



**United Nations
Environment
Programme**

Distr.
LIMITED

UNEP/OzL.Pro/ExCom/41/72
18 November 2003

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Forty first Meeting
Montreal, 17 -19 December 2003

COUNTRY PROGRAMME: LIBERIA

This document consists of:

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

COUNTRY PROGRAMME EVALUATION SHEET

Ozone Unit, Environmental Protection Agency

Status of ratification of the Vienna Convention and the Montreal Protocol

	Signature	Ratification	Entry into
Vienna Convention (1985)		15-Jan-96	14-Apr-96
Montreal Protocol (1987)		15-Jan-96	14-Apr-96
London Amendment (1990)		15-Jan-96	14-Apr-96
Copenhagen Amendment		15-Jan-96	14-Apr-96
Montreal Amendment (1997)			
Beijing Amendment (1999)			

Production of controlled substances: No controlled substances produced

Consumption of controlled (2002) 40.2 metric tonnes
52.5 weighted tonnes (ODP)

(tonnes)	CFC-11	CFC-12	CFC-113	CFC-114	CFC-115	TOTAL	Halon121	Halon130	TOTAL	CTC	MCF	TOTAL	Me-Br
ODS		32.0			1.7	33.7	6.5		6.5				
ODP		32.0			1.0	33.0	19.5		19.5				

Distribution of ODP by CFC 62.9% Halon 37.1% CTC and MCF MB

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

Consumption (ODP tonnes): 0.0 0.0 19.5 33.0 0.0 0.0 0.0

Percent of total: 37.1% 62.9%

MONTREAL PROTOCOL	(ODP tonnes)	CFCs	Halons	Methyl bromide
Baseline consumption		33.0	19.5	
Allowable level of consumption in 2005		16.5	9.8	

Source: Country Programme (2003)

Country Programme

Duration of country programme: 5 years (2004-2008)

ODS phase out target: 85% reduction in CFC consumption by end-2006. Complete phase-out by 2010

Phase out priority area: Refrigeration servicing and halon sectors

Cost of activities in country \$570,000

Strategy:

The Government phase out strategy is aimed to minimize consumption of ODS and the cost to industries and consumers based on the existing legal framework and general economic and industrial policies; continue fulfilment demand for vital ODS-based products without compromising the objectives of the Montreal Protocol. The Government is also proposing introduction of regulations that are socially acceptable and economically feasible.

COMMENTS AND RECOMMENDATIONS OF THE MULTILATERAL FUND SECRETARIAT

DESCRIPTION

1. Based on a survey on the consumption of ODS conducted during the preparation of the Liberia country programme/RMP, in 2002, about 32.6 ODP tonnes of CFCs were used in the country, representing the total consumption, to service domestic refrigerators (18.0 ODP tonnes), commercial and industrial refrigerators (2.9 ODP tonnes) and MAC units (11.7 ODP tonnes). An additional 19.5 ODP tonnes of halon 1211 was imported for use at the airport in Monrovia.
2. There are four flexible foam-manufacturing companies in Liberia all of which converted their blowing operations to methylene chloride in the late 1990s. A total of 10 ODP tonnes of CFC-11 were used by these enterprises.
3. A National Committee on ODS has been established as an advisory body to the Environmental Protection Agency on all ODS-related matters.
4. The Government of Liberia is proposing the establishment of legislation and a regulatory system to control imports of ODS and ODS-based equipment. A special tax should be placed on all ODS imported into the country in order to encourage the substitution of ODS. The revenue accrued from this tax could be used to finance the activities of the Ozone Unit, the National Committee on ODS, and also for information dissemination.
5. The licensing system will be established within the National Environment Commission and the Ministry of Agriculture (all importers must first apply for a license/permit to import ODS into the country). This will also facilitate ODS data collection, assist in the prevention of illegal trade in ODS, and facilitate transition to non-ODS technologies. Penalties will be imposed to discourage illegal imports of ODS and/or ODS-based equipment.
6. The Government is committed to phase out the consumption of ODS according to the Montreal Protocol phase-out schedule.
7. The country programme includes a project for the establishment of an Ozone Unit within the Environmental Protection Agency. The Government of Liberia is requesting a total of US \$140,000 for the implementation of this project. The Multilateral Fund Secretariat's comments and recommendations on this request are presented in document UNEP/OzL.Pro/ExCom/41/18.
8. The country programme also includes an RMP project proposal. The Government of Liberia is requesting a total of US \$625,845 for the implementation of this project. The Multilateral Fund Secretariat's comments and recommendations on this request are presented in document UNEP/OzL.Pro/ExCom/41/43.

9. The country programme also includes a technical assistance to address occupational health and safety for workers regarding the use of methylene chloride in the flexible foam-manufacturing sector (US \$78,000).

COMMENTS

10. The Secretariat noted that Section A of the document issued by the Ozone Secretariat on the status of implementation of the recommendations of the Implementation Committee on non-compliance issues and highlights of potential non-compliance situation arising out of the data report under Article 7 of the Montreal Protocol (UNEP/OzL.Pro/ImpCom/31/2), reported that Liberia has not yet complied with Decisions XIV/14 and XIV/16 (non-compliance with data reporting under Article 7).

11. The Secretariat also drew attention to Decision 38/12 of the Executive Committee, urging implementing agencies responsible for an institutional strengthening project in a country without a compliance baseline to ensure that, before projects (other than institutional strengthening) were prepared and submitted to the Executive Committee, the country had been provided with every assistance to report its compliance baseline data and describe its situation to the Ozone Secretariat.

12. On the basis of the above decisions, the Secretariat suggested that the Government of Liberia send an official communication to the Ozone Secretariat reporting their ODS consumption according to the data collected during the preparation of the country programme, and seek advice from the Ozone Secretariat on whether or not their latest consumption reported in the country programme could be considered as their baseline on the basis of the explanation provided in the country programme (e.g., unavailability of ODS consumption data for the period 1995 to 1997 due to a decade of internal conflicts and related economic disruption). The Secretariat also suggested that the Government of Germany (bilateral cooperation) and UNEP assist the Government of Liberia to submit the plan of action to the Implementation Committee, as proposed by the Government in the country programme, to ensure compliance with the provisions of the Montreal Protocol.

13. Subsequently, the Government of Germany and UNEP informed the Multilateral Fund Secretariat that the Government of Liberia sent its ODS consumption data to the Ozone Secretariat and had requested to use the 2002 CFC consumption as the baseline for compliance.

Technical assistance in the foam sector

14. The Secretariat pointed out that the request for a technical assistance programme to address occupational health and safety for workers regarding the use of methylene chloride in the flexible foam manufacturing sector was not an incremental item, and therefore was not eligible. The project proposal was subsequently withdrawn.

RECOMMENDATIONS

15. The Multilateral Fund Secretariat recommends approval of the Liberia Country Programme, noting that approval of the country programme does not denote approval of the projects identified therein or their funding levels. Approval of the Liberia country programme 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 Liberia.

16. The Government of Liberia be requested to present information annually 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, paragraph 135). Using the approved format, the initial report, covering the period 1 January 2004 to 31 December 2004, should be submitted to the Multilateral Fund Secretariat no later than 1 May 2005.



NATIONAL ENVIRONMENTAL COMMISSION OF LIBERIA

P. O. BOX 4024
5TH STREET, SINKOR
MONROVIA, LIBERIA



November 10, 2003

To: Chief Officer
Multilateral Fund For the
Implementation of the Montreal Protocol
Fax: (514) 282-0068

Subject: Endorsement Letter for the Country Programme
For the Phase Out of the Ozone Depleting Substances in Liberia

Dear Chief Officer,

I have the honor to present my compliments and herewith submit the Country Programme for the Phase Out of the Ozone Depleting Substances in Liberia to you as well as to the Secretariat of Multilateral Fund for the Implementation of the Montreal Protocol to be considered for Multilateral Fund available financial support for its implementation. In this regard, I would like to inform you that the Country Programme Plan for the Phase Out of the Ozone Depleting Substances in Liberia is fully endorsed by the National Environmental Commission. UNEP will implement the Country Programme and GTZ will implement the Refrigerants Management Plan. UNEP will also implement the Institutional Strengthening and the Customs Training Projects.

We are pleased to ensure that the Government of Republic of Liberia is highly committed to the implementation of the plan for the phase out of Ozone depleting substance as stipulated in this plan.

We hope that the Country Programme will get approve in the 41st Meeting of Executive Committee of the Multilateral Fund in December 2003.

Kind regards,

Sincerely yours,

Fodee Kromah, Ph.D.
Executive Director

National Environmental Commission of Liberia

Cc: Marco Gonzalez
Executive Secretary
Ozone Secretariat
Fax: (254 20) 62 39 13, 623601
- Rajendra M. Shende
Chief Energy and Ozone Action Unit
United Nations Environment Programme
Division of Technology, Industry and Economics
Fax: (+33) 1 44 37 1474
- Thanavat Junchaya
UNEP/ROAP, Bangkok 10200, Thailand
Fax: +662 280 3829

COUNTRY PROGRAMME COVER SHEET

COUNTRY: LIBERIA

LEAD NATIONAL AGENCY: ENVIRONMENTAL PROTECTION AGENCY

LEAD IMPLEMENTING AGENCY: UNEP

DATE RECEIVED: OCTOBER 2003

PERIOD COVERED BY COUNTRY: 2004-2008

PROGRAMME

1. PHASE OUT SCHEDULE

SUBSTANCE	CURRENT CONSUMPTION (TONS X ODP) 2002	PLANNED TOTAL CONSUMPTION UNTIL PHASE-OUT (TONS X ODP) 2002-2010	PLANNED YEAR OF COMPLETE PHASE-OUT
CFC-12	32	69	2010
CFC-115	<1	<1	2010
HALON-1211	19.5	29	2010
TOTAL	53	99	

2.0 GOVERNMENT ACTION PLAN

YEAR	DESCRIPTION OF ACTION	SECTOR	INTENDED EFFECT	ESTIMATED COST (US\$)
2002	Establishment of Ozone Office (Unit)	All	Provide monitoring and co-ordination	128,000
2003	Establishment of National Committee on ODS	All	Provide monitoring and co-ordination	
2004-2006	Public Awareness Campaign	All	Create Awareness	
2004-2006	Strengthening institutional framework	All	Provide monitoring and co-ordination	
2004-2006	Establishment of monitoring system for ODS imports, uses and Introduction of import licensing system	All	Ensure compliance with Protocol	
2004-2006	Enactment of regulations and provision of incentives and penalties	All	To ensure compliance with Action Plan	
2004-2006	Certification of refrigeration engineers and technicians	Refrigeration	To ensure improved servicing	436,720
2004-	Establishment of National	Refrigeration	To supervise activities	

2006	Committee on Improved Refrigeration Practices (NCIRP)		of refrigeration sector	
2004-2006	Improvement in servicing and maintenance of refrigeration equipment	Refrigeration	To reduce consumption of CFCs during servicing	
2004-2006	Training of refrigeration engineers and technicians	Refrigeration	Ensure improved servicing and maintenance practices	
2004	Improvement in the supply of nitrogen for servicing of refrigeration equipment	Refrigeration	To guarantee availability of nitrogen to reduce consumption of CFCs	
2004-2006	Introduction of Inspection scheme for imported refrigerators	Refrigeration	To reduce consumption of CFCs	
2004-2006	Introduction of retrofitting of industrial refrigeration systems	Refrigeration	To ensure adoption of proper retrofitting techniques	
2004-2006	Establishment of National Refrigeration Demonstration Centre Implementation of Train the Trainer Programme; Continuous training in Improved Servicing and Maintenance Practices in Refrigeration Sector;	Refrigeration	Trained technicians; To ensure reduction in ODS consumption.	
2004-2006	Incentive Programme for Commercial and Industrial refrigeration End-User Sector, Mobile Air-Conditioning (MAC) Project; Customs Training Programme; Monitoring of all activities within the RMP.	Refrigeration	To ensure reduction in ODSs consumption.	

EXECUTIVE SUMMARY

Background

The Montreal Protocol is an international agreement that aims at reducing and eventually phasing-out the production and use of Chlorofluorocarbons and Halons. The Protocol came into force in January 1989 and has since been ratified by 184 countries as of June 2003.

The Protocol, since its inception, has gone through four amendments that aim at accelerating the phase-out of these Ozone Depleting Substances (ODS). The amendments include the London Amendment of 1990, Copenhagen Amendment of 1992, Montreal Amendment of 1997 and Beijing Amendment of 2000.

The London Amendment was decided by the Second Meeting of the Parties in 1990, where controls on Annex B substances were added. At this meeting, the phase out schedules of Annex A substances were also accelerated. The amendment requires a complete phase-out of CFCs and halons by 2000, but developing countries with a calculated per capita consumption of Annex A substances below 0.3 kg (Article 5 countries) were allowed 10 years grace period to phase-out their use of ODS. It was also noted under the amendment that ODSs used in export products have to be phased-out by 2000, as the ten years grace period provision only applies to ODS used to meet domestic needs.

The London Amendment also provides (in Article 10) for a financial mechanism (Multilateral Ozone Fund) to assist Article 5 Paragraph 1 countries to comply with the control measures of the Protocol. An initial sum of US\$ 240 million dollars was allocated to the fund by non-Article 5 countries (industrialized countries) for the period 1991-1993. Additional contributions totaling US\$ 445 million were also committed for the period 1994-6, US\$ 466 million for 1997-9 and US\$ 440 million for 2000-2002.

Liberia became a party to the Vienna Convention, Montreal Protocol as well as the London and Copenhagen Amendments on January 1, 1996

The consumption of ODS for 2002 was 52 ODP tons. This implies a per capita ODS consumption of 0.01 kg. This means that Liberia falls under the category of Article 5 Paragraph 1 countries, and thus qualifies for a ten year delay in the phase out of ODS. It is also eligible to receive technical and financial assistance from the Multilateral Fund. Currently Liberia is temporarily categorized as an Article 5 Paragraph 1 country, pending receipt of the country's complete split data.

Use of ODSs in Liberia

There is no production of ODSs in Liberia. These substances are all imported by a limited number of local distributors and directly by the ODS-using companies. The total import of CFCs has been estimated at approximately 33 metric tons (MT) in 2002 of which CFC-12 account for almost 99%. Approximately 0.4 metric ton of CFC-115 was used in the composite refrigerant CFC-502 consisting of 49% HCFC-22 and 51% CFC-115. Consumption of halon-1211 was estimated at 6.5 metric tons. There were no records of any importation of carbon tetrachloride, methyl chloroform or methyl bromide. In terms of ODP weighted ODS consumption, the total has been estimated at 52 ODP tons (Tables 2.1).

The dominant part (84%) of consumption of controlled ODS is used for servicing of existing refrigeration equipment and to a minor extent also for installation of new equipment

In the early 1990's, Liberia experienced a decline in the use of CFCs as blowing agents in the manufacturing of flexible foam, when three of the largest manufacturer switched to methylene chloride due to awareness of the ozone issue. The use of CFCs as propellants for aerosols stopped around 1980.

Methodology of the Country Programme Preparation

The methodology for the preparation of the Country Programme involved one mission to Liberia in April 2003 with the purpose of collecting demand figures and other relevant data, discussing institutional and policy framework with industry leaders and government officials, and identifying project activities which may qualify for support from the Multilateral Fund. Cost estimates were then made for the different actions and projects, based on consultations with specialists both in Liberia and abroad in the fields of refrigeration and flexible foam.

Critical Assumptions

In order to estimate the total incremental costs of ODS phase-out in Liberia, the most plausible substitution techniques were identified and costed, based on up-to-date information contained in the UNEP Technical Options and the Refrigeration, Air Conditioning and Heat Pumps, Technical Options Committee Reports.

The incremental costs estimated for Liberia comprise three elements:

- user costs, i.e. costs incurred at the level of manufacturers of ODS using products, including incremental capital and operations costs, costs of re-training of personnel, and research and development in connection with adaptation to ODS free technology, and the costs of technical assistance and support;
- consumer costs, i.e. incremental costs arising from forced early replacement of domestic refrigerators and extra costs of purchasing CFC free refrigerators instead of cheap second-hand CFC-12 refrigerators;
- government costs for institutional strengthening to ensure effective implementation of the Protocol.

The analyses in this report are based on a number of assumptions of which the most crucial are listed below:

- ODSs continue to be available in sufficient quantities to meet demand up to the year 2010 at current prices,
- unconstrained demand grows at a typical rate of 5-15% per year.

Phase-out Scenario

Since Liberia has only six years to phase out her ODSs, only one phase-out scenario (allowable phase-out scenario) is selected and analysed for Liberia. This allowable phase-out scenario is characterised by the full utilisation of the 10-year delay provision in the Protocol. It postpones ODSs phase-out until the latest possible date while keeping the country within the limits of the Montreal Protocol.

The various measures outlined in the Country Programme like better servicing and maintenance procedures can be achieved without increasing the cost of the phase-out significantly. These issues show that under the current situation, the allowable phase-out scenario is the most likely and desirable for Liberia.

Recommended Phase-out Strategy

This strategy adopted for Liberia proposes a freeze in the consumption of ODSs at 1995, 1996 and 1997 average consumption levels of by 1999, 50% reduction by 2005, 85% reduction by 2007 and 100%

reduction by 2010. In view of the unavailability of ODSs consumption data for the period 1995 to 1997 due to a decade of war and related economic disruption, consumption figures for 2002 are used as the base year.

This strategy will ensure compliance with the provisions of the Protocol and further reflect on Government's objectives to minimise Liberia's consumption of ODSs while at the same time reducing the cost associated with the country's industries and consumers. This is also in accordance with projects proposed for financing from the Multilateral Fund and in agreement with the aim of the Fund to provide incentives for the eventual phase-out of ODSs by 2010.

Action Plan

The objective of the Action Plan is to phase-out the consumption of ODSs in Liberia in compliance with the Montreal Protocol as ratified by the Liberian Government, and in accordance with the recommended ODS phase-out strategy.

The Action Plan covers an initial period of five years from the first quarter of 2004 to the end of 2008. The plan comprises the introduction of Government initiatives to effectively regulate and monitor the use of ODSs, and a series of proposed projects in the ODS end user sectors some of which are seen as prerequisites for implementation of the phase-out schedule.

Government Actions:

Two of the basic actions included in the plan have already been initiated with effect from the beginning of 2003.

The relevant institutional framework for the implementation of the Action Plan has been created through the establishment of the National Committee for ODS (NACODS), which includes representatives from key Government institutions as well as representatives of different user associations. The Committee is to advise the Environmental Protection Agency (EPA) on all issues related to ODSs. Furthermore, under the EPA, a special Ozone Office has been created. This Office acts as a secretariat for the Committee and is expected to undertake a coordinating as well as a monitoring function of all activities concerning the phasing-out of ODSs. Three Task Groups of the Committee on Programme Implementation, Refrigeration and Foam Sectors will assist in the work of the office through periodic reviews of progress of actions.

Other proposed Government Actions include:

Introduction of Regulatory Measures

The proposed regulatory measures include a schedule of bans on the use of ODSs for specific purposes at specifically given dates, in accordance with the recommended phase-out strategy; a special ODS tax on imports of all controlled substances to encourage initial substitution of ODSs in easily substitutable applications; and tax exemptions for imports of ODS conserving or benign technology and non-ODS containing products. A local legal consultant will assist in preparing a full schedule of regulatory measures and draft regulations for consideration of the Government through the National Committee on ODS. An economic consultant will also assess the impact of these regulations and cost implications.

Import/Export Licensing System

An import/Export Licensing System is expected to be established to allow the monitoring and controlling of ODS in and out of the country. The system will facilitate the smooth transition towards non-ODS technology

by providing, clear signal to importers, wholesalers and industry about the maximum quantities of ODS permitted to be imported each year into the country until phase-out date. The key elements of the import/export licensing system in Liberia include the following:

- Legal basis, structure and functioning of the Licensing system;
- Import restrictions for ODS (quota, bans);
- Seized ODSs and ODSs based equipment;
- Recording of Data, data management and reporting;
- Monitoring and evaluation;
- Introduction of certification arrangements for refrigeration engineers & technicians, and
- Information dissemination.

Project Proposals:

Seven (7) projects under two main sectors are proposed for funding from the Multilateral Fund. The sectors are Institutional Strengthening, Refrigeration and Foam sectors

The projects comprise the following:

- A) Project ISN 1:** Institutional strengthening for the phase-out of ozone depletion substances
- B) Project-R1-** Refrigeration Sector Projects

Six (6) sub-projects that aim at eliminating the use of ODS within the refrigeration sector are proposed. These sub-projects include:

- 1) Implementation of train-the-trainer/National Refrigeration Demonstration Centre Programmes
- 2) Improved servicing and maintenance in Code of Good Refrigeration Practices – Recovery and Recycling Project
- 3) Incentive Programme for Commercial and Industrial Refrigeration End-User Sector, (Detailed description included in RMP)
- 4) Mobile Air-Conditioning (MAC) Project; (Detailed description included in RMP)
- 5) Customs Training Programme; (Detailed description included in RMP)
- 6) Monitoring of all activities within the RMP. (Detailed description included in RMP)

Table 4.4 shows the proposed phasing and duration of the proposed projects. The projects will be initiated as soon as the Government secures funds for their implementation from the Multilateral Fund.

The total incremental costs of the proposed Government Action Plan are estimated at US \$564,720 at 2003 prices.

It is proposed that the Multilateral Fund cater for all incremental costs not covered by other funding sources. Once the incremental costs of the proposed projects are approved by the Multilateral Fund, appropriate fund-handling mechanisms will be set up.

Project ISN: Institutional Strengthening Project

The purpose of the project is to strengthen the capability of the Environmental Protection Agency to coordinate the implementation of Liberia's Country Programme to phase out the use of ODSs.

Projects R-1& 2: Improved Servicing and Maintenance within the Refrigeration Sector

The purpose of the project is to create a lasting improvement of the maintenance and servicing procedures currently being employed within the refrigeration sector in Liberia through training and supervisory programmes for technicians, introduction of recycling and strengthening of training institutions etc. The project will cover procedures related to all kinds of refrigeration equipment in use.

Budget and Financing of Activities 2004-2008

Tables 4.1 - 4.4 give a breakdown of costs of the Action Plan by components and by year of implementation. It is proposed that all the costs are incremental project costs to be funded by the Multilateral Fund. The costs of the proposed Government Action Plan are covered by the Fund as an institutional support project. Once the incremental costs of the proposed projects are approved by the Multilateral Fund, appropriate funds handling mechanisms will be set up.

The total cost of the Action Plan is US\$564,720.00