. This study will provide insights on the effectiveness of increased education to consumers, which will be useful for future implementation of the Montreal Protocol activities. The data collected will be used to assess readiness for the labelling programme.	10,000
	Activity area total	23,000
	Grand total	120,000

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

11. In line with decision 89/6(d), UNEP has included in the fifth tranche implementation plan the specific actions, performance indicators and funding associated with additional activities to maintain energy efficiency.

12. The Secretariat noted that the proposed activities fall within the scope referred to in subparagraphs (b)(iii) and (b)(v) of decision 89/6. On the objectives and benefits of the study visit, UNEP clarified that the proposed study visit would serve as an important capacity-building activity, that is distinct from the hands-on training under the HPMP and the KIP as it is addressed to different authorities handling energy matters in the country and provides them with the opportunity to jointly learn from the experience of a country that has established MEPS and energy labelling, and which has a testing laboratory. UNEP added that different stakeholder groups needed tailored messaging and takeaways to support their roles in the relevant national processes. UNEP also highlighted that visiting an air-conditioner import-dependant country, which has the necessary infrastructure and regulatory framework in place, would allow participants to attain the specific capacity-building objectives on aspects such as institutional framework for implementation of the MEPS and energy labelling of air-conditioners, relevant process and consideration for development and update of the MEPS and energy labelling of air-conditioners, product registration and approval process of energy performance of air-conditioners through (i) physical testing by a national testing laboratory, (ii) adoption and verification of testing results from an overseas testing laboratory, and (iii) recognition of an overseas testing laboratory.

13. Participants would also benefit from learning on the management of national air-conditioners databases with information on energy performance and refrigerant used for monitoring and reporting, mechanisms in place for import control to ensure compliance with MEPS, enforcement of the MEPS and energy labelling in the domestic market. Furthermore, UNEP commented that the study visit would expose a range of different national stakeholders and decision-makers to real-life examples of how such systems had been developed, implemented and enforced, and would allow for collaboration and synergies among the stakeholders. Participants would also benefit from meeting their respective counterparts in the host country and that it would be neither feasible nor cost-efficient to bring those counterparts to Cambodia.

14. UNEP explained that the activity on training of customs and enforcement authorities on import control procedures, and how to examine type of refrigerant and energy performance of inspected products would be in addition to the customs training under the HPMP, as that training focuses on the import control of controlled substances in bulk. Adding a back-to-back day to the training under the HPMP is necessary for specific training on MEPS and air-conditioner refrigerants. Similarly, on the training of importers of air conditioners, UNEP explained that this training will focus on matters related to HCFC phase-out/HFC phase-down and the link with energy efficiency, the policies and regulations on refrigerants and energy efficiency, registration, application, validation, and inspection processes, as it is important to enhance their knowledge on these issues and promote low GWP and energy efficient air-conditioners in the domestic market. Moreover, the project aims to ensure win-win benefits in conducting a capacity building activity for this new group of stakeholders.

15. As to the training for the Ministry of Commerce, the objective is to make them acquainted with the needs for market inspection of both refrigerant and energy efficient appliances. The contents of the training include inspection techniques of refrigerant in bulk and of energy performance and labelling in the domestic market, actions to be taken in cases of non-compliant products identified during inspection, and safety in handling of refrigerant in bulk and air-conditioners during inspection.

16. The consumer behaviour study responds to the objective of assessing awareness and perception of consumers after the communication and awareness campaigns under the project have been conducted. Results are expected to be used by the government authority to plan future awareness and outreach activities and identify how to strengthen energy-efficiency labelling.

Gender policy implementation

17. The Ministry of Environment has encouraged women to participate in all HPMP-related training programmes, meetings, workshops and other activities; and has committed to collect sex disaggregated data for inclusion in reporting. UNEP confirmed that gender mainstreaming actions to be taken during the implementation of the HPMP will also be applied to the current proposal, which is part of the HPMP.

Updated Agreement

18. In view of funding for additional activities to maintain energy efficiency in the refrigeration servicing sector and the accordingly revised funding schedule, the Agreement between the Government of Cambodia and the Executive Committee has been updated. Specifically, Appendix 2-A has been revised and paragraph 16 has been updated to indicate that the updated Agreement supersedes that reached at the 70th meeting, as contained in annex I to the present document. The full updated Agreement will be appended to the final report of the 94th meeting.

Conclusion

19. The project has been submitted in line with decisions 89/6(b) and 92/22, and includes activities to promote collaboration and develop synergies among the government authorities including the NOU, the Ministry of Mines and Energy, the General Department of Customs and Excise and the Ministry of Commerce, and to foster a better understanding of the linkage between the phasing out of HCFCs/phasing down of HFCs and energy efficiency. The involved authorities will strengthen their cooperation during planning, development, implementation and enforcement of MEPS, labelling and future regulation related to the control of RAC equipment to be imported into the country. Consumers will have a better understanding of available technology options that are low-GWP and energy efficient, their impact on climate and the environment and how to obtain information as a prerequisite for taking informed purchase decisions, which is critical to promote market transformation.

20. The project will help strengthen technical capacity of different stakeholders. The activities planned under the project will also provide inputs for future policies and regulations relating to energy efficiency. They will as well contribute to a framework for considering energy-efficiency-related actions in the remaining tranches of the HPMP and the KIP for Cambodia and will support activities relating to the uptake of energy-efficient low-GWP RAC equipment.

RECOMMENDATION

21. The Fund Secretariat recommends blanket approval of the project for additional activities for the introduction of alternatives to HCFCs with low or zero global-warming potential and for maintaining energy efficiency in the refrigeration servicing sector in Cambodia, and the corresponding 2024-2026 implementation plan, at the funding level shown in the table below, on the understanding that the Fund Secretariat has updated the Agreement between the Government of Cambodia and the Executive Committee, as contained in annex I to the present document, specifically Appendix 2-A, based on the revised funding level due to the inclusion of funding for additional activities to maintain energy efficiency in the refrigeration servicing sector; and paragraph 16 to indicate that the updated Agreement supersedes that reached at the 70th meeting.

	Project title	Project funding (US \$)	Support costs (US \$)	Implementing agency
(a)	Additional activities for the introduction of alternatives to HCFCs with low or zero global warming potential and for maintaining energy efficiency in the refrigeration servicing sector	120,000	15,600	UNEP

Annex I

TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF CAMBODIA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS

(Relevant changes are in bold font for ease of reference)

16. This updated Agreement supersedes the Agreement reached between the Government of Cambodia and the Executive Committee at the 70th meeting of the Executive Committee.

APPENDIX 2-A: THE TARGETS, AND FUNDING

		2010	2011-2012	2013	2014	2015	2016	2017-2018	2019	2020-2021	2022	2023	2024	2025-2029	2030	2031	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	15.0	15.0	13.5	13.5	13.5	13.5	9.75	9.75	9.75	9.75	4.88	0.38	0.38	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	15.0	15.0	13.5	13.5	13.5	13.5	9.75	9.75	9.75	9.75	4.88	0.38	0.38	n/a
2.1	Lead IA [UNEP] agreed funding (US \$)	150,000	0	100,000	0	0	150,000	0	100,000	0	200,000	0	120,000	200,000	0	50,000	1,070,000
2.2	Support cost for Lead IA (US \$)	19,500	0	13,000	0	0	19,500	0	13,000	0	26,000	0	15,600	26,000	0	6,500	139,100
2.3	Cooperating IA [UNDP] agreed funding (US \$)	200,000	0	200,000	0	0	100,000	0	150,000	0	0	0	0	0	0	0	650,000
2.4	Support cost for Cooperating IA (US \$)	15,000	0	15,000	0	0	7,500	0	11,250	0	0	0	0	0	0	0	48,750
3.1	Total agreed funding (US \$)	350,000	0	300,000	0	0	250,000	0	250,000	0	200,000	0	120,000	200,000	0	50,000	1,720,000
3.2	Total support cost (US \$)	34,500	0	28,000	0	0	27,000	0	24,250	0	26,000	0	15,600	26,000	0	6,500	187,850
3.3	Total agreed costs (US \$)	384,500	0	328,000	0	0	277,000	0	274,250	0	226,000	0	135,600	226,000	0	56,500	1,907,850
4.1.1	Total phase-out of HCFCs agreed to be achieved under this agreement (ODP tonnes)																15.0
4.1.2	Phase-out of HCFCs to be achieved in previously approved projects (ODP tonnes)																0
4.1.3	Remaining eligible consumption for HCFCs (ODP tonnes)																0