



**United Nations
Environment
Programme**

Distr.
LIMITED

UNEP/OzL.Pro/ExCom/39/32
6 March 2003

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-ninth Meeting
Montreal, 2-4 April 2003

PROJECT PROPOSALS: HAITI

This document consists of the comments and recommendations of the Fund Secretariat on the following project proposals:

Refrigeration

- Implementation of the refrigerant management plan: recovery and recycling of CFC-12 refrigerant UNDP
- Implementation of the refrigerant management plan: train the technicians on good practices in refrigeration UNEP
- Implementation of the refrigerant management plan: training for customs officers UNEP
- Implementation of the refrigerant management plan: incentive and awareness programme for the commercial and industrial end-user refrigeration sector UNDP
- Implementation of the refrigerant management plan: monitoring the activities in the RMP UNDP

PROJECT EVALUATION SHEET
HAITI

SECTOR: Refrigeration ODS use in sector (2001): 168.9 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

Project Titles:

- (a) Implementation of the refrigerant management plan: recovery and recycling of CFC-12 refrigerant
- (b) Implementation of the refrigerant management plan: train the technicians on good practices in refrigeration
- (c) Implementation of the refrigerant management plan: training for customs officers
- (d) Implementation of the refrigerant management plan: incentive and awareness programme for the commercial and industrial end-user refrigeration sector
- (e) Implementation of the refrigerant management plan: monitoring the activities in the RMP

Project Data	Implementation of the RMP				
	(a)	(b)	(c)	(d)	(e)
Enterprise consumption (ODP tonnes)					
Project impact (ODP tonnes)	14.04				
Project duration (months)	36	12	12	48	36
Initial amount requested (US \$)	220,256	74,200	33,100	180,000	29,400
Final project cost (US \$):					
Incremental capital cost (a)	203,660	71,000	31,600	180,000	29,400
Contingency cost (b)	16,596	3,200	1,500		
Incremental operating cost (c)					
Total project cost (a+b+c)	220,256	74,200	33,100	180,000	29,400
Local ownership (%)	100%	100%	100%	100%	100%
Export component (%)	0%	0%	0%	0%	0%
Amount requested (US \$)	220,256	74,200	33,100	180,000	29,400
Cost effectiveness (US \$/kg.)	15.69				
Counterpart funding confirmed?					
National coordinating agency	National Ozone Unit				
Implementing agency	UNDP	UNEP	UNEP	UNDP	UNDP

Secretariat's Recommendations					
Amount recommended (US \$)	220,256	74,200	33,100		29,400
Project impact (ODP tonnes)	14.04				
Cost effectiveness (US \$/kg)	15.69				
Implementing agency support cost (US \$)	19,823	9,646	4,303		2,646
Total cost to Multilateral Fund (US \$)	240,079	83,846	37,403		32,046

Haiti: Implementation of the RMP

1. The Haiti Country Programme was submitted for the consideration of the Executive Committee at its 39th Meeting (UNEP/OzL.Pro/ExCom/39/40), together with a refrigerant management plan (RMP) project proposal.
2. Based on a survey conducted during the preparation of the Haiti country programme/refrigerant management plan (RMP), the CFC consumption in the country has been estimated at 168.9 ODP tonnes (6.8 ODP tonnes of CFC-11, 158.9 ODP tonnes of CFC-12 and 3.2 ODP tonnes of CFC-115), used for servicing refrigeration equipment.
3. There are at least 150 formal refrigeration service workshops in Haiti servicing commercial/industrial refrigeration equipment and 15 workshops specialising in MAC (the majority of them are located in Port-au-Prince). A large number of automobiles that have been purchased in Haiti during the last ten years were manufactured prior to 1995 and equipped with CFC-based MAC systems. It is also a common practice to service HFC-134a-based MAC units with CFC-12 refrigerant due to poor technical knowledge and the lower price of CFC-12 compared to HCF-134a (US \$1.85/can of CFC-12 and US \$5.00/can of HFC-134a).
4. The refrigeration associations in Haiti estimate that the servicing sub-sector employs approximately 700 technicians working in the formal and informal sectors. The informal sector employs a large number of untrained technicians. Presently, it is a general practice to vent the refrigerant charge remaining in the equipment before servicing; it is also common to use CFCs for flush-cleaning and leak detecting.
5. During the preparation of the RMP project proposal, it was recognised that servicing of non-CFC based equipment with CFC-12 is currently occurring in the country, mainly due to the difference in price between these refrigerants. This practice is carried out either by individuals offering refrigerant top-up services along the roadside or by informal refrigeration servicing practitioners. However, this practice accounts for a very small proportion of the total CFC-12 consumption in the country, since the informal sector undertakes repairs on a relatively infrequent basis.
6. The Government of Haiti is proposing to establish, among others, ODS-related regulations including a licensing system, import quotas on ODSs, regulations on imports of CFC-based equipment by 2003, incentives to reduce ODS emissions into the atmosphere through good refrigeration servicing practices and refrigerant recovery/recycling operations, and public awareness programmes on issues related to the ozone layer. Implementation of these activities would lead to reductions in the consumption of ODSs according to the Montreal Protocol phase-out schedule.

7. The RMP project proposal, as submitted, includes the following sub-projects:
- (a) Development of a regulatory framework for acceleration of compliance with the Montreal Protocol (at no cost to the Multilateral Fund), to elaborate ODS-related regulations including a licensing system which would facilitate the data collection process;
 - (b) Training of customs officers (US \$33,100), to improve the control of import/export of ODS and ODS-based equipment, to establish a database of ODS importers, and to use ODS identification kits;
 - (c) Training of trainers in good refrigeration servicing practices (US \$74,200), to enhance the servicing skills of 350 technicians to avoid emission of refrigerant into the atmosphere during the maintenance and repair of the refrigeration and air conditioning equipment and to increase their awareness on issues related to the ozone depletion;
 - (d) Recovery and recycling programme (US \$220,256), establishment of a recovery and recycling network comprising 38 recovery units and four MAC recovery/recycling units, including ancillary equipment. This activity also provides for four one-day workshops for service technicians on practical demonstration on recovery and recycling equipment;
 - (e) Incentive and awareness programme for the commercial and industrial end-user refrigeration sector (US \$180,000), to provide incentives to large end-user establishments in the commercial and industrial refrigeration sub-sector, in order to expedite retrofitting or replacement of their existing CFC-based equipment; and
 - (f) Monitoring the activities in the RMP (US \$29,400).
8. The Ozone Unit will be responsible for the monitoring, co-ordination and implementation of proposed phase-out activities in the RMP.
9. Through an official communication, the Government of Haiti stated its commitment to achieve the 2005 and 2007 Montreal Protocol phase out targets, through the implementation of the RMP, without further assistance from the Multilateral Fund, in accordance with Decision 31/48.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

Consumption data

10. The Haiti country programme/RMP was first reviewed by the Secretariat prior to the 38th Meeting of the Executive Committee. During the review process, the Secretariat opined that

the level of ODS consumption in Haiti, estimated at 200.7 ODP tonnes, appeared to be very high for the size and economic activities of the population. Subsequently, in December 2002, the Ozone Officer together with UNEP's consultant revised the consumption data downward to 168.9 ODP tonnes.

Recovery and recycling project

11. The Secretariat pointed out that the sub-project for a recovery and recycling scheme included in the RMP, as presented, might not be technically and economically viable and its long-term sustainability was doubtful, for the following reasons:

- (a) the ODS-related legislation and licensing system will be finalised in 2003 (without this legislation in place, the recovery and recycling programme cannot commence);
- (b) the leakage rate of commercial and industrial refrigeration is high and, therefore, the amount of CFC-12 potentially to be recovered is low;
- (c) a number of non-CFC based refrigeration equipment is currently being serviced with CFC-12 due to the lower price of CFC-12 compared to other alternative refrigerants; and
- (d) the refrigeration equipment that will be imported into Haiti, even if it is second-hand, will be based on non-CFC refrigerants.

12. In this regard, UNDP indicated that the recovery and recycling scheme will commence operations by the end of 2003. During the preparatory phase (i.e., detailing equipment specifications, bidding process, and purchase and delivery of the equipment), UNDP would collaborate actively with UNEP to assist in ensuring that the appropriate legislative framework be in place prior to the implementation of the sub-project. As a result, the long-term sustainability of the programme would be supported even before implementation began, through adoption of an appropriate legislative/regulatory framework.

13. Furthermore, most of the second-hand equipment available in Haiti is still operating with CFC refrigerants. Due to the increasing number of Article 5 countries prohibiting import of CFC-based equipment into Haiti, where no controls on ODS and ODS-based equipment yet exist, may have actually increased. It is also to be noted that due to the economic constraints in the country, it is expected that the existing CFC-12 based refrigeration equipment will continue to be in operation for several years.

14. Training in recovery and recycling and implementation of recovery/recycling operations would have a noticeable impact on CFC consumption levels. During the first year, practical experiences and, if necessary, reallocation of some equipment, would result in reductions in CFC consumption. By the end of the second year, these reductions would be higher given that the training in good servicing practices would have been implemented resulting in fewer equipment breakdowns and refrigerant leaks.

15. The funding requested for the recovery/recycling sub-project has been based on the number and type of recovery and recycling machines to be distributed among service technicians (the selection of the workshops for receiving a machine will be based on their professionalism, amount of refrigerant consumption and their ability to recover a stipulated amount of refrigerant). MAC service workshops and recycling centres will be supplied with refrigerant identifiers (as CFC/HFC mixtures are unmanageable as refrigerants, the amounts recovered would be stored for future destruction and would not be used again).

Dual recovery/recycling units

16. The Secretariat pointed out that at its 38th Meeting, the Executive Committee decided that for CFC recovery and recycling programmes, the implementing agencies would examine the possibility of collaboration for leveraging additional financing (i.e., GEF) for acquisition of recovery and recycling units that could service both HFCs and CFCs (Decision 38/38).

17. In this regard, UNDP had already requested the technical expert involved in the project's formulation to undertake an assessment of the additional costs that might be required to fund the acquisition of dual purpose equipment. Furthermore, UNDP and the Government of Haiti would explore the possibility of including HFC recovering and recycling under the auspices of the recovery/recycling scheme both through further technical research and analysis, wherein the opinions of other experts would be sought, as well as through discussions with the GEF and bilateral agents, regarding the possibility of leveraging additional funding for acquisition of dual action equipment.

End-user sector

18. The Secretariat sought a clarification from UNDP on the end-user sub-project, full details of which were not included in the RMP. The Secretariat was informed that additional information required for finalisation of the end-user project remains to be collected. The selection of end-users will be undertaken by the Ozone Unit, with the support of UNDP, once other RMP activities have been launched in order to ensure that the prerequisites necessary for the viable implementation of the incentive programme are in place. Funding for this component of the RMP will be requested by UNDP in 2004, once appropriate legislative mechanisms and economic incentives are in place.

RECOMMENDATIONS

19. Taking into account the need for the Government of Haiti to commence implementation of activities to achieve the 2005 and 2007 CFC phase out targets, the Fund Secretariat recommends blanket approval of the projects at the funding level indicated below, on the understanding that the recovery and recycling component should not commence until the legislation controlling CFC imports is in place and measures have been taken to ensure that the local market prices of CFCs and non-ODS refrigerants are similar.

20. Approval of Haiti's RMP is without prejudice to any decisions that might be taken by the Parties following consideration by the Implementation Committee of the consumption data submitted under Article 7 by the Government of Haiti.

21. UNDP should be requested to submit a request for funding the incentive and awareness programme for the commercial and industrial end-user refrigeration sector in 2004 once the prerequisites necessary for the viable implementation of the project are in place.

Project Titles	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
Implementation of the refrigerant management plan: recovery and recycling of CFC-12 refrigerant	220,256	19,823	UNDP
Implementation of the refrigerant management plan: train the technicians on good practices in refrigeration	74,200	9,646	UNEP
Implementation of the refrigerant management plan: training for customs officers	33,100	4,303	UNEP
Implementation of the refrigerant management plan: incentive and awareness programme for the commercial and industrial end-user refrigeration sector	To be requested in 2004		UNDP
Implementation of the refrigerant management plan: monitoring the activities in the RMP	29,400	2,646	UNDP
