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

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PROJECT PROPOSALS: SYRIA

This document includes the Comments and Recommendations from the Fund Secretariat on the following projects:

Aerosol

- Phasing out CFCs at Gaston Banna & Sons Co. UNIDO

Foam

- Phasing out CFC-11 at Dakkak Co. flexible polyurethane foam plant UNIDO

PROJECT EVALUATION SHEET **SYRIA**

SECTOR: **AEROSOL** ODS use in sector (1994) 260 tonnes

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

Project Title: Phasing out CFCs at Gaston Banna and Sons Company

Project Data	Gaston Banna and Sons Co.
ODS phase-out (ODP tonnes)	104
Proposed project duration (Yrs)	1.5
Incremental capital cost (US \$)	419,500
Contingency (%)	10
Incremental operational cost (US \$)	(120,000)
Total project cost (US \$)	299,500
Local ownership (%)	100
Export component (%)	0
Amount requested (US\$) {Original	407,433
{Revised	299,500
Cost effectiveness (US \$/kg)	2.88
National Coordinating Agency	General Commission for Environmental Affairs
Implementing Agency	UNIDO
Technical review completed?	Yes

<i>Secretariat's Recommendations</i>	
Amount recommended (US \$)	299,500
Project impact (ODP tonnes)	104
Cost effectiveness (US \$/kg)	2.88
Implementing Agency support cost (US \$)	38,935
Total cost to Multilateral Fund (US \$)	338,435

PROJECT DESCRIPTION

1. Gaston Banna and Sons is one of the main aerosol manufacturing enterprises in the country. The company produces different size presentations of hair sprays (798,000 cans/year), and perfumes (145,000 cans/year). The present aerosol filling line consists of two semi-automatic Pamasol filling machines, manual can loading table with conveyer system, manual placing of the valve, crimper and gas filler.
2. The enterprise will convert to HAPs technology, using the open air filling room method. Conversion to HAP technology entails installation of an open air filling station, including crimping, propellant handling and filling, and a water bath for testing filled cans, conveyor system, explosion-proof lighting and ventilation system, HAP storage and purification system, and a fire control system including a water reservoir, pumps, hoses and fire extinguishers.
3. 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 and production trials.
4. The enterprise will finance costs associated with land acquisition for gas storage and open air filling room, civil works including construction of the pump house, water storage tank, and protecting fence and access.
5. UNIDO reviewed the two project proposals in accordance with discussions with the Secretariat. The capital cost of conversion is US \$419,500 including 10% contingency. The operational savings (NPV) for four years are US \$120,000.

SECRETARIAT'S RECOMMENDATIONS

1. The Fund Secretariat recommends approval of the project as follows:

Project	Project Cost US \$	Support Cost US \$	Implementing Agency
Phasing out CFCs at Gaston Banna and Sons Co.	299,500	38,935	UNIDO

SECTOR: FOAM ODS use in sector (1993): 493 ODP tonnes

Sub-sector cost-effectiveness thresholds: Flexible polyurethane (Slabstock) US \$6.23/kg

Phasing out CFC-11 at Dakkak Co. flexible polyurethane foam plant.

<i>Secretariat's Recommendations</i>	
Amount recommended (US \$)	96,553
Project impact (ODP tonnes)	17
Cost effectiveness (US \$/kg)	5.68
Implementing Agency support cost (US\$)	12,552
Total cost to Multilateral Fund	109,105

PROJECT DESCRIPTION

Phasing out CFC-11 at Dakkak Co. flexible polyurethane foam plant.

1. Dakkak Co, the largest producer of flexible foam in Syria has installed capacity of 5,000 tonnes with current production output of 2,220 tonnes. The company manufactures flexible foam blocks for the furniture industry. It intends to replace CFC-11 with methylene chloride as auxiliary blowing agent.
2. The company operates a twelve component high pressure mixing head and will not require any equipment changes during its conversion to the use of methylene chloride.
3. The capital cost of conversion relates to improvement in the ventilation system and provision of enclosures at sources of exposure to methylene chloride in the production, cutting and transport systems.
4. Designs for machine enclosure will be procured from an equipment supplier and manufactured by a local contractor.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS**COMMENTS**

1. The project costs were discussed between UNIDO and the Fund Secretariat and the following changes were agreed to:

Designs for machine enclosure US \$4,500 instead of US \$9,000 per project (Syria and Sudan with similar projects), to be procured by UNIDO and provided to the countries, commissioning and start up US \$7,000, technology transfer and training US \$10,000 and electrical control system US \$4,000. The total project cost taking account of the agreed changes came to US \$96,533

RECOMMENDATION

1. The Fund Secretariat recommends approval of the project with associated support cost and the funding level shown below.

	Project Cost US \$	Support Cost US \$	Implementing Agency
Phasing out CFC-11 at Dakkak Co. flexible polyurethane foam plant.	96,553	12,552	UNIDO