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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Ninetieth Meeting  
Montreal, 20-23 June 2022  
Items 9(a) and (d) of the provisional agenda<sup>1</sup>

**PROJECT PROPOSAL: LIBYA**

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

Phase-out

- HCFC phase-out management plan (stage II, first tranche)

UNIDO

\*Re-issued for technical reasons on 12 June 2022.

<sup>1</sup> UNEP/OzL.Pro/ExCom/90/1

**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**

**Libya**

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
HCFC phase-out plan (stage II)	UNIDO

<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>	Year: 2021	75.00 (ODP tonnes)
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<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>							<b>Year: 2021</b>		
Chemical	Aerosol	Foam	Fire-fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Serviceing				
HCFC-22					47.95				47.95
HCFC-141b		27.05							27.05

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009-2010 baseline:	118.38	Starting point for sustained aggregate reductions:	113.66
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>			
Already approved:	26.51	Remaining:	87.15

<b>(V) BUSINESS PLAN</b>		<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Total</b>
UNIDO	ODS phase-out (ODP tonnes)	8.70	0.0	16.20	24.90
	Funding (US \$)	715,441	0	1,415,805	2,131,245

<b>(VI) PROJECT DATA</b>			<b>2022</b>	<b>2023-2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>Total</b>
Montreal Protocol consumption limits (ODP tonnes)			76.95	76.95	38.47	38.47	38.47	n/a
Maximum allowable consumption (ODP tonnes)			76.95	75.00	38.47	38.47	23.08	n/a
Project costs requested in principle (US \$)	UNIDO	Project costs	976,018	0	786,750	0	407,500	2,170,268
		Support costs	68,321	0	55,073	0	28,525	151,919
Total project costs requested in principle (US \$)			976,018	0	786,750	0	407,500	2,170,268
Total support costs requested in principle (US \$)			68,321	0	55,073	0	28,525	151,919
Total funds requested in principle (US \$)			1,044,339	0	841,823	0	436,025	2,322,187

<b>(VII) Request for approval of funding for the first tranche (2022)</b>		
Agency	Funds requested (US \$)	Support costs (US \$)
UNIDO	976,018	68,321
<b>Total</b>	<b>976,018</b>	<b>68,321</b>

<b>Secretariat's recommendation:</b>	Individual consideration
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## PROJECT DESCRIPTION

### Background

1. On behalf of the Government of Libya, UNIDO as the designated implementing agency has submitted a request for stage II of the HCFC phase-out management plan (HPMP), at the amount of US \$2,400,000, plus agency support costs of US \$168,000, as originally submitted.<sup>2</sup> The implementation of stage II of the HPMP will phase out 51.30 ODP tonnes of HCFCs and assist Libya in meeting the target of 67.5 per cent reduction in HCFC baseline consumption by 2025.
2. The first tranche of stage II of the HPMP being requested at this meeting amounts to US \$1,091,750, plus agency support costs of US \$76,422 for UNIDO, as originally submitted.
3. UNIDO also submitted a progress report on the implementation of stage I and the verification report on HCFC consumption for 2021, as requested by decision 82/75(c).

### Status of implementation of stage I of the HPMP

4. At their Twenty-seventh Meeting, the Parties noted that the annual HCFC consumption reported by Libya for 2013 and 2014 exceeded the country's maximum allowable levels for those years, and that Libya was therefore in non-compliance with the consumption control measures for HCFCs under the Protocol. The Parties further noted with appreciation the submission by Libya of a plan of action to ensure its return to compliance with the Protocol's HCFC control measures, under which Libya committed itself to reducing HCFC consumption from 122.4 ODP tonnes in 2014 to no more than 122.30 ODP tonnes in 2015; 118.40 ODP tonnes in 2016 and 2017; 106.50 ODP tonnes in 2018 and 2019; 76.95 ODP tonnes in 2020 and 2021; and the levels allowed under the Montreal Protocol in 2022 and subsequent years.
5. Subsequently, the Executive Committee approved stage I of the HPMP for Libya at its 75<sup>th</sup> meeting<sup>3</sup> to facilitate its implementation of the plan of action to return to compliance, and to phase out 26.51 ODP tonnes of HCFCs used in the refrigeration and air-conditioning (RAC) servicing and the foam manufacturing sectors to achieve a 10 per cent reduction of HCFC consumption from its baseline by 2018, at a total cost of US \$1,908,843, plus agency support costs. The control targets proposed in the plan of action were used as the Montreal Protocol control targets for stage I.
6. Due to the political and security situation in the country, the implementation of stage I was delayed, the plan was revised at the 86<sup>th</sup> meeting<sup>4</sup>, to extend the implementation until December 2021 (decisions 84/20(b) and 86/26(b)), as stipulated in the updated Agreement between the Government of Libya and the Executive Committee.<sup>5</sup> The country returned to compliance in 2018, has maintained compliance with the targets set in the plan of action thereafter, and achieved the control target of 35 per cent reduction in its consumption baseline in 2020 without additional funding.

### HCFC consumption

7. The Government of Libya reported a consumption of 75.00 ODP tonnes of HCFC in 2021, which is 37 per cent below the HCFC baseline for compliance and 1.95 ODP tonnes lower than the control target set in the plan of action for that year. The 2017-2021 HCFC consumption is shown in Table 1.

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<sup>2</sup> As per the letter of 16 February 2022 from the Ministry of the Environment of Libya to the Secretariat.

<sup>3</sup> Decision 75/50 and documents UNEP/OzL.Pro/ExCom/75/53 and Add.1

<sup>4</sup> Paragraphs 95-109 of document UNEP/OzL.Pro/ExCom/86/21

<sup>5</sup> Annex VIII of document UNEP/OzL.Pro/ExCom/86/100

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

HCFC	2017	2018	2019	2020	2021	Baseline
<b>Metric tonnes (mt)</b>						
HCFC-22	1,557.00	872.70	871.85	871.85	871.85	1,586.00
HCFC-141b	291.35	261.38	260.90	245.91	245.91	283.07
<b>Total (mt)</b>	<b>1,848.35</b>	<b>1,134.08</b>	<b>1,132.75</b>	<b>1,117.76</b>	<b>1,117.75</b>	<b>1,869.07</b>
<b>ODP tonnes</b>						
HCFC-22	85.63	48.00	47.95	47.95	47.95	87.25
HCFC-141b	32.05	28.75	28.70	27.05	27.05	31.13
<b>Total (ODP tonnes)</b>	<b>117.68</b>	<b>76.75</b>	<b>76.65</b>	<b>75.00</b>	<b>75.00</b>	<b>118.38</b>

8. HCFC consumption decreased significantly in 2018 and stabilized at a similar level afterwards. UNIDO explained that the reduction is mainly due to the war in the country, which has destroyed many houses and reduced economic activity, resulting in a decrease in consumption. Other contributing factors, to a lesser extent, include the enforcement of the licensing and quota system, which limited imports of HCFCs, and the market shift to HCFC alternatives, mainly HFCs and HFC blends.

#### *Country programme (CP) implementation report*

9. The Government of Libya reported HCFC sector consumption data under the 2021 CP implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

#### *Verification report*

10. The verification confirms that the Government is implementing a licensing and quota system for HCFC imports and exports and that the total consumption of HCFCs reported under Article 7 of the Montreal Protocol for 2021 was correct (as shown in Table 1 above); therefore, the Government of Libya has met its consumption reduction commitments toward the Executive Committee. The verification report notes that customs officers need further capacity building in the use of HCFC identifiers, which the national ozone unit (NOU) is coordinating with the Customs Department to address it as part of stage II.

#### Status of progress and disbursement

11. The implementation of the HPMP has been considerably hindered by the unstable political and security situation in the country. The latter began to improve in the last quarter of 2020, and the Government was able to implement several activities planned under the stage I, making significant progress.

#### *Legal framework*

12. The Government has issued Amendment of Decree Law 228 to include HFCs in import data registration in preparation for the ratification of the Kigali Amendment; ratification documentation has been submitted to Parliament for consideration and ratification is expected in 2022.

13. During stage I, a training manual was developed and six master trainers and 20 senior customs officers were trained in Tunisia in ODS trade control, enforcement of the licensing and quota system, data recording, identification of ODS, labelling, harmonized system codes, use of refrigerant identifiers, and countering illegal imports.

#### *Foam manufacturing sector*

14. Implementation of the foam conversion projects is challenging but progressing slowly. Several equipment items for Al-Najah (phasing out 105.37 mt of HCFC-141b in the manufacturing of polyurethane (PU) foam for continuous panels) have been delivered to the enterprise; additional equipment, including

cyclopentane drums and a power generator, have been procured and are expected to be delivered by April 2022. Due to the travel ban to Libya from Italy, the supplier's engineers and training personnel are unable to undertake the installation, commissioning and training. The supplier has employed an installation team from other countries to visit Libya and proceed with the installation and commissioning of the conversion equipment, as well as the training of technicians. The conversion project at Al-Najah is expected to be completed in June 2022.

15. The conversion at Al-Amal Alkhadar Company (phasing out 17.53 mt of HCFC-141b in the manufacturing of PU foam discontinuous panels) has been delayed due to the situation in the country and a recent change in equipment supplier. In 2017, UNIDO signed a purchase order with the equipment supplier; equipment was subsequently manufactured, but delivery was interrupted. In January 2022, due to the restructuring of the supplier, the purchase order was cancelled. New technical specifications were developed and the bidding is in progress. The equipment is expected to be delivered in August 2022, followed by installation, commissioning, and training. The project will be completed no later than December 2022.

#### *Refrigeration servicing sector*

16. The following activities were conducted during stage I:

- (a) Training of three master trainers and 35 technicians in HCFC phase-out, theory of cooling, good servicing practices during installation, and servicing and maintenance of RAC systems; and updating and printing, in English and Arabic, 200 copies of training manuals for distribution;
- (b) Provision and delivery of 30 portable refrigerant recovery units to the NOU; procurement of equipment for technician training and for the establishment of reclamation centres (i.e., refrigerant identifiers, recovery machines, portable charging station, leak detectors, servicing tool kits, and safety equipment), with delivery expected in July 2022;
- (c) Developing the code of good servicing practices by an international consultant with the assistance of a national expert; draft version of the code was finalized in 2021 and was used for training of technicians;
- (d) Developing plans for the certification of RAC technicians and servicing workshops, including institutional arrangements, certification standards, training programme, procedure for examination, issuance of certificates, monitoring and enforcement; and
- (e) Continuous awareness-raising activities on the Montreal Protocol, the Government of Libya's commitment to the protection of the ozone layer, the phase-out of HCFCs, the licensing and quota system, and women's participation in protecting the ozone layer.

#### *Level of fund disbursement*

17. As of March 2022, of the US \$1,161,310 approved for stage I of the HPMP,<sup>6</sup> US \$873,250 (representing 75 per cent) had been disbursed for UNIDO. The balance of US \$288,060 will be disbursed in 2022 and 2023.

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<sup>6</sup> The funding tranche was adjusted after deducting US \$747,533 associated with the cancellation of the conversion of one enterprise in the foam sector (Alyem); these funds have been returned to the Multilateral Fund.

Completion of stage I

18. Stage I will be completed by 31 December 2022 as per paragraph 14 of the Agreement approved at the 86<sup>th</sup> meeting.

**Stage II of the HPMP**Remaining consumption eligible for funding

19. The starting point for aggregate reductions of HCFCs was established at 113.66 ODP tonnes when stage I of the HPMP was approved at the 75<sup>th</sup> meeting. After deducting 26.51 ODP tonnes of HCFCs associated with stage I of the HPMP, the remaining consumption eligible for funding amounts to 87.15 ODP tonnes (79.85 ODP tonnes of HCFC-22 and 7.3 ODP tonnes of HCFC-141b). The Government is proposing to phase out 51.30 ODP tonnes (44 ODP tonnes of HCFC-22 and 7.3 ODP tonnes of HCFC-141b) in stage II, and to address the remaining 35.85 ODP tonnes of HCFC-22 eligible for funding in a future stage of the HPMP.

Sector distribution of HCFCs

20. HCFC-141b is only used in the manufacturing sector to produce PU foam for continuous and discontinuous sandwich panels, insulation foam in domestic and commercial refrigeration, and spray foam for building construction. The consumption of HCFC-141b in 2021 was 245.90 mt.

21. There are approximately 15,000 technicians and 2,944 workshops in the servicing sector, consuming HCFC-22, HFCs and blends to service domestic, commercial and industrial air conditioners, refrigeration equipment and transport reefers, as shown in Table 2.

**Table 2. Estimate of demand for HCFC-22 in the RAC servicing sector in Libya**

Sector/ Application	(a)	(b)	(c) = (a)*(b)	(d)	(c)*(d)
	Equipment inventory	Average charge (kg)	HCFC bank (mt)	Estimated bank refilled during servicing (%)	Annual need for servicing (mt)
Domestic air-conditioning (AC) (window and split)	920,300	1.31	1,205.59	16	192.89
Commercial and industrial AC (ducted split AC, packaged AC and heat pumps)	342,580	13.08	4,480.95	15	672.14
Large commercial refrigeration (ice plants, cold food storage facilities and supermarkets)	470	94.31	44.33	10	4.43
Industrial refrigeration (fruit and vegetable supply chains, dairy and meat processing, fishery industry)	500	40.59	20.30	10	2.03
Transport reefer containers	560	5.75	3.22	10	0.32
<b>Total</b>	<b>1,264,410</b>		<b>5,754.38</b>		<b>871.82</b>

22. Libya has not started to monitor the consumption of HFCs yet. Based on the limited information available, it is estimated that HCFC-22 represents 53 per cent of the refrigerants used in the servicing sector, followed by R-407C (41 per cent) and R-410A (5 per cent), with the remaining 1 per cent of HFC-32, R-404A, R-452A, ammonia (NH<sub>3</sub>) and CO<sub>2</sub>/NH<sub>3</sub> systems.

### Phase-out strategy in stage II of the HPMP

23. Stage II of the HPMP aims to achieve a 67.5 per cent reduction from its HCFC baseline consumption by 2025. Stage II will completely phase out the consumption of HCFC-141b in the foam manufacturing sector and further reduce 44 ODP tonnes of HCFC-22 in the refrigeration servicing sector. The stage II strategy was designed based on the experience gained during the implementation of stage I and will focus on strengthening the institutional and legal framework to control HCFC imports; continuing capacity development in the refrigeration servicing sector through training and the provision of equipment to enable good servicing practices and to reduce refrigerant emission; implementing refrigerant recovery, recycling and reclamation; and promoting the adoption of low-global-warming-potential (GWP) alternatives to HCFCs.

24. The foam sector in Libya has undergone significant changes during the war, with the enterprises operating in the baseline years (2009-2010) either destroyed, not operating, or operating under constrained conditions. Due to the challenges faced in the field, the acquisition of accurate data and industrial information required for the preparation of the investment projects could not be completed in time. The Government proposes to submit the foam sector plan during the implementation of stage II.

### Proposed activities in stage II of the HPMP

25. Stage II proposes the following activities to be implemented by UNIDO:

- (a) Updating of the national ODS legislation to include procedures and bylaws; conducting a targeted awareness campaign to sensitize government officials to the enforcement of ODS regulations; establishing a licensing and quota system for equipment operating on controlled substances and proposing a schedule to gradually ban the imports of different categories of equipment; prohibiting new manufacturing facilities using HCFCs and blends; mandatory reporting by importers and banning imports of used HCFC-based equipment; establishing labelling requirements for containers of controlled substances; ensuring the maintenance of logbooks by servicing workshops; mandatory leak checking for equipment with initial charge of more than 3 kg; developing an e-licensing system for HCFC imports; establishing mandatory certification of technicians; and ensuring the registration of servicing workshops (US \$315,000);
- (b) Updating the code of good practices to incorporate new requirements following the European Commission F-gas regulation (labelling, record-keeping and reporting requirements, standards for equipment and installations operating with hydrocarbon (HC) and NH<sub>3</sub>); adapting national standards for RAC products to international standards (ISO-817, ISO-5149 and IEC-60332); and introducing standard operating procedures (SOPs) for servicing workshops handling flammable and hazardous refrigerants (US \$85,000);
- (c) Training of 18 master trainers and 225 customs officers in HCFC control, implementation of the licensing and quota system, policies, regulations, and identification of refrigerants and equipment using HCFCs; conducting three border dialogues with neighbouring countries (Tunisia, Egypt and the Niger) and organizing enforcement cooperation to combat illegal trade; and procurement of 10 advanced refrigerant identifiers (US \$379,000);
- (d) Updating the training manual and training of 18 master trainers and 700 technicians in good servicing practices, leakage detection, refrigerant recovery and recycling, and the safe handling of flammable refrigerants in collaboration with training institutes; implementing a national certification system for RAC technicians and certifying 600 technicians;

supporting the formation of a RAC association that will assist in the technician training and certification programme; providing nine sets of tools and training equipment (e.g., leak detectors, charging units, recovery stations and cylinders, vacuum pumps, brazing equipment, flare and swaging tools) to training institutions and qualification-awarding institutes; providing equipment and tools (e.g., leak detectors for HCFCs and HFCs, multi-function meters, tubing tools, pinch-off and piercing pliers, flaring and swaging tools, wrenches) to 450 certificated technicians for leakage detection and refrigerant recovery (US \$903,000);

- (e) Developing guidelines for refrigerant recovery and reclamation; providing equipment (e.g., reclamation stations, storage tanks, liquid transfer pumps, filter chiller units, refrigerant identifiers, refrigerant test kits, recovery units, leak detectors and accessories) and establishing two refrigerant reclamation centres, and a recovery network including equipment installation, commission and training; providing tools (e.g., recovery stations, service manifolds, electronic gauges, vacuum pumps and gauges, recovery cylinders, servicing tools and safety equipment) to 80 certified technicians for the refrigerant recovery network; training 25 technicians in refrigerant recovery and reclamation in collaboration with two vocational training institutes; evaluating technicians, servicing workshops and reclamation centres on refrigerant recovery and reclamation for certification purposes; and conducting a feasibility study on the disposal of unwanted refrigerants (US \$368,000); and
- (f) Conducting awareness-raising activities to promote low-GWP alternatives; conducting research on the safety and performance of low-GWP technologies in the local context; organizing three seminars for technicians on the regulatory framework and emerging technologies; providing technical assistance to large end users in leakage reduction and transitioning to non-ODS and low-GWP alternatives; and organizing broadcasting and information campaigns on HCFC phase-out and alternative technologies (US \$150,000).

#### *Project monitoring*

26. The system established under stage I of the HPMP will continue into stage II, where the NOU and UNIDO monitor activities, report on progress, and work with stakeholders to phase out HCFCs. The cost of these activities amounts to US \$200,000, including staff and consultant (US \$120,000); travel (US \$10,000); and meetings (US \$70,000).

#### *Gender policy implementation<sup>7</sup>*

27. In line with decision 84/92(d) and the UNIDO gender mainstreaming policies, stage II of the HPMP will be implemented with consideration of gender equality, from project formulation to implementation, both in the investment and non-investment components. Gender mainstreaming policies shall extend to the selection of consultants and implementation teams, project monitoring teams, trainee technicians, as well as customs and enforcement officers. Emphasis will be put on ensuring active participation by women in consultative workshops, stakeholder meetings, and gender capacity building. Throughout stage II, the NOU will seek stakeholders' input on integrating gender-specific indicators in the planning, implementation, and reporting process of each component. Focus will be placed on gender-balanced participation in training and capacity-building activities, as well as other supporting measures. Training and meetings on ozone issues will incorporate sessions on gender to sensitize participants to the importance of gender mainstreaming and women's empowerment.

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<sup>7</sup> Decision 84/92(d) requested bilateral and implementing agencies to apply the operational policy on gender mainstreaming throughout the project cycle.



Total cost of stage II of the HPMP

28. The total cost of stage II of the HPMP for Libya has been estimated at US \$2,400,000 (plus agency support costs), as originally submitted, for achieving a 67.5 per cent reduction from its HCFC baseline consumption by 2025. Out of the 44 ODP tonnes (800 mt) of HCFC-22 to be phased out, 16.50 ODP tonnes (300 mt) will be voluntary reduction and 27.5 ODP tonnes (500 mt) will be funded under stage II. In addition, US \$200,000 was requested for project monitoring, implementation, coordination and reporting. The proposed activities and cost breakdown are summarized in Table 3.

**Table 3. Total cost of stage II of the HPMP for Libya as submitted**

<b>Activity</b>	<b>Cost (US \$)</b>
Development/Update and enforcement of policies and regulations to support HCFC phase-out	315,000
Updating the code of good servicing practices; adapting international standards; and introducing SOPs for servicing workshops handling flammable and hazardous refrigerants	85,000
Training of 18 master trainers and 225 customs officers, conducting three border dialogues, and provision of 10 refrigerant identifiers	379,000
Updating the training manual, training of 18 master trainers and 700 technicians in good servicing practices, certifying 600 technicians, provision of tools to 600 certified technicians, and provision of nine sets of training equipment to vocational training institutions	903,000
Development of guidelines for recovery and reclamation and provision of 80 sets of equipment and tools to establish two refrigerant reclamation centres and a recovery network; technician training on the operation of reclamation centres and on refrigerant recovery; awareness-raising on refrigerant recovery; and conducting a feasibility study on the disposal of unwanted ODS refrigerants	368,000
Awareness-raising activities (seminars, broadcasting and information campaigns) to promote low-GWP alternatives, and technical assistance to large end users	150,000
Monitoring, implementation, coordination and reporting	200,000
<b>Total</b>	<b>2,400,000</b>

Activities planned for the first tranche of stage II

29. The first funding tranche of stage II of the HPMP in the total amount of US \$1,091,750 will be implemented between July 2022 and June 2025 and will include the following activities:

- (a) Employing a consultant to review the national regulatory framework; conducting a public consultation on possible procedures and bylaws to be included in the updated national ODS legislation, including controls on the manufacturing and imports of HCFC-based equipment, mandatory reporting by importers, and leakage control in servicing workshops; targeted awareness campaigns to sensitize government officials and stakeholders to ODS regulations; developing an e-licensing system for HCFC imports and exports and an e-registration system for servicing workshops; developing qualification requirements for the certification of technicians; and establishing a mandatory certification of technicians (US \$147,500);
- (b) Updating the code of good practices to incorporate new requirements following the European Commission F-gas regulation (labelling, record-keeping and reporting requirements, standards for equipment and installations operating with HC and NH<sub>3</sub>); adapting national standards for RAC products to international standards (ISO-817, ISO-5149 and IEC-60332); and employing a national expert to develop SOPs for servicing workshops handling flammable and hazardous refrigerants (US \$57,250);
- (c) Updating the customs training manual; training of six master trainers and 15 customs officers by an international expert; assisting the NOU in engaging the six master trainers to train 72 customs officers in HCFC import control, implementation of the licensing and

quota system, policies, regulations, and identification of refrigerants and equipment; conducting three border dialogues with neighbouring countries (Tunisia, Egypt and the Niger) and organizing enforcement cooperation and combating illegal trade; and procuring five advanced refrigerant identifiers (US \$148,000);

- (d) Updating the technician training manual to include emerging technologies and flammable refrigerants; training six master trainers and 300 technicians in good servicing practices, leakage detection, refrigerant recovery and recycling, and the safe handling of flammable refrigerants, in collaboration with local training institutes; providing equipment and tools (e.g., leak detectors, charging units, recovery stations and cylinders, vacuum pumps, brazing equipment, flare and swaging tools) to three training institutes; implementing a national certification scheme and certifying 200 technicians; providing tools (e.g., leak detectors for HCFCs and HFCs, multi-function meters, tubing tools, pinch-off and piercing pliers, flaring and swaging tools, wrenches, and personal protection) to certified technicians; establishing a RAC association and network to support the technician training and certification programme (US \$392,000);
- (e) Developing a business model and guidelines for refrigerant reclamation centres; providing tools and equipment (e.g., reclamation stations, storage tanks, liquid transfer pumps, filter chiller units, refrigerant identifiers, refrigerant test kits, recovery units, leak detectors and accessories) to establish two refrigerant reclamation centres; provision of tools (e.g., recovery stations, service manifolds, electronic gauges, vacuum pumps and gauges, recovery cylinders, servicing tools and safety equipment) to technicians to develop a refrigerant recovery network; training 25 technicians in refrigerant recovery and reclamation; developing certification criteria for reclamation centre hosts, technicians and servicing workshops; and conducting a feasibility study on the disposal of unwanted ODS (US \$197,000);
- (f) Awareness-raising activities to promote low-GWP alternatives; conducting research on the safety and performance of low-GWP technologies; dissemination of information on emerging alternative technologies in collaboration with the RAC association; providing technical assistance to large end users in leakage reduction and transition to low-GWP alternatives; and organizing campaigns through various media to disseminate information on HCFC phase-out and alternative technologies (US \$80,000); and
- (g) Project implementation, monitoring, coordination and reporting at a total of US \$70,000, including staff and consultant (US \$40,000), travel (US \$10,000), meetings and workshops (US \$10,000), and other miscellaneous costs (US \$10,000).

## **SECRETARIAT'S COMMENTS AND RECOMMENDATION**

### **COMMENTS**

30. The Secretariat reviewed stage II of the HPMP in light of stage I, 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 (decision 74/50), and the 2022-2024 business plan of the Multilateral Fund.

#### Remaining eligible consumption

31. According to the Agreement, the remaining eligible consumption after the implementation of stage I of the HPMP for Libya was 87.15 ODP tonnes, and the funding of US \$2,400,000 requested for stage II, as originally submitted, was calculated based on that amount. It was noted that the verified HCFC

consumption in 2021 was only 75.00 ODP tonnes. Given that Libya has already achieved a 35 per cent reduction from its baseline, activities in stage II should result in further reduction in HCFCs from the current HCFC consumption level. In addition, the 2021 consumption included two enterprises that are being converted under stage I and will stop using HCFC-141b after conversion, leaving only 7.3 ODP tonnes of HCFC-141b eligible for funding in the foam sector under stage II, as per the stage I Agreement. After discussion, it was agreed to use 55.25 ODP tonnes as the starting point for stage II of the HPMP, calculated using the sums of 47.95 ODP tonnes of HCFC-22 consumption in 2021 in the servicing sector and the remaining eligible consumption of 7.30 ODP tonnes of HCFC-141b in the foam sector, as shown in Table 4.

**Table 4: Starting point, reductions and remaining eligible consumption in Libya**

Substance/Sector	Starting point in stage I	Reduction in stage I	Remaining after stage I	Actual consumption in 2021	Starting point for stage II	Reduction in stage II	Remaining after stage II
<b>mt</b>							
HCFC-22 in RAC servicing	1,500.30	48.49	1,451.81	871.85	871.85	452.14	419.71
HCFC-141b in foam manufacturing	283.10	216.73	66.36	245.90	66.36	66.36	0.00
<b>Total (mt)</b>	<b>1,783.40</b>	<b>265.22</b>	<b>1,518.18</b>	<b>1,117.75</b>	<b>938.22</b>	<b>518.50</b>	<b>419.71</b>
<b>ODP tonnes</b>							
HCFC-22 in RAC servicing	82.52	2.67	79.85	47.95	47.95	24.87	23.08
HCFC-141b in foam manufacturing	31.14	23.84	7.30	27.05	7.30	7.30	0.00
<b>Total (ODP tonnes)</b>	<b>113.66</b>	<b>26.51</b>	<b>87.15</b>	<b>75.00</b>	<b>55.25</b>	<b>32.17</b>	<b>23.08</b>

#### Overarching strategy

32. Based on the revised starting point for stage II of 55.25 ODP tonnes, the eligible funding for achieving the 67.5 per cent reduction would be US \$827,193, in line with decision 74/50. In view of the funding reduction, the Government requested to implement stage II over five years to achieve an 80.5 per cent reduction by 2027, in addition to the 67.5 per cent reduction by 2025, to maintain the momentum of implementation and to support continuous compliance. The total funding for an extended stage II would be US \$2,170,268 in line with decision 74/50.

33. While considering a five-year stage II, the Secretariat requested an update on the security situation in Libya. UNIDO informed the Secretariat that the political situation in Libya had been stable, that the Government was united and in control of the whole territory, and that there was no security risk for movement within the country. UNIDO's experts travelled to Libya twice in 2021 and implemented several activities in the foam manufacturing and servicing sectors. Additional training has been planned for technicians on the use of the recovery and reclamation equipment once it is delivered in May 2022. UNIDO does not expect difficulties or delays in the implementation that could be due to potential security risks.

34. The Secretariat noted that only limited activities had been implemented in the servicing sector so far, as stage I had focused on the foam manufacturing sector conversion to phase out HCFC-141b. Based on the update on the security situation provided by UNIDO, the Secretariat considers a five-year plan would better support Libya in the continuous implementation of phase-out activities, enabling compliance with the Protocol. It was agreed that stage II would achieve an 80.5 per cent reduction by 2027, with the remaining consumption to be phased out in a future stage. The reduction in stage II and the remaining eligible consumption after stage II are included in Table 4 above.

35. With regard to the submission of the foam sector plan during the implementation of stage II, the Secretariat noted that the foam conversion projects implemented in stage I were expected to be completed

by the end of 2022 and that the two enterprises would stop using HCFC-141b after conversion, making it easier to understand HCFC-141b consumption in the country at that time. The Secretariat considers that the initiation of stage II implementation will raise awareness and create an enabling environment for data collection to understand sector consumption, thus further enabling a sound preparation of meaningful assistance to phase out the remaining HCFC-141b, and therefore supports this strategy. It was agreed to allow the submission of the foam sector plan during the implementation of stage II, prior to January 2024. The Government agreed to include the establishment of a ban on the import of HCFC-141b both pure and in pre-blended polyols once the remaining HCFC-141b is phased out in the foam sector plan once it is submitted. The Government advised that HCFC-141b in imported pre-blended polyols was included in its licensing and quota system, and that so far no imports of polyols had been detected in Libya.

#### Regulations to support HCFC phase-out

36. The Government of Libya has already issued HCFC import quotas for 2022 at 70.87 ODP tonnes, which is lower than the Montreal Protocol control target.

37. Noting that limited activities were conducted in stage I and that customs officers were trained in the use of refrigerant identifiers only in 2021, the Secretariat discussed the need to support the capacity development of customs officers to control the import and export of HCFCs. It is expected that stage II will support a variety of activities to further strengthen the licensing and quota system, including customs training, establishing mandatory reporting by importers, developing an e-licensing system and conducting awareness-raising activities. These are expected to further increase the operational effectiveness of the licensing and quota system to support the country's compliance.

#### Technical and cost-related issues

38. With regard to the ban on importing HCFC-based equipment, it would include all categories of HCFC-based equipment, with different starting dates. The NOU plans to work with the Government Ministries and to consult with industry stakeholders on banning the imports of smaller HCFC-based air conditioners by the end of 2023, vehicle AC by the end of 2025, and large-scale AC systems by the end of 2027.

39. The regulatory measures to support the sustainability of reclamation and of technician certification were discussed. UNIDO advised that a ban on venting refrigerants during servicing would be included in the regulation once the reclamation centres had been established. With regard to the certification of technicians, implementation of voluntary certification is planned at first; a mandatory certification scheme will be considered once the voluntary one is in place, in consultation with key stakeholders, based on experiences gained and lessons learned from the initial implementation stage.

#### *Sustainability of the activities proposed under stage II*

40. To ensure the sustainability of ODS import control, the Government will develop local expertise through updating the training manuals and training master trainers who will further train the customs officers regularly; refrigerant identifiers will be provided to facilitate the identification of ODS. Long-term capacity development of technicians in leakage reduction is achieved through provision of tools and equipment, supporting training institutions, and the implementation of a technician certification system. In stage II, two reclamation centres and a refrigerant recovery network will be established to facilitate refrigerant recovery, recycling and reclamation. Policy measures will be developed to support the compulsory certification of technicians and the successful operation of refrigerant recovery and reclamation to ensure long-term sustainability of these activities.

Total project cost

41. Based on the agreed strategy and phase-out targets, the total cost for stage II of the HPMP was adjusted from US \$2,400,000 to US \$2,170,268 for achieving an 80.5 per cent reduction in HCFC consumption from the baseline by 2027. The activities in stage II were subsequently adjusted and costs were optimized as follows: the tools provided to training institutions were reduced from nine to eight sets; the number of technicians to be trained was reduced to 600, with other technicians to be trained by the trained technicians on the job; the number of technicians to be certified was reduced to 500, and the number of tools for certified technicians was reduced accordingly; two reclamation centre full-testing laboratories were reduced to one laboratory to serve both centres; tools for the recovery network were reduced to 65 sets; the cost for research on the safety and performance of low-GWP technologies and the feasibility study for the disposal of unwanted ODS refrigerants were removed; and the cost for project management unit was reduced to US \$180,268 and included in the total costs for tonnage deduction, calculated based on US \$4.8/kg. The adjusted activities and costs are shown in Table 5.

**Table 5: Revised cost of stage II of the HPMP for Libya**

Activity	Cost (US \$)
Development/Update and enforcement of policies and regulations to support HCFC phase-out	315,000
Updating the code of good servicing practices; adapting international standards; and introducing SOPs for servicing workshops handling flammable and hazardous refrigerants	85,000
Training of 18 master trainers and 225 customs officers, conducting three border dialogues, and provision of 10 refrigerant identifiers	379,000
Updating of the training manual, training of 18 master trainers and 600 technicians, certifying 500 technicians, provision of 500 sets of tools to 500 certified technicians, and provision of eight sets of training equipment to vocational training institutions	801,000
Development of guidelines and provision of equipment and tools to establish two refrigerant reclamation centres and a recovery network (65 sets); and awareness-raising and training in refrigerant recovery	280,000
Awareness-raising activities (seminars, broadcasting and information campaigns) to promote low-GWP alternatives and provision of technical assistance to large end users	130,000
Monitoring, implementation, coordination and reporting	180,268
<b>Total</b>	<b>2,170,268</b>

42. The funding for the first tranche was reduced to US \$976,018; accordingly, relevant activities were adjusted as follows: the number of technicians to be trained was reduced to 200; two reclamation centre full-testing laboratories were reduced to one laboratory to serve both centres; research on the safety and performance of low-GWP technologies was removed; and other items were cost-optimized. The adjusted activities and costs are shown in Table 6.

**Table 6: Revised cost of the first tranche of stage II of the HPMP for Libya**

Activity	Cost (US \$)
Development/Update and enforcement of policies and regulations to support HCFC phase-out	147,500
Updating the code of good servicing practices; adapting international standards; and introducing SOPs for servicing workshops handling flammable and hazardous refrigerants	57,250
Training of six master trainers and 90 customs officers, conducting one border dialogue with a neighbouring country and provision of five refrigerant identifiers	148,000
Training of six master trainers and 200 technicians; certifying 200 technicians; provision of 200 sets of tools to certified technicians; and provision of three sets of training equipment to vocational training institutions	302,000
Developing a business model and guidelines and provision of equipment and tools to establish two refrigerant reclamation centres and a recovery network; awareness-raising and training in refrigerant recovery	211,000
Awareness-raising activities (seminars, broadcasting and information campaigns) to promote low-GWP alternatives and provision of technical assistance to large end users	50,000
Monitoring, implementation, coordination and reporting	60,268
<b>Total</b>	<b>976,018</b>

Impact on the climate

43. The activities proposed in the servicing sector, including better containment of refrigerants through training and the provision of equipment, will reduce the amount of HCFC-22 used in RAC servicing. Each kilogram of HCFC-22 not emitted due to better refrigeration practices results in the savings of approximately 1.8 CO<sub>2</sub>-equivalent tonnes. The implementation of the foam sector plan that will be submitted during stage II will eliminate the remaining consumption of HCFC-141b in Libya and result in a greenhouse-gas emission reduction of 48,114 tonnes of CO<sub>2</sub> equivalent. Although a calculation of the impact on the climate was not included in the HPMP, the activities planned by Libya, including its efforts to promote low-GWP alternatives, as well as refrigerant recovery, reclamation and re-use, indicate that the implementation of the HPMP will reduce the emission of refrigerants into the atmosphere, resulting in climate benefits.

**Co-financing**

44. The Government will provide in-kind contribution to the implementation of stage II, including office space and a number of staff to assist with the coordination, monitoring and implementation of the activities of the HPMP. The NOU will lead the development and adoption of the regulations and policy measures in cooperation with other Government ministries to support HCFC phase-out.

**2022-2024 draft business plan of the Multilateral Fund**

45. UNIDO is requesting US \$2,170,268, plus agency support costs, for the implementation of stage II of the HPMP for Libya. The total requested value of US \$1,044,339, including agency support costs for the period from 2022 to 2024, is US \$1,089,906 below the amount in the business plan.

**Draft Agreement**

46. A draft Agreement between the Government of Libya and the Executive Committee for stage II of the HPMP is contained in Annex I to the present document.

**RECOMMENDATION**

47. The Executive Committee may wish to consider:

- (a) Noting the submission of the progress report on the implementation of stage I of the HCFC phase-out management plan (HPMP) for Libya as requested by decision 82/75(c);
- (b) Requesting UNIDO to submit the final progress report for stage I of the HPMP to the first meeting of 2023;
- (c) Approving, in principle, stage II of the HCFC phase-out management plan (HPMP) for Libya for the period from 2022 to 2027 to reduce HCFC consumption by 80.5 per cent of the country's baseline, in the amount of US \$2,170,268, plus agency support costs of US \$151,919 for UNIDO;
- (d) Deducting the additional 31.90 ODP tonnes of HCFCs phased out during stage I and the 24.87 ODP tonnes of HCFCs associated with stage II from the remaining HCFC consumption eligible for funding;
- (e) Approving the draft Agreement between the Government of Libya and the Executive Committee for the reduction in consumption of HCFCs, in accordance with stage II of the HPMP, contained in Annex I to the present document;

- (f) Allowing the submission of a foam sector plan during the implementation of stage II of the HPMP prior to 1 January 2024, to phase out the remaining consumption in the foam manufacturing sector; and
- (g) Approving the first tranche of stage II of the HPMP for Libya, and the corresponding tranche implementation plan, in the amount of US \$976,018, plus agency support costs of US \$68,321 for UNIDO.





## Annex I

### **DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF LIBYA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS IN ACCORDANCE WITH STAGE II OF THE HCFC PHASE-OUT MANAGEMENT PLAN**

#### **Purpose**

1. This Agreement represents the understanding of the Government of Libya (the “Country”) and the Executive Committee with respect to the reduction of controlled use of the ozone-depleting substances (ODS) set out in Appendix 1-A (“The Substances”) to a sustained level of 23.08 ODP tonnes by 1 January 2027 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 the stage II of the HCFC phase-out management plan (HPMP) approved (“the Plan”). In accordance with sub-paragraph 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 sub-paragraph 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; and
  - (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;
- (c) Any enterprise to be converted to non-HCFC technology included in the Plan and that would be found to be ineligible under the policies of the Multilateral Fund (i.e., due to foreign ownership or establishment post the 21 September 2007 cut-off date), would not receive financial assistance. This information would be reported as part of the Tranche

Implementation Plan;

- (d) The Country commits to examining the possibility of using pre-blended systems with low-global-warming-potential blowing agents instead of blending them in-house for those foam enterprises covered under the Plan, should this be technically viable, economically feasible and acceptable to the enterprises;
- (e) The Country agrees, in cases where HFC technologies have been chosen as an alternative to HCFCs, and taking into account national circumstances related to health and safety: to monitor the availability of substitutes and alternatives that further minimize impacts on the climate; to consider, in the review of regulations standards and incentives adequate provisions that encourage introduction of such alternatives; and to consider the potential for adoption of cost-effective alternatives that minimize the climate impact in the implementation of the HPMP, as appropriate, and inform the Executive Committee on the progress accordingly in tranche implementation reports; and
- (f) 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. UNIDO has agreed to be the lead implementing agency (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 taking part in this Agreement.

10. The Lead IA will be responsible for ensuring co-ordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to independent verification as per sub-paragraph 5(b). The role of the Lead IA is contained in Appendix 6-A. The Executive Committee agrees, in principle, to provide the Lead IA with the fees set out in row 2.2 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 and the Lead IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA 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 sub-paragraph 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 sub-paragraphs 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 of the Government of Libya and the Executive Committee of the Multilateral Fund.

## **APPENDICES**

### **APPENDIX 1-A: THE SUBSTANCES**

<b>Substance</b>	<b>Annex</b>	<b>Group</b>	<b>Starting point for aggregate reductions in consumption (ODP tonnes)</b>
HCFC-22	C	I	82.52
HCFC-141b	C	I	31.14
Total			113.66

## APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2022	2023 2024	2025	2026	2027	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	76.95	76.95	38.47	38.47	38.47	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	76.95	75.00	38.47	38.47	23.08	n/a
2.1	Lead IA (UNIDO) agreed funding (US \$)	976,018	0	786,750	0	407,500	2,170,268
2.2	Support costs for Lead IA (US \$)	68,321	0	55,073	0	28,525	151,919
3.1	Total agreed funding (US \$)	976,018	0	786,750	0	407,500	2,170,268
3.2	Total support costs (US \$)	68,321	0	55,073	0	28,525	151,919
3.3	Total agreed costs (US \$)	1,044,339	0	841,823	0	436,025	2,322,187
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)						24.87
4.1.2	Phase-out of HCFC-22 to be achieved in the previous stage (ODP tonnes)						34.57
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)						23.08
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)						0.00
4.2.2	Phase-out of HCFC-141b to be achieved in the previous stage (ODP tonnes)						23.84
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)						7.30

\*Date of completion of stage I as per stage I Agreement: 31 December 2022.

## 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 ODS 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 sub-paragraph 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 sub-paragraph 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 sub-paragraph (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 sub-paragraphs 1(a) to 1(d).

2. In the event that in a particular year two stages of the HPMP 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 National Ozone Unit (NOU) is the central administrative unit established within the administrative structure of the Ministry of Environment and is responsible for:

- (a) The co-ordination of governmental activities with respect to ozone layer protection and the facilitation of ODS phase-out;
- (b) The overall co-ordination of national activities toward the implementation of the Plan; and
- (c) The management of the implementation of the planned project activities, in cooperation with the Lead IA.

2. The monitoring role is with the Project Management Unit (PMU) and includes the following:

- (a) Day-to-day implementation of investment projects (where applicable), training programmes, technical assistance and awareness-raising activities included in the approved Plans;
- (b) Providing support to the NOU and the independent verifier in the verification process, including meetings with relevant stakeholders, data collection co-ordination, and input on review findings;

- (c) Under the supervision of the NOU, co-ordinating non-governmental stakeholders, certain Government departments, industrial associations, research and training institutes, the standards bureau, and the statistics bureau for the implementation of the Plan activities; and
- (d) While the main responsibility for data gathering, analysis and reporting remains within the NOU, in some cases the PMU participates in collecting and analyzing consumption data pertaining to the controlled substances associated with the Plan implementation.

3. An independent auditor will be employed by the Lead IA to verify annual ODS consumption as a basis for consumption reporting by the Government under Article 7 of the Montreal Protocol.

#### **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 HPMP;
  - (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 sub-paragraphs 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;
  - (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) 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, the allocation of the reductions to the different budget items and to the funding of the Lead IA;
  - (k) Ensuring that disbursements made to the Country are based on the use of the indicators;

- (l) Providing assistance with policy, management and technical support when required; and
- (m) 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 HPMP results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement and sub-paragraph 1(b) of Appendix 4-A.

#### **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 \$174.5 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 HPMP 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.

#### **APPENDIX 8-A: SECTOR-SPECIFIC ARRANGEMENTS**

1. The Government of Libya may, through the Lead IA, submit the foam sector plan during the implementation of stage II of the HPMP prior to 1 January 2024, to phase out the remaining consumption of HCFC-141b.

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