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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Forty-fourth Meeting  
Prague, 29 November-3 December 2004

**PROJECT PROPOSAL: ETHIOPIA**

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

Refrigeration

- Refrigerant management plan update: refrigeration and air-conditioning sector France

**PROJECT EVALUATION SHEET  
ETHIOPIA**

**PROJECT TITLES****BILATERAL/IMPLEMENTING AGENCY**

(a) Refrigerant management plan update: refrigeration and air-conditioning sector	France
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**NATIONAL CO-ORDINATING AGENCY**

National Ozone Office

**LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT****A: ARTICLE-7 DATA (ODP tonnes, 2003, as of October 2004)**

Annex A, Group I CFCs	28.0		
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**B: COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes, 2003 as of October 2004)**

ODS Name	Sub-sector/quantity	Sub-sector/quantity	Sub-sector/quantity	Sub-sector/quantity.
CFCs	28.0			

**CFC consumption remaining eligible for funding (ODP tonnes)**

39.20

**CURRENT YEAR BUSINESS PLAN ALLOCATIONS**

	Funding US \$ million	Phase-out ODP tonnes
(a)	97,000	23.30

<b>PROJECT TITLE:</b>	<b>RMP update</b>
<b>ODS use at enterprise (ODP tonnes):</b>	28.0
<b>ODS to be phased out (ODP tonnes):</b>	*
<b>ODS to be phased in (ODP tonnes):</b>	n/a
<b>Project duration (months):</b>	36
<b>Initial amount requested (US \$):</b>	91,300
<b>Final project cost:</b>	
Incremental Capital Cost (US \$)	
Contingency (10%) (US \$)	
Incremental Operating Cost (US \$)	
Total Project Cost (US \$)	91,300
<b>Local ownership (%):</b>	100
<b>Export component (%):</b>	0
<b>Requested grant (US \$):</b>	91,300
<b>Cost-effectiveness (US \$/kg):</b>	n/a
<b>Implementing agency support cost (US \$):</b>	11,869
<b>Total cost of project to Multilateral Fund (US \$):</b>	103,169
<b>Status of counterpart funding (Y/N):</b>	n/a
<b>Project monitoring milestones included (Y/N):</b>	Y

**SECRETARIAT'S RECOMMENDATION**

Blanket approval at the costs indicated above

\* To be in compliance with the 2005 and 2007 Montreal Protocol limits (CFC baseline is 33.8 ODP tonnes)

## PROJECT DESCRIPTION

1. In 2003, total CFC consumption in Ethiopia was estimated at 28 ODP tonnes used for servicing refrigeration systems. The CFC baseline for Ethiopia is 33.8 ODP tonnes.
2. According to the survey conducted to prepare the RMP update for Ethiopia, most of the CFC consumption is for servicing domestic refrigerators and freezers (about 200,000 units), commercial refrigeration systems (10,000 systems) and MAC units (2,000 units).
3. There are between 200 and 300 refrigeration servicing workshops. All workshops service different types of refrigeration equipment, such as domestic refrigerators, deep freezers, bottle coolers, display cabinets; about half of the workshops also service MAC units and medium- and large-size refrigeration systems.
4. On average, there are 3 technicians per servicing workshop. The majority of technicians have learnt the trade through on-the-job training. Some technicians have been trained in courses organized by the Ozone Unit, and only a small number of them have taken courses offered by the technical schools.
5. Current refrigerant prices per kg are: US \$6.00 to US \$7.00 for CFC-12, US \$10.20 to US \$11.50 for HFC-134a and US \$5.50 to US \$6.80 for HCFC-22. Although the price of HFC-134a is higher than CFC-12, consumption of HFC-134a has increased over the past years.
6. The refrigeration servicing sector has reported that, due to the current price differential between CFC and non-CFC refrigerants, sometimes HFC-134a-based refrigeration equipment is serviced with CFC-12. This practice is especially prevalent among the smaller workshops, where customers demand the cheaper solution.

### ODS regulations

7. Regulations for controlling trade in and use of ODS in Ethiopia have been in place since 1997 when the Customs Authority introduced the inclusion of ODS and non-ODS substances separately in the Harmonized System of customs classification codes.
8. In 1999, the Environmental Protection Agency drafted ODS regulations, which were included in the new general Environmental Law. However, the Environmental Law has not yet been approved by the Government of Ethiopia. The ODS regulations, when approved, will: set up a permit system for all ODS imports and exports; ban all imports of CFC-based equipment; and require mandatory certification of service technicians trained through the RMP.

### Refrigerant management plan (RMP)

9. The Ethiopia RMP was approved at the 26th Meeting of the Executive Committee as a German bilateral project. The RMP was developed as a national/regional project involving 14 South and East African countries. The activities covered by the RMP were related to legislation/policy, training of refrigeration servicing technicians and training of customs officers.

10. The training of customs officers took place as part of the regional training programme; four customs officers and the Ozone Officer from Ethiopia were trained as trainers, and an additional 19 officers were trained. Currently, ODS training is part of the regular training curriculum for customs officers.

11. At its 30th Meeting, the Executive Committee approved a training programme for recovery and recycling of refrigerants, implemented by UNEP (US \$82,735). This included four training and demonstration workshops to train 65-70 refrigeration service technicians in recovery and recycling, good servicing practices, and the introduction of new non-CFC refrigerants including HFC-134a. About 60 refrigeration servicing technicians have been trained.

#### RMP update

12. The RMP update proposal, as submitted, includes a request for assistance with finalization and approval of the ODS regulations (US \$16,500); complementary training programmes for customs officers (US \$33,000) and complementary training for refrigeration servicing technicians (US \$41,800). The total cost of the RMP update is US \$91,300.

13. The Ethiopia RMP update project was submitted with an official letter from the Government of Ethiopia, signed by the General Manager of the National Meteorological Services Agency, stating the Government's commitment to achieve, without further requests for funding, at least the 50 per cent reduction in CFC consumption by 2005 and the 85 per cent reduction by 2007.

### **SECRETARIAT'S COMMENTS AND RECOMMENDATION**

#### **COMMENTS**

14. The Secretariat notes 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, including the level of funding requested.

15. Ethiopia's 2003 CFC consumption of 28 ODP tonnes is 5.8 ODP tonnes below Ethiopia's CFC baseline consumption (e.g., 33.8 ODP tonnes). The Secretariat expressed its concern regarding the Government of Ethiopia's ability to achieve the 2005 CFC phase-out target in the time frame available (i.e., one year) taking into consideration that ODS regulations have not yet been enacted, no technical assistance programme in the refrigeration servicing sector has been implemented, and the current price differential between CFC and non-CFC refrigerants is very large. Moreover, the actual impact on CFC consumption of the activities being proposed in the RMP update, namely assistance with regulations and additional training programmes for customs officers and refrigeration technicians, would be minimal.

16. Subsequently, the Government of Germany indicated that the Government of Ethiopia is well aware of the potential non-compliance situation in 2005. The Government anticipates that with the assistance provided under the RMP update, it will be able to meet its compliance targets which would primarily be implemented through ODS control imports once the ODS regulations are approved. In the training workshops that have already been implemented, the import

requirements stated in the ODS regulations had already been introduced to customs officers. According to the Ozone Unit, the draft regulations have already increased awareness among customs officers regarding trade in ODS and ODS-based equipment.

17. Also, the survey conducted by the Ozone Unit to prepare the RMP update revealed the urgent need for more training of refrigeration servicing technicians in the country. Trained technicians were found to be more conscious of refrigerant management and the impact of refrigerants on the environment, compared to technicians who had not been trained. However, a direct correlation between ODS consumption and technician training and level of impact is difficult to estimate at this stage.

#### Change of bilateral agency

18. Subsequent to the conclusion of the discussion of the project between Germany and the Secretariat, the Government of Germany submitted an official communication indicating that the Government of France would be the bilateral agency that would implement the RMP update project. The reason for the change of the bilateral agency was that Germany's maximum level of funding for bilateral cooperation in the 2003-2005 triennium has been fully utilized.

19. The Secretariat also received a letter from the Government of France officially re-submitting the RMP project proposal and a letter from the Government of Ethiopia indicating its agreement to the change of bilateral cooperating agency.

### **RECOMMENDATION**

20. The Fund Secretariat recommends blanket approval of the project with associated support costs at the funding level shown in the table below, on the understanding that the Government of France would provide appropriate monitoring throughout project implementation.

	<b>Project Title</b>	<b>Project Funding (US\$)</b>	<b>Support Cost (US\$)</b>	<b>Implementing Agency</b>
(a)	Implementation of the RMP: refrigeration and air-conditioning sector	91,300	11,869	France

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