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Executive Committee of
the Interim Multilateral Fund for the
Implementation of the Montreal Protocol

Eighth Meeting
Montreal, 19-21 October 1992

Addendum

PROJECT PROPOSALS: TUNISIA

This document consists of the Evaluation Sheet prepared by the Fund Secretariat.

PROJECT EVALUATION SHEET

COUNTRY OR REGION: Tunisia

PROJECT TITLE: Ozone Layer Protection through the Reduction of Consumption of Ozone Depleting Substances

BUDGET: \$2.05 million
(\$0.8 million allocated at June 1992 meeting)
(\$1.25 million requested at the October 1992 meeting to be added to the Bank's Work Programme)

INCREMENTAL COSTS: Estimated as 100 percent of the budget

COST EFFECTIVENESS: Not determined

PROJECT DURATION: 3 years

IMPLEMENTING AGENCY: World Bank

NATIONAL COORDINATING AGENCY: Ministère de l'environnement (Agence national de protection de l'environnement)

TECHNICAL REVIEW COMPLETED: YES X NO

SECRETARIAT'S COMMENTS

"The Ozone Layer Protection through the Reduction of Consumption of Ozone-Depleting Substances", project consisting of sub-projects in the refrigeration sector, the foam sector, the aerosol sector, and policy and monitoring measures, was submitted for consideration of the Executive Committee at its Seventh Meeting. The Executive Committee approved partial funding for the following sub-projects based on the Secretariat's recommendation.

- | | | |
|----|--|-----------|
| 1. | Maintenance of Domestic, Commercial and Industrial Refrigerators | \$100,000 |
| 2. | Technical Seminars and Consultancies in the Aerosol Sector | \$300,000 |

The Committee deferred consideration of two sub-projects pending policy decisions regarding institutional strengthening and viability of HFC-134a technology.

The revised version of the project proposal is submitted to the eighth meeting of the Executive Committee for consideration of the following:

(1) Approval of sub-projects:	<u>Requested funding</u>
a) Implementation of Government Actions (Institutional)	\$450,000
b) Engineering Assistance for the Design, Testing and Introduction of non-ODS HFC-134a Technology in the Production of Domestic Refrigerators	\$360,000
(2) Approval of additional funding for:	
a) Maintenance of Domestic, Commercial and Industrial Refrigeration Systems	\$390,000
b) Technical Seminars, Consultations and ODS Phaseout Projects in the Aerosol Sector	\$50,000

1. Project Sub-component: Implementation of Government Actions (Institutional (US \$450,000))

It consists of:

- Creation of Ozone Committee
- Monitoring System
- Regulatory Measures
- ODS Licence/Accreditation System
- Information Dissemination

a) Creation of Ozone Committee (US \$240,000 for a three year period)

In accordance with guidelines adopted at the seventh meeting of the Executive Committee (UNEP/OzL.Pro/ExCom/7/20, Annex II, pages 18-22) Tunisia qualifies as a Category 2 country with funding level of up to US \$300,000. The requested allocations of US \$240,000 is recommended for approval by the Executive Committee provided that the Committee's guidelines will be followed.

b) Monitoring System of ODS use (US \$60,000)

The computerized monitoring system for ODS use through the Direction des Statistiques will be in support of the introduction of the International Standard Classification System in Tunisia. Since ODSs represent a small portion of the whole range of chemicals, the accounting and monitoring of ODS use will be nothing but a small part of the designed system. Accordingly, only part of total expenditures incurred should be allocated from the Fund. US \$10,000 are recommended for approval.

c) Introduction of Regulatory Measures (US \$60,000)

The consultancy service of the economist is expected to be used for policy work and regulatory analyses. Substantial work in respect of formulation of policy and regulatory measures was accomplished during the Country Programme preparation. Moreover, allocations provided for consultancy under creation of the Ozone Committee can be used for these purposes, if necessary. The Secretariat does not recommend approval of this budget item.

d) Introduction of an ODS Licensing System and Accreditation System for Refrigeration Technicians (US \$60,000)

No rationale is provided for the estimates of the cost of this sub-component. Provisions are made under sub-component (b): Maintenance of Domestic Commercial and Refrigeration system for personnel and project support which should be taken into account. The cost of the sub-component can be reduced. See our comments on sub-component (b).

e) Public Awareness Activities (US \$30,000)

The duration of activities is not identified. If a three year period is assumed, US \$10,000 per year seems to be a reasonable cost and are recommended for approval.

SECRETARIAT'S RECOMMENDATION

Total allocations of US \$280,000 are recommended for approval.

2. Project Sub-component: Maintenance of Domestic, Commercial and Industrial Refrigeration Systems (US \$390,000)

Originally two projects were submitted for approval to the Executive Committee at its seventh meeting: (a) Maintenance of Domestic Refrigerators (US \$325,000) and (b) Maintenance of Commercial and Industrial Refrigerators (US \$185,000) at a total cost (US \$510,000). The Executive Committee approved US \$100,000 at its seventh meeting and recommended to combine implementation of these two projects.

The revised project proposal covers the two refrigeration subsectors:

- 1) Domestic Refrigerator Component consists of demonstration and training activities. This project entails the conservation of CFC-12 through recycling and by adopting nitrogen for flushing and purging.
- 2) Commercial & Industrial Refrigerator Component introduces improved service practices and provides instruction on retrofitting technology.

The improved service practices and maintenance can contribute greatly to reduction of CFC consumption in the refrigeration sector. It is expected that one hundred tons of ODS will be phased out annually. The Secretariat supports the project concept. However, the following reductions in the budget can be made without prejudice to project efficiency:

- costs of spare parts, tools, training manuals, books (reduced from US \$40,000 to US \$10,000);
- one month training abroad (at a cost of US \$45,000) can be limited to external training of key instructors for a shorter period (at a cost of US \$10,000);
- three man - months study envisaged under the domestic subsector (US \$50,000) and commercial/industrial subsector (US \$45,000) could be combined and implemented at cost (US \$50,000), and
- introduction of an ODS licensing system and accreditation system for refrigeration technicians (US \$60,000) which is included under sub-component (a) should be combined with personnel and project support (US \$100,000). The costs of these two sub-components (US \$160,000) can be reduced to (US \$120,000).

SECRETARIAT'S RECOMMENDATION

Total allocations of US \$300,000 for the sub-component, including introduction of an ODS licensing system and accreditation system for refrigeration technicians, are recommended for approval.

3. **Project Sub-component: Engineering Assistance for the Design, Testing and Introduction of non-ODS Technology in the Production of Domestic Refrigerators (US \$360,000)**

The purpose of the project is to introduce HFC-134a technology to the largest Tunisian domestic refrigerator factory. This project involves research and development, prototype production and testing before full scale commercial production of the new refrigerators can be commenced. It also includes training refrigeration technicians in HFC-134a technology. It is

expected that sixty tons of CFC-12 will be phased out annually after the commercial production has begun.

This project was submitted to the seventh meeting of the Executive Committee. Action was deferred pending results of the discussion of HFC-134a technology transfer at the upcoming OORG Refrigeration Working Group Meeting. The OORG/RWG recommended HFC-134a as an alternative to CFC-12 in domestic refrigeration in developing countries. Conversion to HFC-134a in a developing country is recommended with the first phase being to address the transfer and testing of technology for pilot production of new refrigerators. HFC-134a technology transfer should be within the framework of existing working relationships or agreements with technology suppliers established for this purpose.

It is indicated under phase B of the project description that a new refrigeration circuit design will be developed with support from compressor manufacturer(s). However, for the time being, no arrangements have been made in respect of identification of a technology supplier. The practical implementation of the project, even if requested funds are allocated, can not proceed until working agreements with the compressor manufacturer(s) can be reached and the scope of technical assistance is determined.

The project is eligible for funding.

SECRETARIAT'S RECOMMENDATION

Approval of the requested US \$360,000 is recommended. The technology supplier should be identified at the earliest convenience so that the necessary technology transfer agreements may be concluded.

4. **Project Sub-component (d): Technical Seminars, Consultations and ODS Phaseout Projects in the Aerosol Sector (US \$300,000 allocated in June 1992: US \$50,000 requested in October 1992)**

The requirements for training and technical assistance have been reduced from US \$95,000 to US \$50,000.

SECRETARIAT'S RECOMMENDATION

Allocations of US \$50,000 are recommended for approval.