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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-sixth Meeting
Montreal, 26-30 May 2025
Item 9(c) of the provisional agenda¹

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, second tranche) | UNIDO | Blanket approval |
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¹ UNEP/OzL.Pro/ExCom/96/1

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Libya

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (stage II)	UNIDO (lead)	90 th	80.5% phase-out by 2027

(II) LATEST ARTICLE 7 DATA (Annex C, Group I)	Year: 2023	61.75 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					39.90				39.90
HCFC-141b		7.85							7.85

* Preliminary data provided by the country prior to submitting the 2024 country programme data

(IV) CONSUMPTION DATA (ODP tonnes)			
2009–2010 baseline:	118.38	Starting point for sustained aggregate reductions:	113.66
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	83.28	Remaining:	30.38

(V) ENDORSED BUSINESS PLAN		2025	2026	2027	Total
UNIDO	ODS phase-out (ODP tonnes)	9.02	0.00	4.67	13.69
	Funding (US \$)	841,823	0	436,025	1,277,848

(VI) PROJECT DATA			2022	2023-2024	2025	2026	2027	Total
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
Funding agreed 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
Funds approved by ExCom (US \$)		Project costs	976,018					976,018
		Support costs	68,321					68,321
Total funds recommended for approval at this meeting (US \$)		Project costs			786,750			786,750
		Support costs			55,073			55,073

Secretariat's recommendation:	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of Libya, UNIDO as the designated implementing agency has submitted a request for funding for the second tranche of stage II of the HCFC phase-out management plan (HPMP), in the amount of US \$786,750, plus agency support costs of US \$55,073.² The submission includes a progress report on the implementation of the first tranche, the verification report on HCFC consumption for 2022-2023, and the tranche implementation plan for 2025 to 2027.

Report on HCFC consumption

2. The Government of Libya reported a consumption of 61.75 ODP tonnes of HCFCs in 2023, which is 48 per cent below the country's HCFC baseline for compliance. The Article 7 data for 2024 has not been reported yet. The country has provided a preliminary estimate of HCFC consumption for 2024. The 2020-2024 HCFC consumption is shown in table 1.

Table 1. HCFC consumption in Libya (2020-2024 Article 7 data)

HCFC	2020	2021	2022	2023	2024*	Baseline
Metric tonnes (mt)						
HCFC-22	871.85	871.85	845.69	780.95	725.50	1,586.00
HCFC-141b	245.91	245.91	240.86	170.85	71.40	283.07
Total (mt)	1,117.76	1,117.75	1,086.55	951.80	796.90	1,869.07
ODP tonnes						
HCFC-22	47.95	47.95	46.51	42.95	39.90	87.25
HCFC-141b	27.05	27.05	26.49	18.79	7.85	31.13
Total (ODP tonnes)	75.00	75.00	73.01	61.75	47.75	118.38

* Preliminary data

3. HCFC consumption stabilized in 2020 and 2021 following the war in the country and has been gradually decreasing in recent years along with implementation of HPMP activities, such as enforcement of the licensing and quota system and the shift to HCFC alternatives.

Country programme implementation report

4. The Government of Libya reported HCFC sector consumption data under the 2023 country programme (CP) implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

Verification report

5. The verification report confirmed that the Government was 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 2022 to 2023 was correct (as shown in table 1 above); therefore, the Government of Libya has met its consumption reduction commitments under its Agreement with the Executive Committee. The verification report suggests establishing a data cross-checking mechanism and implementing further training activities for relevant stakeholders.

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

6. Stage I of the HPMP was completed on 31 December 2023 in line with the extension approved by the Executive Committee in decision 91/14(b)(ii). The project completion report was submitted on 27 June 2024.

² As per the letter of 14 March 2025 from the Ministry of Environment of Libya to UNIDO.

Progress report on implementation of the first tranche of stage II of the HCFC phase-out management plan

Legal framework

7. The national regulatory framework was reviewed and recommendations were developed for the updated national ODS legislation, namely: to include regulations for the control of ODS and HCFC-based equipment (in addition to the licensing and quota system), and to amend Decree Law 228 to register import data of HFCs in preparation for the country's forthcoming ratification of the Kigali Amendment. Four targeted awareness campaigns were conducted to sensitize Government officials and stakeholders to ODS regulations; and regular contact with customs authorities, importers and end users took place to communicate banned substances, alternative technologies, and upcoming quotas.

8. The Government of Libya has initiated the process of ratifying the Kigali Amendment. A formal submission was made to the national legislative authorities and is currently under parliamentary review, expected to be completed in 2025.

9. The electronic licensing system for importation is currently being developed under the supervision of the Customs Authority. This system will eventually integrate all import permits, including controlled substances, under a centralized digital platform. The Ministry of Environment will manage its segment of the licensing system concerning environmental permits. The project is currently on hold due to infrastructure limitations and lack of trained technical personnel, particularly in remote customs offices.

10. Qualification requirements were developed for the certification of technicians, with mandatory certification expected to be established by end of 2025.

11. Plans were developed to update 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 hydrocarbons and NH₃) and to adapt national standards for refrigeration and air-conditioning (RAC) products to international standards such as ISO 817, ISO 5149, and IEC 60332.

12. Standard operating procedures (SOPs) were developed for servicing workshops handling flammable and hazardous refrigerants, referencing key safety classifications and technical properties of flammable refrigerants. Additionally, they provide important safety guidance for the installation and servicing of room air-conditioners with a cooling capacity up to 14 kW and 48,000 BTU/hour. The national ozone unit (NOU) has been working with the relevant ministries for their adoption, which is expected by June 2026 following stakeholder consultation and approval by the Libyan Standards and Metrology Centre.

13. Eight master trainers were trained on the safe handling of refrigerants and use of refrigerant identifiers, as well as how to organize and conduct training sessions; and 90 customs officers from main entry points were trained on HCFC import control, implementation of the licensing and quota system, policies, regulations, and identification of refrigerants and equipment. Five advanced refrigerant identifiers were procured and distributed to the main entry ports. Border dialogues with neighbouring countries were not yet conducted.

Refrigeration servicing sector

14. The following activities were implemented under the first tranche to build the capacity of RAC servicing technicians and workshops:

- (a) The technician training manual was updated to include emerging technologies, the safe handling of flammable refrigerants, and refrigerant recovery, recycling, and reclamation (RRR);

- (b) Eight master trainers (two per region) and 179 technicians were trained (with an additional 40 planned for April 2025) in good servicing practices, leakage detection, refrigerant recovery and recycling, and the safe handling of flammable refrigerants, in collaboration with local training institutes;
- (c) Equipment and tools (e.g., leak detectors, charging units, recovery stations and cylinders, vacuum pumps, brazing equipment, flare and swaging tools) were provided to three training institutes located in three cities (Tripoli, Benghazi, and Sabha) that offer technical diplomas, conduct short-term RAC training courses under the Ministry of Technical and Vocational Education, and issue nationally recognized certificates;
- (d) Sets of 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) were provided to 179 trained technicians; and
- (e) A RAC association and network to support the technician training and certification programme was formed and an inception meeting held, with registration of the association pending.

15. To support the country's RRR network, a business model and guidelines for refrigerant reclamation centres were developed; however, the two host facilities have not yet been identified and thus the procurement of RRR tools and equipment for the centres and technicians was delayed. Two awareness workshops were organized to train 10 technicians in refrigerant recovery and reclamation. Certification criteria were developed for reclamation centre hosts, technicians, and servicing workshops, and a feasibility study on the disposal of unwanted ODS has begun.

16. Under awareness-raising activities to promote low-global-warming-potential (GWP) alternatives, research was conducted on the safety and performance of low-GWP technologies and submitted it to the NOU and relevant ministries; information was disseminated through a seminar in Tripoli for RAC technicians, end users, importers, customs officers, and civil servants on emerging alternative technologies; technical assistance was provided to two end users (service workshops) in Tripoli on leakage reduction and the transition to low-GWP alternatives; and four awareness training campaigns were conducted through various media in Tripoli and Benghazi to disseminate information on HCFC phase-out and alternative technologies, attended by 60 participants from Government authorities and the private sector, including small and medium-sized enterprises.

Project implementation and monitoring

17. The project management unit (PMU) comprises a project administrator who is responsible for the overall coordination of the project, ensures day-to-day implementation and smooth communication within the NOU, prepares annual work plans, and drafts progress reports, and an auditor who is responsible for verifying consumption data and project implementation.

18. Under the first tranche, US \$28,240 of the budgeted US \$60,268 was disbursed for staff and a consultant. The remaining US \$32,028 is committed for staff and consultants, including preparation of the 2025 verification report (US \$12,760); office rent (US \$11,000); travel (US \$5,500); and miscellaneous costs (US \$2,768).

Level of fund disbursement

19. As of March 2025, of the US \$976,018 approved so far, US \$401,841 (41 per cent) had been disbursed. The balance of US \$574,177 will be disbursed in 2025 and 2026, of which US \$350,000 is expected to be disbursed by November 2025.

Implementation plan for the second tranche of stage II of the HCFC phase-out management plan

20. The following activities will be implemented between July 2025 and June 2027:

- (a) Complete the update and enforce the updated national ODS legislation including procedures and bylaws; conduct two additional targeted awareness campaigns to sensitize Government officials and stakeholders to ODS regulations; develop and implement the electronic licensing system for HCFC imports and exports and the electronic registration system for servicing workshops; and adopt and enforce the developed qualification requirements for the mandatory certification of technicians (US \$137,500);
- (b) Adopt the updated code of practices incorporating new requirements following the European Commission F-gas regulation (labelling, record-keeping, and reporting requirements, and standards for equipment and installations operating with hydrocarbons and NH₃) and the updated national standards for RAC products to international standards (ISO-817, ISO-5149 and IEC-60332); and adopt and enforce the SOPs developed for servicing workshops handling flammable and hazardous refrigerants (US \$24,250);
- (c) Train 12 master trainers and 200 customs officers in HCFC control, implementation of the licensing and quota system, policies, regulations, and identification of refrigerants and equipment using HCFCs; conduct three border dialogues with neighbouring countries (Tunisia, Egypt, and the Niger) and organize enforcement cooperation meetings to combat illegal trade; and procure five advanced refrigerant identifiers (US \$148,000);
- (d) Continue updating the training manual with emerging technologies, and train 12 master trainers and 220 technicians in good servicing practices, leakage detection, refrigerant recovery and recycling, and the safe handling of flammable refrigerants in collaboration with training institutes; implement the national certification system for RAC technicians and certify 220 technicians; register the RAC association that is assisting in the technician training and certification programme; provide five 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; and provide 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 220 certificated technicians for leakage detection and refrigerant recovery (US \$316,000);
- (e) Select locations and procure 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 (including one testing laboratory); provide tools (e.g., recovery stations, service manifolds, electronic gauges, vacuum pumps and gauges, recovery cylinders, servicing tools and safety equipment) to 80 certified technicians to develop a refrigerant recovery network; adopt and enforce the developed business model and guidelines for refrigerant reclamation centres; train 10 technicians in refrigerant recovery and reclamation in collaboration with two vocational training institutes; adopt and enforce the certification system to evaluate technicians, servicing workshops, and reclamation centres on refrigerant recovery and reclamation; and finalize the feasibility study on the disposal of unwanted refrigerants (US \$51,000);
- (f) Conduct research on the safety and performance of low-GWP technologies in the local context; organize two seminars for technicians on the regulatory framework and emerging technologies; provide technical assistance to two large end users in leakage reduction and

transitioning to non-ODS and low-GWP alternatives; and conduct two media campaigns on HCFC phase-out and alternative technologies (US \$50,000); and

- (g) Project implementation, monitoring, coordination and reporting at a total of US \$60,000, including staff and consultants (US \$30,000), travel (US \$10,000), meetings and workshops (US \$10,000), and miscellaneous costs (US \$10,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Report on HCFC consumption and verification

21. On the recommendations included in the verification report mentioned in paragraph 5, UNIDO clarified that the NOU and relevant national authorities have established and implemented a robust verification mechanism throughout the licensing and quota control process, including quota allocation and communication, import authorization, pre-arrival coordination, port-of-entry inspection, and final clearance. It was noted that training activities for relevant stakeholders are being implemented as part of the activities for stage II of the HPMP. UNIDO also indicated that the NOU reaffirms its commitment to effectively implementing stage II of the HPMP, building upon the strong regulatory foundation already in place. With regard to the verification of the consumption for 2024, UNIDO confirmed that the verification report would be updated to include 2024 and will be submitted along with CP data which is due in May 2025.

Progress report on implementation of the first tranche of stage II of the HCFC phase-out management plan

Legal framework

22. The Government of Libya has already issued HCFC import quotas for 2025 at 38.17 ODP tonnes, which is lower than the Montreal Protocol control targets.

23. The Secretariat enquired about the timeline to ban the import of different categories of equipment and prohibit new manufacturing facilities from using HCFCs and blends. UNIDO provided a recent update that Libya has already enacted a regulatory ban on the import of equipment operating with HCFC substances. Ministerial Decision No. 165 of 2025, issued on 19 March 2025 by the Minister of Environment, prohibits the import of all equipment and appliances containing HCFCs. The decision has been formally circulated to the Libyan Customs Authority, the Ministry of Economy and Trade, and other relevant regulatory bodies for immediate enforcement.

24. The new regulatory instrument covers the ban of import of all HCFC-based applications including RAC, vehicles, foam production lines and electronic circuit cleaning equipment. It also bans the establishment or expansion of any manufacturing facility using HCFCs as well as ban the import of HCFC-141b for the use as a blowing agent in the foam industry.

Foam manufacturing sector

25. In relation to decision 90/40(f), which allows the country to submit a foam sector plan during the implementation of stage II of the HPMP prior to 1 January 2024 in order to phase out the remaining consumption in the foam manufacturing sector, UNIDO informed that the country has requested not to submit a foam sector plan, since the majority of foam manufacturing enterprises were either destroyed or relocated outside of the country as a result of economic instability caused by the war.

Refrigeration servicing sector

26. In relation to estimated time for the issuance of the certification scheme and types of professions and applications included in the draft scheme, UNIDO provided an update that the scheme is expected to be finalized and issued by late 2025, subject to a final coordination process among stakeholders which includes a series of consultative meetings and technical workshops with key national institutions. The legal instruments to formalize and enforce the certification scheme are currently under development. The certification scheme is designed in accordance with the ISO 17021 and shall cover technicians in servicing workshops that maintain stationary refrigeration, stationary air-conditioning and heat-pump systems, and refrigerated trucks and trailers.

27. Regarding the RRR scheme, UNIDO provided additional details on the business model developed to support the establishment and operation of the RRR network through two national centres of excellence. The model includes a requirement for the recovery and reuse of refrigerants; specifications of recovered refrigerant for general use and reuse in the same equipment; requirements for safe refrigerant transfer, transport and storage; technical specification of recovery equipment; and labelling and logbook of recovered refrigerants. The RRR business model also includes the design of a collection network including a central reclamation solution and a de-central reclamation setup to minimize transfer of refrigerants unless reclamation is needed. Equipment of the centres are expected to be delivered by November 2025, allowing the setup and start of operation by 2026.

Project implementation and monitoring

28. The Secretariat enquired about the PMU personnel and budget utilization, noting that the progress report of the first tranche and the additional feedback provided by UNIDO referred to only utilizing funds for a project coordinator, at headquarters, and a consultant for the verification process and reports. UNIDO clarified that safety concerns in Libya hindered the planned communication, reporting, meeting, and logistical activities, and that the utilization of funds other than personnel was not feasible during the first tranche. As for the project coordinator position, it was placed at UNIDO's headquarters, on a temporary basis, to allow project initiation during the first tranche due to the instability situation. However, with the significantly improved safety situation, UNIDO is currently in the process of recruiting a national project coordinator who will be operating from within the country, and the use of funds other than on personnel costs will also commence normally.

Implementation plan for the second tranche of stage II of the HCFC phase-out management plan

29. In discussing planned activities of the second tranche, UNIDO provided a detailed workplan for planned activities along with linkage to remaining work from the first tranche. UNIDO also provided details about the agreed list of equipment and tools being procured for three training institutes, two reclamation centres, and 200 toolkits for technicians. All clarifications and elaboration provided were in line with the second tranche budget breakdown submitted in the original proposal.

30. Regarding the RAC association that is established as part of the HPMP and currently under its final stage of registration, UNIDO confirmed that the association is established in a way that allows membership of individual technicians and enterprises operating in the RAC servicing and supply chain. The association will support the implementation of HPMP, and future projects, through its agreed workplan that includes promoting good servicing practices and training activities, facilitating stakeholder dialogue, developing and disseminating technical standards and safety protocols, representing the servicing sector with regulatory authorities and training institutions, and supporting outreach and awareness.

Gender policy implementation

31. On the implementation of decisions 84/92(d) and 90/48(c), UNIDO provided feedback that the RAC servicing sector in Libya is dominated by men; therefore, women's engagement in HPMP activities was very limited during the first tranche. Under the second tranche, and with the improved situation on ground, the Government of Libya and UNIDO will conduct campaigns to further promote and encourage women's engagement in HPMP activities, especially joining the RAC servicing workforce.

Sustainability of the HCFC phase-out and assessment of risks

32. The sustainability of the phase-out is ensured through maintaining and updating the regulatory framework, including bans and the control mechanism for an enforceable licensing and quota system, providing the market needs of HCFC and reducing prospects for illegal trade; continuous training of customs and enforcement officers; continuous training of technicians on proper servicing practices and enforcement of mandatory certification; and providing tools for RRR to increase recovery rates, thus reducing the need for virgin refrigerants. The main risk resides with possible implementation delays due to the political and security situations.

Conclusion

33. The Secretariat notes that Libya remains in compliance with the Montreal Protocol targets and its Agreement with the Executive Committee for the period 2022-2024.³ The ban on the import and manufacturing of HCFC-based equipment and the ban on the import of HCFC-141b for use as a blowing agent in the foam industry were introduced in March 2025. Substantial progress was made in the implementation of the first tranche of stage II, and the level of fund disbursement reached 41 per cent. UNIDO confirmed that the updated verification report to include 2024 consumption data will be submitted along with the 2024 CP implementation report in May 2025.

RECOMMENDATION

34. The Fund Secretariat recommends that the Executive Committee note the progress report on the implementation of the first tranche of stage II of the HCFC phase-out management plan (HPMP) for Libya, and further recommends blanket approval of the second tranche of stage II of the HPMP and the corresponding 2025-2027 tranche implementation plan for Libya at the funding level shown in the table below, on the understanding that UNIDO had committed to submitting, in May 2025, an updated verification report that included 2024 consumption data.

	Project title	Project funding (US \$)	Support costs (US \$)	Implementing agency
(a)	HCFC phase-out management plan (stage II, second tranche)	786,750	55,073	UNIDO

³ Includes preliminary data for 2024 provided by the country.