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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Forty first Meeting  
Montreal, 17 -19 December 2003

**PROJECT PROPOSAL: SWAZILAND**

This document consists of the comments and recommendation of the Fund Secretariat on the following project proposal:

Refrigeration:

- Refrigerant management plan update

Germany

**PROJECT EVALUATION SHEET  
SWAZILAND**

SECTOR: Refrigeration ODS use in sector (2002): 1.2 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

**Project Title:**

(a) Refrigerant management plan update

| <b>Project Data</b>                 | <b>Refrigeration</b>              |
|-------------------------------------|-----------------------------------|
|                                     | <b>RMP update</b>                 |
| Enterprise consumption (ODP tonnes) | 1.2                               |
| Project impact (ODP tonnes)         |                                   |
| Project duration (months)           | 36                                |
| Initial amount requested (US \$)    | 74,295                            |
| Final project cost (US \$):         |                                   |
| Incremental capital cost (a)        |                                   |
| Contingency cost (b)                |                                   |
| Incremental operating cost (c)      |                                   |
| Total project cost (a+b+c)          | 74,295                            |
| Local ownership (%)                 |                                   |
| Export component (%)                |                                   |
| <b>Amount requested (US \$)</b>     | 74,295                            |
| Cost effectiveness (US \$/kg.)      |                                   |
| Counterpart funding confirmed?      |                                   |
| National coordinating agency        | Swaziland Environmental Authority |
| Implementing agency                 | Germany                           |

| <b>Secretariat's Recommendations</b>     |        |
|--|--------|
| Amount recommended (US \$)               | 74,295 |
| Project impact (ODP tonnes)              |        |
| Cost effectiveness (US \$/kg)            |        |
| Implementing agency support cost (US \$) | 9,652  |
| Total cost to Multilateral Fund (US \$)  | 83,947 |

## **PROJECT DESCRIPTION**

### Servicing sector

1. In 2002, the total CFC consumption in Swaziland was estimated at 1.2 ODP tonnes used for servicing domestic refrigerators and MAC units. The CFC baseline for Swaziland is 24.6 ODP tonnes.
2. There are approximately 25,000 domestic refrigerators in use in the country, of which 5,000 are serviced every year. The new refrigerators imported into the country are based on non CFC-based refrigerant. The majority of the commercial refrigeration and air conditioning units are based on HCFC or HFC refrigerants, and only a small number of chest freezers and display cabinets are still using CFCs. There are also 4,000 vehicles fitted with CFC-12 MAC units.
3. The current prices of refrigerants per kg are: US \$18.60 for CFC-12, US \$9.00 for HFC-134a and US \$4.00 for HCFC-22.

### ODS regulations

4. The Ozone Regulations, which were drafted in 1999 and enacted in 2003 under the Environment Act of 1992, stipulate that a license is required for all persons who import/export ODS and/or ODS-based products; any product containing ODSs must be clearly labelled; ODS end-users are required to complete a declaration form; and customs authorities can confiscate ODS shipment, if proper procedures are not followed.

### Refrigerant management plan (RMP)

5. The Swaziland RMP was approved at the 26<sup>th</sup> Meeting of the Executive Committee as a bilateral contribution by the Government of Germany. The RMP was developed as a national/regional project involving 14 South and East African countries. The activities covered under the RMP were related to legislation/policy, establishment of a licensing system, training of refrigeration servicing technicians and training of customs officers.
6. The training for customs officers was held as part of the regional training programme; 20 customs officers from the various customs departments from Swaziland were trained. Also, three technicians were trained in Germany as trainers in good refrigeration servicing practices. The training centre received necessary tools and equipment to provide training courses for other refrigeration technicians. The trainers conducted two training courses for 30 technicians as part of the RMP activity.
7. Under the recovery and recycling sub-project, 21 trainers and technicians participated in a 2-day training workshop (September 2000) on recovery and recycling practices. In addition, 10 recovery units and 5 recovery and recycling machines were distributed among service workshops. Based on an evaluation conducted by the Ozone Unit, it was reported that approximately 0.5 tonnes of refrigerants have been recovered. However, the recycling centre has not been established (the Swaziland Environment Authority which was identified as the

organization to operate the centre cannot operate a private bank account). Discussions are currently underway with local refrigerant distributors to set up the up recycling centre.

RMP update

8. The RMP update includes additional training for refrigeration servicing technicians (US \$38,750) and customs training (US \$21,000); an incentive programme for end-users (US \$8,000); and additional funding to initiate the recycling centre (US \$6,545) to provide two recovery units and one recycling unit.

9. The Swaziland RMP project was submitted with an official letter from the Government of Swaziland stating the Government's commitment to achieve, without further request for funding, at least the 50 per cent reduction in consumption of CFCs by 2005 and an the 85 per cent reduction by 2007.

**SECRETARIAT'S COMMENTS AND RECOMMENDATION**

**COMMENTS**

10. The Secretariat has noted that the 2002 CFC consumption in Swaziland is below 1.2 ODP tonnes, which is 23.4 ODP tonnes below the Swaziland's CFC baseline consumption (e.g., 24.6 ODP tonnes). The Secretariat also noted that the project proposal has been submitted in accordance with the provisos of Decision 31/48 and subsequent decisions taken by the Executive Committee regarding RMP proposals.

11. The Secretariat noted that, of the total project cost (US \$75,000), over US \$66,000 was requested for customs and service technicians training programmes and only US \$8,000 was allocated for encouraging retrofit and drop-ins in refrigeration systems. In this regard, the Secretariat suggested that the Government of Germany examines the merits of providing more resources for purchasing service tools for the technicians that could further facilitate the complete phase out of CFCs in Swaziland.

**RECOMMENDATION**

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

|     | <b>Project Title</b>               | <b>Project Funding (US\$)</b> | <b>Support Cost (US\$)</b> | <b>Implementing Agency</b> |
|-----|------------------------------------|-------------------------------|----------------------------|----------------------------|
| (a) | Refrigerant management plan update | 74,295                        | 9,652                      | Germany                    |