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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL

Forty first Meeting  
Montreal, 17 -19 December 2003

**PROJECT PROPOSAL: NAMIBIA**

This document consists of the comments and recommendation of the Fund Secretariat on the following project proposal:

Phase out

- Terminal phase-out management plan for ODS

Germany

**PROJECT EVALUATION SHEET  
NAMIBIA**

SECTOR: Phase-Out ODS use in sector (2002): 20.0 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

**Project Title:**

(a) Terminal phase-out management plan for ODS

<b>Project Data</b>	<b>TPMP</b>
Enterprise consumption (ODP tonnes)	
Project impact (ODP tonnes)	*18.5
Project duration (months)	60
Initial amount requested (US \$)	160,000
Final project cost (US \$):	
Incremental capital cost (a)	
Contingency cost (b)	
Incremental operating cost (c)	
Total project cost (a+b+c)	252,500
Local ownership (%)	100%
Export component (%)	0%
<b>Amount requested for the first tranche (US \$)</b>	160,000
Cost effectiveness (US \$/kg.)	
Counterpart funding confirmed?	
National coordinating agency	National Ozone Unit
Implementing agency	Germany

<b>Secretariat's Recommendations</b>	
Amount recommended (US \$)	
Project impact (ODP tonnes)	
Cost effectiveness (US \$/kg)	
Implementing agency support cost (US \$)	
Total cost to Multilateral Fund (US \$)	

\* The total impact of the plan is 18.5 ODP tonnes. The impact of the first tranche is 10.5 ODP tonnes.

## **PROJECT DESCRIPTION**

### Refrigeration servicing sector

1. In 2002, total CFC consumption in Namibia was estimated at 20.0 ODP tonnes used for servicing refrigeration equipment. The CFC baseline for Namibia is 21.9 ODP tonnes.
2. The refrigeration and air conditioning sector is the single largest consumer of ODS in Namibia. All refrigeration equipment sold in the country is imported mainly from South Africa and from Europe (particularly commercial refrigeration systems). There are approximately 200,000 domestic refrigerators (100,000 units are operating with CFC-12 refrigerants) and a significantly smaller number of domestic air conditioning equipment in the country. There are still second-hand CFC-based compressors and refrigerators available in the market; however, the demand for these units is declining. The average life time of the domestic refrigerators is over 15-20 years because of the high costs involved in replacing it. These units are serviced by a combination of technicians working for local service companies and a large number of self employed technicians working in the semi-formal or informal sector.
3. Commercial refrigeration equipment is commonly used in the food processing enterprises (fisheries, supermarkets, hotels, hospitals, military and the mining industry). Most of the equipment is between 10 and 15 years old. There are approximately 5,000 cold rooms only 1,000 of which are operating with CFCs refrigerants. There are also 50,000 CFC-based display cabinets (of a total of 150,000), a relatively large number of refrigerated trucks (300 units are serviced in Namibia), 10 CFC-based chillers and 18,750 vehicles (of a total population of 75,000 units) fitted with a CFC-12 MAC unit.
4. The servicing sector consists of different sizes of workshops, from a one-man technician to well established workshops with over 10 technicians. The survey conducted during the preparation of the TPMP indicated that there are about 100 established service companies and 500 service technicians. Almost all the service workshops conduct maintenance on domestic and commercial refrigeration equipment. Only a small number of technicians who repair and service refrigeration equipment have attended a formal course on refrigeration. There are only a limited number of training centres where ongoing courses on refrigeration are instructed.
5. The current prices of refrigerants per kg are: US \$6.39 to US \$8.53 for CFC-12, US \$5.88 to US \$8.82 for HFC-134a and US \$2.57 to US \$5.07 for HCFC-22.

### Halons

6. Halons have already been phased-out in Namibia; the only uses of halons are provided from the existing installations. However halons will continue to be needed for critical/essential applications. In this regard, Namibia together with other countries in the region has initiated a programme to develop a regional halon bank project under the auspicious of the Government of Germany (halons are therefore not covered under the TPMP).

### Methyl bromide

7. Namibia ratified the Copenhagen amendment of the Montreal Protocol in March 2003. Small quantities of methyl bromide (MB) consumption have been reported in the country (0.6 ODP tonnes) mainly used in the horticulture and fishmeal business. The TPMP includes a technical assistance activity to address the phase out of MB.

#### Legislation

8. A final draft of the regulations and licensing system has been drawn up by the Ozone Unit in consultation with relevant stakeholders. The regulations have been approved by the Cabinet (5 November 2003). The regulations will include: a permit system for all importers and exporters of ODS and ODS-based equipment; a quota system for ensuring a decline in the imports of ODS, in accordance with the TPMP phase out targets; a ban on imports of ODS-based equipment; and all ODS items must be clearly labelled.

#### Status of approved projects

9. Since 1998, the Government of Germany (bilateral cooperation) has assisted the Government of Namibia in the implementation of the refrigerant management plan (RMP), which includes: development of ODS legislation; training in good refrigeration service practices; training of customs officials; and recovery and recycling of CFCs.

10. The training of trainers programme in good refrigeration practices was conducted as part of the umbrella regional approach of the RMP for the 14 South East and West African countries. Three trainers were trained in a German refrigeration training institute. Subsequently, three training courses have been held in the country and 30 technicians have been trained directly through the RMP project and several more through the regular curriculum which has incorporated the training in new refrigerants.

11. The training of customs officers was held in South Africa in June 2002, as part of the Southern African Customs Union sub regional group. Four customs officers and staff of the Ozone Unit were trained. Subsequently, three training workshops were held where 55 customs officers were trained.

12. The recovery and recycling project was approved as a bilateral project from the Government of Finland. The project has been implemented; 20 recovery units and 6 recycling machines were provided to service technicians; 21 qualified technicians and 40 unqualified technicians were trained on the use of recovery and recycling equipment. Based on an evaluation conducted on the recovery and recycling programme, it was found that the equipment was sporadically used by the technicians and more HCFC-22 refrigerant was recovered than CFC 12.

13. In addition to the RMP project, Namibia is part of a regional halon phase out project, which aims to establish a halon bank in the region (this project was approved only at the 35<sup>th</sup> Meeting of the Executive Committee). This project should ensure that Namibia's halons consumption/installed capacity is phased out.

#### Additional activities proposed

14. The TPMP for Namibia comprises a combination of regulatory, capacity building, investment and awareness measures. In 2000 and 2001, the CFC consumption reported by the Government of Namibia under Article 7 was over the CFC baseline for compliance. In 2002 the reported CFC consumption for Namibia was almost 2 ODP tonnes below the CFC baseline. Given this situation, the Government of Namibia opted for the TPMP rather than the provision of an RMP update; to ensure compliance with the Montreal Protocol's 2005 and 2007 phase out targets by Namibia and achieve a complete phase out by 2008.

15. The TPMP lays out specific action plans for implementation, which are guided by performance-based indicators. It includes additional training for customs officers and refrigeration service technicians, MAC recovery and recycling, an incentive programme for conversion of end-users, technical assistance for the phase out of MB and monitoring and management of the activities proposed in the TPMP.

16. The cost for implementation of the TPMP amounts to US \$4,292,000; of this amount, the Government of Namibia is requesting US \$252,500 from the Multilateral Fund.

## **SECRETARIAT'S COMMENTS AND RECOMMENDATIONS**

### **COMMENTS**

17. At the 37<sup>th</sup> Meeting of the Executive Committee, the Government of Germany submitted a request to assist the Government of Namibia to develop a TPMP rather than a RMP update project. Subsequently, the request was approved by the Executive Committee.

#### Non-compliance with the Montreal Protocol by Namibia

18. At its XIV Meeting, the Parties to the Montreal Protocol noted that Namibia's reported consumption of Annex A, Group I substances in 2000 and 2001, and for the consumption freeze control period (1 July 2000 to 30 June 2001) were above the CFC baseline (22 ODP tonnes). As a consequence, for the July 2000 to June 2001 control period, Namibia was in non-compliance with its obligations under Article 2A of the Montreal Protocol. The Parties requested that Namibia submit to the Implementation Committee a plan of action with time-specific benchmarks to ensure a prompt return to compliance (Decision XIV/22).

19. Pursuant to Decision XIV/22, the Government of Namibia submitted to the Implementation Committee at its 30th and 31st Meetings a plan of action with time-specific benchmarks to ensure a prompt return to compliance. Subsequently, the Implementation Committee, at its 31st Meeting noted with appreciation Namibia's submission of its plan of action committing to reduce its CFC consumption from 20 ODP-tonnes in 2002 to 19.0 ODP tonnes in 2003; to 14.0 ODP tonnes in 2004; to 10.0 ODP tonnes in 2005; to 9.0 ODP tonnes in 2006; to 3.2 ODP tonnes in 2007; to 2.0 ODP tonnes in 2008; to 1.0 ODP tonnes in 2009; and to phase out CFC consumption by 2010, except for essential uses that might be authorized by the Parties. Namibia also committed to establish, by 2004, a system for licensing imports and exports of ODS, including quotas and to ban, by 2004, imports of ODS-using equipment.

20. The Implementation Committee also noted that the measures listed above should enable Namibia to return to compliance, congratulated Namibia on this progress, and urged Namibia to work with the relevant implementing agencies to implement the remainder of the plan of action and phase out consumption of CFCs.

Status of implementation of approved projects

21. Regarding the low refrigerant recovery rate, the Secretariat was informed that the evaluation of the recovery/recycling project was conducted in late 1999 when the prices of CFC were low. During the development of the TPMP, the servicing sector indicated that in the past there was no incentive for setting up a network to recover/recycle refrigerants; also the equipment previously used was home made and many items were no longer in working condition. However, with the increase in the price for CFCs, the sector considered that a recovery/recycling network should be re-established.

Relevant decisions by the Executive Committee

22. The Secretariat drew the attention of the Government of Germany to relevant decisions taken by the Executive Committee related to the conversion of RMP updates to TPMPs, in particular Decision 40/21 through which the Executive Committee, *inter alia*, urged all Article 5 Parties concerned to ensure that all the provisions of Decision 38/64 were applied before submitting projects as a TPMP. Regarding the Executive Committee's criteria for project funding to accelerate phase out and/or to maintain momentum (Decision 40/7), the Secretariat noted that of the six criteria listed under this decision, only criterion 4 (i.e., countries for which project preparation has been approved and utilized) could apply to Namibia.

23. The Secretariat also noted that the level of CFC consumption in Namibia has been maintained at the same level since 1996, notwithstanding the various phase out activities so far implemented, and that the ODS licensing system will be in operation only in January 2004. In this regard, the Government of Germany was invited to consider submitting a proposal in accordance with Decision 31/48 to achieve only the 2005 and 2007 phase-out targets. In the future, when it has been demonstrated that the measures being taken through approved projects in Namibia are achieving the original results, the Government of Namibia could submit a programme for complete phase-out of CFCs.

24. Based on the above observations, the Government of Germany indicated that the Government of Namibia was fully aware of the preconditions for submitting a TPMP proposal. It was intended that relevant ODS regulations and the licensing system, applicable from 1st January 2004, would be approved prior to the 41<sup>st</sup> Meeting of the Executive Committee. Furthermore, the Government has opted for the implementation of the TPMP since mid-2002 and is fully confident that with the regulations in place, it will be able to meet all phase-out commitments on time. Furthermore, the Government is interested in developing a holistic and integrated plan for the phase out of all ODS used in the country and, therefore, the TPMP was developed.

25. Decision 31/48 was already in force at the time when the Government of Namibia opted for the preparation of a TPMP rather than a RMP update. Regarding Decision 40/7, the

Government of Germany said that in its view the TPMP for Namibia also meets criterion 2 (countries with low level consumption of MB).

26. The agreement between the Government of Namibia and the Executive Committee for the implementation of the TPMP will be finalized prior to the 41<sup>st</sup> meeting.

#### **RECOMMENDATION**

27. Pursuant to Decision 38/64 (funding of terminal CFC phase-out plans for LVC countries might be considered on a case by case basis), the TPMP for Namibia is submitted for individual consideration. The Executive Committee may wish to consider the project taking into consideration that all policy and cost issues have been resolved between the Government of Germany and the Fund Secretariat.