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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

CORRIGENDUM

PROJECT PROPOSALS: INDONESIA

This corrigendum is issued to replace pages 3, 6, 7, 11, 12, 16, 17 and 22 with the attached pages.

Amount recommended (US \$)	77,125	106,625	3,538,400
Project impact (ODP tonnes)	9.0	16.45	370
Cost effectiveness (US \$/kg)	8.57	6.48	9.56
Implementing Agency support cost (US \$)	10,026	13,861	459,992
Total cost to Multilateral Fund (US \$)	87,151	120,486	3,998,392

capital cost of conversion involves the conversion of thirty-one dispensers (US \$2,063,900). The capital cost associated with trials, technology transfer and training is US \$121,600, while the cost of contingency is US \$218,550. Incremental operating costs of US \$1,609,500 are expected on the basis of the use of the following chemicals: 370 tonnes CFC-11; 555 tonnes MDI.

Impact of Project on 1999 Freeze

3. There is a large, fast growing service sector that will continue using CFCs as long as CFC containing equipment needs to be serviced. Only the phase-out of CFCs in new products will therefore contain this sector and provide the Government with the control needed to assure the 1999 freeze in Indonesia's usage of ODS.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. Based on expert advice to the Secretariat the following cost items are still being discussed with the Implementing Agencies.

- change of molds following conversion
- provision of heating ovens
- replacement of low pressure with high pressure machines.

2. Agreed costs of the three projects will be communicated to the Sub-Committee on Project Review.

RECOMMENDATION

1. The Fund Secretariat concluded its discussions with UNDP and the World Bank on all the issues outlined in the Secretariat's comments, and recommends blanket approval of all the projects with the funding levels and associated support costs as indicated below.

Project Title	Project Cost US \$	Support Cost US \$	Implementing Agency
(a) Ciptaindah Jokindo - Conversion to CFC-free technology in the manufacture of flexible cold cured molded PUF	77,125	10,026	UNDP
(b) PT Archigramma - Conversion to CFC-free technology in the manufacture of flexible cold-cured molded and integral skin PUF	106,625	13,861	UNDP
(c) FLEXIBLE MOLDED PU FOAM - Technical Assistance Program for SMEs	3,538,400	459,992	World Bank

PROJECT EVALUATION SHEET INDONESIA

SECTOR: FOAM ODS use in sector (1996): 4,000 ODP tonnes

Sub-sector cost-effectiveness thresholds: Flexible (slabstock) US \$6.23/kg
EPE/EPS US \$8.22/kg

Project Titles:

- (a) SEA HORSE - Elimination of CFC-11 in the manufacture of flexible polyurethane foam (slabstock)
- (b) INOAC - Elimination of CFC-11 in the manufacture of flexible polyurethane foam (slabstock)
- (c) FLEXIBLE BOXFOAM Technical Assistance Program for SMEs
- (d) TARA GUNA - Elimination of CFC-12 in the Manufacture of Extruded Polyethylene Foam Sheet

Project Data	FLEXIBLE			EPE/EPS
	SEA HORSE	INOAC	BOXFOAM	TARA GUNA
ODS phase-out (ODP tonnes)	90	110	954	35
Proposed project duration (months)	24	24	24	24
Incremental capital cost (US \$)	621,500	566,500	2,000,000	405,900
- including contingency (%)		10	10	10
Incremental operational cost (US \$)	(89,300)	(153,600)	2,074,951	24,000
Total project cost (US \$)	532,200	412,900	4,074,951	429,900
Local ownership (%)	100	90	100	100
Export component (%)				
Amount requested (US \$) {Original}	560,700	630,769	4,177,000	287,700
{Revised}	532,200	371,610	4,060,640	
Cost effectiveness (US \$/kg)	5.91	3.38	4.26	8.22
National Coordinating Agency	Indonesian Ministry of the Environment (LH)			
Implementing Agency	The World Bank			
Technical review completed?				

Secretariat's Recommendations:				
Amount recommended (US \$)	Pending	Pending	4,060,640	287,700
Project impact (ODP tonnes)			954	35
Cost effectiveness (US \$/kg)			4.26	8.22
Implementing Agency support cost (US \$)			527,883	37,401
Total cost to Multilateral Fund (US \$)			4,588,523	325,101

Additional Comments on the Boxfoam Project

6. The World Bank informed the Secretariat that the project will conclude the projects for the flexible slabstock foam subsector.

7. A similar umbrella project was approved for 50 SMEs in November 1993 based on the use of methylene chloride (at US \$1,660,000 for the phase out of 100 tonnes CFC-11). The current project is based on the use of low index additive. Whereas the use of methylene chloride in the current project would potentially accrue operational savings of about US \$1.6 million for 2 years NPV, the use of low additive index results in incremental operational cost of US \$2.1 million over the same period. Therefore, it may be foreseen that the technology selected for the second group of enterprises could result in higher operational costs for them in the future compared with the first group, which would potentially put them in an economically disadvantageous position. This situation has been brought to the attention of the World Bank with a view to making the group aware of the implication of the use of the low index additive as a phase out option.

RECOMMENDATION(S)

1. The Fund Secretariat concluded discussions with the World Bank on all the issues outlined in the Secretariat's comments and recommends blanket approval of the flexible boxfoam and Tara Guna projects, with the funding levels and associated support costs as indicated below, noting that the Sea Horse and INOAC projects are subject to the consideration of the recommendations on the guidelines for LCD projects.

2. To note that the boxfoam project is a terminal project for the flexible slabstock foam sub-sector and that the Government of Indonesia will not submit any further projects in that sub-sector for funding under the Multilateral Fund.

3. To further note that the Government of Indonesia has been made aware of the potential economic differences in the use of two different technological options by different groups of SMEs and that the Government would not submit any project in future which is aimed at addressing any possible market advantages and/or disadvantages among the different boxfoam producers.

Project Title	Project Cost US \$	Support Cost US \$	Implementing Agency
(a) SEA HORSE - Elimination of CFC-11 in the manufacture of flexible polyurethane foam (slabstock)	Pending		World Bank
(b) INOAC - Elimination of CFC-11 in the manufacture of flexible polyurethane foam (slabstock)	Pending		World Bank
(c) FLEXIBLE BOXFOAM Technical Assistance Program for SMEs	4,060,640	527,883	World Bank
(d) TARA GUNA - Elimination of CFC-12 in the Manufacture of Extruded Polyethylene Foam Sheet	287,700	37,401	World Bank

PROJECT EVALUATION SHEET INDONESIA

SECTOR: FOAMS ODS use in sector (1992): 1025 ODP tonnes

Sub-sector cost-effectiveness thresholds: Rigid US \$7.83/kg

Project Titles:

- (a) PT Aneka Cool Citratama: conversion to CFC free technology in the manufacture of rigid PUF (panels, blocks)
- (b) PT Dilihan Glory - conversion to CFC free technology in the manufacture of rigid PUF (thermoware)
- (c) PT Ferrarindo Multi Sarana - conversion to CFC free technology in the manufacture of rigid PUF (spray foam)
- (d) Karya Cipta Semesta - Conversion to CFC-free technology in the manufacture of rigid PUF spray insulation
- (e) PT Langgeng Makmur Plastic Industry Ltd Conversion to CFC-free technology in the manufacture of rigid PUF insulated thermoware
- (f) UD Samrow Foam - Conversion to CFC-free technology in the manufacture of rigid PUF insulated products

Project Data	Rigid					
	Aneka	Dilihan	Ferrarindo	Karya	Langgeng	Samrow
ODS phase-out (ODP tonnes)	32.7	13.05	8.2	18	20	25
Proposed project duration (months)	24	24	24	24	24	24
Incremental capital cost (US \$)	217,000	115,500	14,300	33,000	105,000	60,000
- including contingency (%)	10	10	10	10	10	10
Incremental operational cost (US \$)	15,225	(2,700)	18,600	35,000	41,000	50,000
Total project cost (US \$)	232,225	112,800	32,900	68,000	146,000	110,000
Local ownership (%)	100	100	100	100	100	100
Export component (%)						
Amount requested (US \$) {Original}	256,000	102,200	32,900	68,000	142,000	110,000
{Revised}	232,225					
Cost effectiveness (US \$/kg)	7.10	7.83	4.01	4.16	7.83	4.85
National Coordinating Agency	Indonesian Ministry of Environment (LH)					
Implementing Agency	UNDP					
Technical review completed?	Yes	Yes	Yes	Yes	Yes	Yes

Secretariat's Recommendations:

Amount recommended (US \$)	232,225	102,200	32,900	68,000	142,000	110,000
Project impact (ODP tonnes)	32.70	13.05	7.65	16.35	18.14	22.69
Cost effectiveness (US \$/kg)	7.10	7.83	4.30	4.16	7.83	4.85
Implementing Agency support cost (US \$)	30,189	13,286	4,277	8,840	18,460	14,300
Total cost to Multilateral Fund (US \$)	262,414	115,486	37,177	76,840	160,460	124,300

RECOMMENDATION

1. The Fund Secretariat concluded its discussions with UNDP on the issues relating to Aneka Cool Citratama project and recommends blanket approval of all the projects below with the funding levels and associated support costs indicated in the table.

Project Title	Project Cost US \$	Support Cost US \$	Implementing Agency
(a) PT Aneka Cool Citratama: conversion to CFC free technology in the manufacture of rigid PUF (panels, blocks)	232,225	30,189	UNDP
(b) PT Dilihan Glory - conversion to CFC free technology in the manufacture of rigid PUF (thermoware)	102,200	13,286	UNDP
(c) PT Ferrarindo Multi Sarana - conversion to CFC free technology in the manufacture of rigid PUF (spray foam)	32,900	4,277	UNDP
(d) Karya Cipta Semesta - Conversion to CFC-free technology in the manufacture of rigid PUF spray insulation	68,000	8,840	UNDP
(e) PT Langgeng Makmur Plastic Industry Ltd Conversion to CFC-free technology in the manufacture of rigid PUF insulated thermoware	142,000	18,460	UNDP
(f) UD Samrow Foam - Conversion to CFC-free technology in the manufacture of rigid PUF insulated products	110,000	14,300	UNDP

PROJECT EVALUATION SHEET INDONESIA

SECTOR: REFRIGERATION ODS use in sector (1992): 2,096 ODP tonnes

Sub-sector cost-effectiveness thresholds: Commercial 15.21 US \$/kg

Project Titles:

- (a) Conversion to CFC-free technology in the manufacture of commercial refrigeration equipment at C.V. Kulkasindo
- (b) Conversion of CFC-12 commercial refrigeration to HFC-134a at PT Maspion
- (c) Conversion of CFC-12 commercial refrigeration to HFC-134a at PT Porkka Indonesia
- (d) Conversion of CFC-12 refrigerant to HFC-134a and CFC-11 to HCFC-141b as the blowing agent for foam insulation in the manufacture of commercial refrigeration units at PT Wahana Derby Sejati

Project Data	Commercial Refrigeration			
	C. V. Kulkasindo	PT Maspion	PT Porkka	PT Wahana Derby Sejati
ODS phase-out (ODP tonnes)	9.4	9	3.96	10.28
Proposed project duration (months)	2	18	18	24
Incremental capital cost (US \$)	116,000	50,930	38,500	176,317
- including contingency (%)		10	10	6
Incremental operational cost (US \$)	66,000	111,200	59,029	221,490
Total project cost (US \$)	182,000	162,130	97,529	397,807
Local ownership (%)	100	100	60	40
Export component (%)	0	0	0	5
Amount requested (US \$) {Original}	136,000	136,890	58,517	139,233
{Revised}		136,890		
Cost effectiveness (US \$/kg)	14.47	15.21	14.77	13.54
National Coordinating Agency	Indonesian Ministry of Environment (LH)			
Implementing Agency	UNDP	World Bank		
Technical review completed?	Yes			

Secretariat's Recommendations:				
Amount recommended (US \$)	136,000	136,890	58,517	139,233
Project impact (ODP tonnes)	9.4	9	3.96	10.28
Cost effectiveness (US \$/kg)	14.47	15.21	14.77	13.54
Implementing Agency support cost (US \$)	17,680	17,795	7,607	18,100
Total cost to Multilateral Fund (US \$)	153,680	154,685	66,124	157,333

and commissioning are requested at a high level in light of the fact that these cost items are related to conversion of the refrigerant part only.

5. The Secretariat and the World Bank are still discussing the issue of the classification of the project and the level of eligible capital and operating incremental costs. The Sub-Committee on Project Review will be informed accordingly.

- (c) **Conversion of CFC-12 commercial refrigeration to HFC-134a at PT Porkka Indonesia**
- (d) **Conversion of CFC-12 refrigerant to HFC-134a and CFC-11 to HCFC-141b as the blowing agent for foam insulation in the manufacture of commercial refrigeration units at PT Wahana Derby Sejati**

1. The Secretariat discussed with the World Bank the eligibility and incrementality of all cost items in these two projects. Requested costs are justified.

RECOMMENDATION

1. The Fund Secretariat concluded its discussions with the World Bank and recommends blanket approval of the projects with associated support costs at the funding level shown in the table below.

Project Title	Project Cost US \$	Support Cost US \$	Implementing Agency
(a) Conversion to CFC-free technology in the manufacture of commercial refrigeration equipment at C.V. Kulkasindo	136,000	17,680	UNDP
(b) Conversion of CFC-12 commercial refrigeration to HFC-134a at PT Maspion	136,890	17,795	World Bank
(c) Conversion of CFC-12 commercial refrigeration to HFC-134a at PT Porkka Indonesia	58,517	7,607	World Bank
(d) Conversion of CFC-12 refrigerant to HFC-134a and CFC-11 to HCFC-141b as the blowing agent for foam insulation in the manufacture of commercial refrigeration units at PT Wahana Derby Sejati	139,233	18,100	World Bank