



**United Nations
Environment
Programme**



Distr.
Limited

UNEP/OzL.Pro/ExCom/32/30/Turkey/Corr.1
17 November 2000

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-second Meeting
Ouagadougou, 6-8 December 2000

Corrigendum

PROJECT PROPOSALS: TURKEY

Replace page 2 with the following page 2.

Replace pages 5 and 6 with the following pages 5-6.

PROJECT EVALUATION SHEET TURKEY

SECTOR: Foam ODS use in sector (1999): 1,049 ODP tonnes

Sub-sector cost-effectiveness thresholds: Integral skin US \$16.86/kg
Rigid US \$7.83/kg

Project Titles:

- (a) Umbrella project. Conversion from CFC-11 into all-water technology for flexible molded and HCFC-141b for integral skin foams at 11 enterprises
- (b) Conversion from CFC-11 into all-water technology for flexible molded and integral skin foams at Urosan
- (c) Phase-out of CFC-11 consumption by conversion to HCFC-141b technology at Purtiz Co. in the manufacture of rigid polyurethane foam for insulating purposes

Project Data	Integral skin		Rigid
	11 enterprises	Urosan	Purtiz
Enterprise consumption (ODP tonnes)	57.50	39.50	58.00
Project impact (ODP tonnes)	48.70	39.50	52.85
Project duration (months)	36	36	30
Initial amount requested (US \$)	403,878	666,381	394,615
Final project cost (US \$):			
Incremental capital cost (a)	309,500	145,000	120,000
Contingency cost (b)	30,950	14,500	12,000
Incremental operating cost (c)	183,945	132,141	169,094
Total project cost (a+b+c)	524,396	291,641	301,094
Local ownership (%)	100%	100%	100%
Export component (%)	0%	0%	0%
Amount requested (US \$)	398,378	291,641	301,094
Cost effectiveness (US \$/kg.)	8.18	7.38	7.30
Counterpart funding confirmed?			Yes
National coordinating agency	Technology Development Foundation		Ministry of Environment
Implementing agency	IBRD		UNIDO

<i>Secretariat's Recommendations</i>			
Amount recommended (US \$)	398,378	291,641	301,094
Project impact (ODP tonnes)	48.50*	39.50	52.85
Cost effectiveness (US \$/kg)	8.21	7.38	5.70
Implementing agency support cost (US \$)	51,789	37,913	39,142
Total cost to Multilateral Fund (US \$)	450,167	329,554	340,236

*For purposes of calculating the cost-effectiveness of the projects only the ODS consumption eligible for funding has been taken into consideration.

of rigid foam. The production will be converted to HCFC-141b technology. The company currently uses three low pressure dispensers – a 14-year old 60 Kg/min Cannon – Viking, a 23-year old 15 kg/min Valentino and a 14-year old 20 kg/min Admiral. The company also uses two Gusmer sprayfoam dispensers for field operations. The capital cost of conversion includes the replacement of the current three low pressure machines with two new high pressure machines at a total cost of US \$155,000, with deduction of \$62,000 to account for their old age, retrofit of the sprayfoam dispensers at US \$3,000 each, technology transfer (US \$10,000), commissioning and start-up (US \$10,000). Incremental operational cost amounting to US \$253,815 is requested.

Justification for the use of HCFC-141b

8. Justification for the use of HCFC-141b is described in the document together with a comparison of conversion costs of replacement with HCFC-141b and with hydrocarbons which were discussed with the company. It states that the company, considering its location relative to other industries, the need to continue its field and factory productions based on one technology, long term safety issues relating to the use of inflammable blowing agent selected HCFC-141b technology as the interim technology until approximately 2005. A copy of the justification from UNIDO and the Government's letter endorsing the selection are attached as annexes to this evaluation.

Impact of the projects

9. 148.1 tonnes of CFC-11 will be phased out by the three projects. This constitutes 8.3% of Turkey's 1999 consumption of Annex A Group I substances. There will be residual ODS consumption of 6.55 tonnes as a result of the use of HCFC-141b.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

Integral skin foam (Umbrella project and Urosan)

1. The Secretariat and the World Bank concluded discussion on the two projects, namely Urosan and the Umbrella project for 11 enterprises and agreed on their costs. The cost of Urosan includes costs relating to the replacement of the mixing heads but not those relating to replacement of molds. The agreed costs are as follows:

	ICC (including 10% contingency) US \$	IOC US \$	Total US \$
Umbrella project	340,450	183,945	398,378
Urosan	159,500	132,141	291,641

2. Consequently the following amounts are recommended for approval of the two projects.

Umbrella project	US \$398,378
Urosan	US \$291,641

3. The summary of the project costs of the individual enterprises in the umbrella project is provided below.

Agreed project costs of Turkey Umbrella project – 11 Enterprises

Enterprise	Project Impact* ODP Tonnes	ICC US \$	IOC US \$	Total Project Cost US \$	Requested Grant US \$	Cost-effectiveness* US \$/kg
Erdogan Rurmenler	0.408	27,500	814	28,314	6,878	16.86
KarakayaCelik	2.45	29,150	4,885	34,035	34,035	13.91
Una Polyuretlan	0.57	27,500	985	28,485	8,322	16.86
Iksan Ltd	1.49	38,500	6,443	44,943	25,037	16.86
Ak-Kom	1.53	27,500	6,638	34,138	25,796	16.86
Karsan	0.64	33,000	2,075	35,075	10,848	16.86
Goldsit	1.40	37,400	2,646	40,046	22,352	16.86
Burflex	4.08	37,400	8,142	45,542	45,542	11.16
Gervener	30.00	27,500	130,165	157,665	157,665	5.26
Yaris Kabin	1.95	27,500	6,769	34,269	26,302	16.86
Hisarlar	3.90	27,500	14,383	41,883	35,601	10.74
Total	48.50	340,450	183,945	524,395	398,378	8.21

*For purposes of calculating the cost-effectiveness of the projects only the ODS consumption eligible for funding has been taken into consideration.

Rigid foam (Purtiz)

4. The Secretariat and UNIDO also concluded discussions on the incremental operational cost of the Purtiz project which was agreed as US \$169,094 instead of the original calculated amount of US \$253,815 resulting in the following project cost.

Incremental capital cost	US \$159,500
Incremental operational cost	US \$169,094
Total project cost	US \$301,094

Therefore the amount of US \$301,094 is recommended for approval as the agreed grant of the project.

RECOMMENDATIONS

1. The Fund Secretariat recommends the Umbrella, Urosan and Purtiz projects for blanket approval with the funding levels and associated support costs indicated in the table below.

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	Umbrella project. Conversion from CFC-11 into all-water technology for flexible molded and HCFC-141b for integral skin foams at 11 enterprises	398,378	51,789	IBRD
(b)	Conversion from CFC-11 into all-water technology for flexible molded and integral skin foams at Urosan	291,641	37,913	IBRD
(c)	Phase-out of CFC-11 consumption by conversion to HCFC-141b technology at Purtiz Co. in the manufacture of rigid polyurethane foam for insulating purposes	301,094	39,142	UNIDO