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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Twenty-third Meeting  
Montreal, 12-14 November 1997

**PROJECT PROPOSALS: SYRIA**

This documents includes the comments and recommendations of the Fund Secretariat on the following project proposals:

Aerosol

- Phasing out CFCs at Dina Cosmetics UNIDO
- Phasing out CFCs at Laboratories Kosmeto UNIDO

Foam

- Phasing out of CFC-11 from flexible slabstock foam manufacturing at AKAL Factory UNIDO

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

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

Sub-sector cost-effectiveness thresholds: Aerosol US \$4.4/kg

**Project Titles:**

(a) Phasing out CFCs at DINA COSMETICS

(b) Phasing out CFCs at LABORATORIES KOSMETO

| Project Data                         | Aerosols                                     |              |
|--------------------------------------|----------------------------------------------|--------------|
|                                      | DINA                                         | LAB. KOSMETO |
| ODS phase-out (ODP tonnes)           | 70                                           | 59.87        |
| Proposed project duration (months)   | 16                                           | 14           |
| Incremental capital cost (US \$)     | 262,000                                      | 223,500      |
| - including contingency (%)          | 10                                           | 10           |
| Incremental operational cost (US \$) | (33,523)                                     | (48,438)     |
| Total project cost (US \$)           | 228,477                                      | 175,062      |
| Local ownership (%)                  | 100                                          | 100          |
| Export component (%)                 |                                              |              |
| Amount requested (US \$) {Original}  | 228,477                                      | 175,062      |
| {Revised}                            |                                              |              |
| Cost effectiveness (US \$/kg)        | 3.26                                         | 2.92         |
| National Coordinating Agency         | General Commission for Environmental Affairs |              |
| Implementing Agency                  | UNIDO                                        |              |
| Technical review completed?          | Yes                                          | Yes          |

|                                          |         |         |
|------------------------------------------|---------|---------|
| <b>Secretariat's Recommendations:</b>    |         |         |
| Amount recommended (US \$)               | 228,477 | 175,062 |
| Project impact (ODP tonnes)              | 70      | 59.87   |
| Cost effectiveness (US \$/kg)            | 3.26    | 2.92    |
| Implementing Agency support cost (US \$) | 29,702  | 22,758  |
| Total cost to Multilateral Fund (US \$)  | 258,179 | 197,820 |

## PROJECT DESCRIPTION

- (a) Phasing out CFCs at DINA COSMETICS
- (b) Phasing out CFCs at LABORATORIES KOSMETO

1. In 1996, the total consumption of CFCs in the aerosol sector in Syria amounted to 793 tonnes. The Executive Committee has approved five projects for the phase out of 527.8 tonnes of CFCs used in the manufacturing of aerosol products, equivalent to 66.56% of the total CFC consumption in this sector. These projects are expected to be fully implemented by the end of 1998.

2. The Government of Syria is submitting two additional projects which would lead to elimination of 129.9 tonnes of CFCs, namely, Dina Cosmetics (70 tonnes of CFC-12) and Laboratories Kosmeto (59.9 tonnes).

3. In total, 657.7 tonnes of CFCs would be eliminated once all the projects become operational. The Government of Syria is intending to meet the 1999 freeze-target by giving priority to the elimination of CFCs in the sector. The Government is also proposing to submit additional aerosol conversion projects to the 24th Executive Committee Meeting.

4. The projects under consideration are for the replacement of CFCs with hydrocarbon propellant used in manufacturing different types and sizes of aerosol products. Dina Cosmetics produces different size presentations of deodorant, perfume and hair spray (1.675 million cans/year) and Laboratories Kosmeto produces deodorant, hair spray, gel spray, styling mousse and air refreshener (470,000 cans/year).

5. The aerosol filling processes under operation at both plants utilise two semi-automatic filling machines which are used for product filling, crimping and gassing with CFCs.

6. 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.

7. 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. The capital cost of conversions is US \$262,000 for Dina Cosmetics and US \$223,500 for Laboratories Kosmeto. The operational savings (NPV) for four years is US \$33,523 for Dina Cosmetics and US \$48,438 for Laboratories Kosmeto.
2. The enterprises will finance costs associated with land acquisition; civil works including, inter alia, construction of platform, new product filling gas room and storage area, pump house and fence (US \$550,000 at Dina Cosmetics and US \$530,000 at Laboratories Kosmeto). 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<br>US \$ | Support<br>Cost US \$ | Implementing<br>Agency |
|----------------------------------------------|-----------------------|-----------------------|------------------------|
| (a) Phasing out CFCs at Dina Cosmetics       | 228,477               | 29,702                | UNIDO                  |
| (b) Phasing out CFCs at Laboratories Kosmeto | 175,062               | 22,758                | UNIDO                  |

## PROJECT EVALUATION SHEET

### SYRIA

SECTOR: FOAM ODS use in sector (1991): 500 ODP tonnes

Sub-sector cost-effectiveness thresholds: Flexible US \$6.23/kg

**Project Title:**

### Phasing out of CFC-11 from flexible slabstock foam manufacturing at AKAL Factory

| Project Data                         | Flexible slabstock      |
|--------------------------------------|-------------------------|
|                                      | AKAL Factory            |
| ODS phase-out (ODP tonnes)           | 101                     |
| Proposed project duration (months)   | 12                      |
| Incremental capital cost (US \$)     | 511,500                 |
| - including contingency (%)          | 10                      |
| Incremental operational cost (US \$) | 110,000                 |
| Total project cost (US \$)           | 621,500                 |
| Local ownership (%)                  | 100                     |
| Export component (%)                 |                         |
| Amount requested (US \$) {Original}  | 621,500                 |
| {Revised}                            |                         |
| Cost effectiveness (US \$/kg)        | 6.15                    |
| National Coordinating Agency         | Ministry of Environment |
| Implementing Agency                  | UNIDO                   |
| Technical review completed?          |                         |

**Secretariat's Recommendations:**

|                                          |         |
|------------------------------------------|---------|
| Amount recommended (US \$)               | Pending |
| Project impact (ODP tonnes)              |         |
| Cost effectiveness (US \$/kg)            |         |
| Implementing Agency support cost (US \$) |         |
| Total cost to Multilateral Fund (US \$)  |         |

## **PROJECT DESCRIPTION**

### Foam Sector Profile

|                                                              |                 |
|--------------------------------------------------------------|-----------------|
| Sector ODS consumption (1991) reported in country programme  | 500 tonnes ODP  |
| Most recent consumption data (1995)                          | 710 tonnes ODP  |
| ODS to be phased out in approved projects (as at July 1997)  | 182 tonnes ODP  |
| ODS reported to have been phased out (as at July 1997)       | 0 tonnes ODP    |
| ODS to be phased-out in current proposed projects            | 101 tonnes ODP  |
| Latest (1995) CFC-11 consumption reported according to Art.7 | 1014 tonnes ODP |

### **Phasing out of CFC-11 from flexible slabstock foam manufacturing at AKAL Factory**

1. The company Akal Factory will convert from the use of CFC-11 in the manufacture of flexible foam used for the furniture, mattresses and textile lamination industry. Akal Factory is equipped with a 18 year old Laader Berg EG-6 slabstock machine.
2. The chosen replacement alternative is liquid carbon dioxide technology (LCD). The capital cost of conversion involves the modification of existing production facilities and installation of supplementary equipment and instruments. The associated cost amounts to US \$465,000. The capital cost associated with trials, technology transfer and training is US \$100,000, while the cost of contingency is US \$56,500. Incremental operating costs of US \$75,900 are to be determined.

### Impact of Project on 1999 Freeze

3. This project will contribute to achieve the freeze target of the country in 1999.

## **SECRETARIAT'S COMMENTS AND RECOMMENDATIONS**

### **COMMENTS**

1. The Executive Committee at its Twenty-second Meeting requested the Fund Secretariat and the Implementing Agencies to finalize their discussions on the guidelines for LCD projects and present their recommendations to the Committee alongside the projects which may be submitted to the Twenty-third Meeting for approval. As at 20 October 1997 there were still ongoing discussions among the implementing agencies and the Fund Secretariat with the view to finalizing the recommendations.
2. The final project cost of this and the other LCD projects will be communicated to the Sub-Committee on Project Review should agreement be reached on the guidelines.