



**United Nations
Environment
Programme**



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

Seventeenth Meeting
Montreal, 26-28 July 1995

PROJECT PROPOSAL: ZIMBABWE

This document includes the Comments and Recommendations from the Fund Secretariat.

PROJECT EVALUATION SHEET

COUNTRY OR REGION: Zimbabwe

PROJECT TITLE: CFC refrigerant 12 recovery and reclaim automotive air conditioning, domestic and commercial refrigeration, commercial air conditioning

BUDGET: US \$388,566¹

INCREMENTAL COSTS: US \$388,566

ODS PHASE-OUT: 46.5 MT

COST EFFECTIVENESS²: US 8.36 per kg. ODP saved

PROJECT DURATION: 1 year

IMPLEMENTING AGENCY: UNIDO

NATIONAL COORDINATING AGENCY: Ministry of Environment and Tourism

TECHNICAL REVIEW COMPLETED: YES X NO

SECRETARIAT'S COMMENTS

1. The project proposal is to implement a comprehensive national programme for recovery and recycling of refrigerant in the refrigeration sector.
2. The project includes provision of 120 recovery equipment to be distributed among the 400 workshops in the country. It also includes a CFC reclamation center to service all industry sectors manufacturing or servicing ODS based refrigeration equipment.
3. A training programme to provide proper and safe methods for handling CFCs, demonstrate the use of recovery units, and review of good refrigeration servicing practices and good house keeping, is also included.

¹ Including contingency (10 per cent).

² Determined as the ratio of incremental costs to the estimated annual saving of ODP (\$/ODPkg).
For CFC-11, ODS=ODP.

4. The total budget for the central reclaim facility amounts to US \$105,720, including supporting equipment such as metallic shelves, gas welding, vacuum cleaner, a pick-up truck, computer and printer.
5. Based on its discussions with the Secretariat, UNIDO agreed to exclude supporting equipment from the request. Subsequently, the equipment cost was adjusted to US \$267,300, including 10 per cent contingency.
6. Operating savings accrued from the 46.5 tonnes of recovered CFC have not been considered in the calculations of net incremental costs. It is to be noted, however, that a financial evaluation report prepared by UNIDO indicates the high profitability of the programme: by the fourth year (1998), the cumulative cash balance would be US \$150,000, increasing to US \$2.84 million by 2005.

SECRETARIAT'S RECOMMENDATIONS

7. The Executive Committee might wish to consider whether operational savings based on estimates of the tonnage of CFCs recovered, should be taken into account in the presentation of recycling project proposals, and that the monitoring of quantities recovered should be carried out by national ozone units and should not be included in the costs for recycling projects.