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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Forty-third Meeting
Geneva, 5-9 July 2004

PROJECT PROPOSAL: MOROCCO

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

Refrigeration

- Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the terminal umbrella group of commercial refrigeration manufacturers

UNIDO

**PROJECT EVALUATION SHEET
MOROCCO**

SECTOR: Refrigeration ODS use in sector (2002): 242.67 ODP tonnes

Sub-sector cost-effectiveness thresholds: commercial refrigeration US\$ 15.21/kg ODP

Project Title:

- (a) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the terminal umbrella group of commercial refrigeration manufacturers

Project Data	Refrigeration
Enterprise consumption (ODP tonnes)*	37.95
Project impact (ODP tonnes)	36.9
Project duration (months)	24
Initial amount requested (US \$)	460,149
Final project cost (US \$):	
Incremental capital cost (a)	359,864
Contingency cost (b)	
Incremental operating cost (c)	
Total project cost (a+b+c)	359,864
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US \$)	359,864
Cost effectiveness (US \$/kg.)	12.48
Counterpart funding confirmed?	
National coordinating agency	Ministere de l'industrie, de commerce et des telecommunications
Implementing agency	UNIDO

Secretariat's Recommendations	
Amount recommended (US \$)	359,864
Project impact (ODP tonnes)**	18.4
Cost effectiveness (US \$/kg)***	19.55
Implementing agency support cost (US \$)	26,990
Total cost to Multilateral Fund (US \$)	386,854

* As originally submitted in the proposal

**Remaining eligible consumption

***Based on the remaining eligible consumption

PROJECT DESCRIPTION

ODS consumption

1. The ODS baselines for compliance in Morocco and allowable ODS consumption for 2005-2015 are as follows:

Allowable consumption (ODP tonnes)	CFC	Halon	MB
Baseline consumption	802.27*	7.00*	697.20**
2005	401.14	3.50	557.76
2007	120.34	3.50	557.76
2010	0	0	557.76
2015	0	0	0

*1995-1997 baseline

**1998-2000 baseline

2. In 2002, the Government of Morocco reported to the Ozone Secretariat a total CFC consumption of 668.6 ODP tonnes, 3.9 ODP tonnes of halons and 387 ODP tonnes of MB. At the 41st Meeting of the Executive Committee, the Government of Morocco submitted a country programme update, prepared with the assistance of UNIDO. The remaining consumption in the country was estimated at 237.6 ODP tonnes (25.3 ODP tonnes in the foam sector, 37.9 ODP tonnes in commercial refrigeration manufacturing sector and 174.4 ODP tonnes in the refrigeration servicing sub-sector).

Project proposal

3. On behalf of the Government of Morocco, UNIDO has submitted a terminal umbrella project for the conversion of ten remaining manufacturers to non-ODP technologies in the commercial refrigeration sector in Morocco. The impact of the proposal results in the phase out of 36.9 ODP tonnes as originally submitted, including 13.78 ODP tonnes of CFC-11 used in foaming operations and 24.17 ODP tonnes of CFC-12 applied as a refrigerant. The companies manufacture a range of refrigeration equipment, which can be tailored to suit the needs of the customers. All the enterprises are of small and medium size using similar production technology. Two companies are using locally made low-pressure machines for foaming the insulation. The others apply manual foaming operations or use prefabricated insulation panels. All of the companies use charging equipment, vacuum pumps and leak detectors to handle CFC-12 refrigerant.

4. The foaming operations would be converted to the transitional technology based on HCFC-141b blowing agent and HFC-134a will be used as the alternative non-ODP refrigerant. The conversion would require replacement of production equipment in foaming and refrigerant operations.

5. UNIDO indicated that the choice of HCFC-141b as an interim technology was made by the enterprises following a discussion with them on available alternatives and relevant decisions of the Executive Committee regarding the use of HCFC-141b as an interim foam blowing agent substitute. The justification for the use of transitional technologies is included in Section 3.1 of the proposal.

6. In accordance with relevant decisions of the Executive Committee on the use of HCFCs, a letter of transmittal from the Government of Morocco endorsing the use of HCFC-141b by the companies has been submitted and is attached.

7. Total requested grant is US \$460,649. Overall cost effectiveness is estimated at US \$12.48/kg ODP.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

8. The terminal umbrella project covers conversion of 10 commercial refrigeration enterprises in Morocco. A similar proposal for conversion of four major commercial refrigeration manufacturers was submitted by UNIDO to the 41st Meeting in September 2003. The proposal was subsequently withdrawn by UNIDO in anticipation of the submission of the country programme update by the Government of Morocco which would have allowed Morocco to select Option 1 or Option 2 determining the remaining eligible consumption in the country.

9. The country programme update was submitted to the 41st Meeting. The remaining consumption in the country was estimated at 237.6 ODP tonnes (25.3 ODP tonnes in the foam sector, 37.9 ODP tonnes in commercial refrigeration manufacturing sector and 174.4 ODP tonnes in the refrigeration servicing sub-sector). According to Decision 35/57 of the Executive Committee, the remaining consumption eligible for funding for Morocco was calculated at 49.8 ODP tonnes of CFCs on the basis of Option 1 (Montreal Protocol baseline) or -96.1 ODP tonnes on the basis of Option 2 (very recent consumption) (document UNEP/OzL.Pro/ExCom/35/61). After taking into account the phase out of CFCs in projects approved on or after the 35th Meeting (31.4 ODP tonnes), the maximum remaining CFC consumption eligible for funding is 18.4 ODP tonnes based on Option 1.

10. After deliberations on this issue, the Executive Committee took Decision 41/87, which inter alia recommended discussing projects proposed by Morocco under its country programme update in accordance with Executive Committee guidelines.

11. In the process of reviewing the proposal, the Secretariat brought to UNIDO's attention the deliberation of the Executive Committee on the country programme update for Morocco and Decision 41/87. The Secretariat proposed to UNIDO an approach for assisting the country to address the remaining CFC consumption through the following measures:

- (a) Implementing conversion of the remaining ten commercial refrigeration manufacturers on the basis of the remaining eligible consumption of 18.4 ODP tonnes and the cost-effectiveness threshold in the commercial refrigeration sector at the cost of US\$ 279,864;
- (b) Providing a modest technical assistance programme at the cost of US\$ 40,000 to assist any remaining users to phase out their CFC consumption; and
- (c) Providing a management fee of US\$ 40,000 to assist the Government in managing the project for complete CFC phase out in the country. The total funding level has been estimated at US \$359,864.

12. It was proposed to apply the standard conditions associated with projects for complete ODS phase out. UNIDO in consultation with the Government of Morocco accepted the alternative approach proposed by the Secretariat.

RECOMMENDATION

13. The Fund Secretariat recommends blanket approval of the project with associated support costs at the funding level shown in the table below, on the understanding that:

- (a) The Government of Morocco agrees that no additional resources will be requested from the Multilateral Fund for activities related to the complete phase-out of Annex A, Group I substances.
- (b) The Executive Committee agrees to provide Morocco with the flexibility in using the agreed funds consistent with operational procedures as agreed between the Government of Morocco and UNIDO.

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the terminal umbrella group of commercial refrigeration manufacturers	359,864	26,990	UNIDO

43rd Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol

GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS TO THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

PROJECT(S) OF THE GOVERNMENT OF Kingdom of Morocco

The Government of the Kingdom of Morocco requests UNIDO to submit the project listed in Table 1 below/attached Table 1 to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 43rd Meeting.

Section I: ODS Consumption Data

1. The ODS consumption figure(s) of the project(s) has/have been validated by the National Ozone Unit (NOU).
2. The consumption data have been retained in the records of the NOU for reference and/or future verification.
3. The Government has been advised by the NOU that the agreement to the project(s) indicates a commitment to ensure that the validated phase-out figure(s) was/were realized and yielded a sustained reduction from the current sector consumption of 37.95 ODP tonnes.

Table 1: Projects Submitted to theMeeting of the Executive Committee

Project Title/Sector	Type of ODS	Consumption (ODP Tonnes), (Year)	Amount to be Phased Out (ODP Tonnes), (Year)	Implementing Agency
<u>Refrigeration Sector</u>				
CONVERSION FROM CFC-11 TO HCFC-141b AND CFC-12 TO HFC-134a TECHNOLOGY IN THE MANUFACTURE OF COMMERCIAL REFRIGERATION EQUIPMENT AT THE TERMINAL UMBRELLA GROUP OF COMMERCIAL REFRIGERATION MANUFACTURERS IN MOROCCO	CFC11 & CFC12	37.95	36.90	UNIDO
Total	CFC11 & CFC12	37.95	36.90	UNIDO

*43rd Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol***Section II: Other Relevant Actions Arising from Decision 33/2**

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee;
5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs, in view of the instances of equipment purchased by the Multilateral Fund not being used or being reverted to the use of CFCs.
6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.

Section III: Projects Requiring the Use of HCFCs for Conversion

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government
 - (a) has reviewed the specific situations involved with the project(s) (Megafro, Atelier de Menuiserie Frigorifiques S.A., Sogo Frigo and Etablissement Ouadilux, Frigo Angad, Ets. Mallouki, Froid et Climatisation Laayoune, Reboukh Abdellah, Construction Froid, O.C.P) as well as its HCFC commitments under Article 2F; and
 - (b) has nonetheless determined that, at the present time, the projects needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the company/companies involved.

Name and signature of responsible Officer:

Le Chef de la Division
des Industries Chimiques et Parachimiques

Designation:

Signé Abderrahim CHAKOUH

Date: 4 MAI 2004

MINISTRE DE L'INDUSTRIE, DU COMMERCE ET DES TELECOMMUNICATIONS

DEPARTEMENT DU COMMERCE ET DE L'INDUSTRIE

Telephone: 212 37 66 00 20

Fax: 212 37 66 00 21

E-mail: abderrahim@mcinet.gov.ma