



**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: COLOMBIA

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

PROJECT EVALUATION SHEET

COUNTRY OR REGION: Colombia

PROJECT TITLE: Implementation of a national programme for recovery and recycling of refrigerant

BUDGET: US \$886,000¹

INCREMENTAL COSTS: US \$886,000

ODS PHASE-OUT: 111.4 MT

COST EFFECTIVENESS²: US \$2.1 per kg. ODP saved

PROJECT DURATION: 1 year

IMPLEMENTING AGENCY: UNDP

NATIONAL COORDINATING AGENCY: Ministerio del Medio Ambiente

TECHNICAL REVIEW COMPLETED: YES ____ NO ☒ ____

SECRETARIAT'S COMMENTS

1. The project proposal is to implement a comprehensive national programme for recovery and recycling of refrigerant in the refrigeration and air conditioning sectors, excluding the MAC sub-sector.
2. The project will result in a phase out of 111.4 tonnes of CFCs. The amount of CFCs to be phased out was estimated on the basis of a survey of 107 workshops in Colombia.
3. The project includes ten one-day demonstration workshops. The workshops will provide explanation on the need for recovery and recycling, presentation of recovery and recycling methodologies in different systems and good practice during servicing and maintenance.
4. UNDP adjusted the total cost for 400 refrigerant recovery bags to US \$8,800, considering a cost per bag of US \$22.

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.

5. UNDP agreed that project implementation at the national level could be managed and monitored by the Ozone Unit supported by the Fund. Thus, no funds are being requested for the monitoring system.

6. Annual operating savings, at the national level, accrued from the resale of the recovered and recycled refrigerant are estimated at US \$289,640. The project indicates that at the workshop level, savings will be offset by additional costs associated with: (i) larger time needed for a typical repair and maintenance operation in order to recover the refrigerant; (ii) additional transportation of the recovered refrigerant to service workshops, and to and from the recycled centers; and (iii) service charge at the recycling centers. UNDP considers that accounting for operational savings will disincentive small service workshops to cooperate with the programme.

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.