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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-eighth Meeting
Rome, 20-22 November 2002

PROJECT PROPOSAL: CAMEROON

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

Refrigeration:

• Refrigerant management plan to phase out the use of ODS in the refrigeration-servicing sector (includes: training in good refrigerant management practices, training of customs officers, and recovery and recycling programme) first tranche	UNIDO

PROJECT EVALUATION SHEET
CAMEROON

SECTOR: Refrigeration ODS use in sector (2001): 214.1 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

Project Title:

(a) Refrigerant management plan to phase out the use of ODS in the refrigeration-servicing sector (includes: training in good refrigerant management practices, training of customs officers, and recovery and recycling programme) first tranche

Project Data	**Refrigerant management plan**
Enterprise consumption (ODP tonnes)	
Project impact (ODP tonnes)	112.6
Project duration (months)	36
Initial amount requested (US $)	522,982
Final project cost (US $):	
Incremental capital cost (a)	
Contingency cost (b)	
Incremental operating cost (c)	
Total project cost (a+b+c)	522,982
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US $)	150,000
Cost effectiveness (US $/kg.)	4.64
Counterpart funding confirmed?	
National coordinating agency	National Ozone Unit
Implementing agency	UNIDO

Secretariat's Recommendations	
Amount recommended (US $)	150,000
Project impact (ODP tonnes)	112.6
Cost effectiveness (US $/kg)	4.64
Implementing agency support cost (US $)	19,368
Total cost to Multilateral Fund (US $)	169,368

PROJECT DESCRIPTION

Refrigeration servicing sector

1. In 2001, CFC consumption in Cameroon was estimated at 364.1 ODP tonnes. Of this amount, 144.7 tonnes were used for servicing refrigeration equipment (mainly domestic refrigerators where 103.3 tonnes were used) and 78.4 tonnes were used for manufacturing commercial refrigeration equipment. The remaining CFC consumption of 141 tonnes was used in flexible foam applications (this consumption has been addressed through two investment projects approved for Cameroon in 1997 that were still under implementation).

2. According to data reported by the Government of Cameroon under Article 7, between 1997 and 2001, CFC consumption increased from 260 to 364 tonnes; the increase was attributed to the development of the fishing and agriculture sectors and an increase in the demand for domestic refrigeration appliances (new or second hand).

3. Often, the refrigeration and air-conditioning equipment available on the market is comprised of repaired second hand equipment. Low standards of maintenance and poor quality repair activities result in relatively high consumption of refrigerants per unit.

4. Although legal imports of ODSs are well-controlled, illegal imports are still significantly used in servicing refrigeration equipment. It is also recognised that quantities of CFC-12 (in containers of 30 and 240 kg) and CFC-based equipment are illegally entering the country. As of today, the newly introduced control measures have not been entirely successful in dealing with the informal sector the size of which is not precisely known, despite the Government's efforts. The RMP includes capacity building activities to resolve these issues.

5. It is estimated that approximately 3,900 people are employed in the refrigeration and air-conditioning sector, including activities such as distribution, installing and maintenance of new equipment, repair and sale of second-hand appliances and maintenance of existing commercial and industrial refrigeration equipment. However, the number of technicians regularly working in the domestic and commercial refrigeration and air-conditioning maintenance and repair sector may be as high as 1,000, and only around 10 per cent of them have proper refrigeration training. Maintenance and repair are therefore generally of a low standard and relatively large emissions of ODS into the atmosphere are generated during these operations.

6. Three categories of operatives have been defined within the framework of the RMP: small and medium enterprises with 4 to 80 employees; small licensed workshops with 1 to 3 employees (semi-formal); and the informal sector. There are about 60 licensed small and medium sized enterprises employing a total of 1,400 technicians. The remaining 2,500 technicians are employed in the semi-formal and informal sector. In general, small workshops and the informal sector employ technicians who have been trained on-the-job, normally using very rudimentary equipment and very often no leak detector.

Regulatory framework

7. Drafting and putting into place the legal and regulatory framework for the control and monitoring of ODSs is co-ordinated by the Ozone Unit, in conjunction with the Ministry for the Environment. The primary activities include development of ministerial decisions introducing import restrictions of ODS and ODS-based equipment. These restrictions have encouraged technicians to improve their servicing skills, with the consequence of extended equipment life in some case by as a much as 5 years.

8. In addition, the Ozone Unit will develop and implement future measures in the context of the RMP, including:

(a) Monitoring effectiveness of current regulations and processes for improving their implementation, particularly in the informal sector and in the context of illegal imports;

(b) Certification of refrigeration technicians;

(c) Introduction of tax incentives to promote recovery and recycling activities;

(d) Processes for encouraging all stakeholders to promote non-ODS technologies and substances.

Activities proposed in the RMP

9. The RMP includes the following sub-projects:

(a) Training of customs officers in the identification and control of ODS imports (US $67,650), to assist in the implementation of ODS import regulations and enhance the control of illegal imports;

(b) Training programme for refrigeration technicians (US $134,157), to enhance the servicing skills of refrigeration technicians and to establish a certification programme; and

(c) Establishment of a recovery and recycling scheme (US $321,175), comprising 60 recovery machines and 10 recycling machines with ancillary equipment, 1,120 refrigerant recovery bags and 100 service kits, and demonstration workshops for service technicians in refrigerant recovery operations.

10. The domestic refrigerator and freezer company, FAEM (converted to non-CFC technologies with assistance from the Multilateral Fund) has offered to provide a suitable building for the recycling centre. FAEM operates a nation-wide network of distributors for the sales of its products and also has 60 refrigeration servicing shops. The central facility will be controlled by the Ozone Unit, which will oversee the operation of the recycling facility and monitor and record volumes of CFCs recovered and recycled. FAEM will be responsible for the security of all RMP equipment, spare parts, maintenance and repairs.

11. Also, UCE (the other manufacturer of domestic refrigerators and freezers converted to non-CFC technologies) will also participate in the recovery and recycling project (UCE has 10 service shops in the country).

Performance agreement

12. The RMP project includes a draft performance agreement to be issued by the Minister of Industrial and Commercial Development, committing to achieve, without further requests for funding, at least the 50 per cent reduction step in 2005 and the 85 per cent reduction step in 2007 as stipulated in the Montreal Protocol; to restrict imports as necessary to achieve compliance with the reduction steps; that the current and expected future consumption of all sub-sectors including the informal sector, small and medium-sized enterprises and mobile air conditioning, has been taken account of in the RMP; and that the Government strategy for phasing out ODS includes adequate provision for monitoring and reporting on progress.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Compliance with the Montreal Protocol

13. The Secretariat pointed out that Cameroon was determined to be in non-compliance with the freeze of Annex A Group I consumption as determined by the data reported in pursuant to Article 7 of the Montreal Protocol. Subsequently, the Parties to the Montreal Protocol at their 13th Meeting requested "that Cameroon submit to the Implementation Committee a plan of action with time-specific benchmarks to ensure a prompt return to compliance". The Parties also decided "to closely monitor the progress of Cameroon with regard to the phase-out of ozone-depleting substances…". Also through this decision, the Parties "caution Cameroon, in accordance with item B of the indicative list of measures (of non-compliance procedure), that in the event that the country fails to return to compliance in a timely manner, the Parties shall consider measures, consistent with item C of the indicative list of measures. These measures may include the possibility of actions available under Article 4, such as ensuring that the supply of CFCs (that is the subject of non-compliance) is ceased and that importing Parties are not contributing to a continuing situation of non-compliance" (Decision XIII/23).

14. In this regard, UNIDO indicated that on 18 April 2002, the Government of Cameroon sent a letter to UNIDO and the Secretariat requesting technical and financial assistance for the implementation of the RMP project in line with Decision 31/48 and agreed to comply with the phase-out obligation under the Montreal Protocol. Furthermore, the UNEP Regional Network Co-ordinator for Africa informed UNIDO, that UNEP (through the CAP) will assist the Government of Cameroon to prepare a compliance strategy to set phase out targets and formulate a clear plan of action. The strategy will be submitted to the 14th Meeting of the Parties.

15. The Secretariat sought a clarification for the increase in CFC consumption in the country between 1997 and 2001. UNIDO indicated that due to a misunderstanding, the Government of Cameroon did not include in their 1997 and 1998 reports to the Ozone Secretariat, the CFCs

which were used by the refrigeration and foam enterprises that were under conversion to non-CFC technologies. However, data reported from 1999 to 2001, included the CFC consumption associated with these projects. UNIDO also reported that the Government of Cameroon has confirmed that no CFCs are currently used by the refrigeration and foam enterprises, and, therefore, it was expected that the actual consumption of CFCs for 2002 would be about 220 tonnes.

16. The Secretariat pointed out that the amount of CFCs used for the production of commercial refrigerators (over 80 tonnes) was very high, taking into consideration the size of the population (15.8 million), the average size of a family (7 persons/family), the urban population rate (50 per cent) and the electrification rate (46 per cent). UNIDO indicated that the data included in the RMP project was based on the survey conducted by a national consultant; it appears that the manufacturers of commercial refrigerators are producing display cabinets, upright refrigerators, chest freezers. The conversion of these manufacturers is not a part of the RMP project.

17. The Secretariat also indicated that considering the large number of technical colleges in the country (280 units), where about 30 per cent of the refrigeration technicians have been trained, it would be advisable to fully utilise local expertise in the implementation of the RMP rather than international experts (for which US $45,000 was requested). UNIDO indicated that the request for international consultants was for training the trainers in good service practice, training the customs officer and technician in the use of the recovery and recycling equipment; such experts were not available in the country.

RECOMMENDATION

18. The Fund Secretariat recommends approval in principle of US $522,982 as the total funds that will be available for Cameroon to achieve the phase out of 112.6 ODP tonnes of CFCs by 2007, representing 85 per cent of the CFC consumption used in the refrigeration servicing sector.

19. The Fund Secretariat also recommends blanket approval for the first tranche of the RMP project at the funding level indicated in the table below, with the understanding that a subsequent year's funding will not be disbursed until the Executive Committee has favourably reviewed the prior year's progress report and that the recovery and recycling component will not commence until the price of CFC-12 increases to a level equivalent to the local market price of non-ODS refrigerants.

	Project Title	Project Funding (US$)	Support Cost (US$)	Implementing Agency
(a)	Refrigerant management plan to phase out the use of ODS in the refrigeration-servicing sector (includes: training in good refrigerant management practices, training of customs officers, and recovery and recycling programme) first tranche	150,000	19,368	UNIDO

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