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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Ninety-third Meeting  
Montreal, 15-19 December 2023  
Item 9(c) of the provisional agenda<sup>1</sup>

**PROJECT PROPOSAL: MOROCCO**

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

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<sup>1</sup> UNEP/OzL.Pro/ExCom/93/1

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

**Morocco**

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>	<b>MEETING APPROVED</b>	<b>CONTROL MEASURE</b>
HCFC phase-out plan (stage II)	UNIDO (lead)	88 <sup>th</sup>	67.5% phase-out by 2025

<b>(II) LATEST ARTICLE-7 DATA (Annex C Group I)</b>	Year: 2022	19.84 ODP tonnes
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<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>								<b>Year: 2022</b>	
Chemical	Aerosol	Foam	Fire-fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22				19.84					19.84
HCFC-141b in pre-blended polyols		11.47							11.47

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009-2010 baseline:	51.40	Starting point for sustained aggregate reductions:	67.79
<b>CONSUMPTION ELIGIBLE FOR FUNDING</b>			
Already approved:	51.10	Remaining:	16.69

<b>(V) ENDORSED BUSINESS PLAN</b>		<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Total</b>
UNIDO	ODS phase-out (ODP tonnes)	4.59	0.00	1.19	5.78
	Funding (US \$)	326,350	0	84,564	410,914

<b>(VI) PROJECT DATA</b>			<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>Total</b>
Montreal Protocol consumption limits (ODP tonnes)			33.38	33.38	33.38	33.38	16.69	n/a
Maximum allowable consumption (ODP tonnes)			33.38	25.33	25.33	25.33	16.69	n/a
Funding agreed in principle (US \$)	UNIDO	Project costs	370,000	344,500	305,000	0	79,032	1,098,532
		Support costs	25,900	24,115	21,350	0	5,532	76,897
Funds approved by ExCom (US \$)		Project costs	370,000	344,500				714,500
		Support costs	25,900	24,115				50,015
Total funds recommended for approval at this meeting (US \$)		Project costs			305,000			305,000
		Support costs			21,350			21,350

<b>Secretariat's recommendation:</b>	Blanket approval
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## PROJECT DESCRIPTION

1. On behalf of the Government of Morocco, 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 \$305,000, plus agency support costs of US \$21,350.<sup>2</sup> The submission includes a progress report on the implementation of the first tranche, the verification report on HCFC consumption for 2021 to 2022, and the tranche implementation plan for 2024 to 2025.

### Report on HCFC consumption

2. The Government of Morocco reported a consumption of 19.84 ODP tonnes of HCFCs in 2022, which is 61 per cent below the HCFC baseline for compliance. The 2018-2022 HCFC consumption is shown in table 1.

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

HCFC	2018	2019	2020	2021	2022	Baseline
<b>Metric tonnes (mt)</b>						
HCFC-22	422.55	499.83	459.22	320.41	360.72	705.45
<b>Total (mt)</b>	<b>422.55</b>	<b>499.83</b>	<b>459.22</b>	<b>320.41</b>	<b>360.72</b>	<b>819.54*</b>
HCFC-141b in imported pre-blended polyols**	98.40	104.30	104.30	104.30	104.30	71.82***
<b>ODP tonnes</b>						
HCFC-22	23.24	27.49	25.26	17.62	19.84	38.80
<b>Total (ODP tonnes)</b>	<b>23.24</b>	<b>27.49</b>	<b>25.26</b>	<b>17.62</b>	<b>19.84</b>	<b>51.35*</b>
HCFC-141b in imported pre-blended polyols**	10.82	11.47	11.47	11.47	11.47	7.90***

\* The baseline includes 114.09 mt (12.55 ODP tonnes) of HCFC-141b, consumption of which has been zero since 2014.

\*\* Country programme (CP) data.

\*\*\* Average consumption between 2007 and 2009.

3. The HCFC consumption has been decreasing due to the activities implemented under the HPMP, in particular, the ban on the import of HCFC-141b pure; and the introduction of alternative technologies to HCFCs. The reduction in 2021 was likely due to economic instability in the country and to the COVID-19 pandemic, and the increase in 2022 reflects the recovery of economic activities from the pandemic. The use of HCFC-141b contained in imported pre-blended polyols has shown an increase from the starting point for aggregate reduction due to the economic recovery after the COVID-19 pandemic; however, a project is being implemented to completely phase out this use by 1 January 2025.

### *Country programme implementation report*

4. The Government of Morocco reported HCFC sector consumption data under the 2022 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 of Morocco 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 the year 2021 was correct as shown in table 1 above. However, for 2022, the consumption reported under the Article 7 data is 5.43 mt (0.30 ODP tonnes) more than the verified consumption. This is due to the inclusion of an unrealized import in Article 7 data. The Article 7 data will be revised accordingly. The verification concluded that Morocco is in compliance with the 2021 and 2022 maximum allowable consumption of Annex C, Group I substances as in the Agreement with the Executive Committee.

<sup>2</sup> As per the letter of 4 October 2023 from the Ministry of Industry and Commerce of Morocco to UNIDO.

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

6. Stage I of the HPMP was completed on 31 December 2021. The project completion report was submitted on 11 March 2022.

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

*Legal framework*

7. The Government of Morocco has been implementing the licensing and quota system to control the import of HCFCs. An electronic licensing system was launched in 2014 and implemented in 2015. A ban on pure HCFC-141b was implemented on 1 January 2015 to sustain the phase-out in the foam manufacturing sector. Morocco ratified the Kigali Amendment on 22 April 2022 and is preparing to include HFCs in the electronic licensing system.

*Manufacturing sector*

8. Under the investment project to phase out HCFC-141b contained in pre-blended polyols in the polyurethane foam sector, a contract has been signed with the enterprise Métaux Profilage Isolation (MPI) for the conversion of a manufacturing line to cyclopentane. Bidding for the supply of cyclopentane technology has been completed and a supplier has been selected. Equipment procurement has been initiated, with equipment expected to be delivered in the first half of 2024. MPI is conducting the preparatory studies for the installation of the cyclopentane tank and the necessary equipment and is submitting a request to the local authorities for the permissions and certificates.

9. Technical assistance to the remaining three enterprises will be provided once the conversion at MPI is complete.

*Refrigeration and air-conditioning servicing sector*

10. The following activities were implemented under the first tranche:

- (a) A national and an international expert have been recruited to develop the code of practices for the refrigeration and air-conditioning (RAC) servicing sector. Coordination meetings were held with the national standardisation institution (IMANOR) to discuss the content of the code. It is planned to finalize the code by the end of 2023 after a stakeholder consultation meeting;
- (b) A national and an international expert have been recruited to develop the training modules on good servicing practices and the certification of technicians. The first draft of the modules has been produced, and it is planned to be validated by the stakeholders before the end of 2023;
- (c) A workshop was held with the support of three international experts (one female) to discuss the establishment of a technician certification system, the elaboration of the code of practices and the design of the institutional and legal framework for certification; 25 stakeholders (30 per cent women) attended the workshop. The continuous coordination between the national ozone unit (NOU) and IMANOR on the matter is in progress;
- (d) Tools and equipment (e.g., vacuum pumps, digital gauges, electronic scales, leak detectors, digital manifolds, recovery and recycling units, flaring tools, brazing sets) have been procured for six training centres and are expected to be delivered by the end of 2023. The procurement of the second batch of equipment (including RAC training units, refrigerant

identifiers, and contamination check kits) for the six training centres has begun, and the equipment is expected to be delivered in the first quarter of 2024;

- (e) A national expert has been recruited to conduct the preliminary study for the introduction of the refrigerant recovery, recycling and reclamation (RRR) system; a work plan has been developed for stakeholder consultations; and the first draft of the study is expected to be finalized by November 2023;
- (f) A list of trainers to be trained in good servicing practices have been identified. The training will cover leakage reduction and refrigerant containment; refrigerant RRR; and equipment servicing using flammable refrigerants. A national expert has been recruited to conduct the training in the fourth quarter of 2023; and
- (g) An awareness-raising and training workshop was organized for 179 participants; and a UNIDO consultant delivered a presentation on the new training modules and on an RRR system.

#### *Project implementation and monitoring*

11. Disbursements for project coordination, implementation, and reporting total US \$35,136 for consultants (US \$18,570), travel (US \$4,566), information events (US \$4,500), and verification (US \$7,500).

#### Level of fund disbursement

12. As of October 2023, of the US \$370,000 approved for UNIDO under the servicing sector, US \$83,798 (23 per cent) had been disbursed. The balance of US \$286,202 will be disbursed in 2024.

13. The investment project for phasing out HCFC-141b contained in imported pre-blended polyols approved at the 91<sup>st</sup> meeting is at the initial stage of implementation, and no disbursement has been made.

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

14. The following activities will be implemented between December 2024 and June 2025:
- (a) Training of 250 RAC servicing technicians (20 per cent women) on good practices for managing and handling refrigerants and equipment containing them, leakage control, refrigerant recovery, and servicing equipment using flammable refrigerants (US \$85,000);
  - (b) Training and certifying 30 trainers (50 per cent women) who will in turn train and evaluate technicians under the certification programme. The training covers good servicing practices; leakage reduction and refrigerant containment; refrigerant recovery, recycling, and reuse; and servicing equipment using flammable refrigerants (US \$20,000);
  - (c) Based on the study completed in the first tranche, an entity will be selected to host the RRR centre, taking into consideration the entity's capability to manage the centre in a sustainable manner; and 50 sets of recovery machines will be purchased and distributed to workshops and technicians in different locations in the country to support the RRR programme (US \$145,000);
  - (d) A survey will be conducted on the use of refrigerants in the fisheries sector. A workshop with 50 participants (20 per cent women) will be organized to disseminate the results of the study and raise awareness on the Montreal Protocol and the need for phasing out HCFCs (US \$10,000);

- (e) Awareness-raising activities for 50 people in collaboration with the Moroccan Association of Refrigeration Professionals, focusing on women's involvement in the HCFC phase-out and the activities in the RAC sector (US \$5,000); and
- (f) Project coordination, monitoring and reporting at the cost of US \$40,000 for staff and consultants (US \$21,875), travel (US \$5,625), meetings and information events (US \$5,000), and verification (US \$7,500).

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

#### Report on HCFC consumption

15. The import of HCFC-141b contained in pre-blended polyols was reported as 104.30 mt for each year from 2019 to 2022 under the CP data. UNIDO explained that HCFC-141b contained in imported pre-blended polyols was only included in the licensing system from October 2022. The reported imports for 2019 to 2022 were estimated based on consultation with the industries. This consultation indicated that the consumption has been stable since 2019, so the same estimate was used for each year. The 2023 reporting will be based on the officially collected data.

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

##### *Legal framework*

16. The Government of Morocco has already issued HCFC import quotas for 2023 at 18.98 ODP tonnes, which is lower than the Montreal Protocol control targets and the targets set in its Agreement with the Executive Committee.

##### *Refrigeration servicing sector*

17. The Secretariat enquired about the reasons for the delay in several activities, including establishing a licensing system for HCFC-22-based equipment, training of trainers for customs officers, and the survey in the fisheries sector. UNIDO clarified that the NOU prioritized the establishment of the regulatory frameworks for the certification system and the RRR system. The licensing system for HCFC-22-based equipment would be developed only once those regulatory frameworks are in place. The training of trainers for customs training has been planned for November 2023 starting with the selection of trainers. For the survey in the fisheries sector, the NOU decided to wait on implementing it until the survey report on the servicing sector under the enabling activities (EA) was finalized, as the EA report will provide preliminary information on this sector, which will be further analyzed and developed under the fisheries sector survey. The EA report has just been completed in late November; therefore, the fisheries survey will be conducted in the third tranche.

#### Gender policy implementation

18. The operational policy on gender mainstreaming for projects supported by the Multilateral Fund has been incorporated into the activities of the first tranche. Women have been encouraged to participate all activities. As a result, 15 per cent of the trainers trained in the first session were female; seven women participated the workshop on the certification system; and 60 per cent of the participants for the work meetings on certification and training are women representatives from training and certification institutions and the NOU. Awareness-raising efforts on gender balance have been undertaken in the regular communication with the Moroccan Association of Refrigeration Professionals. Ten percent of the

participants for the celebration of World Refrigeration Day in 2023 were women. The continuous promotion of the gender mainstreaming policy is expected to generate positive results in women's participation in the HPMP activities.

#### Sustainability of the HCFC phase-out and assessment of risks

19. The Government of Morocco has an enforceable licensing and quota system, has banned the import of pure HCFC-141b since 1 January 2015, and is committed to banning the import and use of HCFC-141b contained in pre-blended polyols. This ban will commence after completion of the umbrella project prior to 1 January 2025 to sustain the phase-out of HCFC-141b in the foam sector. The certification of technicians is being developed to ensure competence of servicing technicians in safely handling alternative refrigerants for their adoption. The training curriculum is reviewed and updated regularly to include the latest issues. Enforcement of the regulations will ensure the sustainability of HCFC phase-out. Barriers and potential risks, including, *inter alia*, the limited access to information on alternatives; the lack of incentives for manufacturers and end-users to switch to new technologies; and the limited training of technicians on handling alternatives could jeopardize the successful phase-out of HCFCs in the country. The interventions designed in the HPMP, including a legal and institutional framework to control the import of HCFCs and HCFC-based equipment, training, and awareness-raising activities, will help remove these barriers and minimize the risks.

#### Conclusion

20. Morocco has achieved the control targets in its Agreement with the Executive Committee and under the Montreal Protocol. The country is enforcing a licensing and quota system to control the import of HCFCs and is working towards establishing a licensing system for the import of HCFC-22-based RAC equipment and a ban on the import of HCFC-141b contained in pre-blended polyols by 1 January 2025. The project for phasing out HCFC-141b polyols to support the transition of the foam sector to non-HCFC, low-GWP alternatives is progressing. Training modules and codes of practice have been developed and technician certification is being implemented. Equipment and tools have been provided to support the training and mandatory certification of technicians. The disbursement of the first tranche is 23 per cent.

#### **RECOMMENDATION**

21. 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 Morocco, and further recommends blanket approval of the second tranche of stage II of the HPMP and the corresponding 2024-2025 tranche implementation plan for Morocco at the funding level shown in the table below.

	<b>Project title</b>	<b>Project funding (US \$)</b>	<b>Support costs (US \$)</b>	<b>Implementing agency</b>
(a)	HCFC phase-out management plan (stage II, second tranche)	305,000	21,350	UNIDO