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EXECUTIVE COMMITTEE OF
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Montreal, 26–30 May 2025
Item 9(d) of the provisional agenda¹

PROJECT PROPOSAL: THE ISLAMIC REPUBLIC OF IRAN

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

Phase-out

- | | | | |
|---|---|----------------------|--------------------------|
| • | HCFC phase-out management plan (stage III, first tranche) | UNDP, UNEP and UNIDO | Individual consideration |
|---|---|----------------------|--------------------------|

¹ UNEP/OzL.Pro/ExCom/96/1

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**The Islamic Republic of Iran**

(I) PROJECT TITLE	AGENCY
HCFC phase-out plan (stage III)	UNDP (lead), UNEP and UNIDO

(II) LATEST ARTICLE 7 DATA (Annex C, Group I)	Year: 2023	93.66 ODP tonnes
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2024	
Chemical	Aerosol	Foam	Fire-fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22				3.51	44.07				47.58
HCFC-141b		1.98		4.62					6.60

(IV) CONSUMPTION DATA (ODP tonnes)			
2009–2010 baseline:	380.50	Starting point for sustained aggregate reductions:	380.50
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	326.77	Remaining:	53.73

(V) ENDORSED BUSINESS PLAN		2025	2026	2027	Total
UNDP	ODS phase-out (ODP tonnes)	4.30	0.0	0.0	4.30
	Funding (US \$)	401,542	0	0	401,542
UNEP	ODS phase-out (ODP tonnes)	0.0	0.0	0.0	0.0
	Funding (US \$)	505,800	0	0	505,800
UNIDO	ODS phase-out (ODP tonnes)	8.00	0.0	16.74	24.74
	Funding (US \$)	957,155	0	1,983,504	2,940,659

(VI) PROJECT DATA			2025	2026-2027	2028	2029	2030	Total
Montreal Protocol consumption limits (ODP tonnes)			123.66	123.66	123.66	123.66	0	n/a
Maximum allowable consumption (ODP tonnes)			76.10	76.10	50.10	50.10	0	n/a
Project costs requested in principle (US \$)	UNDP	Project costs	1,178,480	0	1,169,166	0	521,850	2,869,496
		Support costs	82,493	0	81,842	0	36,530	200,865
	UNEP	Project costs	301,000	0	234,000	0	65,000	600,000
		Support costs	38,127	0	29,640	0	8,233	76,000
	UNIDO	Project costs	660,000	0	420,000	0	270,000	1,350,000
		Support costs	46,200	0	29,400	0	18,900	94,500
Total amounts recommended in principle (US \$)	Project costs		2,139,480	0	1,823,166	0	856,850	4,819,496
	Support costs		166,820	0	140,882	0	63,663	371,365
	Total funds		2,306,300	0	1,964,048	0	920,513	5,190,861

(VII) Request for approval of funding for the first tranche (2025)		
Implementing agency	Funds recommended (US \$)	Support costs (US \$)
UNDP	1,178,480	82,493
UNEP	301,000	38,127
UNIDO	660,000	46,200
Total	2,139,480	166,820

Secretariat's recommendation:	Individual consideration
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PROJECT DESCRIPTION

Background

1. On behalf of the Government of the Islamic Republic of Iran, UNDP as the lead implementing agency has submitted a request for stage III of the HCFC phase-out management plan (HPMP), at a total cost of US \$5,357,561, consisting of US \$2,864,496, plus agency support costs of US \$200,515, for UNDP, US \$755,000, plus agency support costs of US \$93,050, for UNEP and US \$1,350,000, plus agency support costs of US \$94,500, for UNIDO, as originally submitted.² The implementation of stage III of the HPMP will phase out the remaining consumption of HCFCs by 2030.

2. The first tranche of stage III of the HPMP being requested at this meeting amounts to US \$2,352,019, consisting of US \$1,335,230, plus agency support costs of US \$93,466, for UNDP, US \$193,300, plus agency support costs of US \$23,823, for UNEP and US \$660,000, plus agency support costs of US \$46,200, for UNIDO, as originally submitted.

Status of implementation of stage II of the HCFC phase-out management plan

3. Stage II of the HPMP for the Islamic Republic of Iran was originally approved at the 77th meeting,³ updated at the 90th meeting, and further revised at the 92nd and 94th meetings,⁴ to phase out 162.37 ODP tonnes of HCFCs used in the refrigeration and air-conditioning (RAC) servicing, commercial refrigeration manufacturing and the polyurethane (PU) foam manufacturing sectors, and to meet a 75 per cent reduction from the baseline by 2023, at a total cost of US \$10,766,539, plus agency support costs. Stage II of the HPMP will be completed by December 2025, as per the extension approved by the Executive Committee at its 90th meeting.⁵

Report on HCFC consumption

4. The Government of the Islamic Republic of Iran reported a consumption of 93.66 ODP tonnes of HCFC in 2023, which is 75 per cent below the HCFC baseline for compliance and 1.5 per cent below the maximum allowable consumption in the Agreement for the same year. The Article 7 data for 2024 has not been reported yet. The 2020–2024 HCFC consumption is shown in table 1.

Table 1. HCFC consumption in the Islamic Republic of Iran (2020–2024 Article 7 data)

HCFC	2020	2021	2022	2023	2024*	Baseline
Metric tonnes (mt)						
HCFC-22	1,511.47	1,356.37	1,830.89	1,051.93	865.12	2,974.55
HCFC-141b	732.15	447.61	510.46	325.53	60.00	1,971.82
Total (mt)	2,243.62	1,803.98	2,341.35	1,377.46	925.12	4,945.80
ODP tonnes						
HCFC-22	83.13	74.60	100.70	57.85	47.58	163.60
HCFC-141b	80.54	49.24	56.15	35.81	6.60	216.90
Total (ODP tonnes)	163.67	123.84	156.85	93.66	54.18	380.50

* Country programme data

5. HCFC consumption in the Islamic Republic of Iran has decreased between 2020 and 2023 due to reduced import quotas and enterprise conversions completed under stage II of the HPMP in the PU foam and commercial manufacturing sectors. While consumption in manufacturing has significantly decreased, consumption in the servicing sector has fluctuated. At the time of issuance of the present document, the

² As per the letter of 26 January 2025 from the Department of Environment of the Islamic Republic of Iran to UNDP.

³ Decision 77/44

⁴ Decisions 90/45, 92/13 and 94/36

⁵ Decision 90/45(c)

Secretariat received the 2024 country programme (CP) data, which shows a total consumption of 925.12 mt (54.18 ODP tonnes), out of which 123.80 mt (10.11 ODP tonnes) corresponds to manufacturing, compared to 664.99 mt (54.48 ODP tonnes) in 2023, and 801.32 mt (44.07 ODP tonnes) corresponds to servicing sector, compared to 712.47 mt (39.19 ODP tonnes) in 2023.

Country programme implementation report

6. The Government of the Islamic Republic of Iran reported HCFC sector consumption data under the 2023 CP implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

Status of progress and disbursement

7. Stage II of the HPMP is in its final steps of implementation. As of May 2025, its main achievements included:

- (a) *Policy:* Improvements to the licensing and quota system; training provided to 125 customs officers; establishment of a ban on the import and use of HCFC-141b pure and contained in pre-blended polyols as of July 2024; and a ban on the use of HCFC-22 in the manufacturing of RAC equipment expected to enter into force on 1 January 2026;
- (b) *Manufacturing sectors:* Completed conversions to alternatives with low global-warming potential (GWP) (hydrocarbon (HC) and water-based) at 56 manufacturers of PU foam for domestic and commercial refrigeration, discontinuous panels and integral skin and ongoing conversions at five additional enterprises; assistance provided to one systems house in supplying HC- and water-based systems to 95 small and medium-sized enterprises (SMEs) in the PU foam manufacturing sector; completed conversions to R-290 at 32 manufacturers of commercial refrigeration equipment and ongoing conversions at additional 16 manufacturers; and
- (c) *Servicing sector:* Establishment of an operational refrigerant distribution centre; updates made to the curriculum for RAC technical training; strengthening of six Technical Vocational Training Organization (TVTO) training centres; training provided to nearly 1,000 RAC technicians and master trainers; study conducted on competency-based certification for RAC technicians; production and translation of material for the servicing sector and policymakers; and distribution of four refrigerant identifiers to customs offices.

8. Out of the US \$10,766,539 approved under stage II, a total of US \$10,012,746 (93 per cent) has been disbursed, and the remaining US \$753,793 will be disbursed in 2025.

Stage III of the HCFC phase-out management plan

Remaining consumption eligible for funding

9. After deducting 326.77 ODP tonnes of HCFCs associated with stages I and II of the HPMP, the remaining consumption eligible for funding in stage III amounts to 53.73 ODP tonnes.

Sector distribution of HCFCs

10. Table 2 presents the distribution of HCFC use among sectors in 2023.

Table 2. HCFC use by sector in 2023 (CP data)

Sector	Substance	mt		ODP tonnes	
		tonnage	%	tonnage	%
Manufacturing					
Commercial RAC	HCFC-22	318.63	23	17.52	19
Extruded polystyrene foam	HCFC-22	20.83	2	1.15	1
PU foam	HCFC-141b	325.54	24	35.81	38
Subtotal manufacturing		665.00	48	54.48	58
Servicing					
RAC	HCFC-22	712.47	52	39.19	42
Subtotal servicing		712.47	52	39.19	42
Total		1,377.47	100	93.67	100

Manufacturing sectors

11. The commercial RAC manufacturing sector is composed of small enterprises that assemble a wide range of RAC systems and equipment (e.g., display cabinets, island cases, stand-alone commercial refrigerators, freezers, commercial and industrial air-conditioning (AC) systems, chillers, condensing units, package units and laboratory freezers). Most manufacturers have been assisted in converting to low-GWP alternatives under stage II of the HPMP. These enterprises' consumption, as well as the consumption of 22 SMEs that started operating after 21 September 2007, will stop before the ban on the use of HCFC-22 in the manufacturing of RAC equipment enters into force on 1 January 2026.

12. The extruded polystyrene foam manufacturing sector is composed of three enterprises: one consuming HFC-134a, and the remaining two, ineligible for funding due to the cut-off date, will phase out HCFC-22 without assistance. The Government is considering a ban on HCFC use in this sector by 31 December 2028.

13. The PU foam manufacturing sector has been assisted under stage II of the HPMP to phase out its entire consumption of HCFCs. The ban on the import and use of HCFC-141b pure and contained in pre-blended polyols entered into force in July 2024.

Refrigeration servicing sector

14. HCFC-22 is used to service all types of RAC systems, with 67 per cent consumed in industrial and commercial refrigeration (ICR) and 33 per cent in residential and commercial AC, as shown in table 3.

Table 3. Estimation of demand for HCFC-22 in the RAC servicing sector (2023)

Application	Type	Estimated population (units)	Average charge (kg/unit)	Installed capacity estimate (mt)	Estimated units repaired		HCFC-22 demand for repair	
					units	%	mt	%
Air-conditioning								
Room	Window	2,418,000	0.1	241.80	120,900	5	12.09	2
	Split	202,881	1.2	243.46	71,008	35	85.21	12
Commercial	Packaged	64,683	6.0	388.10	6,468	10	38.81	5
Chillers	Chillers	68,173	30.0	2,045.19	3,409	5	102.26	14
Subtotal air-conditioning		2,753,737	n/a	2,918.55	201,785	n/a	283.37	33
Refrigeration								
Commercial	Stand-alone	221,125	2.0	442.25	44,225	20	88.45	12
	Condensing units	41,996	8.0	335.97	12,599	30	100.79	14
Industrial	Ice cream units	7,356	10.0	73.56	1,839	25	18.39	3
	Cold room/ice bank	29,420	6.5	191.23	10,297	35	66.93	9
	Refrigerators	187,333	2.0	374.67	56,200	30	112.40	16
Chillers	Process chillers	2,324	250.0	581.00	349	15	87.25	12
Subtotal refrigeration		489,554	n/a	1,998.67	125,508	n/a	474.21	67
Total		3,243,291	n/a	4,917.22	327,293	n/a	712.58	100

15. In the ICR sector, HCFC-22 is used to service display cabinets, island cases, stand-alone commercial refrigerators, freezers and condensing units mostly found in supermarkets and convenience stores, as well as laboratory freezers and cold storage and refrigeration equipment found in facilities needing low-temperature cooling applications (e.g., food processing plants, process chillers, freezing tunnels, seafood industry plants and ice machines). Many of these applications also use HFCs, while large installations in industrial areas outside main cities also use ammonia (NH₃).

16. The consumption of HCFCs in room AC servicing has decreased over time, as HCFC-22-based units have been reaching their end of life and replaced by R-410A-based split AC units. All 34 manufacturers of AC equipment (including room AC, light commercial AC and small chillers) identified in the country use HFCs. Commercial AC systems are used inter alia in hotels, malls and restaurants. Industrial AC equipment includes locally produced central AC systems and chillers using either HCFC-22 or HFCs.

17. There are approximately 45,000 technicians in the country, most of them working for servicing workshops and around 30 per cent operating independently in the servicing sector. About 70 per cent of all workshops are formal, i.e., registered with government authorities. Training for RAC technicians is offered at 31 provincial-level TVTO centres and 400 smaller vocational training centres under their supervision. Vocational education is also delivered through secondary vocational schools, overseen by the Ministry of Education.

18. Over 2,500 customs and enforcement officers manage international trade control and enforce the national regulations on controlled substances. Under stages I and II of the HPMP, 259 customs officers and 294 enforcement officers received training, and Montreal Protocol considerations were included in the curriculum for new officers. Due to high staff turnover, ongoing training is needed to keep officers updated on the control requirements for ozone-depleting substances (ODSs).

Phase-out strategy

19. Stage III of the HPMP aims to completely phase out HCFC consumption in the refrigeration servicing sector by strengthening the regulatory and policy framework, strengthening the TVTO centres, expanding the training and certification programme, improving the refrigerant recovery and reclaim processes and the testing capabilities of RAC systems, providing technical assistance to the ICR and other sectors to promote low-GWP alternatives, and conducting gender-sensitive outreach and awareness activities.

Proposed activities

20. The servicing sector activities proposed for implementation under stage III and in the first tranche, as well as their cost breakdown, are presented in table 4.

Table 4. Servicing sector activities and their cost under stage III of the HPMP for the Islamic Republic of Iran, as submitted

Activity	Agency	Cost (US \$)	
		Stage III	First tranche
1. Regulatory and policy framework			
Enhance the policy framework to adopt low-GWP alternatives by developing standard operating procedures (SOPs) for the safe transport and storage of flammable refrigerants; guidelines for the introduction of international standards on A2L/A3 refrigerants; and distribution of 15 multi-refrigerant identifiers to customs officers (US \$192,500); and supporting HCFC-22 phase-out in sensitive sectors through strategic studies: fisheries sector assessment, food cold chain assessment,	UNDP	316,500	240,500

Activity	Agency	Cost (US \$)	
		Stage III	First tranche
mapping the installed base of HCFC-22-based chillers, priority assessment of potential demand for the servicing tail, and analysis of the supply chain for adopting alternatives to HCFC-22 (US \$124,000)			
Training of 150 customs officers (20 per cent of them women) on ODS risk profiling, inspection techniques and use of refrigerant identifiers, and of 100 local enforcement officers on Montreal Protocol measures and the licensing system; and translation into Farsi of the new edition of UNEP's customs manual	UNEP	44,500	7,500
Subtotal		361,000	248,000
2. Technical assistance to TVTO centres			
Installation of a 50 kW R-290-based training chiller at 1 TVTO centre and 6 HFC-32-based room AC training units at TVTO centres	UNDP	171,500	171,500
Training of 3 local experts to assess the TVTO centres' curricula, technical capacity, application of training standards, and technician evaluations; and assessment of 4 TVTO centres	UNEP	84,000	54,000
Adaptation ⁶ of 14 TVTO centres to handle training with flammable refrigerants (US \$420,000); strengthening of 6 TVTO centres equipped under stage II with tools ⁷ for handling A2L and A3 refrigerants (US \$240,000); and installation of training benches ⁸ and equipment for handling NH ₃ and carbon dioxide (CO ₂) refrigerants at 3 selected training workshops (US \$390,000)	UNIDO	1,050,000	510,000
Subtotal		1,305,500	735,500
3. Technician training, certification and capacity building			
Training of 15 trainers abroad on good servicing practices and training methods for low-GWP alternatives and energy efficiency; those trainers to train 50 additional instructors locally; training on good servicing practices provided to 2,000 technicians; and ongoing updates to and translation of training material for TVTO centres	UNEP	342,500	85,000
Expansion of the pilot programme for technicians' skills assessment and certification in collaboration with the Instructor Training and Research Centre through expert review of test materials and methodology, training of 30 assessors, and theoretical and practical testing of a pilot batch of 100 technicians		49,500	0
Expansion of the pilot project on using logbooks for record-keeping for supermarket condensing units (stage I) to large central systems in retail refrigeration through developing logbook criteria and forms, creation of a prototype mobile app, training on record-keeping using logbooks provided to 30 servicing technicians, and post-implementation analysis		48,000	13,000
Subtotal		440,000	98,000
4. Refrigerant recovery, recycling and reclaim (RRR) programme			
Strengthening of the RRR framework through the establishment of 2 new multi-refrigerant reclaim centres ⁹ and development of SOPs and standards for reclaiming refrigerants	UNDP	196,730	196,730

⁶ Including inter alia fire detection and alarm system, ventilation, fire extinguishers, emergency exits and other safety measures and adaptations compliant with safety standards (ATEX and ISO-5149).

⁷ Including test and demonstration samples for commercial refrigeration cycles using R-290, HFC-32 and NH₃, recovery units, manifold sets, vacuum pumps, gas sensors, safety equipment and other tools and accessories.

⁸ Specialized equipment for hands-on training on NH₃ and CO₂ refrigeration cycles simulates real-world commercial systems, including cold rooms and various refrigeration cycles. Each bench is equipped with tools and accessories for practical demonstrations, helping technicians develop skills in operation, maintenance, and troubleshooting.

⁹ Including reclamation units, vacuum pumps, vacuum gauges, portable charging units, refrigerant cylinders of different capacities, weight scales, refrigerant identifiers, cylinder inspection and cleaning equipment, and consumables for one year.

Activity	Agency	Cost (US \$)	
		Stage III	First tranche
5. Technical assistance to the ICR servicing sector			
Demonstration of NH ₃ -based systems as an energy efficient alternative for food storage cold rooms: market research to identify suitable NH ₃ -based systems and suppliers, capacity building for 50 servicing technicians and service providers for NH ₃ -based systems, and demonstration of NH ₃ -based systems at 3 end-user sites	UNIDO	300,000	150,000
Development of guidelines for good practices in the installation and servicing of large commercial and industrial cooling and refrigeration equipment at private sector stakeholders; training of 400 technicians on brazing and pipe connection technology for large systems	UNDP	185,000	185,000
Pilot project on early leak detection and reduction in large systems: installation of 50 monitoring sets ¹⁰ at 25 ICR enterprises to identify leakage points in real time, ensure early repair and reduce emissions	UNDP	82,500	82,500
Distribution of 100 toolkits ¹¹ to servicing workshops in the ICR sector (US \$173,830) and 400 toolkits ¹² to independent room AC and commercial refrigeration technicians (US \$597,436)	UNDP	771,266	0
Subtotal		1,338,766	417,500
6. Pilot project for two-stage evaporative cooling			
Pilot project to demonstrate the feasibility, safety, and cost-effectiveness of a two-stage evaporative cooling system to improve the efficiency and eliminate humidity produced by existing single-stage coolers: design of a second-stage evaporation cycle system for 5 assembly enterprises, testing of 5 pilot units at selected end users, issuance of 1 technical publication, and organization of 4 regional workshops to disseminate project results	UNDP	320,300	287,500
7. Improving the testing capabilities for RAC equipment			
Upgrading the Accreditation Laboratory of the Office of Standards through construction of a testing module and climate chamber (co-financed) and furnishing the testing chambers with proper equipment and material, ¹³ updating the SOPs and protocols for the accreditation laboratory, and providing related training to staff	UNDP	386,700	0
8. Outreach and awareness			
Strengthening of RAC associations through knowledge sharing and networking: creation of 5 publications for sectoral studies and journals in collaboration with RAC associations; organization of 5 annual technology roadshows or industry roundtables and 5 annual awareness-building workshops for target groups; and production and distribution of information material including gender considerations	UNEP	81,500	16,300

¹⁰ Containing pressure and temperature sensors, monitoring control box for setting monitoring threshold values of pressures, temperatures, gas sensor and output to Wifi unit, Wifi unit and software package and gas sensor.

¹¹ Including inter alia A2L/A3 refrigerant recovery equipment, refrigerant cylinders, weight scale, electronic vacuum gauge, nitrogen service cylinder set, nitrogen cylinder, flammable refrigerant warning signs, flammable refrigerant labels, vacuum pump, gauge manifold set, refrigeration tube locking and piercing pliers, tube cutting and bender tools, ratchet wrenches, flaring and swaging tool set and protective gear.

¹² Including inter alia vacuum pump, gauge manifold set, refrigeration tube locking and piercing pliers, tube cutting and bender tools, ratchet wrenches, flaring and swaging tool set, portable flushing kit, protective gear, leaking detectors, weight scale, valve core remover and thermometer.

¹³ Including inter alia air handling units, humidifiers, air samplers, dry and wet bulb measurement device, receiving chamber units, monitor and measurement control panels. Water distribution tanks, chiller units, ancillary installation materials, nozzle chamber for velocity measurement, thermocouple panels spare parts and training.

Activity	Agency	Cost (US \$)	
		Stage III	First tranche
9. Project monitoring unit (PMU)			
PMU activities, including staff (US \$292,500), consultants (US \$10,000), travel and meetings (US \$62,500), monitoring and reporting (US 30,000), and operational costs (US \$39,000)	UNDP	434,000	171,500
PMU activities, including staff	UNEP	105,000	17,500
Subtotal		539,000	191,000
TOTAL		4,969,496	2,188,530

Project implementation and monitoring

21. The system established under stages I and II of the HPMP will continue into stage III, with the national ozone unit (NOU), UNDP and UNEP monitoring activities, reporting on progress, and working with stakeholders to phase out HCFCs. The cost of those activities is shown in table 4 above.

Total cost of stage III of the HCFC phase-out management plan

22. The total cost of stage III of the HPMP for the Islamic Republic of Iran has been estimated at US \$4,969,496 (plus agency support costs), as originally submitted, for achieving total phase-out by 2030. The proposed activities and their cost breakdown are summarized in in table 5.

Table 5. Total cost of stage III of the HPMP for the Islamic Republic of Iran as submitted

Activity	Agency	Cost (US \$)	Phase-out (mt)	CE* (US \$/kg)
1. Regulatory and policy framework	UNDP	316,500	**923.02	4.80
	UNEP	44,500		
2. Technical assistance to TVTO centres	UNDP	171,500		
	UNEP	84,000		
	UNIDO	1,050,000		
3. Technician training, certification and capacity building	UNEP	440,000		
4. Refrigerant RRR programme	UNDP	196,730		
5. Technical assistance to the ICR servicing sector	UNIDO	300,000		
	UNDP	1,038,766		
6. Pilot project for two-stage evaporative cooling	UNDP	320,300		
7. Improving the testing capabilities for RAC equipment	UNDP	386,700		
8. Outreach and awareness	UNEP	81,500		
Subtotal 1-8		4,430,496		
9. PMU	UNDP	434,000	n/a	n/a
	UNEP	105,000	n/a	n/a
Subtotal 1-9		4,969,496	923.02	5.38
Additional reductions from the remaining consumption eligible for funding			53.89	n/a
Total		4,969,496	976.91	5.09
Total UNDP		2,864,496		
Total UNEP		755,000		
Total UNIDO		1,350,000		

* CE=Cost-effectiveness

** Average consumption in the refrigeration servicing sector over the last three years at the time of preparation of stage III (816.53 mt or 44.91 ODP tonnes in 2021, 1,240.06 mt or 68.20 ODP tonnes in 2022, and 712.47 mt or 39.19 ODP tonnes in 2023)

Implementation plan for the first tranche of stage III of the HCFC phase-out management plan

23. The first funding tranche of stage III of the HPMP, in the total amount of US \$2,188,530, will be implemented between June 2025 and September 2028. Detailed information on the activities to be implemented, including adjustments and the level of funds agreed, is presented in table 7 below.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

24. The Secretariat reviewed stage III of the HPMP in light of stages I and II, the policies and guidelines of the Multilateral Fund, including the criteria for funding HCFC phase-out in the consumption sector for stage II of HPMPs (decisions 74/50 and 90/31), and the 2025–2027 business plan of the Multilateral Fund.

Overarching strategy

HCFC reductions between 2025 and 2029

25. The Secretariat notes with appreciation the commitment of the Government of the Islamic Republic of Iran to set the maximum allowable consumption levels between 2025 and 2029 that are lower than those established by the Montreal Protocol and to achieve an 80 per cent reduction from the baseline between 2025 and 2029. During the discussions, noting that the country's HCFC consumption level was already 75 per cent below the baseline, and considering HCFC phase-out achieved in the manufacturing sectors and the robust set of activities included in stage III, the Government agreed to further reduce the maximum allowable consumption for the years 2028 and 2029 to 86.8 per cent of the baseline.

Total HCFC phase-out and use of the servicing tail

26. The Government proposes to meet the 100 per cent reduction from the country's HCFC baseline consumption by 2030, and to maintain maximum annual consumption of HCFCs in the period 2030–2040 at a level consistent with Article 5, paragraph 8 ter(e)(i), of the Montreal Protocol.¹⁴

27. In line with decision 86/51, to allow for consideration of the final tranche of its HPMP, the Government of the Islamic Republic of Iran agreed to submit a detailed description of the regulatory and policy framework in place to implement measures to ensure that HCFC consumption is in compliance with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol for the period 2030–2040, and, if the Islamic Republic of Iran intends to have consumption during the period 2030–2040, in line with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol, proposed modifications to its Agreement with the Executive Committee covering the period beyond 2030.

Technical and cost-related issues

Activity 1: Regulatory and policy framework

28. The activity included strategic studies to support HCFC-22 phase-out in sensitive sectors (fisheries, food cold chain, installed base of HCFC-22-based chillers, supply chain for alternatives to HCFC-22 and potential demand for the servicing tail). UNDP explained that those studies were needed to better understand the country's remaining installed capacity of HCFC-22-based equipment and to design targeted activities to avoid transition to high-GWP alternatives, remove barriers to the adoption of low-GWP

¹⁴ HCFC consumption may exceed zero in any year so long as the sum of its calculated levels of consumption over the ten-year period from 1 January 2030 to 1 January 2040, divided by 10, does not exceed 2.5 per cent of the HCFC baseline.

alternatives, and estimate and reduce future HCFC-22 demand for the servicing tail. The Secretariat and UNDP agreed that for those studies to provide timely input to guide activities during stage III, they should start immediately and not in future tranches as originally proposed. UNDP also agreed to include the preliminary findings of the studies in the submission of the second tranche. Regarding UNEP's part under this activity, the only adjustment made was the inclusion of support for the participation of customs officers in two border-dialogue workshops.

Activity 2: Technical assistance to technical vocational training organizations

29. The implementing agencies provided clarification on their roles in this activity and how coordination among them would be ensured. Accordingly, UNEP's assessment of the TVTO centres will focus on the content and educational value of the curricula, with the objective of improving the standards of training provided in the country, whereas UNIDO's and UNDP's assistance will focus on the infrastructure and equipment required to provide training on low-GWP alternatives. The strengthening of TVTO centres by UNIDO and UNDP will also focus on supporting UNEP's training and certification activities provided through these centres.

30. In relation to the impact of this activity, the implementing agencies explained that out of the 31 provincial TVTO centres, six were successfully strengthened during stage II and another 14 will be strengthened under stage III, for a total of 20. Noting that there were 50 additional centres in the country that could be adapted to provide refrigeration-related training, the Secretariat considered it important to maximize the impact of this activity. Following detailed discussions with the agencies on the activities, equipment and budget proposed, it was agreed that:

- (a) The number of experts trained by UNEP to assess TVTO centres would be increased from three to five, and the number of TVTO centres to be assessed would be 10 rather than four;
- (b) The number of AC training units to be provided by UNDP for training would be increased from six to 10, and a technical expert would be recruited by UNDP to support training at TVTO centres and related outreach activities in coordination with UNEP;
- (c) The number of TVTO centres to receive only essential safety upgrades with assistance from UNIDO would increase from 14 to 20; and
- (d) The number of TVTO centres equipped by UNIDO to handle flammable refrigerants through cost optimization would increase from six to 12.

31. About the 50 kW R-290-based training chiller unit to be installed by UNDP at one TVTO centre, it was agreed that the outreach (Activity 8) to be implemented by UNEP should include awareness activities to support the promotion of this technology, and the study on the cold chain to be conducted by UNDP under Activity 1 should provide data on HCFC-based chillers going out of circulation in the coming years to promote the adoption of R-290-based technology among those end users.

Activity 3: Technician training, certification and capacity building

32. Under stage II, the TVTO's Instructor Training and Research Centre reviewed and updated six training standards and eight training modules with the aim of strengthening the technicians' training on the safe handling of low-GWP alternatives to HCFCs. The training programme, with modules covering inter alia good servicing practices, refrigerant collection, recovery and recycling, use of HC technology in RAC, and the installation, commissioning, and repair of split AC units, extended to nearly 1,000 technicians. Noting the robust training and certification partnership established with the TVTO centres, the Secretariat and UNEP discussed the potential areas of optimization to further increase this activity's impact under stage III, based on the budget proposed. The following was agreed:

- (a) The number of trainers to be trained outside the country would be reduced from 15 to 12, while the number of instructors to be trained by them locally would increase from 50 to 80;
- (b) The target of 2,000 technicians to be trained in good servicing practices would be maintained, but the number of technicians certified in good servicing practices would increase from 100 to 590; and
- (c) Ten meetings and workshops would be held by the NOU in collaboration with the TVTO and the Ministry of Education to promote the integration of good servicing practices into the programmes of secondary vocational schools, to reach more future technicians with basic good servicing practices concepts and skills' development; the NOU would further discuss with the Ministry of Cooperatives, Labour and Social Welfare the feasibility and timing of making skill certificates specific to good servicing practices mandatory for RAC technicians.

33. On the proposal to digitally expand the logbooks initiative implemented during stage I in two supermarkets, UNEP explained that while the manual logbooks were successfully maintained, that information was not always available to the NOU, which could gain a better understanding of refrigerant leakages and servicing patterns through digital access. Upon the Secretariat's suggestion, information on energy efficiency will be included in the logbook. Regarding the prospect of introducing a regulation to support the consistent maintenance of logbooks, UNEP explained that such a regulation could be considered later, considering the results of this pilot initiative.

Activity 4: Refrigerant recovery, recycling and reclaim programme

34. UNDP explained that stage III aimed to decentralize the refrigerant RRR infrastructure to enable two key cities to reclaim and reuse refrigerants locally. Those cities are distant from the capital and are important hubs for cooling equipment. The Government's goal is to grow refrigerant-handling capacity nationwide, making the expansion of these centres the first step in that direction. Local RRR initiatives will reduce transport costs and time, thereby lowering refrigerant cost and improving the logistical efficiency of supply systems. The centres will be operated by enterprises dealing with refrigerants and refrigeration parts, using a business model that supports long-term sustainability. UNDP also confirmed that refrigerant recovery during servicing and end-of-life of equipment was a requirement included in the training and certification on good practices, in line with the adopted standard EN-378. The Secretariat notes that the approach proposed for stage III will make it possible to expand proper refrigerant handling and reuse to cities other than Tehran, which already has two refrigerant refilling and distribution centres with reclaiming capability.

Activity 5: Technical assistance to the industrial and commercial refrigeration sector

35. Given the large proportion of national HCFC consumption for ICR (67 per cent altogether), the Secretariat considers that targeted activities in this sector can have significant impact on reducing HCFC consumption and facilitating the adoption of low-GWP alternatives in the country. Regarding the activities proposed by UNDP, the training on brazing is designed for enterprises that design, assemble and install tailor-made ICR systems, such as medium- to large-sized cold rooms, ice banks, and central racks for markets and supermarkets. The training will apply international standard EN-ISO 13585 to improve the technicians' knowledge of alternative connection methods and to reinforce brazing techniques in difficult-to-access areas. Given the relevance of this activity to improving RAC systems' design, installation, and leakage reduction, it was agreed that the number of technicians to be trained under this activity would be increased from 400 to 500. To achieve this, some funds were reallocated from toolkits for technicians, where savings were achieved by replacing nitrogen regulators with standard RAC flushing kits commonly used in other countries.

36. Regarding UNIDO's pilot project on NH₃-based systems for the cold storage of food products, it intends to engage about 15 refrigeration manufacturers and 10 service providers to support the supply and maintenance of three demonstration units. The pilot sites will be HCFC-22 users selected based on technical and safety readiness and the provision of co-financing. End users with more co-financing will be prioritized to create the possibility of including additional sites. The types of systems and capacities include 10-30 kW cold rooms. The monitoring of performance and energy use of the baseline and replacement equipment will be conducted for a period of three months, following a protocol to be developed during project implementation. The NOU is actively exploring regulatory measures and would consider bans or limits on high-GWP refrigerants based on the pilot results.

37. Noting that the local production of NH₃ supports the selected technology, the Secretariat enquired whether other locally produced low-GWP technologies (i.e., HC) had also been considered. UNIDO explained that during the implementation of the project it would explore the feasibility of including both technologies at the three targeted sites. This approach would help the project's replicability across the sector, given the limitations of NH₃ application among certain end users.

Activity 6: Pilot project for two-stage evaporative cooling

38. Regarding this pilot project, UNDP explained that evaporative cooling was an optimal technology for dry climatic conditions. The population of single-stage evaporation systems used in the country, estimated at 14 million in 2018, has been gradually replaced by conventional HCFC- or HFC-based AC equipment because of humidity issues, which this project intends to address. In the single-stage evaporation process, intake air is wetted and enters directly into the building, whereas in two-stage evaporative cooling, the air is pre-cooled in the first stage by passing through a heat exchanger, with cooled water resulting from this stage being used to bring the air's temperature further down before it enters the space intended to be cooled. The technology does not use HCFCs or HFCs and consumes 60 to 75 per cent less electricity than conventional HCFC-based AC equipment.

39. The project will provide technical assistance to five local assemblers to develop prototype units of two-stage evaporative coolers, and five end users to test them over a period of six to 12 months. Data will be collected in a detailed report, and awareness-raising and technical workshops will be conducted to disseminate project results and promote technology use. It is expected that the project will be easily replicated given the number of households using AC, helping to retire HCFC-22 AC systems and prevent the introduction of new R-410A-based units. The Secretariat considers that the results of this project could also assist other Article 5 countries with dry climatic conditions in their consideration of cost-effective, energy-efficient alternatives.

40. In line with decision 92/36(g), UNIDO and UNDP are requested to submit the final reports on the implementation of pilot projects on the use of NH₃-based systems for cold storage (Activity 5) and evaporative cooling (Activity 6) at end users upon project completion, including the HCFC phase-out and energy-efficiency gains achieved.

Activity 7: Improving the testing capabilities for refrigeration and air-conditioning equipment

41. UNDP confirmed that the laboratory to be upgraded was operational, with one box dedicated to split AC units and one to small commercial refrigeration units (cabinets), and that it would provide co-financing. The upgrade will help sustain HCFC phase-out in the manufacturing sector by providing an effective local testing infrastructure for converted manufacturers to test products and obtain proper certification (equivalent to Conformité Européenne, Gulf-Mark, or the Emirates Conformity Assessment Scheme) for alternative units. It will also incentivize the market and end users to use the alternatives by signaling that their safety parameters and efficacy of use were corroborated by an independent qualified laboratory.

Project implementation and monitoring

42. The cost of the project monitoring and implementation unit was adjusted from US \$539,000 for UNDP and UNEP to US \$389,000 for UNDP only, which corresponds to 8 per cent of the total value of stage III of the HPMP. The funds will be used on staff (US \$292,500), consultants (US \$10,000), operational costs (US \$39,000), stakeholder coordination, meetings and reporting (US \$47,500).

Total project cost

43. The total cost for stage III of the HPMP amounts to US \$4,819,496. The project will phase out 50.76 ODP tonnes (923.02 mt) of HCFCs, plus additional 2.96 ODP tonnes (53.89 mt) of HCFCs to be deducted from the country's remaining HCFC consumption eligible for funding, at an overall cost-effectiveness of US \$4.93/kg. The adjusted budget breakdown of activities included in table 5 above is presented in table 6, which also presents the agreed adjustments to each activity.

Table 6. The cost and adjustments to stage III of the HPMP for the Islamic Republic of Iran as agreed

Activity	Agency	Cost (US \$)	Phase-out (mt)	CE (US \$/kg)
1. <u>Regulatory and policy framework:</u>	UNDP	316,500	923.02	4.80
Added participation of customs officers in two border dialogues (UNEP)	UNEP	49,500		
2. <u>Technical assistance to TVTO centres:</u>	UNDP	221,500		
AC units for TVTO centres increased from 6 to 10; technical expert added to support training activities (UNDP)	UNEP	55,000		
Experts trained increased from 3 to 5; TVTO centres to be assessed increased from 4 to 10; cost reduced (UNEP)	UNIDO	1,050,000		
TVTO centres to be upgraded increased from 14 to 20; and TVTO centres to receive tools for flammables increased from 6 to 12 under the same budget (UNIDO)				
3. <u>Technician training, certification and capacity building:</u>	UNEP	419,500		
Trainers to be trained abroad reduced from 15 to 12; trainers to be trained locally increased from 50 to 80; technicians to be certified increased from 100 to 590				
4. <u>Refrigerant RRR programme:</u>	UNDP	196,730		
No adjustments				
5. <u>Technical assistance to the ICR servicing sector:</u>	UNIDO	300,000		
Technicians to receive training on brazing increased from 400 to 500 under the same budget (UNDP)	UNDP	1,038,766		
6. <u>Pilot project for two-stage evaporative cooling:</u>	UNDP	320,300		
No adjustments				
7. <u>Improving testing capabilities for RAC equipment:</u>	UNDP	386,700		
No adjustments				
8. <u>Outreach and awareness:</u>	UNEP	76,000		
Added activities to support adoption of R-290 in chillers				
Subtotal 1-8		4,430,496		
9. <u>PMU:</u>	UNDP	389,000	n/a	n/a
Adjusted cost (UNDP)				
Funding for UNEP removed				
Subtotal		4,819,496	923.02	5.22
Additional reductions from the remaining consumption eligible for funding			53.89	n/a

Activity	Agency	Cost (US \$)	Phase-out (mt)	CE (US \$/kg)
Total		4,819,496	976.91	4.93
Total UNDP		2,869,496		
Total UNEP		600,000		
Total UNIDO		1,350,000		

Agreed implementation plan for the first tranche of stage III of the HCFC phase-out management plan

44. The agreed implementation plan for the first tranche is presented in table 7.

Table 7. Agreed implementation plan for the first tranche of stage I

Activity	Agency	Cost (US \$)
1. Regulatory and policy framework		
Development of SOPs for the safe transport and storage of flammable refrigerants and guidelines for the introduction of international standards on A2L and A3 refrigerants and delivery of 15 multi-refrigerant identifiers to customs officers (US \$192,500); completed assessments of the fisheries sector, the food cold chain, the installed base of HCFC-22-based chillers, the potential demand for the servicing tail, and the supply chain for HCFC alternatives (US \$88,000)	UNDP	280,500
Training of 50 customs officers and 30 local enforcement officers	UNEP	15,000
2. Technical assistance to TVTO centres		
Installation of a 50 kW R-290-based training chiller at 1 TVTO centre and 10 HFC-32-based room AC training units at 5 TVTO centres	UNDP	196,500
Train 5 local experts to assess TVTO centres' curricula and assess 10 TVTO centres' technical capacity, application of training standards, and technician evaluations	UNEP	55,000
Initiate upgrades to 20 TVTO centres to comply with safety requirements for flammable refrigerants	UNIDO	200,000
Strengthen 12 TVTO centres with tools for handling A2L and A3 refrigerants		110,000
Initiate the installation of training benches and equipment for handling NH ₃ and CO ₂ refrigerants at 3 selected training workshops		200,000
3. Technician training, certification and capacity building		
Five train-the-trainer sessions on good servicing practices and training methods; train 150 technicians in good servicing practices and low-GWP alternatives and energy efficiency	UNEP	127,000
Initiate the expansion of the pilot programme for technician skill assessment and certification		35,000
Initiate the digital expansion of the pilot project on using logbooks for record keeping for large central systems in retail refrigeration		39,000
4. Refrigerant RRR programme		
Develop SOPs and standards for reclaiming refrigerants and establish 2 RRR centres	UNDP	196,730
5. Technical assistance to the ICR servicing sector		
Identify NH ₃ -based system manufacturers and suppliers, conduct market research report on NH ₃ -based systems, and provide capacity building for 50 servicing technicians and service providers	UNIDO	150,000
Develop and distribute guidelines on brazing and piping, train 250 technicians in brazing techniques	UNDP	122,500
Complete pilot project on early detection and reduction of leaks in large RAC systems		82,500
6. Pilot project for two-stage evaporative cooling		
Second-stage evaporation cycle system prototype developed and tested at lab	UNDP	143,750
7. Improving the testing capabilities for RAC equipment		
No activities under the first tranche	UNDP	0

Activity	Agency	Cost (US \$)
8. Outreach and awareness		
Strengthen RAC associations through knowledge sharing and networking campaign on HCFC phase-out and alternatives	UNEP	30,000
9. PMU		
PMU, including staff (US \$117,500), consultants (US \$5,000), travel and meetings (US \$7,500), monitoring and reporting (US \$13,000), and operational costs (US \$13,000)	UNDP	156,000
Total		2,139,480
Total UNDP		1,178,480
Total UNEP		301,000
Total UNIDO		660,000

Co-financing

45. Co-financing will be provided by several beneficiaries included in stage III, including the TVTO centres in charge of civil works for the adaptations to safely handle flammable refrigerants and the related training, the end users participating in the NH₃ demonstration in cold rooms, and the Accreditation Laboratory of the Office of Standards.

2025–2027 draft business plan of the Multilateral Fund

46. UNDP, UNEP and UNIDO are requesting US \$4,819,496, plus agency support costs, for the implementation of stage III of the HPMP for the Islamic Republic of Iran. The total requested value of US \$2,306,300, including agency support costs, for the period of 2025–2027 is US \$1,541,700 below the amount in the business plan.

Gender policy implementation

47. In line with decisions 84/92(d), 90/48(c) and 92/40(b), the operational gender mainstreaming policy of the Multilateral Fund will be applied throughout the implementation of stage III, including the hiring of a gender expert, collecting sex-disaggregated data, carrying out training sessions and workshops for women only, actively promoting the participation of female technicians in these activities, and developing promotional materials on women in the RAC sector. In consultation with women's groups, the Department of Women's Development, and national experts on gender issues, interviews and meetings will be carried out with women in the field (technicians, trainers and others) to tackle under-representation and unequal treatment by ensuring financial benefits, equal pay, safety in workplaces, and the development of a systematic plan for addressing gender equality and women's empowerment. Project indicators will include number/percentage of women and men employed throughout the project lifecycle, gender assessments undertaken, implementation of gender assessment recommendations on track. Gender-disaggregated data will be collected for all HPMP activities and project staff will be sensitized to gender issues by completing relevant United Nations training courses.

Sustainability of the HCFC phase-out and assessment of risks

48. The Montreal Protocol has been included in the training curriculum for customs officers, and training content is regularly updated. The NOU and the customs authorities are committed to ensuring that the country respects its HCFC reduction targets stipulated in the Agreement, and that every border officer has at least a basic understanding of Montreal Protocol-related controls. The officers' training will continue with trainers that have undergone refresher training under stage III. The sustainability of the HCFC phase-out in the manufacturing sector will be achieved through the promulgation of relevant bans on the imports and manufacturing of products using HCFCs in the foam and RAC sectors.

49. The identified risk of a potential adoption of high-GWP technologies due to market forces and external factors affecting the country's economy will be addressed by the awareness campaigns intended to support stakeholders and to sensitize them to the impact of their technology choices, and by the technical assistance and pilot demonstration activities to support end users choosing low-GWP alternatives. UNDP will use risk management tools, such as the Partner Capacity Assessment Tool and Enterprise Risk Management, to identify and mitigate potential delays caused by any implementing partner's lack of capacity to effectively perform, manage and monitor their assigned roles.

Impact on the climate

50. The activities proposed in the servicing sector, which include better containment of refrigerants through training and the provision of equipment, will reduce the amount of HCFC-22 used in servicing. Every kilogram of HCFC-22 not emitted due to better refrigeration practices results in the savings of approximately 1.8 CO₂-equivalent tonnes. A calculation of the impact on the climate was provided in the HPMP. The activities planned by the Islamic Republic of Iran, including its efforts to promote low-GWP alternatives as well as refrigerant recovery and reuse, indicate that the implementation of the HPMP will reduce the emissions of refrigerants into the atmosphere, resulting in climate benefits.

Draft Agreement

51. A draft Agreement between the Government of the Islamic Republic of Iran and the Executive Committee for stage III of the HPMP is contained in annex I to the present document.

RECOMMENDATION

52. The Executive Committee may wish to consider:

- (a) Approving, in principle, stage III of the HCFC phase-out management plan (HPMP) for the Islamic Republic of Iran for the period from 2025 to 2030 for the complete phase-out of HCFC consumption, in the amount of US \$5,190,861, consisting of US \$2,869,496, plus agency support costs of US \$200,865, for UNDP, US \$600,000, plus agency support costs of US \$76,000, for UNEP, and US \$1,350,000, plus agency support costs of US \$94,500, for UNIDO, on the understanding that no more funding from the Multilateral Fund will be provided for the phase-out of HCFCs;
- (b) Noting:
 - (i) The commitment of the Government of the Islamic Republic of Iran:
 - a. To completely phase out HCFCs by 1 January 2030, and that HCFCs will not be imported after that date, except for those allowed for a servicing tail between 2030 and 2040, where required, consistent with the provisions of the Montreal Protocol;
 - b. To establish a ban on the use of HCFCs in the manufacturing of extruded polystyrene foam by 31 December 2028;
 - (ii) That, upon completion of the end-user projects in the industrial and commercial refrigeration and room air-conditioning sectors included in stage III of the HPMP, UNIDO and UNDP will submit final reports on their implementation in line with decision 92/36(g), including the HCFC phase-out and the energy-efficiency gains achieved;

- (iii) That, to allow for consideration of the final tranche of its HPMP, the Government of the Islamic Republic of Iran should submit:
 - a. A detailed description of the regulatory and policy framework in place to implement measures to ensure that HCFC consumption was in compliance with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol for the period 2030–2040;
 - b. If the Islamic Republic of Iran were intending to have consumption during the period 2030–2040, in line with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol, proposed modifications to its Agreement with the Executive Committee covering the period beyond 2030;
- (c) Deducting 53.73 ODP tonnes of HCFCs from the remaining HCFC consumption eligible for funding;
- (d) Approving:
 - (i) The draft Agreement between the Government of the Islamic Republic of Iran and the Executive Committee for the reduction in consumption of HCFCs, in accordance with stage III of the HPMP, contained in annex I to the present document; and
 - (ii) The first tranche of stage III of the HPMP for the Islamic Republic of Iran, and the corresponding tranche implementation plan, in the amount of US \$2,306,300, consisting of US \$1,178,480, plus agency support costs of US \$82,494, for UNDP, US \$301,000, plus agency support costs of US \$38,127, for UNEP, and US \$660,000, plus agency support costs of US \$46,200, for UNIDO.

Annex I

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF THE ISLAMIC REPUBLIC OF IRAN AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS IN ACCORDANCE WITH STAGE III OF THE HCFC PHASE-OUT MANAGEMENT PLAN

Purpose

1. This Agreement represents the understanding of the Government of the Islamic Republic of Iran (the “Country”) and the Executive Committee with respect to the reduction of controlled use of the ozone-depleting substances (ODSs) set out in Appendix 1-A (“The Substances”) to a sustained level of zero ODP tonnes by 1 January 2030 in compliance with Montreal Protocol schedule.
2. The Country agrees to meet the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A (“The Targets, and Funding”) in this Agreement as well as in the Montreal Protocol reduction schedule for all Substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of the Substances that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances that exceeds the level defined in rows 4.1.3 and 4.2.3 (remaining consumption eligible for funding).
3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees, in principle, to provide the funding set out in row 3.1 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (“Funding Approval Schedule”).
4. The Country agrees to implement this Agreement in accordance with stage III of the HCFC phase-out management plan approved (“the Plan”). In accordance with subparagraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.

Conditions for funding release

5. The Executive Committee will only provide the Funding in accordance with the Funding Approval Schedule when the Country satisfies the following conditions at least eight weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:
 - (a) That the Country has met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which there are no due country programme implementation reports at the date of the Executive Committee meeting at which the funding request is being presented are exempted;
 - (b) That the meeting of these Targets has been independently verified for all relevant years, unless the Executive Committee decided that such verification would not be required;
 - (c) That the Country had submitted a Tranche Implementation Report in the form of Appendix 4-A (“Format of Tranche Implementation Reports and Plans”) covering each previous calendar year; that it had achieved a significant level of implementation of

activities initiated with previously approved tranches; and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent; and

- (d) That the Country has submitted a Tranche Implementation Plan in the form of Appendix 4-A covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

Monitoring

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (“Monitoring Institutions and Roles”) will monitor and report on implementation of the activities in the previous Tranche Implementation Plans in accordance with their roles and responsibilities set out in the same Appendix.

Flexibility in the reallocation of funds

7. The Executive Committee agrees that the Country may have the flexibility to reallocate part or all of the approved funds, according to the evolving circumstances to achieve the smoothest reduction of consumption and phase-out of the Substances specified in Appendix 1-A:

- (a) Reallocations categorized as major changes must be documented in advance either in a Tranche Implementation Plan as foreseen in subparagraph 5(d) above, or as a revision to an existing Tranche Implementation Plan to be submitted eight weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:
 - (i) Issues potentially concerning the rules and policies of the Multilateral Fund;
 - (ii) Changes which would modify any clause of this Agreement;
 - (iii) Changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches;
 - (iv) Provision of funding for activities not included in the current endorsed Tranche Implementation Plan, or removal of an activity in the Tranche Implementation Plan, with a cost greater than 30 per cent of the total cost of the last approved tranche;
 - (v) Changes in alternative technologies, on the understanding that any submission for such a request would identify the associated incremental costs, the potential impact to the climate, and any differences in ODP tonnes to be phased out if applicable, as well as confirm that the Country agrees that potential savings related to the change of technology would decrease the overall funding level under this Agreement accordingly;
- (b) Reallocations not categorized as major changes may be incorporated in the approved Tranche Implementation Plan, under implementation at the time, and reported to the Executive Committee in the subsequent Tranche Implementation Report; and
- (c) Any remaining funds held by the bilateral or implementing agencies or the Country under the Plan will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

Considerations for the refrigeration servicing sector

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sector included in the Plan, in particular:

- (a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation; and
- (b) The Country and relevant bilateral and/or implementing agencies would take into consideration relevant decisions on the refrigeration servicing sector during the implementation of the Plan.

Bilateral and implementing agencies

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNDP has agreed to be the lead implementing agency (the “Lead IA”) and UNEP and UNIDO have agreed to be the cooperating implementing agencies (the “Cooperating IAs”) under the lead of the Lead IA in respect of the Country’s activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of the Lead IA and/or Cooperating IAs taking part in this Agreement.

10. The Lead IA will be responsible for ensuring coordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to independent verification as per subparagraph 5(b). The Cooperating IAs will support the Lead IA by implementing the Plan under the overall coordination of the Lead IA. The roles of the Lead IA and Cooperating IAs are contained in Appendix 6-A and Appendix 6-B, respectively. The Executive Committee agrees, in principle, to provide the Lead IA and the Cooperating IAs with the fees set out in rows 2.2, 2.4 and 2.6 of Appendix 2-A.

Non-compliance with the Agreement

11. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A (“Reductions in Funding for Failure to Comply”) in respect of each ODP kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement, and take related decisions. Once decisions are taken, the specific case of non-compliance with this Agreement will not be an impediment for the provision of funding for future tranches as per paragraph 5 above.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decisions that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee, the Lead IA and the Cooperating IAs to facilitate implementation of this Agreement. In particular, it will provide the Lead IA and the Cooperating IAs with access to the information necessary to verify compliance with this Agreement.

Date of completion

14. The completion of the Plan and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption level has been specified in Appendix 2-A. Should at that time there still be activities that are outstanding, and which were foreseen in the last Tranche Implementation Plan and its subsequent revisions as per subparagraph 5(d) and paragraph 7, the completion of the Plan will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per subparagraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A will continue until the time of the completion of the Plan unless otherwise specified by the Executive Committee.

Validity

15. All of the conditions set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

16. This Agreement may be modified or terminated only by mutual written agreement between the Government of the Country and the Executive Committee of the Multilateral Fund.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	163.6
HCFC-141b	C	I	216.9
Total			380.5

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2025	2026-2027	2028	2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	123.66	123.66	123.66	123.66	0	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	76.10	76.10	50.10	50.10	0	n/a
2.1	Lead IA (UNDP) agreed funding (US \$)	1,178,480	0	1,169,166	0	521,850	2,869,496
2.2	Support costs for Lead IA (US \$)	82,493	0	81,842	0	36,530	200,865
2.3	Cooperating IA (UNEP) agreed funding (US \$)	301,000	0	234,000	0	65,000	600,000
2.4	Support costs for Cooperating IA (US \$)	38,127	0	29,640	0	8,233	76,000
2.5	Cooperating IA (UNIDO) agreed funding (US \$)	660,000	0	420,000	0	270,000	1,350,000
2.6	Support costs for Cooperating IA (US \$)	46,200	0	29,400	0	18,900	94,500
3.1	Total agreed funding (US \$)	2,139,480	0	1,823,166	0	856,850	4,819,496
3.2	Total support costs (US \$)	166,820	0	140,882	0	63,663	371,365
3.3	Total agreed costs (US \$)	2,306,300	0	1,964,048	0	920,513	5,190,861

4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)	53.73
4.1.2	Phase-out of HCFC-22 to be achieved in the previous stages (ODP tonnes)	109.87
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
4.2.2	Phase-out of HCFC-141b to be achieved in the previous stage (ODP tonnes)	216.90
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)	0

* Date of completion of stage II as per stage II Agreement: 31 December 2025

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval at the first meeting of the year specified in Appendix 2-A.

APPENDIX 4-A: FORMAT OF TRANCHE IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Tranche Implementation Report and Plans for each tranche request will consist of five parts:

- (a) A narrative report, with data provided by tranche, describing the progress achieved since the previous report, reflecting the situation of the Country in regard to phase-out of the Substances, how the different activities contribute to it, and how they relate to each other. The report should include the amount of ODSs phased out as a direct result from the implementation of activities, by substance, and the alternative technology used and the related phase-in of alternatives, to allow the Secretariat to provide to the Executive Committee information about the resulting change in climate relevant emissions. The report should further highlight successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Tranche Implementation Plan(s), such as delays, uses of the flexibility for reallocation of funds during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes;
- (b) An independent verification report of the Plan results and the consumption of the Substances, as per subparagraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification has to be provided together with each tranche request and will have to provide verification of the consumption for all relevant years as specified in subparagraph 5(a) of the Agreement for which a verification report has not yet been acknowledged by the Committee;
- (c) A written description of the activities to be undertaken during the period covered by the requested tranche, highlighting implementation milestones, the time of completion and the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the plan will be provided by calendar year. The description should also include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall Plan that are foreseen. The description should also specify and explain in detail such changes to the overall plan. This description of future activities can be submitted as a part of the same document as the narrative report under subparagraph (b) above;
- (d) A set of quantitative information for all Tranche Implementation Reports and Plans, submitted through an online database; and

- (e) An Executive Summary of about five paragraphs, summarizing the information of the above subparagraphs 1(a) to 1(d).
- 2. In the event that in a particular year two stages of the Plan are being implemented in parallel, the following considerations should be taken in preparing the Tranche Implementation Reports and Plans:
 - (a) The Tranche Implementation Reports and Plans referred to as part of this Agreement, will exclusively refer to activities and funds covered by this Agreement; and
 - (b) If the stages under implementation have different HCFC consumption targets under Appendix 2-A of each Agreement in a particular year, the lower HCFC consumption target will be used as reference for compliance with these Agreements and will be the basis for the independent verification.

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The monitoring process will be managed by the Department of the Environment through the National Ozone Unit (NOU), with the assistance of the Lead IA. The consumption will be monitored and determined based on official import and export data for the Substances recorded by relevant Government departments. The NOU shall compile and report on an annual basis, on or before relevant due dates, data on the consumption of the Substances to be submitted to the Ozone Secretariat, and on the progress of implementation of the Plan to be submitted to the Executive Committee.
2. The NOU and the Lead IA will engage an independent and qualified entity to carry out a qualitative and quantitative performance evaluation of the Plan's implementation. The evaluating entity shall have full access to relevant technical and financial information related to implementation of the Plan; it shall prepare and submit to the NOU and the Lead IA a consolidated draft report at the end of each Tranche Implementation Plan, comprising the findings of the evaluation and recommendations for improvements or adjustments, if any. The draft report shall include the status of the Country's compliance with the provisions of this Agreement. Upon incorporating the comments and explanations, as may be applicable, from the NOU, the Lead IA and the Cooperating IAs, the evaluating entity shall finalize the report and submit it to the NOU and the Lead IA. The NOU shall endorse the final report, and the Lead IA shall submit the same to the Multilateral Fund Secretariat.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities, including at least the following:
 - (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's Plan;
 - (b) Assisting the Country in preparation of the Tranche Implementation Reports and Plans as per Appendix 4-A;
 - (c) Providing independent verification to the Executive Committee that the Targets have been met and associated tranche activities have been completed as indicated in the Tranche Implementation Plan consistent with Appendix 4-A;
 - (d) Ensuring that the experiences and progress is reflected in updates of the overall plan and in future Tranche Implementation Plans consistent with subparagraphs 1(c) and 1(d) of Appendix 4-A;

- (e) Fulfilling the reporting requirements for the Tranche Implementation Reports and Plans and the overall Plan as specified in Appendix 4-A for submission to the Executive Committee, and should include the activities implemented by the Cooperating IAs;
- (f) In the event that the last funding tranche is requested one or more years prior to the last year for which a consumption target had been established, annual tranche implementation reports and, where applicable, verification reports on the current stage of the Plan should be submitted until all activities foreseen had been completed and HCFC consumption targets had been met;
- (g) Ensuring that appropriate independent technical experts carry out the technical reviews;
- (h) Carrying out required supervision missions;
- (i) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Tranche Implementation Plan and accurate data reporting;
- (j) Coordinating the activities of the Cooperating IAs, and ensuring appropriate sequence of activities;
- (k) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country and the Cooperating IAs, the allocation of the reductions to the different budget items and to the funding of the Lead IA and each Cooperating IA;
- (l) Ensuring that disbursements made to the Country are based on the use of the indicators;
- (m) Providing assistance with policy, management and technical support when required;
- (n) Reaching consensus with the Cooperating IAs on any planning, coordination and reporting arrangements required to facilitate the implementation of the Plan; and
- (o) Timely releasing funds to the Country/participating enterprises for completing the activities related to the project.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent entity to carry out the verification of the Plan's results and the consumption of the Substances mentioned in Appendix 1-A, as per subparagraph 5(b) of the Agreement and subparagraph 1(b) of Appendix 4-A.

APPENDIX 6-B: ROLE OF THE COOPERATING IMPLEMENTING AGENCIES

1. The Cooperating IAs will be responsible for a range of activities. These activities are specified in the Plan, including at least the following:

- (a) Providing assistance for policy development when required;
- (b) Assisting the Country in the implementation and assessment of the activities funded by the Cooperating IAs, and refer to the Lead IA to ensure a coordinated sequence in the activities;
- (c) Providing reports to the Lead IA on these activities, for inclusion in the consolidated reports as per Appendix 4-A; and

- (d) Reaching consensus with the Lead IA on any planning, coordination and reporting arrangements required to facilitate the implementation of the Plan.

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US \$179 per ODP kg of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the target specified in row 1.2 of Appendix 2-A has not been met, on the understanding that the maximum funding reduction would not exceed the funding level of the tranche being requested. Additional measures might be considered in cases where non-compliance extends for two consecutive years.

2. In the event that the penalty needs to be applied for a year in which there are two Agreements in force (two stages of the Plan being implemented in parallel) with different penalty levels, the application of the penalty will be determined on a case-by-case basis taking into consideration the specific sectors that lead to the non-compliance. If it is not possible to determine a sector, or both stages are addressing the same sector, the penalty level to be applied would be the largest.