Distr.
LIMITED

UNEP/OzL.Pro/ExCom/18/44
30 October 1995

ORIGINAL: ENGLISH

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

Eighteenth Meeting
Vienna, 22-24 November 1995

PROJECT PROPOSALS: TANZANIA

This document includes the Comments and Recommendations from the Fund Secretariat on the following projects:

Aerosol

- Phasing out CFCs at Mansoor Daya Chemicals Ltd. UNIDO

Refrigeration

- Phasing out of CFCs at Tanzania Domestic Appliances Manufacturers Ltd. UNIDO

PROJECT EVALUATION SHEET
TANZANIA

SECTOR: **AEROSOL** DS use in sector (1994): 150 ODP tonnes

Sub-sector cost-effectiveness threshold: Hydrocarbons US $4.40/kg

Project Title:

Phasing out CFCs at Mansoor Daya Chemicals Ltd.*

Project Data	**Mansoor Daya**
ODS phase-out (ODP tonnes)	150
Proposed project duration (Yrs)	1.5
Incremental capital cost (US $)	585,800
Contingency (%)	10
Incremental operational cost (US $)	(168,637)
Total project cost (US $)	417,163
Local ownership (%)	100
Export component (%)	-
Amount requested (US $) {Original	455,069
{Revised	417,163
Cost effectiveness (US $/kg)	2.78
National Coordinating Agency	Ministry of Industry and Trade
Implementing Agency	UNIDO
Technical review completed?	Yes

Secretariat's Recommendations	
Amount recommended (US $)	417,163
Project impact (ODP tonnes)	150
Cost effectiveness (US $/kg)	2.78
Implementing Agency support cost (US $)	54,231
Total cost to Multilateral Fund (US $)	471,394

* New proposal to the 18th Meeting

PROJECT DESCRIPTION

1. Mansoor Daya Chemicals Ltd. is the only aerosol manufacturing enterprise in the country. The company produces different size presentations of insecticides (1,450,000 cans/year), and air freshened (50,000 cans/year). The present aerosol filling line consists of one Pamasol filling, can loading table with conveyer system, crimpers and two gas fillers. In addition, two old filling machines are put into operation only for manufacturing small quantities of special products. All operations are manually performed.

2. The enterprise will convert to HAPs technology, using the open air filling room method. Conversion to HAP technology entails installation of an open air filling station with one semi-automatic filling machine (15 cans/min) including crimping, propellant handling and filling and a water bath for testing filled cans, conveyor system, explosion-proof lighting and ventilation system, HAP storage and purification system, and a fire control systems including a water reservoir, pumps, hoses and fire extinguishers. Technical assistance will be provided for performance and supervision of engineering designs, equipment installation and commissioning of the plant, training in production, quality control and safety procedures and production trials.

3. The enterprise will finance costs associated with land acquisition for gas storage and open air filling room, civil works including construction of the pump house, water storage tank, and modification to the control laboratory to permit the safe work with flammable substances.

4. The capital cost of conversion is US $585,800, including 10% contingency. The operational savings (NPV) for four years is US $168,637.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The project is well designed to completely phase out the consumption of CFCs in the aerosol sector. The calculations of incremental costs account for savings to be accrued from converting to cheaper HAP substitutes.

RECOMMENDATION

1. The Fund Secretariat recommends approval of the project with associated support costs at the funding level shown in the table below:

Project	Project Cost US $	Support Cost US $	Implementing Agency
Phasing out CFCs at Mansoor Daya Chemicals Ltd.	417,163	54,231	UNIDO

PROJECT EVALUATION SHEET
TANZANIA

SECTOR:	**Refrigeration**	ODS use in sector (199):	63 ODP tonnes
Sub-sector cost-effectiveness threshold:		Domestic	13.76 US $/kg

Project Title:
Phasing out of CFCs at Tanzania Domestic Appliance Manufacturers Ltd.*

Project Data		**Domestic Refrigeration**
ODS phase-out (ODP tonnes)		43
Proposed project duration (Yrs)		1.3
Incremental capital cost (US$)		592,790
Contingency (%)		10
Incremental operational cost (US$)		0
Total project cost (US$)		592,790
Local ownership (%)		100
Export component (%)		0
Amount requested (US$)	{Original	786,610
	{Revised	592,790
Cost effectiveness (US$/kg)		13.78
National Coordinating Agency		Ministry of Tourism, Natural Resources and Environment
Implementing Agency		UNIDO
Technical review completed?		Yes

Secretariat's Recommendations	
Amount recommended (US $)	592,790
Project impact (ODP tonnes)	43
Cost effectiveness (US $/kg)	8.96
Implementing Agency support cost (US$)	77,063
Total cost to Multilateral Fund (US $)	669,853

* New proposal to 18th Meeting

PROJECT DESCRIPTION

1. Tanzania's Country Programme has not been finalized yet. However, the project document reports that CFCs consumption of 43 MT by Tanzania Domestic Appliance Manufacturers Ltd. accounts for 68 per cent of the Tanzania's total ODS consumption, which is estimated at 68 MT. The enterprise is the sole producer of domestic refrigerators and freezers in the country.

2. The chosen technologies are HFC-134a and cyclopentane for the conversion of the refrigeration and foam system, respectively.

3. The conversion will involve replacing the existing refrigeration system with charging board for HFC-134a, vacuum pumps and leak detectors as well as prototype testing.

4. The conversion will also replace the current foaming line, and will provide a high pressure foaming machine, a cyclopentane mixing station, new fixtures and plugs, cyclopentane delivery system, and the safety measures required for the handling of cyclopentane.

5. The refrigeration service will be provided with charging boards, CFC-12 recovery bags and a hand held leak detector for HFC-134a.

6. The capital costs include cost of commissioning and start up as well as cost of consultancy and ten per cent contingency.

7. The enterprise will not request the incremental operating costs.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The chosen technologies are proven.

2. The enterprise will share the cost of fixtures and plugs.

3. The Secretariat discussed with UNIDO the eligibility and incrementality of all cost items. The project budget has been adjusted accordingly.

RECOMMENDATIONS

1. The Fund Secretariat recommends approval of the project with associated support costs at the funding level shown in the table below:

Project	Project Cost US $	Support Cost US $	Implementing Agency
Phasing out of CFCs at Tanzania Domestic Appliances Manufacturers Ltd.	592,790	77,063	UNIDO