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

Twentieth Meeting
Montreal, 16-18 October 1996

COUNTRY PROGRAMME: ETHIOPIA

This document consists of:

- Country Programme Evaluation Sheet (prepared by the Fund Secretariat)
- Comments and Recommendations of the Fund Secretariat
- Transmittal Letter from the Government of Ethiopia
- Country Programme Cover Sheet
- Country Programme (Executive Summary)

ETHIOPIA COUNTRY PROGRAMME EVALUATION SHEET

National Metereological Services Agency (NMSA)

Status of ratification of the Vienna Convention and the Montreal Protocol

	Signature	Ratification	Entry into force
Vienna Convention (1985)		11/Oct/94	09/Jan/95
Montreal Protocol (1987)		11/Oct/94	09/Jan/95
London Amendment (1990)			
Copenhagen Amendment (1992)			

Production of controlled substances: No controlled substances produced

Consumption of controlled substances (1994) 36.6 metric tonnes
30.8 weighted tonnes (ODP)

(tonnes)	CFC-11	CFC-12	CFC-113	CFC-114	CFC-115	TOTAL	Halon1211	Halon1301	TOTAL	CTC	MCF	TOTAL	Me-Br
ODS	0.2	29.9				30.1					6.5	6.5	
ODP	0.2	29.9				30.1					0.7	0.7	

Distribution of ODP by substance: CFC 97.9% Halon CTC and MCF 2.1%

Distribution of ODP by sector: Aerosol Foam Halon Refrigeration Solvent Other

Consumption (ODP tonnes): 30.1 0.7

Percent of total: 97.9% 2.1%

Country Programme

Duration of country programme: 15 years (1996-2010)

ODS phase out target: 80% reduction by 2002. Complete phase out by 2010

Phase out priority area: Refrigeration and solvent sectors

Cost of activities in country programme: \$627,120

Strategy:

The Government of Ethiopia is committed to phase out ODS in accordance with the time frame stated under the Montreal Protocol. The phase out strategy will ensure that there is no forced early retirement of appliances using ODS which would be a burden for the consumers. The strategy will be based more on sensitization and creating awareness than on bans or control measures. Appropriate systems involving licensing and issue of permits may be devised if found appropriate.

COMMENTS AND RECOMMENDATIONS OF THE FUND SECRETARIAT

COMMENTS

1. The Country Programme conforms to the format of the approved guidelines. The total ODS consumption in the country is estimated at 30.1 tonnes, mainly CFC-12 exclusively used for servicing domestic refrigerators and freezers, commercial refrigerators and mobile air conditioners. In addition, 0.7 ODP tonnes of methyl chloroform is used for engine cleaning by the Ethiopian Airline.

2. A stand-alone project proposal related to CFC recovery and recycling and a training programme in good refrigeration practices for service technicians is also included in the Country Programme. The project will be implemented in 1997 through bilateral cooperation by the Government of Finland. In addition, the country programme identified two investment projects, one for elimination of methyl chloroform as a solvent and one for retrofitting of two CFC-11 chillers.

3. The country programme includes a project for the establishment of a National Ozone Cell within the National Meteorological Services Agency (institutional strengthening). The Government of Ethiopia is requesting financial support for the implementation of this project totaling US \$98,000.

4. The institutional strengthening project has been developed following the approach proposed by the Fund Secretariat for low volume ODS-consuming countries, where ODS consumption is mainly for servicing refrigeration and air conditioning equipment (UNEP/OzL.Pro/ExCom/18/9 Annex I). The main responsibilities of the Ozone Unit would include: organizing training workshop for service technicians, following-up the training activities, supervising the implementation of refrigerant recovery and recycling programme, and facilitating the government's data reporting obligations under the Montreal Protocol.

5. Based on the ODS consumption levels in Ethiopia, analysis of similar projects so far approved by the Executive Committee, current market prices of office equipment and software, the Fund Secretariat recommends a budget of US \$60,500 for a three-year period, with the following break-down:

Capital costs:	US \$8,000
Personnel:	US \$27,000
Operational costs:	US \$20,000
Contingency:	US \$5,500

RECOMMENDATIONS

1. The Fund Secretariat recommends as follows:

2. To approve the Ethiopia Country Programme. Approval of the Country Programme does not denote approval of the projects identified therein or their funding levels.

3. To request the Government of the Ethiopia to present annually information to the Executive Committee on progress being made in the implementation of the country programme, in accordance with the decision of the Executive Committee on implementation of country programmes (UNEP/OzL.Pro/ExCom/10/40, para 135). Using the approved format, the initial report, covering the period 18 October 1996 to 31 December 1997, should be submitted to the Fund Secretariat no later than 31 March 1998.
4. To request the Government of Finland to re-submit the refrigerant recovery and recycling programme included in the country programme for consideration by the Executive Committee.
5. To approve the amount of US \$60,500 and US \$7,865 support cost for institutional strengthening to be included as an amendment to UNEP's 1996 work programme. To request UNEP not to disburse any funds for this activity until after the refrigerant recovery and recycling programme is approved by the Executive Committee.

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Ethiopian Federal Democratic Republic Government

National Meteorological Services

Agency

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Date

10-3-1/31

29 AUG 1996

The Chief Officer,
Secretariat of the Multilateral Fund for the Implementation of
the Montreal Protocol,
Montreal Trust Building, 27th Floor
1800 McGill College Avenue,
Montreal, Canada H3A 3J6

Dear sir,

I have the honour to submit herewith the Country Programme of Ethiopia for the consideration and approval of the Executive Committee of the Multilateral Fund for the implementation of the Montreal Protocol.

Ethiopia adhered to the Protocol on 11 October 1994 and became a party on 11 January 1995. It is classified as operating under Paragraph 1 of Article 5 of the Montreal Protocol.

I would like to place on record the appreciation of the Government of Ethiopia for the assistance extended to it through the UNEP IE OzonAction Programme for the preparation of the Country Programme which started in July 1995. I am pleased to say that the Government is committed to the implementation of actions contained in the Country Programme.

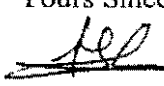
I further assert that it is the Government's intention to monitor compliance with the Protocol. If necessary, further and different action from those specified in the Country Programme will be updated and submitted to the Executive Committee of the Multilateral Fund.

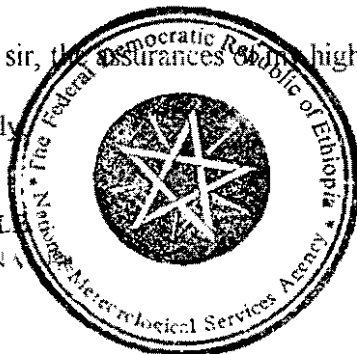
I hope that the Executive Committee will approve the request for assistance made in respect of the following actions:

- a) Institutional Strengthening. and
- b) Training Project.

Please accept, sir, the assurances of my highest consideration.

Yours Sincerely


TESFAYE HAILU
GENERAL MANAGER



Country Programme Cover Sheet

Country :

Ethiopia

Date Received :

Lead National Agency :

Natural Meteorological
Services Agency (NMSA)

Lead Implementation Agency: UNEP

Period Covered by Country
Program : 1996 - 2010

1. Phase Out Schedule

Substance	Current Consumption (Tonnes * ODP) in 1994	Planned total consumption till phase-out (Tonnes * ODP)	Planned year of Phase- out
CFC-11	0.24	0.84	1997
CFC-12	29.87	243.00	2005
Methyl Chloroform	.65	1.79	1997
CFC-115*	0	0.72	2006
Total	30.71	246.35	-

*CFC -115 as in R-502.

2. Government Action Plan

Sector	Action	Timing	Intended effect
All	Institutional strengthening through the establishment of a National Ozone Cell	Jan'97	Build capacity to implement Country Programme activities for phase out, including formulation and coordination of projects and public awareness activities
Refrigeration and Air Conditioning	Prepare regulations / legislation and ban imports of CFC-based Refrigerators, air conditioners and other equipment.	1998	Reduction in future recharge requirements from 657 MT to 114 MT over the period 1997 to 2010.
	Training programme for refrigeration technicians through the Addis Technical Institute.	1997	• Adoption of better practices • Knowledge of use of substitutes • Awareness about low / zero ODP blends • Training in recovery and recycling • Capability for cost effective retrofitting

3. Projects being submitted for funding

Year	Activity	Estimated Cost (US\$)	Funds requested from the MF (US\$)	Government Contribution (US\$)
1996 -1999	Institutional Strengthening	115,000	95,000	20,000

4. Potential projects (to be formulated and submitted in future)

Sector/Name of Company	Project Description	Total ODS Phase-out (MT per annum)	Cost of Project
Refrigeration and Air-Conditioning	Training *	-	US \$ 69120
Ethiopian Airline	To phase out use of methyl chloroform in engine cleaning by use of ultrasonic aqueous cleaner.	6.5	US \$ 140000
Hilton Hotel	To convert two centrifugal chillers based on CFC-11 to ODS free/ low ODP alternatives.	0.24	US \$ 300,000

* As advised by the Multilateral Fund Secretariat, this project should be submitted later for intersessional approval for bilateral assistance from the Government of Finland's 1997 assessed contribution to the Multilateral Fund

5. Costs

Cost of Activities and Projects in Country Programme	US\$ 115,000
Estimated Cost of complete Phase out	US\$ 624,120
Estimated Cost effectiveness	US\$ 20.3/kg

Executive Summary

Ethiopia is a country situated in the North Eastern corner of Africa. It has a land area of 1,167,600 sq. km. and a population estimated at 55.5 million. The country's economy is largely agrarian and the process of industrialisation is in its infancy.

There is no production of ODS in Ethiopia and all requirements are met through imports. Based on its per capita consumption of 0.0005 kg, the country qualifies as a developing country under Article 5 of the Montreal Protocol to which the country acceded in 1994.

In order to comply with the provisions of the Protocol, the Government of Ethiopia, as a first step, has formulated a Country Programme with the assistance of UNEP. The National Meteorological Services Agency took the lead in preparing this Country Programme.

The Country Programme provides data on consumption and use of ODS and expresses the commitment of the Government to phase out use of ODS through a defined strategy, actions to be undertaken by Government and Industry and projects which would require assistance from the Multilateral Fund.

The following table shows the consumption of ODS based on end use by various sectors.

USER SECTOR	SUBSTANCE	APPLICATION	CONSUMPTION	
			Annex A Group I	Annex B Group III
Domestic Refrigerators	CFC-12	Servicing of Refrigerators and Freezers	19.393	
Commercial Refrigeration	CFC-12	Servicing of Display cabinets	0.001	
	CFC-12	Servicing of Deep Freezers/Bottle Coolers	0.602	
Industrial Refrigeration	CFC-11	Servicing of chillers	0.240	
	CFC-12	Servicing of cold rooms	0.272	
Mobile Air Conditioning	CFC-12	Servicing of automobile ac's	9.600	
Solvents & Cleaning agents	Methyl Chloroform	Cleaning of aircraft engine components.		6.510
Total (in MT)			30.109	6.510
Total (in ODP tonnes)			30.109	0.651

The unconstrained demand for ODS is estimated to grow from 31 MT (ODP) in 1994 to 71 MT (ODP) in 2010.

The Government of Ethiopia is committed to phase out of ODS in accordance with the time frame allowed under the Protocol. The phaseout strategy will ensure that there is no forced early retirement of the stock of ODS based equipment which represent assets for the economy. Given that there are few regulations and laws particularly in the area of environment, and relatively few trade restrictions, the Government will pursue a strategy that relies more on sensitisation and public awareness than on bans or other command and control measures. The Government will also consider financial incentives / disincentives as long as they do not impose a significant burden on the exchequer to promote phase out.

In addition to the Government actions, investment projects are expected to be formulated for implementation of phase out of ODS. One project, Institutional Strengthening is being submitted with this Country Programme.

Based on the actions and projects, the country expects to achieve significant phaseout by the year 2010.

The Government plans to manage and monitor the implementation of phase-out through the National Ozone Cell which will be created under the NMSA and which will work closely with the National Environment Protection Agency (NEPA).

Annexure 1.1

Project No 1 Institutional Strengthening

Project Title	Establishment of National Ozone Cell for the implementation of Montreal Protocol in Ethiopia.
Sectors covered	All
ODS consumption	NA
Project Duration	3 years
Project Impact	Establish institutional machinery for successful implementation, coordination and monitoring of phase-out activities
Project Budget	US\$ 115,000
Assistance requested from MF	US \$ 95,000
Implementing Agency	UNEP
National Coordinating Agency	National Meteorological Services Agency (NMSA)

Project Summary

The NMSA has been overseeing the tasks of Country Programme preparation and the work has been handled by persons who already have defined roles and responsibilities within the current functions of the NMSA. Once implementation of the Country Programme begins, there will be a need for a dedicated team to oversee this activity.

Project Description

The National Ozone Unit will be established within the NMSA and will work in close coordination with the NEPA. It will be headed by a Programme Director who will be supported by one Research Assistant and a secretary working on a part time basis. The Programme Director will work under the overall administrative supervision of the NMSA.

The National Ozone Unit will, inter-alia, undertake the following activities.

- Provide information on the Montreal Protocol, phase-out schedules, regulations and general information to enable Ethiopia to achieve its goals as outlined in the Country Programme.
- Conduct research as necessary to provide the public with information on new developments under the Montreal Protocol as well as alternatives to ODS substances.
- Monitor the implementation of the Country Program.
- Coordinate the phase-out activities, including formulation and implementation of training projects.
- Assist in the implementation and monitoring of projects under the Country Program and prepare reports as required to the implementing / funding agencies.
- Submit Annual reports on the ODS consumption to the Ozone Secretariat of UNEP, as per the requirements of the Article 7 of the Montreal Protocol.
- Submit Annual reports on progress of implementation of Country Programme to the Multilateral Fund Secretariat, as per decision of the 10th meeting of the Executive Committee of the Multilateral Fund;
- Submit Institutional Strengthening project related reports to UNEP IE, as per the requirements of the Institutional Strengthening project document.
- Liaise with industry, stakeholders, Ministers and government agencies as necessary for the formulation and implementation of phase-out activities.
- Develop public and sector education programmes in conjunction with the NMSA and the NEPA.
- Conduct surveys as required to access information on the imports of ODS and alternatives in Ethiopia as also the viability of retrofits in the commercial refrigeration sector.
- Assist with the implementation and monitoring of specific projects to be implemented under the Country Programme and prepare reports as required to the implementing / funding agencies.

The National Ozone Cell will be established within the premises of the NMSA with office space and some amenities provided.

Budget for Institutional Strengthening

Government contribution is expected to cover salary of an assistant, basic furniture and office space. The equivalent value will be about US\$ 20,000

Funds requested from the Multilateral Fund (US\$)

	1997	1998	1999	Total
<u>Personnel</u>				
Head	9000	9000	9000	27000
<u>Infrastructure</u>				
Computer	3000			3000
Printer	3000			3000
Fax	2000			2000
Photocopy	5000			5000
<u>Operational Costs</u>				
Office supplies & stationery	1000	1000	1000	3000
Communication & transport	4000	4000	4000	12000
Meetings , seminars & public awareness	20000	10000		30000
TOTAL	47000	24000	14000	85000
Regional Assistance	4000	3000	3000	10000
GRAND TOTAL	54000	27000	17000	95000