UNITED
NATIONS

EP

United Nations
Environment
Programme

Distr.
LIMITED

UNEP/OzL.Pro/ExCom/25/23
29 June 1998

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Twenty-fifth Meeting
Montreal, 29-31 July 1998

WORLD BANK WORK PROGRAMME AMENDMENTS

COMMENTS AND RECOMMENDATIONS FROM THE FUND SECRETARIAT

1. The World Bank requested funding for the activities indicated in Table 1, amounting to US $765,010 for amendments to its 1998 work programme.

Table 1: 1998 Work Programme Amendment and Corresponding Funding Levels

Country	In Business Plan	Activity/Project	Type	Comple-tion Date	Amount Requested (US $)	Amount Recommende d (US $)
Argentina	Yes	Project preparation for methyl bromide (citrus and cotton) demonstration project	PRP	Dec 1998	50,000	-
Chile	Yes	Project preparation for the continuation of the auction scheme in Chile	PRP	Dec 1998	80,000	-
Chile	Yes	Renewal of Institutional Strengthening Project	INS	Oct 2000	145,000	143,500
Tunisia	Yes	Renewal of Institutional Strengthening Project	INS	Dec 1999	187,000	186,700
Turkey	Yes	Project preparation for methyl bromide	PRP	Dec 1998	50,000	-
Turkey	No, but investment project is in the contingency list	Project preparation for commercial refrigeration terminal umbrella project	PRP	Dec 1998	120,000	Defer
Uruguay	Yes, in Contin-gency List	Project preparation	PRP	Dec 1998	45,000	-
Sub-Total					677,000	330,200
Agency support		(13%)			88,010	42,926
Total					765,010	373,126

PROJECT PREPARATION

2. The Secretariat reviewed the World Bank's work programme amendments in the context of past approvals by the Committee of activities in the countries listed in the above table, in the light of decision 23/51, "Criteria for Project Preparation" and other relevant decisions of the Executive Committee.

Methyl bromide project preparation

3. Both project preparation requests for methyl bromide demonstration projects were presented to the Committee at its last meeting and the Committee decided not to approve them because of insufficient information (decision 24/17).

4. Additional information was provided for Argentina. The Bank plans to demonstrate methyl bromide alternatives for cotton and citrus fumigation. Cotton and citrus are not in the priority list of crops for soil fumigation. The Bank is submitting its request based on decision 24/18 that defers requests for 15 months for uses not included in the priority list, except if methyl bromide consumption is growing. The Bank indicates that methyl bromide consumption in Argentina has grown by 50 per cent in 1997, while the data reported to the Fund Secretariat by the Government of Argentina indicated an increase in methyl bromide consumption of 8 per cent between 1996 and 1997.

5. Moreover, decision 23/51 states that project preparation should be considered on a case-by-case basis if the request is from an agency whose rate of disbursement is low in the country for which the request is made. The Bank has disbursed 14 per cent of funds approved in Argentina over a year and a half ago (projects approved through 1996).

6. Although the Bank's request to the Executive Committee does not provide any additional information about the project preparation for methyl bromide in Turkey, the Bank indicated to the Secretariat that the Government of Turkey has provided the Bank additional information. The Bank indicated that the project preparation request for Turkey will prepare demonstration projects for non-methyl bromide soil fumigation alternatives for strawberries and eggplants and demonstration projects for replacing methyl bromide use in fumigating dried apricots, raisins and figs for storage purposes. Methyl bromide use in these sectors has increased substantially during the past few years according to the World Bank.

7. This additional information provided by the Bank for Turkey indicates that it intends to prepare projects that do not correspond to the list of priority crops and it does not specify consumption figures against which claims of growth in the sector can be based. It should also be noted that UNIDO has submitted a methyl bromide demonstration project to this meeting for Turkey concerning tomatoes, cucumbers, and carnation flowers.

Project preparation for the continuation of the auction scheme in Chile

8. The requested activity should be considered in the light of the following:

- the funds would be used to support the government's request for assistance from legal and economic advisors to prepare regulation and supporting analyses necessary for the approval of restrictions for the use and import of ODS
- the Executive Committee has already approved US $502,243 in technical assistance for public awareness, US $217,876 for training for the auction programme, and US $354,407 for institutional strengthening
- the Executive Committee has already approved US $360,671 for the World Bank to prepare two auction investment programmes representing a total value of US $1.4 million for Chile (one in 1992 and one in 1996)
- project completion reports have not been received for all of the sub-projects approved in the first auction programme
- the project approved in 1996 is still underway and the completion of the auction is scheduled for 31 July 1998

9. The Executive Committee may wish to consider additional funding for another phase of the Chilean auction programme once all of the project completion reports have been received for the programmes approved to-date.

10. Annex I of the Bank's Work Programme Amendment indicates that the Bank allocated US $30,000, or 3 per cent of the US $1 million approved for the project for the Bank's financial intermediary. While a charge of 2 to 3 per cent was applied to project funds approved for the World Bank up to the 17th Meeting, this practice was discontinued since the 17th Meeting when the Bank applied the agency support cost of 13 per cent to all activities approved for it. Therefore, the Committee should request the World Bank to reinstate US $30,000 to the auction programme and the cost of the Bank's financial intermediary should come from the Bank's agency fees.

Project preparation for commercial refrigeration terminal umbrella project in Turkey

11. The request for Turkey is for the preparation of an umbrella project which will cover what appear to be very low-consuming enterprises including those involved in servicing (800-2000 enterprises). The Executive Committee has approved 11 refrigeration projects including three recovery and recycling projects valued at US $9.5 million to phase out 1,240 ODP tonnes in Turkey. Four of these projects are for the commercial refrigeration sector. This request should be considered in the light of the Executive Committee's consideration of the paper on umbrella projects submitted to this meeting.

Project preparation in Uruguay

12. Annex II of the Bank's Work Programme Amendment presents the results of the Market Assessment Study of Remaining ODS Uses in Uruguay. The report indicates that Uruguay will easily meet the 1999 freeze target and is concerned with meeting its subsequent targets in 2005 and 2010. The report's main conclusion is that future ODS consumption will be driven primarily by the residual demand for ODS resulting from the growing stock of refrigeration equipment.

13. At its 23rd Meeting, the Executive Committee approved US $30,000 for UNEP to develop a refrigerant management plan (RMP) for Uruguay. The project is planned to be completed by November 1998. RMPs are expected to address the country's plan for the CFC servicing sector which the Market Assessment indicates as the driving force for future ODS consumption. The Secretariat recommends that the Executive Committee should consider the completed RMP for Uruguay before determining whether or not additional activities of the Bank are warranted.

INSTITUTIONAL STRENGTHENING

14. Two requests for renewal of the institutional strengthening projects (2-year period) have been submitted by the Governments of Chile and Tunisia. The requests followed Executive Committee's decisions on renewal of institutional strengthening projects (Decisions 19/29 and 24/23). The two requests were accompanied by requested comprehensive progress reports and detailed action plans.

15. A summary of the progress report and the plan of action for the next two-year period for the two institutional strengthening requests are presented below:

Chile renewal of institutional strengthening

Summary of the Project and Country Profile	
Implementing Agency:	World Bank
Amount originally approved	US $215,200 (Jun 92 - Jun 96)
Second approval (six months)	US $143,500 (Oct 96 - Nov 98)
Amount requested for renewal:	US $143,500
Date of last disbursement of funds	December 1997
Date of approval of country programme	June 1992
ODS consumption reported in country programme (1989), (ODP Tonnes)	1,055.1
Latest reported ODS consumption (1996) (ODP tonnes)	1,164.0
Amount approved for projects (US $)	3,641,463
Amount disbursed (as at December 1997) (US $)	1,574,340
ODS to be phased out (tonnes ODP)	534
ODS phased out (as at December 1997) (tonnes ODP)	110

Progress report

16. The following non-investment activities have been approved and funded by the Executive Committee:

		US $
(a)	Country programme preparation, June 1991	121,166
(b)	Implementation of a sector specific training programme, June 1992	122,876
(c)	Recovery & recycling programme at Central de Servicios Tecnicos (CST), June 1992	120,000
(d)	Bromosorb technology in commodity fumigation, December 1994	317,000
(e)	Public awareness programme, June 1992	361,000
(f)	Ozone seal programme, June 1992	8,000

17. The main achievements reported in the progress report include preparation of rules, regulations and criteria to be used in the auctioning system. Five projects were presented, for the elimination of 62.6 tonnes ODS, with a cost-effectiveness of US $6.21/kg ODS eliminated. As of 15 May, 11 projects are in the pipeline to eliminate 310 tonnes (US $9.4/kg) and three more projects are in the early stage of preparation, which would account for an additional 30 tonnes. Methyl bromide activities have also been developed and CONAMA has decided to prepare a proposal for the legal regulatory framework to be discussed during the second half of 1998 to include import prohibitions and to advance the phase-out to the year 2000 instead of 2010. An international workshop was prepared by the Ozone Team and took place in Santiago in March 1997.

Plan of Action (November 1998 - November 2000)

18. The Plan of Action includes selection, review and evaluation of proposals submitted to the next auction; identification of new ODS-using companies as potential participants in the auction programme; evaluation of financial solvency, technical and economic feasibility of firms submitting bids to the auction; preparation of subgrant agreements with selected enterprises; and monitoring of the implementation of projects including equipment disposal. In preparing a regulatory framework, coordination with customs authority and the adoption of a license system for controlling the import of ODS has commenced and controlled substances have been incorporated into the dangerous substance listings of the Ministry of Health.

Tunisia renewal of institutional strengthening

19. The Government of Tunisia is submitting a request for the renewal of the institutional strengthening project for a period of one year.

Summary of the Project and Country Profile	
Implementing Agency:	World Bank
Amount originally approved:	US $280,000 (Oct 92 -Oct 95)
Amount requested for renewal:	US $186,700
Date of last disbursement of funds	May 1998
Date of approval of country programme	May 1996
ODS consumption reported in country programme (1994), (ODP Tonnes)	526.4
Latest reported ODS consumption (1996) (ODP tonnes)	1,011.1
Amount approved for projects (US $)	US $5,429,134
Amount disbursed (as at December 1997) (US $)	US $2,873,258
ODS to be phased out (tonnes ODP)	743
ODS phased out (as at December 1997) (tonnes ODP)	60

Progress report

20. The following non-investment activities have been approved and funded by the Executive Committee:

		US $
(a)	Maintenance of domestic, commercial and industrial refrigeration systems, June 1992	390,000
(b)	Country programme preparation, March 1993	8,200
(c)	Technical assistance for development of HFC-134a based domestic refrigerators, October 1992	360,000
(d)	Country programme preparation, June 1991	8,200

21. The main achievements reported in the progress report include implementation of 30 projects covering the most important CFC users (5 projects have been completed) for total ODS expected to be phased out of about 746 tonnes; control of CFC use and import; exchange of information and coordination between all concerned parties; and public awareness and dissemination of information. The main responsibilities and activities carried by the 15 members representing concerned ministries (NOP) have been guidance to the OPIU dealing with implementation of the country programme, project identification, priority action and follow-up.

Plan of Action (January 1998 - December 1999)

22. The Plan of Action aims at consolidating the achievements of the Ozone Unit, which entails close supervision of ongoing projects, follow-up on new activities already approved by the Executive Committee (November 1997), and preparation of new projects to phase out remaining ODS; preparation of a regulatory framework to better control the import and use of CFCs; training programmes will continue, focusing on maintenance practices, and dissemination of new techniques to be implemented together with ongoing projects.

RECOMMENDATION

The Executive Committee may wish to consider:

1. the eligibility of the requested funding for the Chilean auction programme, and to request the World Bank to submit project completion reports on the projects approved at the 7th and 19th Meeting of the Committee; and to reinstate the US $30,000 (allocated to financial intermediary) back to the investment project approved at the 19th Meeting;

2. the eligibility of methyl bromide project preparation for Argentina and Turkey;

3. deferring project preparation for Turkey until umbrella project guidelines are adopted;

4. further activities for CFC phase-out in Uruguay after the refrigerant management plan is completed; and,

5. approving the amount of US 143,500 with US $18,655 support cost for institutional strengthening for Chile and US $186,700, with US $24,271 support cost for institutional strengthening for Tunisia.

1998 WORK PROGRAM AMENDMENT

Global Environment Coordination,
Environment Department
THE WORLD BANK

June 1998

WORLD BANK'S 1998 WORK PROGRAM AMENDMENT

Introduction

At the 24th Meeting of the Executive Committee (EC), the World Bank requested US$1.69 million in project preparation to prepare 1998 submissions of 68 projects in the core list and 25 projects in the contingency list. US$1.35 million was approved with the understanding that additional project preparation funds could be requested when additional information is provided. The difference between the requested and approved amounts represents the project preparation funds requested for methyl bromide demonstration activities in Argentina and Turkey and for projects in several sectors in Chile and Uruguay.

Work Program Amendment

In response of Decision 24/17, the World Bank would like to resubmit its request for project preparation funds to support the preparation of methyl bromide demonstration projects in Argentina and Turkey. Projects in Argentina will demonstrate technical viability of methyl bromide alternatives for cotton and citrus fumigation. Methyl bromide uses for cotton and citrus fumigation increase rapidly during the last few years (50% increase in 1997).

In addition to project preparation requests for methyl bromide activities, the Work Program Amendment also includes project preparation activities in Chile and Uruguay. In compliance with Decision 19/15 adopted at the time the first installment of US$ 1 million was approved for the Chile Montreal Protocol Implementation Program - Phase II, the World Bank is submitting a brief evaluation report of the first auction carried out under the Phase II program, along with its request for funding to support the preparation of a revised plan and approach to complete the Phase II program. The evaluation report is attached as Annex I to this Work Program Amendment.

This Work Program Amendment also includes a funding request to support project preparation activities in Uruguay. The market survey to identify residual use of ODS in the country has already been completed. The market survey report is attached as Annex II to this Work Program Amendment. The World Bank would, therefore, like to request for additional funding for Uruguay to develop investment projects for those enterprises identified during the preparation of the market survey.

The World Bank also include a funding request of US$120,000 for Turkey to support the preparation of Turkey commercial refrigeration terminal umbrella project which will involve ODS phaseout in approximately 2,000 enterprises.

In addition to project preparation requests, the Work Program Amendment also includes requests for institutional strengthening renewal from Chile and Tunisia. The reports and action plans are attached as Annexes III and IV.

Project Preparation

Country	Project Title	Sector	ODP to be Captured (ODP tons)	Requested Amount (US$)	Agency Support Cost (US$)	Total (US$)	Date of Completion
Argentina	Project preparation for methyl bromide (citrus and cotton) demonstration project	Methyl bromide		50,000	6,500	56,500	Dec 1998
Chile	Project preparation for the Phase II auction scheme	Several sectors	240	80,000	10,400	90,400	Dec 1998
Turkey	Project preparation for commercial refrigeration terminal umbrella project	Refrigerati on	200	120,000	15,600	135,600	Dec 1998
Turkey	Project preparation for methyl bromide	Methyl bromide		50,000	6,500	56,500	Dec 1998
Uruguay	Project preparation	Several sectors	150	45,000	5,850	50,850	Dec 1998
TOTAL			590	345,000	44,850	389,850	

Non-Investment Projects

Country	Project Title	Requested Amount (US$)	Agency Support Cost (US$)	Total (US$)	Date of Completion
Chile	Renewal of Institutional Strengthening Project	145,000	18,850	163,850	Oct 2000
Tunisia	Renewal of Institutional Strengthening Project	187,000	24,310	211,310	Dec 1999
TOTAL		332,000	43,160	375,160	

CHILE - MONTREAL PROTOCOL IMPLEMENTATION PROGRAM PHASE II

PROGRESS REPORT AS OF MAY 1998

Purpose

This note provides an update on the progress achieved to date in preparing a project to demonstrate the cost-effectiveness of competitively allocating Multilateral Fund (MF) resources to phase out ODS consumption in Chile. The note describes the status of the auction program and is intended to support a World Bank CY98 work program amendment for additional project preparation funds for completing initiated tasks.

In summary, the Program's first auction closed in December 1997 and resulted in projects for a reduction of 62.62 ODP MT at an average cost-effectiveness of $6.21/kg. This cost-effectiveness is 29% lower than the promised ceiling of 90% of the sector thresholds of those sectors participating in the auction. Bidding under a second auction is underway and is expected to close by July 31, 1998. With improved dissemination, the second auction is expected to attract greater demand for grants, particularly from the numerous dispersed and small users in the foams sector. On the basis of the second auction results, the World Bank will assist Chile present a second-tranche request for the Phase II Program during the 26th Meeting of ExCom in November 1998.

Background

At the 19th meeting of the ExCom, the World Bank presented a proposal for a 2-tranche program of US$4.8 million aiming at demonstrating the viability of engaging prospective beneficiaries of the MF in a competitive process (an auction) to allocate funds to the most cost-effective bids to phase-out ODS. The ExCom approved US$1,000,000 - $970,000 for this Program and $30,000 for FI fee - indicating that "no additional funds would be provided until there had been an evaluation of the project as funded to date" (**decision 19/15**). This note and the Completion Report of Phase I (submitted in this pachage under separate cover) addresses the ExCom request with information avaialable at this time.

As designed and approved by ExCom, the Program consisted of the following main steps:

- ODS consuming firms would be invited to bid for grants in return for reductions in kgs of ODS;
- bids, expressed as $/kg reduced, would be screened to ensure MF eligibility and to verify accuracy of the reduction reported;
- bids would be ranked in ascending order of bid value (i.e., grant requested per kg of ODS eliminated);
- bids are awarded a grant until the finds for each specific auction is depleted;
- as an additional safeguard, each auction must have a minimum cost-effectiveness equal to

- 90% of the MF-established threshold for the sectors participating in that bid (weighted by their respective shares of accepted bids).

The auction offered two potential advantages. First, the administrative costs of individual project review in a country with many small users are reduced; and, second, the auction reduces the costs to the MF since firms would face competition for resources and this would reveal a true willingness to receive grants.

The implementation strategy of the program envisioned a series of initial steps involving establishment of auction rules and dissemination which would enable a first bid to take place four months after ExCom approval of the first tranche. The subsequent steps included bid evaluation, subgrant agreement signing, monitoring, and reporting.

Completed Activities

Design and Execution of First Auction

The design of the auction program required the preparation of bidding documents that describe the rules and evaluation criteria the government would use for the auction program. Since this program commits the Government to allocate funds, legal advice was sought to ensure clarity and accuracy of the document. Initially expected to take place in March 1997, the auction was delayed several months because the Government of Chile issued new procediures for all public bidding documents which required a formal clearance by the Contraloría de la Nación (General Comptroller's Office).

The bidding period for the first auction lasted from October 1 to November 30, 1997. The bids were evaluated in December and awards were issued in January of 1998. The results of the auction are as follows:

FIRST AUCTION - Awarded Bids						
Bid/Firm	**Sector**	**Impact (ODP Tons)**	**Project Cots (US$)**	**Requested Grant**	**US$ grant/kg**	**Execution (mos.)**
Multipanel	Rigid Foam	18.34 CFC-11	358,791	137,551	7.50	6.3
Himmer & Himmer	Rigid Foam	7.17 CFC-11	61,579	49,467	6.90	3
Frío Real	Rigid Foam	17.42 CFC-11	70,940	63,845	3.67	5
Sindelen	Dom. Refr.	12.30 CFC-11	131,925	86,058	7.04	12
Sindelen	Dom. Refr.	7.39 CFC-12	60,833	51,744	7.00	12
TOTAL		62.62	684,068	388,665	6.21 (weighted)	

The number of bids was lower than expected due to two factors not fully considered during the design phase: (a) the declining prices of CFCs in Chile induce users (particularly small firms) to continue using an affordable input and the MP grant thresholds are not attractive enough to small users; (b) the majority of ODS users are small firms that do not yet perceive any controls on ODS. These lessons have stimulated the Government to strengthen the dissemination of the Program, particularly with small users, and to speed the preparation of the regulatory controls on ODS (see Program Expansion needs below).

Despite the relatively reduced number of bids received, the results to date are considered satisfactory considering the following indicators:

- Grant allocation falls well below 90% of EC thresholds[1];
- Grant funding accounts for less than 100% of project costs;
- Projects will be implemented in relatively short time-frames (6-month average);
- Captured ODP will help attain 1999 freeze in Chile;
- Four Projects were submitted, evaluated, and approved in only four months;
- All but one of the associated subgrant agreements for approved bids have signed (as of May 7, 1998).

Preparation of Second Auction

The second auction has been designed to take into account the main lessons learned from the first auction: market structure; need for greater promotion; stratification of users. This time bidders will be ranked in 3 categories according to their level of ODP consumption, to ensure broader competition among similarly-sized firms. Targeting relatively small and dispersed enterprises (annual ODS use of <30 t), the program still envisages competition within the categories of enterprises. The overall threshold for the Phase II Program (90% of EC thresholds) will be maintained, while allowing small enterprises to compete for the grants. The second auction is attracting interest of approximately a dozen firms and it is expected that at least 100 ODP MT will captured. A large domestic refrigeration company, and small and medium enterprises (with average consumption levels ranging between 5 and 10 MT each) in the rigid polyurethane foam subsector have expressed their interest in presenting competitive bids.

Disbursements of already approved $970,000 are expected to take place in CY98, which assumes that the remaining $550,000 are committed after the second auction. Foreseeing new subprojects to exceed these funds, a proposal for a second tranche for Phase II would be submitted to the 26th meetings of the ExCom.

Expert Advice

In addition to the auction program, the World Bank has financed targeted expert advice to assist a large ODS user on technological options with the understanding that the

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1 90% of the thresholds in sectors represented in the first auction is calculated as follows: ($7.83/kg for rigid PU foam * 42,930 kgs of CFC-11 in foam reduced) + ($13.76/kg * 19,680 kgs in dom. ref. reduced) / 62,620 kgs = $ 9.69 * 0.9 = **$ 8.72**

- assistance would enable participation in the auctions program. The consulting assignment was completed in late April 1998.

Work Program Expansion

Preparation funds for continuing World Bank support in the evaluation of the second auction and preparation of the funding request to ExCom's 26th meeting are being sought as a CY98 Work Program Amendment. These funds would support a government's request for assistance from legal and economic advisors to prepare the detailed regulations and supporting analyses necessary to obtain official approval of restrictions for the use and import of ODS. Finally, the Bank will also assist Chile in preparing in preparing a progress report on project for Institutional Strengthening (IS II) and a proposal its third phase (IS III).

URUGUAY: MARKET ASSESSMENT OF REMAINING ODS CONSUMPTION

FINAL REPORT

Summary: This report presents the results of the application of funds assigned by the 22nd Executive Committee Meeting to conduct a Market Survey of the remaining ODS consumption in Uruguay. It presents the results of market research and field investigations conducted over 1997 and early 1998 to identify and characterize end-use sectors that account for the remaining ODS consumption in Uruguay. The Government of Uruguay (GOU) has and is implementing with success a number of Multilateral Fund-supported activities which to date have achieved a reduction of 137 tons of ODS, a result which exceeds the 1999 freeze. Deeply committed to not only meeting the 1999 freeze, but to achieving the 2005, 2007 and 2010 mandated deadlines, the GOA has asked the World Bank for assistance in developing an appropriate strategy suited to its country conditions in order to meet its Montreal Protocol (MP) commitment. Market assessment results provided in this report show that with the exception of a small number of minor manufacturing facilities using ODS for foam products in Uruguay, future ODS consumption will be driven primarily by the **residual demand** for ODS resulting from the growing stock of refrigeration equipment. In addition to ODS incidence in the market, this report identifies relevant small economy characteristics that affect the extent to which Uruguay must depend on foreign supplies of ODSs and ODS-using equipment. The background data included in the body of the report provide an appropriate framework to explore the policy options available to Uruguay. Further work in this area will be the object of World Bank assistance in 1998. Project preparation funds for this purpose are being requested as a 1998 Business Plan Amendment.

Introduction

1. In May 1997, the 22nd Executive Committee (Ex. Com.) of the Multilateral Fund under the Montreal Protocol (MFMP) met and approved a US$23,000 proposal submitted on behalf of the Oriental Republic of Uruguay by the World Bank for funding of a market assessment of Uruguayan ODS consumption. This report details the findings of this research effort. It is presented in four sections.

2. Section I presents a summary of the evolution of ODS consumption in Uruguay since the 1992 Country Program[1] and identifies the challenges that exist in order for Uruguay to meet its phaseout commitment on schedule as the country tries to achieve the 50% reduction target in 2005 and the full elimination in the year 2010. Section II describes in greater detail the evolution of ODS consumption over the past few years taking into consideration the reductions associated with Multilateral Fund-supported projects in the main consuming sectors. Section III presents the assessment of the structure of ODS consumption in each sector focusing on sources of remaining demand for ODS. Section IV concludes the report by presenting some perspectives to outline the possible scenarios that may emerge in the process of Uruguay's efforts to meet its ODS phaseout commitments under the Montreal Protocol (MP).

I. Evolution of ODS Consumption in Uruguay and Challenges Ahead

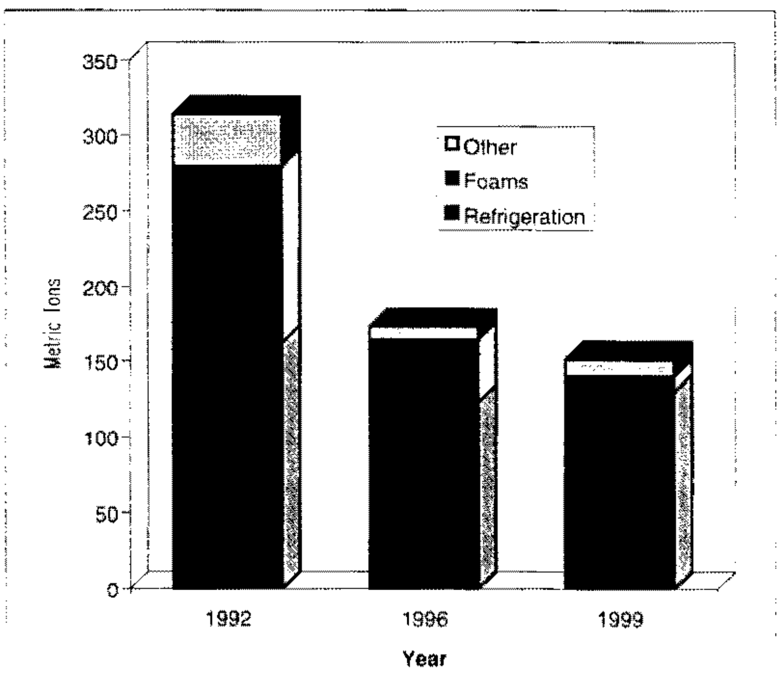
[1] The report focuses on substances in Group A and B and therefore excludes HCFCs and Methyl Bromide.

3. Uruguay ratified the Montreal Protocol on Substances that Deplete the Ozone Layer on January 8, 1991. Its Country Program was approved by Multilateral Fund Executive Committee at the 10[th] Meeting (June of 1993). In 1992, Uruguay's main ODS consumption was concentrated mostly in refrigeration (54.1%) and foams (34.7%). Aerosols (7.3%), solvents (2.8%) and halons (1.1%) represented 11.2% of the total 314 ODS metric tons consumed at the time. Uruguay, falling under the category of low-volume consuming (LVC) countries, does not produce ODS and its consumption is dependent on imports (mainly CFCs).

Implementation of the Country Program

4. The first ODS reduction goal prescribed in the Uruguay Country Program established 1996 as the year in which Uruguay would be expected to achieve a 30% reduction in ODS consumption from the 1992 level (i.e. achieve reduction to 221.9 MT ODP consumption). Phase-out investment and institutional strengthening projects funded by the Multilateral Fund (MF) have been important in successfully reaching that goal. Chart 1 shows the progress made in reducting consumption since 1992 and demonstrates that the initial projects and activities have been very successful. A total reduction in consumption of 45% has been achieved.

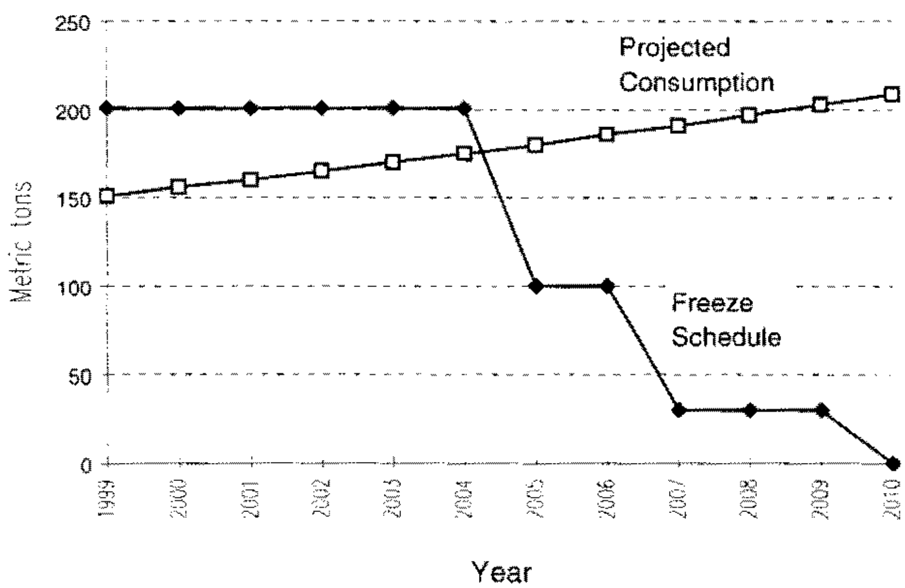
Chart 1: Evolution of Reductions from 1992 and forecast to 1999



- In addition, the freeze requirement, at the average of 1995-97 consumption by the year 1999, seems feasible to achieve by continuing with the current trend of investment and institutional strengthening activities.

5. Meeting the second goal in the Country Program which aims at the total elimination of ODS use by the year 2010 will require a renewal of the commitment to phaseout ODS through well designed and implemented measures that address forecast deficiencies. Chart 2 shows projected consumption and the freeze schedule which Uruguay must adhere to in order to comply with the Country Program and the Montreal Protocol, i.e. a reduction of 50% of CFC consumption by 2005 and 100% by 2010.

Chart 2: ODS Consumption Freeze Schedule and Projected Consumption Trend



6. To reduce consumption from the 314 MT of CFCs and halons recorded in the Country Program for 1992, Uruguay has been active in seeking assistance from the Multilateral Fund to promote the elimination of ODS consumption in most of its major manufacturing facilities. A total reduction in ODS consumption of 180 MT is expected to fully materialize by 1999 as a result of approximately 15 Multilateral Fund supported activities[2]. The reduction recorded through 1996 is approximately 137 MT. As noted above this result more than meets the Country Program's objective of reducing 94.2 MT (i.e., 30% reduction from 1992 consumption) by 1996.

7. The evident trend in the remaining portion of the ODS consumption markets not affected by conversion projects indicates that while reduced consumption levels are being

[2] One project was canceled: TEM S.A. due to bankruptcy.

- achieved due to a switch in some sectors to less concentrated ODS substances (notably the switch to HCFC-22 in commercial systems), service and other sectors (i.e. MAC) have experienced an increase in consumption. As described in more detail in section II, consumption at 201 MT based on the average consumption recorded for 1995-97 is the reference level adopted for purposes of Uruguay's Montreal Protocol Reduction schedule.

8. Since its estimated consumption in 1999 is 151 MT, Uruguay will easily meet the 1999 freeze target. There is concern, however, that subsequent MP targets in 2005 and 2010 will present greater challenges. Chart 2 indicates that absent any new measures to decrease ODS, remaining consumption and growth may jeopardize the ability of Uruguay to meet its commitment under the Montreal Protocol. The Government of Uruguay (GOU) continues to work with implementating agencies of the Montreal Protocol in order to preclude such a development. Nonetheless, the scenario indicates that other countries that have moved forward with Montreal Protocol Programs may need to consider that in the medium to long term additional challenges may emerge.

II. Structure of ODS End-Use Sectors and the Impact of Conversion Projects

9. The extent to which the investments of the Multilateral Fund in Uruguay have contributed to the success of ODS reduction initiatives in Uruguay between 1992 and 1996 can be seen in Tables 1 and 2. Import statistics for 1996 reported as 43.8 tons of CFC-11 and 127 tons of CFC-12 confirm the most important sources of ODS consumption in Uruguay. Of the 43.8 tons of CFC-11 the great majority of consumption is in manufacturing activities. Of the 127 tons of CFC-12 that entered Uruguay in 1996, most consumption appears to be distributed among several servicing activities (to be discussed below).

10. The composition of CFC-11 and CFC-12 consumption broken out according to the foam and refrigeration sectors is shown in Tables 1 and 2 respectively[3]. Between 1992 and 1996 Uruguay successfully managed to reduce existing CFC-11 consumption by 65%. Table 1 shows that by 1999 CFC-11 consumption will decrease to approximately 10 tons due to the completion of ongoing projects. Approximately 1.5 tons is used in non-foam applications and is described in Table 3.

Table 1: Foams Sector Breakdown of CFC-11 Consumption (MT)

PROJECT	1992	1996	1999 Est.
DIVINO	-	24.30	-
ETCHEPARE-GIL	-	4.40	-
COLDER	-	0.0	-
NEVOL	-	3.70	-
FERROCO	-	3.64	3.98
TOPSY	-	2.40	2.62

[3] CFC-11 and to some extent CFC-12 is used as a substitute for CFC-113 in aerosols.

ZUNINO 1/	-	2.40	-
AISPUR	-	1.80	1.97
FUMAYA	-	0.60	0.66
DELANTIR	-	0.04	0.04
TOTAL 2/	117 3/	43.28	9.27

Note 1/: ZUNINO uses CFC-11 as substitute for solvents in aerosols.
Note 2/: Imports for 1999 are based on current imports, reductions to date, expected reductions and a 3% g
Note 3/: 1992 figure from Country Program

11. Table 2 shows that between 1992 and 1996 CFC-12 consumption decreased from 162 tons to 126.5 tons. The 22% reduction is due mainly to ongoing investment projects of firms in the refrigeration industry and other activities such as recycling initiatives. For 1999, however, CFC-12 consumption is expected to increase to an estimated 133 tons taking into account the reductions generated by the ongoing World Bank activities.

Table 2: Refrigeration Sector Breakdown of CFC-12 Consumption (MT)

	1992	**1996**	**1999 Est.**
MANUFACTURING:			
COLDER	-	-	-
NEVOL	-	1.3	-
CABRERA	-	1.1	1.20
INDUNOR	-	-	-
TOPSY	-	0.4	0.43
ZUNINO	-	3.6	-
AISPUR	-	1.8	1.97
PANASCO	-	2.75	3.0
SUBTOTAL MANUFACTURING:	-	19	-
TRANSPORTE REFR.	-	2.0	-
SERVICING:			
MAC Cars	-	14.00	-
MAC Buses	-	5.00	-
AC Buildings	-	1.50	-
Dom. Refrig.	-	55.0	-
Com. & Ind. Refrig.	-	38.0	-
SUBTOTAL SERVICE & TRANSPORTE REF	143.0	115.50	126.2
TOTAL	162.0	126.45	132.8

Table 3 provides a breakdown of CFC-11 in the service sector.

Table 3: Service Sector Breakdown of CFC-11 Consumption (MT)			
PROJECT	**1992**	**1996**	**1999 Est.**
CORFRISA 1/	-	1.10	1.10
SERVICIO A/C 2/	-	0.40	0.40
TOTAL	-	1.50	1.50

General Note: No estimate of CFC-11 in servicing was included in the Country Program.
Note 1/: Company has no plans to expand current consumption, hence 1999 estimate reflects zero growth.
Note 2/: 1999 estimate reflects flat consumption expectation.

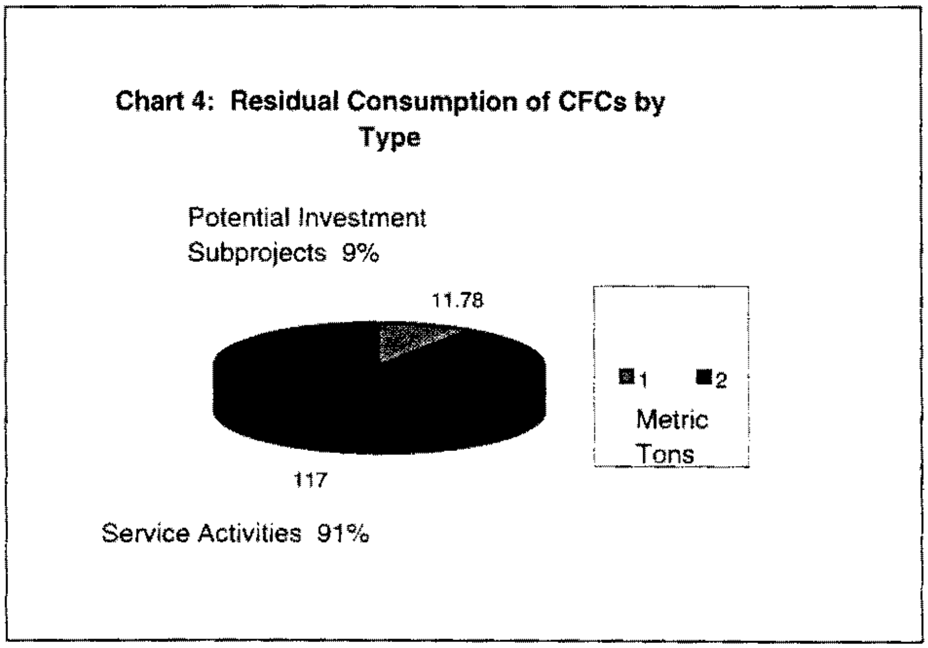
III. Characteristics of the Remaining Sources of ODS Demand

12. The most important finding of the market assessment is that a significant demand for CFC-12 in refrigeration servicing applications exists and consumption is expected to increase. In addition, there continues to be a demand for CFC-11 in small-scale manufacturing environments. Approximately 44% of the residual demand for CFC-12 is for domestic refrigeration servicing. The remaining consumption is distributed among commercial and industrial refrigeration servicing, MAC servicing (automobiles and buses) and small-scale manufacturing.

13. Another important finding of the market assessment is that 95% of the domestic refrigeration sector is satisfied through imports and a large share of imported domestic refrigeration units enter Uruguay equipped with CFC-12 systems. On the other hand commercial and industrial refrigeration systems currently being introduced to the market appear to be equipped for the most part with HFC-134a or HCFC-22 systems.

14. The relative weight of domestic refrigeration servicing can be explained by data on imports and existing stock. Imported domestic refrigeration units are approximately 100,000 units of which 50,000 are CFC-12 units. Of the 50,000 CFC-12 units that enter Uruguay, 39,200 are Korean imports and the remaining 11,800 originate in Argentina, Brazil, Mexico and Chile. The stock of domestic refrigeration is estimated at 1,000,000 units (domestic freezers and refrigerators, but does not include institutions (hotels, hospitals).

15. Chart 4 below shows the global breakdown of remaining ODS consumption in Uruguay. The pie attributes a large part of this consumption to servicing activities in the refrigeration sector. The additional consumption that remains to be phased out in small-scale manufacturing is also identified. Of the total 171 MT of current CFC consumption, 42.5 MT consists of consumption that will be phased out due to ongoing projects and related activities. Chart 4 only reflects the 128.5 MT of residual consumption.



IV. Perspective for Developing a Strategy for ODS Phaseout in Uruguay

16. The profiling of a low volume consuming (LVC) like Uruguay can be relatively straightforward as regards easily identifiable major sources of consumption, but the real challenge lies in accurately identifying residual consumption. The use of import statistics, national census data, and a systematic process involving a complete canvassing of the Country can lead to development of a reasonably accurate profile of the composition of ODS in a given Country.

17. The market assessment of Uruguay's remaining ODS consumption is not only of importance to Uruguay. It is also important to other signatories of the Montreal Protocol on substances that deplete the ozone layer, especially those with larger economies where such an undertaking would be much more difficult to undertake. In the case of a LVC country, the task is challenging, but it can be accomplished more easily than in a major economy. The consumption trend shown in this market assessment indicates that residual demand and consumption may prevent even countries with the best intentions from achieving their phaseout commitments.

18. As described in earlier sections of this report, Uruguay has been as active as any country can be in mobilizing resources and in encouraging its manufacturing industry to phase-out ODSs. Chart 4 above shows that there remain a few small manufacturers mainly in the foams sector that need to work towards phasing out CFCs via conversion of plant facilities. These and other sources of remaining consumption in manufacturing account for approximately 12 tons of ODS consumption, 72 % of which is CFC-11 and the rest CFC-12. Another 117 tons are consumed mainly in servicing applications

- requiring almost exclusively CFC-12. For Uruguay to avoid a situation which would result in the country's inability to meet the 2005 target of 100 MT consumption, a strategy to assist Uruguay in targeting the remaining sources of ODS consumption needs to be developed. The following questions would need to be addressed:

- in a scenario of no further action by the Government, how fast will consumption of CFC-12 grow in the refrigeration servicing sector and how will it impact the 2005 and 2010 deadlines?
- assuming a Refrigerant Management Plan and intensive training of technicians how much of this consumption and associated emissions can be avoided?
- in Uruguay's regional trade context what would be the cost to its society if the Government imposed a phased ban of new CFC-based refrigeration equipment?
- are there any policy options available to Uruguay that the Multilateral Fund could support to accelerate the retirement of the CFC-based stock of refrigeration equipment?

19. These issues will be analyzed as part of the World Bank's assistance to Uruguay during the next few months provided that project preparation funds are approved at the 25th meeting of the Executive Committee. This analysis and subsequent discussions with high-level policy-makers in Uruguay would allow a presentation of the country's strategic proposal to the Multilateral Fund during the November 1998 Meeting of MFMP. Being one of the most proximate countries to the most pronounced section of depleted ozone layer on earth, the concern which exists in Uruguay is equally urgent with regard to the inability of other countries to meet phaseout commitments. There is a demonstrative value in the Uruguayan scenario outlined in this report which other countries can utilize to fine-tune phaseout activities and preclude potential breaches of phaseout commitments.