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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL

Thirty-fifth Meeting
Montreal, 5-7 December 2001

PROJECT PROPOSALS: LIBYA

This document consists of the comments and recommendations of the Fund Secretariat on the following project proposals:

Foam:

- Phase out of CFC-11 by conversion to methylene chloride (MC) in the manufacture of flexible polyurethane foam at Tasharoukiate Ali Sannoga UNDP
- Phase out of CFC-11 by conversion to methylene chloride (MC) in the manufacture of flexible polyurethane foam at Tasharoukiate El Hani UNDP
- Phase out of CFC-11 by conversion to liquid carbon dioxide (LCD) in the manufacture of flexible polyurethane foam at El Houria Unit Plant UNDP

**PROJECT EVALUATION SHEET
LIBYA**

SECTOR: Foam ODS use in sector (2000): 351.55 ODP tonnes

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

Project Titles:

- (a) Phase out of CFC-11 by conversion to methylene chloride (MC) in the manufacture of flexible polyurethane foam at Tasharoukiate Ali Sannoga
- (b) Phase out of CFC-11 by conversion to methylene chloride (MC) in the manufacture of flexible polyurethane foam at Tasharoukiate El Hani
- (c) Phase out of CFC-11 by conversion to liquid carbon dioxide (LCD) in the manufacture of flexible polyurethane foam at El Houria Unit Plant

Project Data	Flexible slabstock		
	Ali Sannoga	El Hani	El Houria
Enterprise consumption (ODP tonnes)	23.00	28.00	96.00
Project impact (ODP tonnes)	23.00	28.00	96.00
Project duration (months)	36	36	36
Initial amount requested (US \$)	131,956	118,756	596,583
Final project cost (US \$):			
Incremental capital cost (a)	110,900	100,900	515,350
Contingency cost (b)	11,090	10,090	46,535
Incremental operating cost (c)	3,650	1,450	-41,480
Total project cost (a+b+c)	125,640	112,440	520,405
Local ownership (%)	100%	100%	100%
Export component (%)	0%	0%	0%
Amount requested (US \$)	125,640	112,440	520,405
Cost effectiveness (US \$/kg.)	5.46	4.02	5.42
Counterpart funding confirmed?	Yes	Yes	Yes
National coordinating agency	Ministry of Environment and Climate Changes		
Implementing agency	UNDP		

Secretariat's Recommendations			
Amount recommended (US \$)	125,640	112,440	
Project impact (ODP tonnes)	23.00	28.00	
Cost effectiveness (US \$/kg)	5.46	4.02	
Implementing agency support cost (US \$)	16,333	14,617	
Total cost to Multilateral Fund (US \$)	141,973	127,057	

PROJECT DESCRIPTION

Sector background

- Latest available total ODS consumption (2000)	2,224.26 ODP tonnes
- Baseline consumption of Annex A Group I substances (CFCs)	716.70 ODP tonnes
- Consumption of Annex A Group I substances for the year 2000	987.34 ODP tonnes
- Baseline consumption of CFCs in foam sector	531.55 ODP tonnes
- Consumption of CFCs in foam sector in 2000	531.55 ODP tonnes
- Funds approved for investment projects in foam sector as of end of July 2001	US \$ 881,858
- Quantity of CFC to be phased out in approved investment projects in foam sector as of end of July 2001	167.00 ODP tonnes
- Quantity of CFC phased out from approved investment projects in the foam sector as of end of July 2001 (including CFC phased out in projects not yet reported as completed)	0 ODP tonnes
- Quantity of CFCs in approved ongoing investment projects in the foam sector as of end of July 2001	167.00 ODP tonnes
- Quantity of CFCs remaining to be phased out in the foam sector as of end of July 2001	686.52 ODP tonnes
- Quantity of CFCs to be phased out in investment projects being submitted to the 35 th ExCom (December 2001).	147.00 ODP tonnes
- Quantity of CFCs remaining to be phased out in the foam sector by the end of 2001	539.52 ODP tonnes

Flexible Slabstock Foam

Tasharoukiate El Hani and Tasharoukiate Ali Sannoga

1. El Hani and Ali Sannoga consumed 28 tonnes and 23 tonnes of CFC-11 respectively in 2000 in the production of slabstock foam for mattresses and furniture applications using manual boxfoam machines. The two companies will convert their production to the use of methylene chloride. The total incremental capital cost of the projects are US \$129,742 for El Hani and US \$139,742 for Ali Sannoga. These costs cover equipment replacement of the manual boxfoam with semi-automatic machine, methylene chloride storage tank, methylene chloride metering system, machine enclosure and ventilation. Trials, technology transfer and training amount to US \$16,742 each. Incremental operating costs of US \$1,450 and US \$3,650 respectively are requested. The projects are expected to be completed in 3 years.

El Houria Unit

2. El Houria consumed 96 tonnes CFC-11 in 1999 in the production of slabstock foam for mattresses and furniture applications using Viking Maxfoam. The company will convert its

production to the use of liquid carbon dioxide technology. The total incremental capital cost of conversion including 10% contingency amounts to US \$561,885 which includes US \$370,000 for the LCD system, US \$50,000 as technology license fee and US \$40,350 for trials, technology transfer and training. Incremental operating cost of US \$34,698 is requested resulting in a total project cost of US \$506,583. The project is expected to be completed in 3 years.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

Methylene Chloride Projects

3. The Secretariat identified some technical and cost issues relating to the replacement of the existing manual boxfoam machines with semi-automatic ones. The Secretariat and UNDP discussed the issues and agreed on the eligible grants of US \$125,640 and US \$112,440 for the Ali Sannoga and El Hani projects respectively. It was also agreed to keep the issues relating to the replacement of manual boxfoams in these and similar projects in view and to continue to examine available options with the view to designing more cost-effective projects.

LCD Project

El Houria Unit

Technology license fee

4. The Secretariat discussed with the implementing agencies the issue of continued payment by the Multilateral Fund of the technology license fee given that over US \$2.5 million has already been allocated for payment of the use of the technology. The consensus was that the license fee could be eliminated within the context of a review of the technology as well as the guidelines which were adopted on a trial basis. The issue is elaborated in the Overview of issues identified during project review.

5. The breakdown of the cost of El Houria Unit project is as follows:

Incremental capital cost:	US \$511,885
Incremental operating savings:	(US \$41,480)
Total project cost:	US \$470,405
License fee:	US \$50,000
Grand total (with license fee):	US \$520,405

6. The Secretariat and UNDP agreed on the other elements of the project's costs. However, it is submitted for individual consideration on account of the issue raised above.

RECOMMENDATIONS

7. The Fund Secretariat recommends blanket approval of the Tasharoukiate Ali Sannoga and Tasharoukiate El Hani projects with the levels of funding and associated support costs indicated below.

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	Phase out of CFC-11 by conversion to methylene chloride (MC) in the manufacture of flexible polyurethane foam at Tasharoukiate Ali Sannoga	125,640	16,333	UNDP
(b)	Phase out of CFC-11 by conversion to methylene chloride (MC) in the manufacture of flexible polyurethane foam at Tasharoukiate El Hani	112,440	14,617	UNDP
