UNITED NATIONS

EP

United Nations Environment Programme

Distr.
LIMITED

UNEP/OzL.Pro/ExCom/35/28
4 November 2001

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-fifth Meeting
Montreal, 5-7 December 2001

PROJECT PROPOSAL: BAHAMAS

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

Refrigeration:

- Terminal phaseout management plan — World Bank

PROJECT EVALUATION SHEET
BAHAMAS

SECTOR: Refrigeration ODS use in sector (2000): 65.9 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

Project Title:

(a) Terminal phaseout management plan

Project Data	**Multiple-subsectors**
Enterprise consumption (ODP tonnes)	
Project impact (ODP tonnes)	68.00
Project duration (months)	72
Initial amount requested (US $)	750,000
Final project cost (US $):	
Incremental capital cost (a)	
Contingency cost (b)	
Incremental operating cost (c)	
Total project cost (a+b+c)	
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US $)	750,000
Cost effectiveness (US $/kg.)	11.03
Counterpart funding confirmed?	
National coordinating agency	Bahamas Environment and Science Technology Commission
Implementing agency	World Bank

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

PROJECT DESCRIPTION

Terminal phaseout management plan

1. The Government of Bahamas submitted a terminal phase-out management plan (TPMP) for the consideration of the Executive Committee at its 35th Meeting. Through this Plan, the Government of Bahamas is requesting technical assistance to achieve a complete phase out of its ODS consumption by the end of 2007.

2. The total cost requested for implementation of the Plan is US $750,000. The Executive Summary of the Plan, as submitted by the World Bank is attached to this document as Annex I.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

3. The Secretariat reviewed the ODS consumption data for Bahamas from different official sources of information (i.e.: data reported to the Ozone Secretariat under Article 7, progress report on the implementation of the country programme for Bahamas submitted to the Fund Secretariat, and data reported in the Plan) and found some data discrepancies. After a review of the data, the World Bank confirmed that the CFC baseline for Bahamas is 64.9 ODP tonnes and the 2000 ODS consumption is 65.9 ODP tonnes. The Secretariat was also informed that the Government of Bahamas is aware of the consumption levels and is taking immediate steps to control ODS imports so that compliance with the freeze can be achieved in 2002.

4. The Executive Committee approved at its 23rd Meeting (November 1997), the RMP project for Bahamas with the following three sub-projects: a training programme in good practice in refrigeration (UNEP, US $50,000); a training programme in monitoring and controlling of ODSs (UNEP, US $26,500); and a national programme for recovery and recycling of refrigerants (UNDP, US $151,400).

5. The Secretariat informed the World Bank that no information was included in the TPMP regarding the status of implementation of the RMP project (by its Decision 33/13, the Executive Committee decided that any proposal to update RMPs should be accompanied by a progress report form the implementing agencies on the status of work being undertaken in the sub-projects approved within the RMP). Subsequently, the World Bank provided the following information regarding the status of the implementation of these sub-projects:

(a) Training programme in good practice in refrigeration (under UNEP's work programme). In November, 1998, a total of 28 technicians were trained as trainers, who will train the remaining technicians through two workshops.

(b) Training programme in monitoring and controlling of ODSs. Implementation of this programme has been delayed since import control regulations were not in place. The licensing system has been drafted and is expected to enter into force in 2002. In anticipation of the final rule, the Bahamas' Environment and Science

Technology Commission entered into an agreement in 2001 with an international consultancy to expedite implementation of the training programme (currently scheduled for February 2002). From 2002, imports of CFC-based equipment would be allowed only on an exceptional basis and would not be permitted for MACs or any ordinary consumer products. Since most of the automotive and refrigeration market is supplied from the United States, this restriction is not expected to cause any problem.

(c) Recovery and recycling programme in the commercial/industrial refrigeration sector (under UNDP's work programme). Implementation of this programme commenced in March 1999 with training and demonstration workshops for service technicians in recovery and recycling operations. Fifty recovery machines were distributed to stationary-sector refrigeration service companies, and 2 recovery machines were installed at Bahamas' Technical and Vocational Institute facilities in Nassau and Freeport.

6. The Secretariat noted that through the recovery and recycling project, over 12 ODP tonnes of CFCs were expected to be recovered and recycled; additional savings in CFC consumption were also expected to be achieved through the training programme of refrigeration technicians. However, from the consumption data reported in the TPMP, the proposed reductions in CFC consumption in the RMP have not yet been achieved.

7. The Secretariat questioned the eligibility and the sustainability of the proposal to retrofit MAC units to non-CFC refrigerants. The recommendations in the MAC sector, adopted by the Executive Committee at its 12th Meeting, indicated that countries be encouraged to pursue a more aggressive recycling and reclamation programme; a comprehensive MAC recovery/recycling programme is not yet fully operational in Bahamas. In this regard, the World Bank indicated that the TPMP will establish the first operational CFC recovery and recycling project in the country focused on the mobile sector. CFC recycling operations will be carried out on most of the vehicles equipped with a CFC-based MAC unit. It will ensure that leak repairs are carried out before refilling with CFC and that CFC is not put into systems that are already based on HFC-134a refrigerants. It is proposed that the MAC recycling programme will reach about 80 to 90% of the existing CFC-based MAC units in the country. MAC retrofits would be carried out only on CFC-based vehicles which owners consider the remaining life of vehicles long enough to justify the total costs and after comparing the costs of continuing repair of CFC units. MAC retrofits are expected to contribute about 40 to 50% of the CFC reductions needed to meet the 2005 target.

8. The World Bank also indicated that the retrofit sub-projects in commercial refrigeration/air conditioning installations will be the subject of recovery efforts for their CFC charges prior to installing the new CFC-free refrigerant. The recovered CFCs will be contained and made available to service technicians for future CFC repairs, particularly in household units and other small refrigeration systems (where the policy will be to extend the life of existing equipment). From 2002 until the end of 2007, the amounts of CFCs for repair refrigeration systems will be supplied by imports or through the refrigerant recovery and recycling programmes (commercial/industrial refrigeration and MAC). After 2007, CFCs will be supplied only from recovery/recycling operations.

9. The World Bank also informed the Secretariat that the proposed funding level of US $488,000 requested for the retrofit programme (out of a total cost estimated at US $4.5 million for retrofitting of all CFC-based systems in the Bahamas) was based on the cost estimates of retrofitting/repair/replacement by local service experts, considering the size and age of the refrigeration systems and that most owners would likely opt for extending the life of the existing facilities for as long as possible.

10. The Secretariat and the World Bank discussed issues associated with the number of additional recovery and recycling units requested under the TPMP and the project management costs (US $150,000) representing 20% of the total project cost. Subsequently, the World Bank agreed to reduce the number of additional equipment and the size of the project management, with a corresponding cost adjustment (a total reduction of US $25,000).

RECOMMENDATION

11. This project is submitted for individual consideration. The Secretariat noted that the Executive Committee approved the funding for the preparation of the TPMP more than a year prior to the adoption of Decision 31/48 (July 2000), and that the funding being requested (US $725,000 as revised) is more than 5 times the amount equivalent to the 50% additional funding of the approved elements of Bahamas' RMP (Section A(b) of Decision 31/48 stipulates that additional funding shall not exceed 50% of the funds approved for the original RMP).

Annex I

Summary of Terminal Phaseout Management Plan for the Bahamas (as submitted by the World Bank to the 35th Meeting of the Executive Committee)

1. The TPMP will employ a combination of policy-based actions, a locally managed action plan and performance based contracts to implement and monitor progress. The action plan covers 2002-2007, with zero consumption of CFC targeted by January 1, 2008. A series of three Action Programs (each covering 24 months) of which the first one has been agreed while the two following have been broadly agreed between the Bank and Bahamas, will provide the overall operational and implementation arrangements, relying principally on performance-based contracts for specific phase out actions. The Action Programs provide performance-based indicators for each period, including the annual reduction in CFC imports and consumption that are to be achieved. The First Action Program is included at the end of Chapter VII. The main policy actions are an overall ODS control and phase out policy and an import registration and quota system that will establish annual limits for imports of CFC, and thus limit domestic consumption. Additional policy actions will be considered as needed to ensure that the Bahamas meets the objectives of the TPMP and its obligations under the Montreal Protocol.

2. In 2000, the Bahamas reported consumption of 65.9 tons CFC, or about 12 percent over its 1999 freeze level target. All of the CFC consumption is in the refrigeration and air conditioning sectors, with about 90 percent being in mobile air conditioning (MAC). The TPMP provides an action plan that will gradually reduce CFC imports and consumption, starting from 2002, to the following levels:

Exhibit ES-1. TPMP Baseline and Emission Reductions (ODP Tons, Annex A Group I – CFCs)

Year	Consumption	Targeted Annual Reduction	MP target
1999	54	-	64.9
2000	66	-	
2001	-	-	
2002	58	8	
2003	48	10	
2004	36	12	
2005	25	11	32.4
2006	14	11	
2007	6	8	9.7
2008	0	6	

Note: Data for 2001 are not known. Efforts to bring Bahamas into compliance with the freeze can only show results by 2002; so no target for 2001 is given.

3. The immediate target is to bring Bahamas into compliance with the MP 1999 freeze level target by 2002 and with subsequent reductions to be below the intermediate targets in 2005 and 2007; with total phase out occurring in 2008. (This is one year later than given in the original Bahamas ODS Country Program.)

4. The total cost of this phase out program to the Bahamian economy is conservatively estimated to be about US$4.5 million as described in Chapter VI, with most costs being borne by final users and represent retrofit of a large portion of eligible equipment and systems prior to the end of their useful life. A portion of equipment will be retired after reaching end of useful life and any replacement costs for this equipment are not included.

5. It is recognised that the Multilateral Fund cannot provide full funding for all incremental costs, so the request for funding support has been reduced to the following:

Exhibit ES-2. Phaseout Costs and Requested Funding		
Cost Component	**Actual costs (US$)**	**Funding requested (US$)**
Retrofitting		
Commercial refrigeration Food and fishing industry	1,500,000	282,000
MAC sector (20,000 cars)	3,000,000	206,000
Recycling		
10 MAC Recycling Workshops		40,000
13 Refrigeration Workshops		52,000
Technical Assistance Component		
Training in the refrigeration and MAC sector		20,000
Project management costs		150,000
Total Costs		750,000

6. The estimated annual cash flow for proposed funding is shown in the following table:

Exhibit ES-3. Annual Project Cash Flow ($)						
2002	**2003**	**2004**	**2005**	**2006**	**2007**	**Total**
130,000	160,000	160,000	140,000	120,000	40,000	750,000

7. The typical local phase out action would be expected to show results in terms of reduced (or eliminated) CFC consumption about one year later. Thus, the funds flow is concentrated in the earlier years, and there is a one year lag built into the action plan under the TPMP between receipt of funding at the local level and in achieving CFC phase out results.

8. These costs represent the minimum level to cover local management and technical assistance needed to implement and monitor the program, and provide some support for a portion of actual local conversion/retrofit and recycling costs.

9. The refrigeration sectors (excluding MAC) have quite small CFC consumption. It is generally recognised that small scale actions, such as represented by the Bahamas case would justify considerably higher eligible costs due to dis-economies of scale for such small installations and retrofits. A detailed description and costs for the proposed Refrigeration Sectors Phaseout Project are given in Chapter VI.

10. The costs for the MAC Sector Recycling and Retrofit Project were determined from estimates of 1) costs for establishing a reasonable recycling/recovery program for CFCs and 2) actual retrofit costs for MAC units (not including compressors, condensers, etc.) for the number of vehicles that are likely to be retrofitted over the period of the TPMP and 3) costs of recycling program. This cost level was then intentionally reduced further to much less than full eligible retrofit costs as a means of reducing the funding request. A detailed description and costs for the proposed MAC CFC Recycling and Retrofit Project are given in Chapter VI.

11. The proposed action plan and costs are consistent with Executive Committee (EXCOM) guidelines as they apply to terminal phase out projects, retrofitting of end users, recycling and retrofit actions and to small country with low volume consumption and SME considerations.

12. The TPMP will be implemented through the operational and management arrangements given in Chapter VII. The key approach to implementation and monitoring will be through performance- based contracts and performance- based indicators covering policy actions, management, technical assistance and phase out actions. The Bahamas and the Bank will agree on a series of three Biannual Action Programs and each will give the performance targets and indicators to be achieved and reported. The two tables below outline the main project parameters and indicators:

Exhibit ES-4. Main Targets and Schedule and Budget for Implementing the TPMP

Program	Timeline		ODS Consumption (mt)		ODS Reduction (mt)	Funding requested (US$)
	Start	End	Start	End		
First Biannual Program	Jan 2002	Dec 2003	65.9	48	17.9	$290,000
Second Biannual Program	Jan 2004	Dec 2005	48	25	23	$300,000
Third Biannual Program	Jan 2006	Dec 2008	25	0	25	$160,000
					65.9	$750,000

Exhibit ES-5. Tentative Action Plan and Performance Indicators

	Tentative Actions	Performance Indicators
First Biannual Program	Policies: Training Recycling/recovery End user retrofit Import/export control and monitoring Achieve agreed reduction in CFC consumption Agree on detailed scope of Second Biannual Program	Date of Effectiveness Training conducted Contracts signed Contracts signed Quotas issued and progress reports from Customs Progress reports from NOU/BEST Agreement by Bank and BEST
Second Biannual Program	Policies: Training Recycling/recovery End user retrofit Import/export control and monitoring Achieve agreed reduction in CFC consumption Agree on detailed scope of Third Biannual Program	Date of Effectiveness Training conducted Contracts signed Contracts signed Quotas issued and progress reports from Customs Progress reports from NOU/BEST Agreement by Bank and BEST

Third Biannual Program	Policies: Recycling/recovery End user retrofit Import/export control and monitoring Achieve agreed reduction in CFC consumption	Date of Effectiveness Contracts signed Contracts signed Quotas issued and progress reports from Customs Progress reports from NOU/BEST

****