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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
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PROJECT PROPOSAL: ANGOLA

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

Refrigeration

- Implementation of the RMP: enforcement of regulations, training of customs officers, training of refrigeration service technicians, recovery and recycling, incentive programme for end-users, and public awareness

Germany

**PROJECT EVALUATION SHEET
ANGOLA**

SECTOR: Refrigeration ODS use in sector (2001): 121.7 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

Project Title:

- (a) Implementation of the RMP: enforcement of regulations, training of customs officers, training of refrigeration service technicians, recovery and recycling, incentive programme for end-users, and public awareness

Project Data	Refrigerant management plan
Enterprise consumption (ODP tonnes)	
Project impact (ODP tonnes)	103
Project duration (months)	60
Initial amount requested (US \$)	700,000
Final project cost (US \$):	
Incremental capital cost (a)	
Contingency cost (b)	
Incremental operating cost (c)	
Total project cost (a+b+c)	700,000
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US \$)	700,000
Cost effectiveness (US \$/kg.)	7.00
Counterpart funding confirmed?	Yes
National coordinating agency	National Ozone Unit
Implementing agency	Germany

Secretariat's Recommendations	
Amount recommended (US \$)	700,000
Project impact (ODP tonnes)	103
Cost effectiveness (US \$/kg)	7.00
Implementing agency support cost (US \$)	87,000
Total cost to Multilateral Fund (US \$)	787,000

PROJECT DESCRIPTION

Background

1. The Government of Angola has submitted a RMP project proposal for the consideration of the Executive Committee at its 39th Meeting.

ODS consumption

2. In 2002, a national survey on the consumption of ODS was conducted by the Government of Germany. Based on this survey, in 2001, about 120.7 ODP tonnes of CFCs were used in the country to service refrigeration equipment (mainly domestic refrigerators) and by small enterprises in the aerosol, foam and solvent sectors (10 ODP tonnes), with the following sectoral distribution:

Sector	Units	ODS	ODP tonnes
Domestic refrigeration:			
Domestic refrigerators	740,000	CFC-12	72.0
Domestic air conditioners	3,750	CFC-12	2.3
	18,750	HCFC-22	1.1
Industrial/commercial refrigeration:			
Commercial air conditioners	25	CFC-11	3.0
Large cold stores	65	R-502	12.0
		HCFC-22	6.0
Cold rooms, ice makers, bottle coolers	1,500	CFC-12	20.0
		HCFC-22	1.0
Mobile air conditioning:			
MAC units (older than 1995)	4,500	CFC-12	1.4
Other sectors:			
Aerosols, foam, solvents (SMES and informal sector)		CFC-12	10.0
Totals:		CFCs	120.7
		HCFCs	8.1

3. As reported in the Angola country programme, the civil war led to a significant decline of the country's industrial and agricultural sectors; therefore, there was a relatively low consumption of ODSs (including MB). However, it is expected that a growth in the national economy will increase the ODS consumption.

4. The current prices of refrigerants are as follows: US \$20/kg for CFC-11 and CFC-12; US \$25/kg for HFC-134a; and US \$27/kg for HCFC-22 (the high prices of refrigerants in Angola, was confirmed by the Government of Germany's consultants).

Policy framework

5. Angola's Environmental law includes regulations for the protection of the environment and its natural resources. However, no specific regulations for the control of ODS have yet been put in place.

6. The Government of Angola is proposing the establishment of legislation and a regulatory system to control imports of ODSs. The technical monitoring capacity will be improved to ensure the effective monitoring of the legal and technical provisions provided for under the Montreal Protocol. The National Directorate for Environment, of the Ministry of Fisheries and Environment, has been empowered to address issues related to the implementation of the Montreal Protocol. The Ozone Unit has been established under this Department.

Sub-projects in the RMP

7. The RMP consists of the following sub-projects:
- (a) Implementation and enforcement of regulations (US \$25,000): to draft and finalise ODS regulations, including a licensing/permit system establishing quotas for importers of ODSs; develop a refrigeration and air-conditioning policy approach; and adapt the international Customs Code Harmonisation System;
 - (b) Training of customs officers (US \$80,000): to train 200 customs officers in proper recognition of ODS and ODS-containing systems; modernise the statistical registration system to monitor and control imports of ODS and ODS-based equipment, and monitor ODS in accordance with Angola's commitments under the Montreal Protocol;
 - (c) Training in the refrigeration servicing sector (US \$160,000): to train trainers (20 trainers) and refrigeration servicing technicians (150 technicians every year) in good refrigeration servicing practices to reduce emissions of CFCs; introduce alternative refrigerants and improve the distribution channels for alternative refrigerants; and introduce recovery and recycling practices;
 - (d) Establishment of a recovery and recycling equipment network (US \$220,000): to establish a network of 100 recovery and recycling machines for servicing commercial and industrial refrigeration units and 25 MAC recovery/recycling machines, including ancillary equipment. Implementation of this sub-project will lead to the phase out of 8 tonnes of CFCs;
 - (e) Incentive programme for retrofit/drop-in for end-users (US \$125,000): to inform on possible retrofit of commercial refrigeration equipment, launch an incentive programme for retrofits and design maintenance plans for existing refrigeration systems. Implementation of this sub-project will lead to the phase out of 40 tonnes of CFCs;
 - (f) Implementation of a public awareness programme (US \$90,000): to promote the activities proposed in the RMP, mainly targeting the refrigeration technicians and end-users.

Targets, schedule and cost of the RMP

8. The total requested grant for the RMP project is US \$700,000 excluding agency support costs. The performance indicators are as follows:

Year	Target (ODP tonnes)	MP schedule (ODP tonnes)	Indicator(s) of achievement	Disbursement (US\$)
2003	120	120	-Drafted legislation -Involved stakeholders in phase-out process -Informed end users of ODS phase out -Initiated the training of trainers in good refrigeration servicing practice	180,000
2004	100		-Initiated training of customs officers -Trained 30% of refrigeration technicians -Initiated incentive and awareness programmes	320,000
2005	60	60	-Established legislation and drafted Eco-label system -Implemented effective import controls with quota system -Trained customs officials -Initiated recovery/recycling operations -Covered 25 commercial air conditioners in a containment programme -Trained 70% of refrigeration technicians	200,000
2006	30		-Substituted 10,000 refrigeration systems as a result of incentive programme -Established Eco-label system -Established mandatory R&R	
2007	18	18	-Trained 90% of refrigeration technicians -Recovered 40% of CFCs through the R&R operations	
2009	5		-Trained 100% of refrigeration technicians -Recovered all available CFCs	
2010	0	0		

SECRETARIAT'S COMMENTS AND RECOMMENDATION**COMMENTS**

9. The following issues were discussed with the Government of Germany after the review of the RMP project by the Fund Secretariat; the issues were addressed by the Government of Germany:

Submission of an RMP for Angola

10. At its 38th Meeting, the Executive Committee approved the Angola country programme (UNEP/OzL.Pro/ExCom/38/62). The country programme also included a Terminal Phase-out Management Plan (TPMP) for the phase-out of 120.7 ODP tonnes of controlled substances, at an estimated cost of US \$1,206,700, funding of which would be requested to the Executive Committee in 2003. Accordingly, the Government of Germany has initially submitted for the consideration by the Executive Committee at its 39th Meeting, the TPMP for Angola.

11. During the review process, the Secretariat pointed out that, on the basis of Decision 38/64(a) (i.e., requests for funding of terminal CFC phase-out plans for LVC countries might be considered on a case-by-case basis, provided that, among others, the country concerned has a licensing system in operation and has enacted or improved legislation to phase out ODS consumption), the proposal could only be considered as an RMP project, since the licensing system and ODS legislation were under development. The Secretariat also noted that the level of funding requested for the TPM was above that for similar projects in other LVC countries.

12. In view of the above issues, the Secretariat suggested to the Government of Germany to discuss with the Government of Angola the option of moving forward now with an RMP proposal instead of complete phase out plan. This would allow initial progress to be made towards meeting compliance targets and would provide the opportunity to review more closely the needs for a complete phase out of ODSs as the implementation of the RMP progresses. Subsequently, the Government of Germany decided to resubmit the proposal as an RMP project.

Issues raised at the 14th Meeting of the Parties

13. The Secretariat pointed out that the Parties to the Montreal Protocol noted that Angola was in non-compliance with its data reporting obligations under the Montreal Protocol and urged Angola to work closely with the implementing agency concerned to report the required data to the Ozone Secretariat as a matter of urgency, and to request the Implementation Committee to review the situation of Angola with respect to data reporting at its next meeting (Decision XIV/16).

14. The Government of Germany informed the Secretariat that the Ozone Office for Angola has already submitted the ODS consumption report to the Ozone Secretariat.

Issues related to ODS legislation in Angola

15. The RMP included a request for implementation and enforcement of regulations. The Secretariat pointed out that this activity would constitute double counting, taking into consideration that the level of funding approved by the Executive Committee for the preparation of the Angola country programme/RMP (US \$60,000), was double the amount that was approved in the past for similar activities. This was done on the understanding that relevant ODS legislation should be prepared at the time of the preparation of the phase-out plan to avoid any delays in the implementation of the sub-projects in the phase-out plan (as per Decision 31/48).

16. The Government of Germany informed the Secretariat that Ozone Unit has been restructured on several occasions, from one Ministry to another; therefore, during the preparation of the country programme/RMP, it was impossible to develop ODS regulations and related legal matters. For this task, an international consultant (Portuguese speaking) and national legal experts to draft ODS regulations including a licensing system, are urgently required. This activity would be done on the basis of UNEP's preparatory documents drafted under the Ozone Action Programme.

Issues related to the refrigeration servicing sector

17. Pursuant to Decision 38/38, the Secretariat pointed out that the implementation of the customs training programme, the recovery and recycling network, the incentive programme for retrofit/drop-in for end-users and the commercial air conditioning sub-project, could only commence once the legislation controlling CFC imports is in place.

18. Regarding the CFC recovery and recycling programme included in the RMP, the Secretariat pointed out that at its 38th Meeting, the Executive Committee decided that for CFC recovery and recycling programmes, the implementing agencies would examine the possibility of collaboration for leveraging additional financing (i.e., GEF) for acquisition of recovery and recycling units that could service both HFCs and CFCs (Decision 38/38).

19. The Government of Germany responded that this matter was discussed among their consultants, with GEF representatives and related European industry (manufacturers of recovery/recycling machines). The indication from GEF has been negative. HFC/CFC dual equipment is customised machinery and only procurement of large quantities (500 units or more) would be extremely cost effective.

20. The Government of Germany and the Secretariat also discussed the size of the recovery and recycling sub-project taking into account the total amount of CFC-12 potentially to be recovered (20 tonnes of CFC-12 used in air-conditioning and commercial refrigeration equipment and 12 ODP tonnes of R-502 used in large cold stores), the number of vehicles fitted with a CFC-MAC unit (4,500 vehicles) and their average age (at least eight years); and the current practice of servicing HFC-134a-based MAC units with CFCs. The Government of Germany indicated that there are a large number of small workshops servicing air cooling systems and MAC units in very old vehicles fitted with CFC-based MAC units. Based on additional information received from national and international consultants in Angola, the number of recovery machines would be higher than the number requested in the project (GTZ would seek additional funding outside the Multilateral Fund, for procurement of more machines, if needed). It is also to be noted that the extremely high prices for CFCs makes recycling operations very attractive.

RECOMMENDATION

21. The Fund Secretariat recommends blanket approval of the projects at the funding level indicated below, on the understanding that implementation of the customs training programme, the recovery and recycling network, the incentive programme for retrofit/drop-in for end-users and the commercial air conditioning sub-project would only commence once the legislation controlling CFC imports is in place.

22. Approval of Angola’s RMP 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 Angola.

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
	Implementation of the RMP: enforcement of regulations, training of customs officers, training of refrigeration service technicians, recovery and recycling, incentive programme for end-users, and public awareness	700,000	87,000	Germany
