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

Twenty-second Meeting
Nairobi, 28-30 May 1997

PROJECT PROPOSALS: TUNISIA

This document includes the comments and recommendations from the Fund Secretariat on the following projects:

Aerosols

- Phasing out CFCs at Codifa UNIDO
- Phasing out CFCs at Sogepar UNIDO
- Phasing out CFCs at Alki S.A. UNIDO

PROJECT EVALUATION SHEET
TUNISIA

SECTOR: AEROSOL ODS use in sector (1996) 222 ODP tonnes

Sub-sector cost-effectiveness threshold: 4.4 US $/kg

Project Titles:
(a) Phasing out CFCs at CODIFA
(b) Phasing out CFCs at SOGEPAR
(c) Phasing out CFCs at ALKI S.A.

Project Data	**AEROSOL**		
	Codifa	**Sogepar**	**Alki**
ODS phase-out (ODP tonnes)	60.25	18.15	20
Proposed project duration (Yrs)	14 months	14 months	14 months
Incremental capital cost (US $)	278,500	109,000	131,000
Contingency (%)	10	10	10
Incremental operational cost (US $)	(98,514)	(40,167)	(56,435)
Total project cost (US $)	179,986	68,833	74,565
Local ownership (%)	100	100	100
Export component (%)	0	0	0
Amount requested (US $) {Original}	201,175	79,784	84,565
{Revised}	179,986	68,833	74,565
Cost effectiveness (US $/kg)	2.99	3.79	3.73
National Coordinating Agency	National Agency for the Protection of the Environment		
Implementing Agency	UNIDO	UNIDO	UNIDO
Technical review completed?	Yes	Yes	Yes

Secretariat's Recommendations:			
Amount recommended (US $)	179,986	68,833	74,565
Project impact (ODP tonnes)	60.25	18.15	20
Cost effectiveness (US $/kg)	2.99	3.79	3.73
Implementing Agency support cost (US $)	23,398	8,948	9,693
Total cost to Multilateral Fund (US $)	203,384	77,781	84,258

PROJECT DESCRIPTION

(a) Phasing out CFCs at CODIFA
(b) Phasing out CFCs at SOGEPAR
(c) Phasing out CFCs at ALKI S.A.

1. In 1996, the total consumption of CFCs in the aerosol sector in Tunisia amounted to 222 tonnes. At its 19th Meeting (May 1996), the Executive Committee approved two projects for the phase out of 115 tonnes of CFCs used in the manufacturing of aerosol products at Satem Parfumes et Produits Cosmetiques and at Jasminal Laboratories.

2. The Government of Tunisia is submitting three additional projects in the aerosol sector which would lead to elimination of 98.4 tonnes of CFCs, namely, Codifa (60.25 tonnes of CFC-12), Sogepar (18.15 tonnes) and Alki (20 tonnes).

3. In total, 213.4 tonnes of CFCs, equivalent to 96.13% of the total CFC consumption in the aerosol sector, would be eliminated once the five projects become operational.

4. The Government of Tunisia is intending to meet the 1999 freeze-target by giving priority to the elimination of CFCs in the sector. The Government would like to accelerate the process of phasing out the use of CFCs from the industry and aims to have all the ODS eliminated by the year 2000.

5. The projects under consideration are for the replacement of CFCs with hydrocarbon propellant used in manufacturing of different types and sizes of aerosol products. Codifa produces different size presentations of insecticides, air fresheners, cleaners and furniture polish (790,000 cans/year); Alki produces air fresheners and insecticides (242,000 cans/year); and Sogepar produces deodorants and hair sprays (265,000 cans/year).

6. The present aerosol filling line consists of semi-automatic filling machines, manual can loading table with conveyer system, manual placing of the valve, crimper and gas filler.

7. The enterprises will convert to HAPs technology. Conversion entails installation of gas filling machines to be located in open air filling rooms including a propellant handling system, water baths for testing filled cans, HAP storage and purification systems, gas detectors and fire control systems. Conveyor systems, explosion-proof lighting and ventilation systems are also requested.

8. Technical assistance will be provided for performance and supervision of engineering designs, equipment installation and commissioning of the plant. Training in production, quality control and safety procedures will also be provided.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

9. UNIDO revised the project proposals in accordance with discussions with the Fund Secretariat. Cost of some pieces of equipment (water bath, LPG storage tank and purification system) were adjusted according to the size of the enterprises. Operating savings were also adjusted after re-analyzing the formulations for some of the products when switching to hydrocarbon propellant.

10. The capital cost of conversions are US $278,500 for Codifa, US $109,000 for Sogepar and US $131,000 for Alki, including 10% contingency. The operational savings (NPV) for four years are US $98,514 for Codifa, US $40,167 for Sogepar and US $56,435 for Alki.

11. The enterprises will finance costs associated with land acquisition; civil works including, inter alia, construction of platform, new product filling plant, gas room and storage area, pump house and fence; and air compressors (US $460,000 at Codifa, US $460,000 at Sogepar and US $320,000 at Alki). The Fund Secretariat has not reviewed these costs, some of which would not be eligible.

RECOMMENDATION

1. The Fund Secretariat recommends blanket approval of the projects at the funding levels indicated below:

	Project Title	Project Cost US $	Support Cost US $	Implementing Agency
(a)	Phasing out CFCs at Codifa	179,986	23,398	UNIDO
(b)	Phasing out CFCs at Sogepar	68,833	8,948	UNIDO
(c)	Phasing out CFCs at Alki	74,565	9,693	UNIDO