



United Nations Environment Programme

Distr.
LIMITED



UNEP/OzL.Pro/ExCom/15/19
18 November 1994

ORIGINAL: ENGLISH

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

Fifteenth Meeting
Montreal, 13-16 December 1994

COUNTRY PROGRAMME: SWAZILAND

This document consists of:

- Comments and Recommendations of the Fund Secretariat
- Country Programme Evaluation Sheet (prepared by the Fund Secretariat)
- Transmittal Letter from the Government of Swaziland
- Country Programme Cover Sheet
- Country Programme Executive Summary¹
- Institutional strengthening project proposal

¹

Complete Country Programme was sent only to members of the Executive Committee who requested full documentation.

COMMENTS AND RECOMMENDATIONS OF THE FUND SECRETARIAT

COMMENTS

1. The Country Programme conforms to the format of the approved guidelines. One departure from usual practice was that the original data collected was based on Swazi financial year (1 July-30 June). However the relevant tables have been adjusted to reflect the calendar year.
2. One domestic refrigerator/freezer manufacturing company (Masterfridge (Pty) Ltd) and refrigerator and air conditioning servicing companies are currently the only consumers of ODS. Masterfridge is a major regional producer of domestic refrigerators and exports the bulk of its products to South Africa and other neighbouring countries, controlling about 40 per cent of the market in the countries of the Common Customs Union (South Africa, Swaziland, Lesotho, Botswana and Namibia).
3. The consumption of ODS in 1993 was 100.6 ODP tonnes consisting of 75.5 ODP tonnes of CFC-11, 24.3 ODP tonnes of CFC-12 and 0.8 ODP tonnes of CFC-115. Masterfridge was the sole consumer of CFC-11, while the company consumed 76% of the CFC-12. The rest of the CFC-12 (5.8 ODP tonnes) was used for servicing.
4. The phase out of ODS is influenced by the country's trade links with South Africa, a non-Article 5 country, and more significantly by the activities of Masterfridge. Thus in anticipation of receiving retroactive funding of its incremental costs, Masterfridge embarked on its own upon a complete phase-out of CFCs in its manufacturing operations. It phased out CFC-11 in its foam blowing through substitution with HCFC-141b by 1 January 1994 and intends to further phase-out the HCFC-141b through substitution with cyclopentane by 1995. It has substituted CFC-12 with HFC-134a as refrigerant in its refrigerators and freezers. Consequently by the end of the current year (1994) it is expected that 93 per cent of ODS consumption (i.e., the total consumption of Masterfridge) would have been phased out. The main constraint on the phase-out process was reported to be shortage of HFC-134a compressors on the world market. The residual consumption which is due to the servicing sector would be phased out by 2005 through prohibitions and other financial and regulatory measures.
5. As part of a National Ozone Policy to facilitate the ODS phase-out, the government will set up a National Ozone Office to carry out its action plan.
6. An annex which provides a project proposal for institutional strengthening amounting to US \$67,320 has been included in the country programme. The Government also will request for retroactive funding for the ODS phase-out carried out by Masterfridge (Pty) Ltd., estimated to be US \$3,322,942, through UNIDO as implementing agency. In this regard, the attentions of the government and the implementing agency are drawn to the existing guidelines relating to project presentation and retroactive funding.

RECOMMENDATIONS

The Fund Secretariat recommends as follows:

7. To approve the Swaziland Country Programme. Approval of the Country Programme does not denote approval of the projects identified therein or their funding levels.
8. In accordance with the Executive Committee decision on implementation of country programmes (UNEP/OzL.Pro/ExCom/10/40, para 135), to request the Government of Swaziland to present annually to the Executive Committee information on progress being made in the implementation of the country programme. Using the approved format, the initial report, covering the period 16 December 1994 to 31 December 1995, should be submitted to the Fund Secretariat not later than 31 March 1996.
9. To approve the amount of US \$67,320 and US \$8,750 as support costs for institutional strengthening, to be included in UNEP's 1994 Work Programme, subject to the following:

The Government of Swaziland will report to the Ozone Secretariat its consumption data in accordance with Article 7 of the Montreal Protocol.

SWAZILAND COUNTRY PROGRAMME EVALUATION SHEET

National Implementing Agency: National Ozone Office, Swaziland Environment Authority

Status of ratification of the Vienna Convention and the Montreal Protocol

	Signature	Ratification	Entry Force
Vienna Convention (1985)		10/Nov/92	08/Feb/93
Montreal Protocol (1987)		10/Nov/92	08/Feb/93
London Amendment (1990)			
Copenhagen Amendment (1992)			

Production of controlled substances: 0 metric tonnes (mt)

Consumption of controlled substances (1993): 101.2 metric tonnes
(excluding methyl bromide) 100.6 weighted tonnes (ODP)

Substance	CFC						Halon			Solvents			M-Br
(ton)	11	12	113	114	115	Total	1211	1301	Total	CTC	MCF	Total	
ODS	75.5	24.3			1.4	101.2							
ODP	75.5	24.3			0.8	100.6							

Source: Country Programme (1994)

Distribution of ODP by substance:

CFC: 100.0% Halon: CTC, MCF:

Distribution of ODP by sector:

Sector:	Aerosol	Foam	Halon	Refrig.	Solvent
Consumption (tonnes):				100.6	
Percent of total:				100.0%	

Country Programme

Duration of country programme: 11 years (1994-2005)

ODS phase-out target:

Complete phase out of CFC-11 by 1994, 90% of CFC-12 by 1995 and complete phase out by 2005

Phase-out priority area:

Refrigeration sector

Cost of activities in country programme: \$3,390,262

Strategy:

To phase out well in advance of the Protocol requirements relying on existing legal and institutional framework. The refrigerator manufacturer consuming all the CFC-11 and 90% of CFC-12 will phase out all use of CFC by 1995. Import of CFC-12 for servicing and recharge will continue until 2005.

NRF/SEA/INT/4.1

Chief Officer
Secretariat of the Interim Multilateral Fund
for the Implimentation of the Montreal Protocol
UNEP IE/PAC
39-43 quai Andre Citroen,
75739 Paris
CEDEX 15
FRANCE

24 October 1994

Dear Sir/Madam,

RE: LETTER OF TRANSMITTAL: SWAZILAND COUNTRY PROGRAMME

I have the honour to present to you the Country Programme for Swaziland. The lead agency responsible for coordinating the preparation of this Country Programme has been the Swaziland Environment Authority an agency housed within the Ministry of Natural Resources and Energy.

In your review of this Country Programme, please be aware that Swaziland is submitting this document as a Party to the Montreal Protocol on Substances that Deplete the Ozone Layer and is operating under paragraph 1 of Article 5.

After careful deliberation as to the actions that Swaziland should take in response to the Montreal Protocol, the Government of Swaziland has outlined a clear agenda of its phase out approach to the Protocol. Government is firmly committed toward implementing these actions which are detailed on pages 23-25 of the Country Programme.

Further, Government fully intends to monitor compliance with the Montreal Protocol. If it appears the that actions in the Country Programme are insufficient to phase out ozone depleting substances as stated, Government will take additional measures to ensure compliance, incorporate these new measures into the Country Programme and submit this to the Executive Committee.

Please accept my sincerest regards,

J.T. MKATSHWA
PRINCIPAL SECRETARY

COUNTRY PROGRAMME COVER SHEET

Country: Swaziland

Lead National Agency: Swaziland Environment Authority

Participating Implementing Agency: UNEP

1. Phase-out schedule

Substance	Current consumption calendar 1993 (Tonnes x ODP)	Article 5 schedule Total unconstrained (Tonnes x ODP)	Planned total consumption 1994 until phase-out (Tonnes x ODP)	Planned year for complete phase-out
CFC 11	75.5	6235	50	1994
CFC 12	24.3	1056	23	2000
CFC 115	0.8	18	9	2005
Total	100.6		82	

2. Government Action Plan

Action	Responsibility	Timing
Establish Ozone Committee	SEA	Done
Establish National Ozone Office	SEA	1995
Develop & implement public awareness campaign	SEA	1995-7
Draft environment policy statement	SEA	1995
Establish ODS user registration system	SEA	1995
Establish customs information system	Customs	1995
Establish national Ozone Office information system	SEA	1995
Prepare necessary legislation	SEA	1995-9*
Establish funds mechanism	Finance/CBS	1995

* If applicable

3. Project Summary Table

Project	Intended Effect	Sector	ODP tonnes affected	Estimated Cost US\$				
				1995	1996	1997	1998	Total
A. Submitted								
A.1 Institutional Strengthening	Coordination, Control, technical support and monitoring	All		34980	34980	34980	34980	104940
B. Under Development (Estimated)								
B.1 Refrigerator factory change-over	Eliminate ODS consumption in manufacture	Refrigerator manufacture	445.9	3,322,942				3,322,942
B.2 Regional training of refrigerant servicing technicians	Reduce emissions of ODS's in air conditioning and refrigeration servicing	Refrigerant servicing		N/A	N/A	N/A	N/A	N/A
B.3 Regional training of Customs officials	Ensure ODS'S are properly logged and recorded to minimise risk of illegal movements	All		N/A	N/A	N/A	N/A	N/A
B.4 Purchase of refrigerant Recovery units	Reduce emissions of ODS's in air-conditioning and refrigeration servicing	Refrigerant servicing	7.6	N/A	N/A	N/A	N/A	N/A

**COUNTRY PROGRAMME
FOR THE PHASE OUT OF
OZONE DEPLETING
SUBSTANCES**

SWAZILAND

EXECUTIVE SUMMARY

This document, the Country Programme, constitutes the Government of Swaziland's commitment and plan for reducing the consumption of Ozone Depleting Substances (ODS's) in Swaziland. The Programme has been approved by the Ministry of Natural Resources and Energy for submission to the Executive Committee.

Swaziland is classified as an Article 5 developing country with annual per capita ODP consumption below 0.3 kg and therefore qualifies for funding from the Multilateral Fund for ODS phase-out projects.

The users of ODS's in Swaziland have in the past mainly comprised three sectors, namely:

fridge and freezer manufacture - one company which distorts Swaziland's overall consumption as it is the largest manufacturer in the region, including South Africa

airconditioning and refrigeration servicing - nine significant organisations which obtain their ODS's directly from South Africa and are largely dependent on South African technology

fire fighting equipment installation and servicing - one company, but no further consumption of halons in servicing or installation will be allowed and this sector is therefore not dealt with further in this executive summary

Three scenarios have been considered for future consumption of ODS's in Swaziland after 30 June 1994, namely:

unconstrained demand - total ODP consumption to 2010 of 7315 metric tonnes (including transitional substances) - where it is assumed that ODS's will be readily available at current prices and no restriction will be placed on their usage

Montreal Protocol consumption - total ODP consumption to 2010 of 2805 metric tonnes (including transitional substances) - where it is assumed that consumption is unconstrained until 1997, frozen then until being halved in 2005, reduced to 15% of 1996 levels in 2008 and then phased out completely in 2010

Planned (or accelerated) phase-out consumption - total ODP consumption to 2010 of 58 metric tonnes (including transitional substances) - where the Country Programme is implemented and the consumption of ODS's is phased out rapidly well ahead of the requirements of the Montreal Protocol, but on a least cost basis to minimise the costs of phase-out

It is intended that the fridge manufacturer will have totally phased out its consumption of both CFC ODS's and the transitional HCFC's by 30 June 1995. There will be a residual requirement for ODS's in the refrigeration and airconditioning servicing industry but transitional substances will gradually replace CFC's and then will be superseded by non-ODS substances themselves. This phase-out will be completed by 2005.

The fridge manufacturer, Masterfridge, has already embarked on a complete change-over from ODS consuming plant to ODS free plant in anticipation of receiving funding from the Multilateral Fund to reimburse their incremental costs incurred in this change-over. Masterfridge firstly used water-blown methods to reduce its CFC11 consumption from inception in 1990, replaced CFC11 with HCFC141b as a blowing agent in January 1994, then replaced CFC12 with HFC134a as a refrigerant in July 1994 and will be replacing HCFC141b with pentane as a blowing agent in July 1995. The incremental project costs for the change-over are estimated at US\$3,322,942 (project submission details still to be prepared).

The airconditioning and refrigeration servicing industry is largely reliant on South Africa (which is not an Article 5 country) for their technology. All new systems installed now are more ozone friendly than before, however there will still be a future residual requirement for ODS's for the servicing and possible retrofit of existing systems. It is intended to reduce this requirement by supplying the relevant service companies with recovery and recycling units. The cost of this project is still under preparation.

The Government has been and will continue to be supportive of industry's efforts to phase-out the consumption of ODS's. A high level task force, the Swaziland Environment Authority, representing Government, NGO's and the private sector, was formed to oversee environmental matters and a Government department, the Swaziland Environment Authority Secretariat, falling under the Ministry of Natural Resources and Energy was created. An Ozone Committee, again representing both Government and private sector views, was formed to oversee Montreal Protocol matters. Funding is being sought of US\$ 67,320 from the Multilateral Fund for institutional strengthening to create and fund a National Ozone Office to oversee and monitor the implementation of Swaziland's Country Programme (project attached to Country Programme).

Additional projects for the training of airconditioning and refrigeration servicing technicians and Customs officials on a regional basis will be considered and funding from the Multilateral Fund may be sought in this regard at a later date.

Total incremental costs for the country in implementing its planned, accelerated phase-out of ODS's is estimated at US\$4,691,440 for the period to 1997.

PROJECT COVERSHEET

Country	:	Swaziland
Project title	:	Institutional strengthening for the phase-out of ozone depleting substances and the establishment of a National Ozone Office
Implementing agency	:	UNEP
National implementing agency	:	Swaziland Environment Authority
Consumption of controlled substances	:	82,9 ODP weighted metric tonnes (1994 consumption - Annex's A & B)
Project duration	:	3 years
Project objective	:	ODS phase-out as per Country Programme
Justification	:	Dedicated unit required to monitor, provide advice on and compliance with Country Programme's ODS phase-out schedule
Sectors covered	:	All sectors
Total incremental costs	:	US\$ 67,320

1. Project Description

- 1.1 The Government of Swaziland acknowledges the importance of adhering to its Country Programme schedule for the phase-out of ozone depleting substances.
- 1.2 The country does not however have institutional capacity to monitor industry's adherence to the Programme, provide advice to industry sectors and feedback to Government to ensure that steps are taken as necessary for compliance with the Programme's phase-out. The institutional strengthening project will address these issues and will enable the development of monitoring activities, project identification and implementation, reporting, awareness campaigning etc.
- 1.3 The Project proposes the establishment of a Swaziland National Ozone Office to fulfil the functions described in paragraph 1.2 above.

2. Structure and Management

- 2.1 The Swaziland Environment Authority Secretariat is a Government department falling under the Ministry of Natural Resources and Energy. The National Ozone Office will report to the Secretariat and specifically to its Director.
- 2.2 A Swaziland Environment Authority comprising eight principal secretaries, four NGO representatives and four representatives from industry meets quarterly and is responsible for formulating the country's environmental policies through Cabinet, the Ministry of Natural Resources and Energy and the Swaziland Environment Authority Secretariat. It therefore has indirect influence on the National Ozone Office.
- 2.3 The National Ozone Office will be run by one Officer. He or she will obtain administrative support from another organisation and there will therefore be no need for additional staff.

3. Activities

- 3.1 The National Ozone Office will carry out the following activities:

- Establish an information system and maintain accurate monthly records of all ODS imports, importers and users.
- Develop and establish a registration system for all ODS users
- Disseminate relevant information to users and other relevant parties on current consumption and scheduled phase out targets
- Disseminate and exchange information to and with users, other national ozone offices and implementing agencies on phase-out processes
- Promote phase-out actions identified in the Country Programme

- Monitor and evaluate progress of implementation of the ODS phase-out actions
- Facilitate co-ordination of activities in the country for ODS phase-out
- Facilitate action on ozone-related issues by policy makers
- Provide liaison between Government and relevant international bodies (UNEP, UNIDO, UNDP, World Bank, Fund Secretariat, etc.)
- Assist in preparation of any necessary supportive legislation
- Develop and implement public awareness campaign on all ozone issues

Although Swaziland has a low consumption outside of the refrigerator factory there are a number of key activities within this project including the development of retrofitting plans, refrigeration management and the encouragement of the purchase of non-CFC equipment.

4. Inputs

- 4.1 One Ozone Officer will be hired as this will suffice considering the small size of the economy, population, number of ODS users and ODP consumption per capita. The Officer will be an experienced professional administrator with relevant qualifications and sound knowledge of the Swaziland business and Government environments. The Officer will obtain administrative support from another organisation and will not therefore need to employ staff. A transport allowance will cover usage of the Officer's motor vehicle and petrol in visiting users and other parties.
- 4.2 Office space will be rented together with facsimile, photocopier, computer, printer, wordprocessor and software facilities from another organisation. Modem and E-mail facilities at the Swaziland Environment Authority Secretariat will be used when necessary. These steps which avoid capital expenditure will reduce the costs involved in establishing the Office.
- 4.3 Some stationery and other consumable expenses will be incurred.
- 4.4 Where appropriate, technical expertise will be subcontracted from recognised experts, and an allowance is made for staff incentives for this external technical input for specific issues that may fall outside the Officer's expertise or where he or she is not able to obtain information from other ozone offices or from implementing agencies.

5. Budget

- 5.1 The total budget for the three year project is US\$ 67,320 This covers recurrent expenditure only no specific capital expenditure will be necessary.

- 5.2 The staff incentives of the only staff member, the Ozone Officer will be US\$10,000 per annum.
- 5.3 All costs are at nominal current prices. No allowance has been made for the impact of inflation. The exchange rate used, the approximate closing rate at 30 September 1994, is US\$1=SZL3.60.
- 5.4 The project is proposed to run from 1 January 1995 to 31 December 1997.
- 5.5 The Government of Swaziland provides additional resources towards the development of the Institutional Strengthening project, both in kind and through the provision of resources, for example staff time from government employees at the SEA and other Ministries, transport, communications and in other areas. The value of this contribution is estimated to be equivalent to that of the recommended budget.
- 5.6 The project is scheduled to provide minimum input necessary to meet the objectives outlined above and all possible steps have been taken to reduce costs to the lowest level possible commensurate with this.

6. Outputs

6.1 The expected outputs of this Project are:

- Establishment of a National Ozone Office
- A national public awareness campaign of ozone depleting substances and the Montreal Protocol
- Increased awareness by users on ODS consumption, effect and alternative processes leading to reduced consumption
- Compliance with the Country Programme

**INSTITUTIONAL STRENGTHENING PROJECT FOR SWAZILAND :
DETAILED BUDGET**

Figures in US Dollars

YEAR	1995	1996	1997	TOTAL
Staff incentives	10000	10000	10000	30000
Travel expenses	2000	2000	2000	6000
Admin support	3400	3400	3400	10200
Photocopies	400	400	400	1200
E-mail, Modem	600	600	600	1800
Telephone, fax	600	600	600	1800
Stationery, etc.	400	400	400	1200
Public awareness campaigns	3,000	3,000	3,000	9,000
<i>Sub-total (US\$)</i>	<i>20,400</i>	<i>20,400</i>	<i>20,400</i>	<i>61,200</i>
Contingencies	2,040	2,040	2,040	6,120
TOTAL US\$	22,440	22,440	22,440	67,320