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

Nineteenth Meeting
Montreal, 8-10 May 1996

Corrigendum

PROJECT PROPOSALS: MALAYSIA

Aerosol projects: **Replace** pages 2, 3 and 4 **with** the attached pages.

PROJECT EVALUATION SHEET
MALAYSIA

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

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

Project Title: Umbrella project to phase out ODS at SMEs in the aerosol sector in Malaysia

Project Data	**Umbrella project (SMEs)**
ODS phase-out (ODP tonnes)	250
Proposed project duration (Yrs)	2
Incremental capital cost (US $)	2,093,400
Contingency (%)	10
Incremental operational cost (US $)	(110,000)
Total project cost (US $)	2,028,400
Local ownership (%)	100
Export component (%)	0
Amount requested (US$) {Original	2,028,400
{Revised	1,486,660
Cost effectiveness (US $/kg)	5.95
National Coordinating Agency	Department of Environment
Implementing Agency	UNDP
Technical review completed?	Yes

Secretariat's Recommendations (PROVISIONAL)	
Amount recommended (US $)	1,486,660
Project impact (ODP tonnes)	250
Cost effectiveness (US $/kg)	5.95
Implementing Agency support cost (US $)	193,266
Total cost to Multilateral Fund (US $)	1,679,926

PROJECT DESCRIPTION

1. The Government of Malaysia, through UNDP, has submitted for consideration by the Executive Committee this project proposal to phase out 250 tonnes of CFCs used by 35 low consuming enterprises. Implementation of this project will lead to complete phase out of the aerosol sector in Malaysia.

2. The Government of Malaysia has requested the Fund Secretariat to give special attention to this project proposal since it is crucial to complete the ODS phase out in the aerosol sector.

3. The Government of Malaysia is committed to a complete ODS phase out by the year 2000. The Environmental Quality Order 1993 (issued on 23 October 1993), prohibits the use of ODS as propellant in the aerosol industry effective 1 June 1994, and in pharmaceutical products from 1 January 1999. The Government has granted a two-year grace period to those plants which have indicated their intention to phase out CFCs.

4. In 1995, UNDP carried out a survey of aerosol fillers. The survey revealed that there are still 30 small-size fillers, each using 5 to 8 tonnes of CFCs and 5 medium-size fillers, each using 10 to 29 tonnes of CFCs.

5. The enterprises are characterized by low-capital investments, moderate production volume, and located in heavily populated areas. The main production is for personal care products, car care and industrial products.

6. The project consists of replacing the existing filling machines with manual, low-volume capacity units, and providing a water bath, fire safety and protection systems, and LPG deodorizing columns to each enterprise. UNDP stated that "any technological upgrade and/or increase in capacity is inherent and unintentional due to the manufacturer's existing machine specifications and design".

7. The capital costs are estimated at US $51,150 for a small-size filler and US $58,320 for a medium-size filler. The filling units and crimper costs were reduced to take account of a 5% rebate on bulk purchase. US $45,000 is included for technical support, safety training programme and commissioning, covering the 35 enterprises.

8. Incremental operating savings expected from the use of a cheaper propellant are estimated at US $110,000.

9. The total incremental cost of the umbrella project was estimated at US $2,028,400, resulting in initial cost effectiveness of US $8.11/kg, which is above the threshold value of US $4.40/kg for this sector.

10. UNDP indicated that the 35 aerosol enterprises had agreed to adhere to all safety regulations, and to cover the costs for relocation to a more suitable location, and additional safety-related works needed (estimated at US $401,300 per plant).

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. At its 15th Meeting, the Executive Committee approved an investment project for the conversion Kontrak Manufacturing Services plant to HAPs technology. The project included installation of a filling line to service small fillers who could not convert to HAP technology cost-effectively. From information provided by the World Bank, none of the fillers under the UNDP umbrella project will be using Kontrak's filling facility.

2. The poor cost effectiveness of the project as initially submitted (US $8.11/kg against a threshold value of US $4.4/kg for the aerosol sector) was due to the relatively high costs of capital equipment and safety requested for each enterprise.

3. The Fund Secretariat proposed to UNDP, and through it to the Government of Malaysia, to recalculate the incremental costs of the project on the basis of the costs for six filling centres and the associated safety instead of provision of filling facility to each of the enterprises.

4. The proposal amounted to rationalization of equipment for hydrocarbon purification, safety and fire protection systems.

5. Consequently, the total capital cost of the project was adjusted to US $1,596,660, including 10 per cent contingency, training and technical support costs. The total cost requested for funding is US $1,486,660, after deducting incremental operating savings.

6. UNDP and the Secretariat considered that the equipment being proposed constitute the minimum requirements for a safe filling operations using HAPs. Nevertheless, the cost effectiveness of the project is US $5.95/kg, which is above the threshold value for this sector.

7. The operational modalities of the project will be arranged between the Malaysian Department of the Environment, UNDP and the enterprises.

8. This is the first project proposal dealing with low consuming enterprises that has been submitted for the consideration by the Executive Committee. The Committee may wish to review this project in the light of the policy paper on "approaches to ODS phase-out in small- and medium-sized enterprises" (UNEP/OzL.Pro/ExCom/19/54) submitted to the 19th Meeting.

RECOMMENDATIONS

1. The Executive Committee may wish to consider approving this project in the amount of US $1,486,660 and US $193,266 as support costs to UNDP for the following special features which would not be found in an average project for low ODS consuming enterprises:

   (i) the legislative support provided by the Government of Malaysia;

   (ii) that the project represents complete phase-out in the aerosol sector in Malaysia;

   (iii) the Government of Malaysia will not seek funding for any further projects in the aerosol sector.

2. This project does not constitute a precedent for future projects which do not have the special features listed above.