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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-second Meeting
Montreal, 29 May to 2 June 2023
Item 9(c) of the provisional agenda¹

PROJECT PROPOSAL: TUNISIA

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 and UNEP

¹ UNEP/OzL.Pro/ExCom/92/1

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Tunisia

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (stage II)	UNIDO (lead), UNEP	84 th	67.5 % phase-out by 2025

(II) LATEST ARTICLE-7 DATA (Annex C Group I)	Year: 2022	20.65 ODP tonnes
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2022	
Chemical	Aerosol	Foam	Fire-fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22					20.65				20.65
HCFC-141b									
HCFC-142b									
HCFC-141b contained in imported pre-blended polyols		1.60							1.60

(IV) CONSUMPTION DATA (ODP tonnes)			
2009-2010 baseline:	40.7	Starting point for sustained aggregate reductions:	45.68
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	32.49	Remaining:	12.88*

*Excluding 0.31 ODP tonnes of HCFC-141b and HCFC-142b since there is no more consumption in the country

(V) ENDORSED BUSINESS PLAN		2023	2024	2025	Total
UNIDO	ODS phase-out (ODP tonnes)	5.4	0.0	1.7	7.1
	Funding (US \$)	414,000	0	128,000	542,000
UNEP	ODS phase-out (ODP tonnes)	1.4	0.0	0.3	1.7
	Funding (US \$)	113,000	0	27,000	140,000

(VI) PROJECT DATA			2019	2020	2021	2022*	2023	2024	2025	Total
Montreal Protocol consumption limits (ODP tonnes)			36.63	26.46	26.46	26.46	26.46	26.46	13.19	n/a
Maximum allowable consumption (ODP tonnes)			34.60	25.91	25.91	25.91	25.91	25.91	12.88	n/a
Funding agreed in principle (US \$)	UNIDO	Project costs	858,306	0	0	386,640	0	0	120,000	1,364,946
		Support costs	60,081	0	0	27,065	0	0	8,400	95,546
	UNEP	Project costs	76,000	0	0	100,000	0	0	24,000	200,000
		Support costs	9,880	0	0	13,000	0	0	3,120	26,000
Funds approved by ExCom (US \$)		Project costs	934,306	0	0	0	0	0	0	934,306
		Support costs	69,961	0	0	0	0	0	0	69,961
Total funds recommended for approval at this meeting (US \$)		Project costs	0	0	0	0	486,640	0	0	486,640
		Support costs	0	0	0	0	40,065	0	0	40,065

*The second tranche was submitted in 2023.

Secretariat's recommendation:	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of Tunisia, UNIDO as the lead implementing agency has submitted a request for funding for the second tranche of stage II of the HCFC phase-out management plan (HPMP), at a total cost of US \$526,705, consisting of US \$386,640, plus agency support costs of US \$27,065 for UNIDO, and US \$100,000, plus agency support costs of US \$13,000 for UNEP.² The submission includes a progress report on the implementation of the first tranche, the verification report on HCFC consumption for 2019 to 2022, and the tranche implementation plan for 2023 to 2025.

Report on HCFC consumption

2. The Government of Tunisia reported a consumption of 20.65 ODP tonnes of HCFC in 2022, which is 49 per cent below the HCFC baseline for compliance. The 2018-2022 HCFC consumption is shown in table 1.

Table 1. HCFC consumption in Tunisia (2018-2022 Article 7 data)

HCFC	2018	2019	2020	2021	2022	Baseline
Metric tonnes (mt)						
HCFC-22	471.13	443.95	422.30	376.18	375.40	709.34
HCFC-123	0.00	0.5	0.5	0.00	0.00	n/a
HCFC-141b	0.00	8.46	0.00	0.00	0.00	14.57
HCFC-142b	0.00	0.00	0.00	0.00	0.00	0.55
(Subtotal / Total) (mt)	471.13	452.91	422.80	376.18	375.40	724.46
HCFC-141b in imported pre-blended polyols*	65.00	94.35	67.00	14.50	14.50	45.64**
ODP tonnes						
HCFC-22	25.91	24.42	23.23	20.69	20.65	39.01
HCFC-123	0.00	0.01	0.01	0.00	0.00	n/a
HCFC-141b	0.00	0.93	0.00	0.00	0.00	1.61
HCFC-142b	0.00	0.00	0.00	0.00	0.00	0.04
(Subtotal / Total) (ODP tonnes)	25.91	25.36	23.24	20.69	20.65	40.70
HCFC-141b in imported pre-blended polyols*	7.15	10.38	7.37	1.60	1.60	5.02**

* Country programme (CP) data

** Starting point established in the Agreement with the Executive Committee

3. The consumption of HCFCs has been declining since 2018 due to activities being implemented in the refrigeration and air-conditioning (RAC) servicing sector, and the phase-out of 79.3 mt (4.36 ODP tonnes) of HCFC-22 associated with the residential air-conditioning (AC) manufacturing enterprises which converted to R-410A technology without funding from the Multilateral Fund.

4. Small quantities of HCFC-123 were consumed in 2019 and 2020 for use by the food industry as a refrigerant for chillers. HCFC-141b was imported in 2019 by a pharmaceutical enterprise for use as a solvent in the manufacture of disposable syringes. The enterprise has since completed its conversion under stage I and from 1 January 2020 there has been a ban on the import of HCFC-141b in bulk.

Country programme implementation report

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

² As per the letter of 17 March 2023 from the Ministry of Environment of Tunisia to UNIDO.

Verification report

6. The verification report confirmed that the Government is implementing a licensing and quota system for HCFC imports and exports and that the total consumption of HCFCs reported under Article 7 of the Montreal Protocol for 2021 and 2022 was correct (as shown in table 1 above); however, there were discrepancies between the verified consumption data and Article 7 data report for 2019 and 2020, showing slightly higher consumption in 2019 (0.14 ODP tonnes) and slightly lower consumption in 2020 (0.24 ODP tonnes) than what had been officially reported. For 2019 the difference was due to imports by a company that operates in a special economic zone specializing in fish and seafood where all products are exported, which is regulated under customs control and did not require a quota or a licence; this was not reported as consumption as it was used for export. For 2020 the difference was because an importer received special permission for the import of HCFC-22 at the end of December 2019, but the shipment was cleared by customs only in 2020 and was thus reported as consumption for that year. The verification concluded that Tunisia has complied with the maximum allowable consumption of all Annex C, Group I substances as stated in the Agreement with the Executive Committee. One recommendation was included in the verification report and discussed in paragraph 17 below.

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

7. Stage I of the HPMP was completed as scheduled on 31 December 2021. The project completion report was submitted on 21 July 2022, and all the remaining funds have been returned.

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

Legal framework

8. The Government of Tunisia continues to implement an electronic licensing and quota system for HCFC imports. The Government ratified the Kigali Amendment on 27 August 2021. A National Commission for the Protection of the Ozone Layer (NOC) comprising the HPMP Steering Group, the Legislative Group and the Technical Group is responsible for setting import quotas for controlled substances and establishing a licensing system for the import and export of HFCs. The import of HCFC-141b in bulk has been prohibited since 1 January 2020. The HS codes were updated in 2018 for better identification of HFCs.

9. The Government is in the process of preparing new regulations supporting the phase-out of HCFCs including a ban on the sale, distribution and installation of equipment and materials containing HCFCs; establishing a certification system for enterprises and technicians in the RAC servicing sector; and establishing the legal framework for an HCFC recovery, recycling and reclamation (RRR) system; all these have been submitted to the Minister of Environment between June 2022 and March 2023 for consultation and approval. Actions have also been initiated to strengthen the NOC to set import quotas and to monitor imports of ODS and HFCs, with a draft decree submitted to the Ministry of Environment in March 2023.

10. During the first tranche a four-day training was organized to train 13 customs officers as trainers and a guide was prepared and distributed for the control and identification of ODS and ODS-based equipment, illegal trade, and the use of HS codes.

Polyurethane foam manufacturing

11. Stage II included conversion projects for the phase-out of the use of HCFC-141b contained in pre-blended polyols in two polyurethane (PU) foam manufacturing enterprises (GAN and le Panneau). The first enterprise GAN converted to the use of cyclopentane for insulation foam in manufacturing domestic refrigerators and freezers; the project was completed in December 2021 phasing out 5.78 ODP tonnes

(52.5 mt) of HCFC-141b in pre-blended polyols. The second conversion project at le Panneau was approved for a change in technology at the 88th meeting from HFO-1233zd to n-pentane in the manufacture of rigid insulation panels; this conversion is currently ongoing. The selection process to engage a supplier was completed and the supplier began to manufacture the requested equipment (i.e., rigid PU injection machine) in January 2023; the project is expected to be completed by June 2023. Once completed, 14.5 mt (1.6 ODP tonnes) of HCFC-141b in imported pre-blended polyols are expected to be phased out from the project.

Refrigeration servicing sector

12. Sixty RAC trainers, out of which 10 were women, received training and certification under a pilot technician certification scheme. The guide on codes and standards for servicing in the RAC sector was updated. Two separate training workshops were held for a total of 97 trainers each (including 17 women): one on the updated codes and standards; the other on good RAC servicing practices. Training on good practices for managing and handling refrigerants was held for 300 RAC technicians. Twelve refrigerant identifiers were provided to the Tunisian Association of Refrigeration and to five RAC training centres; and one RAC training centres was provided with RAC servicing tools and equipment (leak detectors, manifolds, electronic scales, brazing kits, refrigerant recovery units, vacuum pumps, refrigerant cylinders, and basic tools, among others). The business model for the RRR system was updated and a decree to establish the system was drafted. Awareness raising activities were undertaken including the celebration of world refrigeration day and the distribution of brochures on HPMP progress and commitments.

Project implementation and monitoring

13. During the first tranche the NOU has been responsible for the overall implementation of the HPMP, and specific implementation tasks were assigned to the National Commission for the Protection of the Ozone Layer.

Level of fund disbursement

14. As of March 2023, of the US \$934,306 approved so far (US \$853,306 for UNIDO and US \$76,000 for UNEP), US \$607,820 (65 per cent) had been disbursed (US \$547,290 for UNIDO and US \$60,530 for UNEP). The balance of US \$326,486 will be disbursed in 2023.

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

15. The following activities will be implemented between June 2023 and June 2025:
- (a) Remaining activities for the conversion of the foam enterprise le Panneau: complete testing and trials using the new technology and equipment, destruction of HCFC-based equipment, and turn-over of the project to the country and enterprise (funds from previous tranche);
 - (b) Policy and regulation: work will be carried out to establish a ban on the import of HCFC-141b contained in pre-blended polyols and on the development of regulations related to the management of HCFCs and HFCs including stipulations related to recycling and reclamation, operating equipment based on these substances and their end of life management, strengthening the quota system and banning the importation, manufacture or assembly of HCFC-based equipment (UNEP) (US \$20,000, plus funds from previous tranche);
 - (c) Capacity building for customs: provision of 10 refrigerant identifiers and training workshops will be carried out for a total of 100 customs officers on control of HCFC

imports under the current licensing system (UNEP) (US \$35,000 plus funds from previous tranche);

- (d) Capacity building for the RAC servicing sector: developing a code of conduct for the RAC servicing sector and updating training materials for service technicians (UNEP) (US \$45,000); training sessions for 200 RAC technicians on codes and standards for the RAC sector, and good practices for managing and handling of refrigerants and a practical training sessions for RAC trainers on natural and flammable refrigerants; an international consultant will be recruited to deliver training and to ensure a gender responsive approach (UNIDO) (US \$50,000);
- (e) Certification system: international consultant to complete the final training and testing materials for RAC technician certification and to ensure a gender sensitive approach; three workshops to raise public awareness on the official certification system for all stakeholders; three training and certification sessions to certify 40 trainers on the new system; and training and certification sessions for the 200 RAC technicians who previously completed the capacity building training sessions (UNIDO) (US \$95,000, plus funds from previous tranche);
- (f) Capacity building for training centres: provision of four sets of tools and equipment³ to four additional training centres; procurement of a specialized set of tools and equipment for maintenance in the fishery industry and delivery to the training centre for maritime mechanics; the provision of spare parts for one training centre specialized in ammonia-based refrigeration⁴ (UNIDO) (US \$10,000, plus funds from previous tranche);
- (g) Recovery, recycling, and a reclamation system: recruitment of a legal expert to revise the draft decree; study tour for responsible Tunisian entities to a reclamation centre in a country with a successful RRR system in place; procurement of equipment for the upgrade of two reclamation centres (25 recovery and recycling units, 50 different size-cylinders, 25 digital leak detectors, 20 digital manifolds, four refrigerant identifiers, vacuum pumps, scales, and basic tools) (UNIDO) (US \$200,000 plus funds from previous tranche); and
- (h) Project monitoring unit: coordination and monitoring of project implementation and ensuring the collection of gender results and other indicators (UNIDO) (US \$31,640).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Report on HCFC Consumption

16. UNIDO explained that the Government considers the discrepancy in the consumption data for 2019 and 2020 observed in the verification report as a serious matter; that the data for 2019 does not need to be corrected as the quantity in question was subsequently exported; and that for 2020 the Article 7 data reported was the correct amount. UNIDO further confirmed that the country would take steps to avoid these kinds of discrepancies in the future.

³ Including leak detectors, manifolds, electronic scales, brazing kits, refrigerant recovery units, vacuum pumps, refrigerant cylinders, and basic tools.

⁴ Including safety valve and cooling hoses for the compressor, droplet separator, sprayers, spray motor pump for the condenser, ammonia detection unit and electrical cabinet, and ammonia NH₃ charge.

17. The verification report also included one recommendation to establish special tariff codes for HCFC-141b contained in imported pre-blended polyols for the effective implementation of the future ban on imports of this substance; this will be included in the activities for the second tranche.

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

Legal framework

18. The Government of Tunisia has already issued HCFC import quotas for 2023 at 19.94 ODP tonnes (362.5 mt), which is lower than the Montreal Protocol control targets and the targets in the Agreement with the Executive Committee.

19. The Secretariat requested an update on the ban on HCFC-141b contained in imported pre-blended polyols. UNIDO informed that a decree for the ban on the sales, distribution and installation of equipment and materials containing HCFCs, which also includes *inter alia* a ban on the imports and production of foam with HCFC-141b contained in pre-blended polyols, was submitted by the NOU to the Minister of Environment of Tunisia in June 2022. The decree is expected to come into force by the end of 2023 and be effective in January 2024. The delay was attributed to the implementation challenges with le Panneau and the change in technology.

20. In explaining the delays in the training of customs officers, where only 13 were trained out of a target of 125 for first tranche, UNIDO mentioned that the training delays were caused by difficulties in scheduling sessions in 2020 and 2021 due to the pandemic. While the Government exerted all efforts to ensure that the training could be completed in 2022, challenges were faced concerning the selection of the national consultant who would be responsible for the overall programme. This has been internally resolved and the remaining training for customs officers is proposed to be completed in 2023, along with the provision of the refrigerant identifiers which is requested as part of the second tranche.

Polyurethane foam manufacturing

21. In explaining the delay in the completion of the remaining foam enterprise conversion (le Panneau), UNIDO noted that because the change in technology was approved only in December 2021, the milestones targeted for this project had changed; signing the contract with the equipment supplier was done only in July 2022 and the supplier was only able to manufacture the equipment with the agreed specifications in January 2023. The target equipment delivery date is May 2023, installation and commissioning is expected to be in June 2023. UNIDO does not expect any other delays in the project implementation, and noted the commitment of the enterprise to start production using the alternative once the equipment is installed and testing and trials are completed.

Refrigeration servicing sector

22. UNIDO also provided a clarification on the certification scheme, explaining that the decree to formalize technician certification had been drafted and is under consultation. Under the HPMP and consistent with the current government approach, the Government provides two sets of training programmes. One programme is for RAC trainers and technicians on good refrigeration practices for handling both HCFCs and alternatives including flammable ones and includes potential refresher courses throughout the course of the HPMP and beyond. The second involves training and certification of RAC trainers following the standards required under the European Union's F-gas regulation for these trainings, from which the proposed national certification programme is patterned. The successful completion of the latter one provides technicians with a formal certificate issued by the Veritas Cepas.⁵

⁵ Certification body used by the European Union.

23. Regarding the RRR system, UNIDO also clarified that the decree to formally establish this system in Tunisia had also been drafted and is also undergoing consultation. The final approval of this decree will provide the framework for setting up and implementing the system in the country. UNIDO also explained that the Government needs to revise the business model for the RRR system as the institutional arrangements proposed in the earlier model were challenging to implement because of lack of infrastructure in the relevant entities involved. During the second tranche, a new institutional arrangement to support this business model will be developed, consistent with the decree currently under consideration.

Gender policy implementation⁶

24. In line with the Multilateral Fund operational policy on gender mainstreaming information has been provided on the participation of women in some of the training activities of the HPMP and a female legal expert was engaged in for the drafting of decrees.

Sustainability of the HCFC phase-out and assessment of risks

25. The Government of Tunisia has developed official decrees to institutionalize the RRR system, formalize the technician certification programme, and ban the sale, distribution and installation of equipment and materials containing HCFCs. These actions demonstrate that the Government is committed to ensuring the sustainability of the phase-out of HCFCs by putting in place the supporting regulatory framework as a foundation for the activities in the HPMP to continue even after the HPMP is completed. In addition, the Government is also ensuring the monitoring of imports of these substances through their e-licensing system and the continued monitoring of the enterprises after conversion. After completion of the conversion in the remaining PU foam enterprise, the Government will put in place a ban on the import of HCFC-141b contained in imported pre-blended polyols. Activities in the servicing sector will continue to contribute to the sustainable reduction of HCFC-22.

Conclusion

26. The Secretariat noted that the HCFC consumption in Tunisia for 2022 was 20 per cent below the HCFC consumption targets in the country's Agreement with the Executive Committee. The country also upgraded its licensing and quota system, and the implementation of the activities approved under the first tranche of stage II of the HPMP continues to progress. The remaining enterprise will complete the conversion from HCFC-141b in imported pre-blended polyols to n-pentane during the second quarter of 2023 allowing the country to establish a ban on the import of HCFC-141b contained in pre-blended polyols under the second tranche. Training of customs and refrigeration trainers and technicians, and certification of technicians will also continue under the second tranche. Fund disbursement was 65 per cent which exceeds the threshold for the release of the next tranche.

⁶ In line with decision 84/92(d), decision 90/48(c) encouraged bilateral and implementing agencies to continue ensuring that the operational gender mainstreaming policy was applied to all projects, taking into consideration the specific activities presented in table 2 of document UNEP/OzL.Pro/ExCom/90/37.

RECOMMENDATION

27. 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 Tunisia; note that the ban on imports of HCFC-141b contained in pre-blended polyols had been postponed to January 2024; and further recommends blanket approval of the second tranche of stage II of the HPMP and the corresponding 2023-2025 tranche implementation plan for Tunisia at the funding levels shown in the table below.

	Project title	Project funding (US \$)	Support costs (US \$)	Implementing agency
(a)	HCFC phase-out management plan (stage II, second tranche)	386,640	27,065	UNIDO
(b)	HCFC phase-out management plan (stage II, second tranche)	100,000	13,000	UNEP