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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
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PROJECT PROPOSALS: INDONESIA

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

Foam

•	Phaseout of CFC-11 by conversion to water based technology and LCD technology in the manufacture of flexible molded foam and to HCFC-141b in the manufacture of molded integral skin polyurethane foam at Anto Indo Foam	World Bank
•	Phase-out of CFC-11 by conversion to 100% water blown technology at P.T. Trias Rantaimas in the manufacturing of polyurethane integral skin shoe soles	UNIDO

PROJECT EVALUATION SHEET
INDONESIA

SECTOR: Foam ODS use in sector (1997): 1,294 ODP tonnes

Sub-sector cost-effectiveness thresholds: Integral skin US $16.86/kg

Project Titles:

(a) Phaseout of CFC-11 by conversion to water based technology and LCD technology in the manufacture of flexible molded foam and to HCFC-141b in the manufacture of molded integral skin polyurethane foam at Anto Indo Foam

(b) Phase-out of CFC-11 by conversion to 100% water blown technology at P.T. Trias Rantaimas in the manufacturing of polyurethane integral skin shoe soles

Project Data	**Integral skin**	
	Anto Indo	**Trias Rantaimas**
Enterprise consumption (ODP tonnes)	54.30	18.43
Project impact (ODP tonnes)	51.80	18.43
Project duration (months)	36	30
Initial amount requested (US $)	586,727	279,259
Final project cost (US $):		
Incremental capital cost (a)	465,000	85,000
Contingency cost (b)	46,500	8,500
Incremental operating cost (c)	80,727	47,819
Total project cost (a+b+c)	592,227	141,319
Local ownership (%)	100%	100%
Export component (%)	0%	0%
Amount requested (US $)	592,227	141,319
Cost effectiveness (US $/kg.)	10.94	7.67
Counterpart funding confirmed?		Yes
National coordinating agency	Ministry of Environment	Office of State Minister for Environment
Implementing agency	IBRD	UNIDO

Secretariat's Recommendations		
Amount recommended (US $)		141,319
Project impact (ODP tonnes)		18.43
Cost effectiveness (US $/kg)		7.67
Implementing agency support cost (US $)		18,371
Total cost to Multilateral Fund (US $)		159,690

PROJECT DESCRIPTION

Sector Background

- Latest available total ODS consumption (1998)	4,483.90 ODP tonnes
- Baseline consumption of Annex A Group I substances (CFCs)	1,293.70 ODP tonnes
- Consumption of Annex A Group I substances for the year 1998	4,238.00 ODP tonnes
- Baseline consumption of CFCs in foam sector	1,992.00 ODP tonnes
- Consumption of CFCs in foam sector in 1997	1,294.00 ODP tonnes
- Funds approved for investment projects in foam sector as of end of 1999	US $20,840,522.00
- Quantity of CFC to be phased out in investment projects in foam sector as of end of 1999	3,816.74 ODP tonnes
- Quantity of CFC phased out in investment projects in foam sector as of end of 1999	1,249.09 ODP tonnes
- Quantity of CFC to be phased out in investment projects in foam sector approved in 1999	432.40 ODP tonnes
- Funds approved for investment projects in the foam sector in 1999	US $2,405,958.00

INTEGRAL SKIN FOAM

P.T. Trias Rantaimas

1. P.T. Trias Rantaimas was established in 1988. It uses 18.43 ODP tonnes of CFC-11 per year (average 1997-1999) in the production of polyurethane integral skin shoes soles. The company operates two 20 kg/min Elastogran F20 NG low pressure machines installed in 1988. The production is to be converted to a fully water-based system. The project includes the replacement of the two existing low-pressure dispensers with high-pressure dispensers (US $160,000). Other costs include training, commissioning, and consultancy services (US $14,000). Incremental operating cost for two years of US $87,859 is requested.

Anto Indo Foam

2. Anto Indo Foam was founded in June 1991. It produces polyurethane flexible molded foam products including seat backs and pillows and integral skin foam. The production is split evenly between integral skin and flexible molded foams with a total CFC-11 consumption of 54.3 tonnes. The company operates locally-made 5 kg/min low pressure dispensers stated to have been purchased in 1987-1994. It also premixes its systems in an open top premixer also purchased in 1998. It is proposed to convert the flexible molded foam production to LCD technology for lower density foam (comprising about 15% of CFC-11 consumption) and water-blown technology for higher density foam (almost 35% of CFC-11 consumption). The integral skin production will be converted to the use of HCFC-141b.

3. The conversion involves the replacement of one of the 5 kg/min low pressure dispensers with 15kg/min high pressure dispenser with direct LCD at US $170,000, LCD storage and transfer US $30,000. The other seven will be retrofitted, four for use with HCFC at the cost of US $25,000 each and three with higher output for flexible molded foam for US $30,000 per machine for US $90,000. A new premixer for US $25,000 is also requested. The total incremental capital cost of the conversion requested is US $460,000. Incremental operational cost due to water blown is US $92,211, while LCD realizes a saving of US $11,484.

Impact of the projects

4. When implemented, the projects will phase-out 70.2 tonnes of CFC-11 which is 1.7% of Indonesia's 1998 consumption of Annex A Group I substances. There will be residual ODP of 2.5 tonnes.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

Anto Indo Foam

1. The Executive Committee's decision relating to conversion of flexible molded foams provides enterprises freedom of choice of conversion technology between two technological options, namely LCD and water-blown. However the eligible grant should be based on the option with lower conversion costs. No agreement has been reached on the cost of either option.

2. The Fund Secretariat and the World Bank are discussing the project whose outcome could be influenced by the decision of the Executive Committee on how to treat the issue of increase in foam density in rigid and flexible molded foam production.

3. The World Bank has not provided the justification for the use of HCFC-141b by Anto Indo in the conversion of the production of integral skin foam from CFC-11 to HCFC-141b. The letter from the Government of Indonesia which should be provided in line with Decision 27/13 has also not been provided.

4. There are some inconsistencies in the date of establishment of the company, i. e. 1991 and the dates of purchase of most of the equipment for the company, i. e. 1987-1988, which pre-dated the establishment of the company. A clarification has been sought from the World Bank.

5. The Anto Indo Foam project is submitted for individual consideration.

Trias Rantaimas

1. The Fund Secretariat and UNIDO discussed the project and agreed that the eligible grant should be based on the cost of retrofit of the existing machines instead of their replacement with high pressure machines. The costs of the project were agreed as:

Incremental capital cost:	US $93,500
Incremental operational cost:	US $47,819
Total project cost:	US $141,319

RECOMMENDATION

1. The Fund Secretariat recommends the Trias Rantaimas project for blanket approval with the level of funding and associated support cost as indicated below.

	Project Title	Project Funding (US$)	Support Cost (US$)	Implementing Agency
(b)	Phase-out of CFC-11 by conversion to 100% water blown technology at P.T. Trias Rantaimas in the manufacturing of polyurethane integral skin shoe soles	141,319	18,371	UNIDO