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the Multilateral Fund for the
Implementation of the Montreal Protocol

Twenty-second Meeting
Nairobi, 28-30 May 1997

## PROJECT PROPOSALS: SYRIA

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

Aerosol

| | |
|---|---|
| • Phasing out CFCs at Taki Eddin & Co. | UNIDO |
| • Phasing out CFCs at Al Yaman Co. | UNIDO |
| • Phasing out CFCs at Ahmed Ali Harsho Sons Co. | UNIDO |

**PROJECT EVALUATION SHEET**
**SYRIA**

SECTOR: AEROSOL ODS use in sector (1996): 793 ODP tonnes

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

***Project Titles***:

(a) Phasing out CFCs at Taki Eddin & Co.
(b) Phasing out CFCs at Al Yaman Co.
(c) Phasing out CFCs at Ahmed Ali Harsho Sons Co.

| **Project Data** | **AEROSOL** | | |
|---|---|---|---|
| | Taki Eddin | Al Yaman | Ahmed Ali Harsho |
| ODS phase-out (ODP tonnes) | 118.8 | 75 | 45 |
| Proposed project duration (Yrs) | 14 months | 14 months | 14 months |
| Incremental capital cost (US $) | 322,500 | 267,500 | 212,500 |
| Contingency (%) | 10 | 10 | 10 |
| Incremental operational cost (US $) | (78,297) | (51,372) | (37,172) |
| Total project cost (US $) | 244,203 | 216,128 | 175,328 |
| Local ownership (%) | 100 | 100 | 100 |
| Export component (%) | 0 | 0 | 0 |
| Amount requested (US $) {Original} | 280,703 | 229,743 | 175,328 |
| {Revised} | 244,203 | 216,128 | 175,328 |
| Cost effectiveness (US $/kg) | 2.06 | 2.88 | 3.90 |
| National Coordinating Agency | General Commission for Environmental Affairs | | |
| Implementing Agency | UNIDO | UNIDO | UNIDO |
| Technical review completed? | Yes | Yes | Yes |

| ***Secretariat's Recommendations:*** | | | |
|---|---|---|---|
| Amount recommended (US $) | 244,203 | 216,128 | 175,328 |
| Project impact (ODP tonnes) | 118.8 | 75 | 45 |
| Cost effectiveness (US $/kg) | 2.06 | 2.88 | 3.90 |
| Implementing Agency support cost (US $) | 31,746 | 28,097 | 22,793 |
| Total cost to Multilateral Fund (US $) | 275,949 | 244,225 | 198,121 |

## PROJECT DESCRIPTION

(a) Phasing out CFCs at Taki Eddin & Co.
(b) Phasing out CFCs at Al Yaman Co.
(c) Phasing out CFCs at Ahmed Ali Harsho Sons Co.

1. In 1996, the total consumption of CFCs in the aerosol sector in Syria amounted to 793 tonnes. The Executive Committee approved two projects for the phase out of 289 tonnes of CFCs used in the manufacturing of aerosol products at Gaston Banna and Sons and Careesse Cosmetics in Syria. These two projects are expected to be fully implemented by mid 1998.

2. The Government of Syria is submitting three additional projects in the aerosol sector which would lead to elimination of 238.8 tonnes of CFCs, namely, Taki Eddin (118.8 tonnes of CFC-12), Al Yaman (75 tonnes) and Ahmed Ali Harsho Sons (45 tonnes).

3. In total, 527.8 tonnes of CFCs, equivalent to 66.56% of the total CFC consumption in the aerosol sector, would be eliminated once the five projects become operational.

4. The Government of Syria is intending to meet the 1999 freeze-target by giving priority to the elimination of CFCs in the sector.

5. The projects under consideration are for the replacement of CFCs with hydrocarbon propellant used in manufacturing different types and sizes of aerosol products. Taki Eddin produces different size presentation of deodorants, insecticides and hair sprays (2.19 million cans/year); Al Yaman produces deodorants, insecticides, hair sprays, shoe polish, air refresher, furnish polish and glass cleaner (885,000 cans/year) and Ahmed Ali Harsho Sons produces deodorants, hair sprays and air fresheners (502,000 cans/year).

6. The aerosol filling process under operation at Taki Eddin utilises two automatic filling machines; Al Yaman utilises one automatic filling machine; and Ahmed Ali Harsho Sons utilises two semi-automatic machines, one of which is used for product filling and the second for crimping and gassing with CFCs. The following unitary operations are performed in each aerosol filling plant manually: can loading, placing of the valve, insertion of the cap and case packing.

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

1. UNIDO revised the project proposals in accordance with discussions with the Fund Secretariat. Cost of some pieces of equipment (LPG storage tank and purification systems, consultancy services) 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.

2. The capital cost of conversions are US $322,500 for Taki Eddin, US $267,500 for Al Yaman and US $212,500 for Ahmed Ali Harsho Sons. The operational savings (NPV) for four years are US $78,297 for Taki Eddin, US $51,372 for Al Yaman and US $37,172 for Ahmed Ali Harsho Sons.

3. 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 $560,000 at Taki Eddin, US $580,000 at Al Yaman and US $530,000 at Ahmed Ali Harsho Sons). 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 Taki Eddin | 244,203 | 31,746 | UNIDO |
| (b)Phasing out CFCs at Al Yaman | 216,128 | 28,097 | UNIDO |
| (c)Phasing out CFCs at Ahmed Ali Harsho Sons | 175,328 | 22,793 | UNIDO |