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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Thirty-sixth Meeting  
Montreal, 20-22 March 2002

**PROJECT PROPOSALS: ARGENTINA**

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

Aerosol

- Conversion from CFC-11, CFC-12, CFC-113 and MCF into HCFC for technical aerosols at Electroquimica Delta World Bank

Fumigant

- Methyl bromide phase-out in tobacco and non-protected vegetable seedbeds: request for first tranche UNDP

**PROJECT EVALUATION SHEET  
ARGENTINA**

SECTOR: ODS use in sector (2000): 116 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

**Project Title:**

- (a) Conversion from CFC-11, CFC-12, CFC-113 and MCF into HCFC for technical aerosols at Electroquimica Delta

Project Data	Filling plant
	Delta
Enterprise consumption (ODP tonnes)	60.00
Project impact (ODP tonnes)	60.00
Project duration (months)	36
Initial amount requested (US \$)	264,704
Final project cost (US \$):	
Incremental capital cost (a)	0
Contingency cost (b)	0
Incremental operating cost (c)	1,666,159
Total project cost (a+b+c)	1,666,159
Local ownership (%)	100%
Export component (%)	0%
<b>Amount requested (US \$)</b>	264,704
Cost effectiveness (US \$/kg.)	4.40
Counterpart funding confirmed?	Yes
National coordinating agency	OPROZ
Implementing agency	World Bank

<b>Secretariat's Recommendations</b>	
Amount recommended (US \$)	264,000
Project impact (ODP tonnes)	60.00
Cost effectiveness (US \$/kg)	4.40
Implementing agency support cost (US \$)	34,320
Total cost to Multilateral Fund (US \$)	298,320

## **PROJECT DESCRIPTION**

### Conversion from CFC-11, CFC-12, CFC-113 and MCF into HCFC for technical aerosols at Electroquímica Delta

1. The Government of Argentina is submitting a project proposal for the conversion of technical aerosols manufactured by Electroquímica Delta (173,750 cans/year) to non-CFC technologies. There is another company in Argentina, Servex, which is still producing technical aerosols based on CFCs propellants.
2. Implementation of this project will result in the phase out of 60 ODP tonnes of CFCs (4 ODP tonnes of CFC-11, 35.6 ODP tonnes of CFC-12, 20.4 ODP tonnes of CFC-113, and 0.02 ODP of MCF).
3. In the early 1990s the company converted, with its own resources, part of its production line (about 40 per cent of the total production) to hydrocarbon aerosol propellants (HAPs) but continued producing their technical aerosols (non-flammable dusters and the non-flammable contact cleaners) using CFCs as propellants and solvents.
4. The company is requesting assistance from the Fund to cover only incremental operating costs associated with the replacement of CFC-11 and CFC-12 (as a propellant) by a mixture of HCF-134a (60 per cent) and HCFC-22 (40 per cent), and CFC-113 (as a solvent) by a mixture of HCFCs, HFCs, HFE and hydrocarbon.
5. The total incremental operating costs (NPV for 4 years have been estimated at US \$1,660,159; however, based on the cost-effectiveness threshold (US \$4.40/kg), the maximum funding allowable is US \$264,704.
6. The Government of Argentina submitted a letter regarding the justification of the use of HCFC technologies.

## **SECRETARIAT'S COMMENTS AND RECOMMENDATION**

### **COMMENTS**

7. The Secretariat sought clarification on the level of consumption of CFCs in the aerosol sector in Argentina. According to the country programme (UNEP/OzL.Pro/ExCom/13/17), CFCs consumption in the aerosol sector was estimated at 119 ODP tonnes, of which 100 ODP tonnes were for essential uses; also, the progress report on the implementation of the country programme for 2001 reported a total consumption of CFCs in the aerosol sector of 116 ODP tonnes. The World Bank reported that the CFC-113 and MCF used by the enterprise have been reported by the Government of Argentina in the solvent sector rather than in the aerosol sector, even if it is used in an aerosol container. Therefore, the consumption reported in the project proposal is correct.

8. The Secretariat and the World Bank discussed issues related with the level of production of CFC-based aerosol cans by Electroquímica Delta and the current prices of CFCs and their replacement substances (HCFCs and HFC) that were used in the calculations of the incremental operating costs. The World Bank confirmed that the current level of production in the plant is 174,000 cans/year and the prices of the chemicals are those reported in the project. Furthermore, the price of CFC-12 US \$2.80/kg) were checked against the price used in the Argentina CFC production sector proposal.

9. The Secretariat also pointed out that the technical reviewer of the project proposal raised important technical issues related to solvency and vapour pressure and cost issues regarding the use of a blend of HFC-134a (60 per cent) and HCFC-22 (40 per cent). The reviewer recommended that the substitution be accomplished by a blend of HCFC-141b (60 per cent) and HCFC-22 (40 per cent), which would satisfy the requirement of solvency and pressure. No reinforced cans would be required, and it would be more cost effective (the cost of HCFC-141b is lower than the cost of HFC-141b). The World Bank indicated that the project proposal follow the most cost-effective approach. The tests so far undertaken by the company indicated that aluminium cans (not reinforced cans) can be used with the proposed blend of HCFC-22 and HFC-134a. Furthermore, the company also tested the blend of HCFC-141b and HCFC-22, which resulted to be aggressive, and therefore, not a good replacement for CFC-113.

## RECOMMENDATION

10. The Fund Secretariat recommends blanket approval of the project with associated support costs at the funding level shown in the table below:

	<b>Project Title</b>	<b>Project Funding (US\$)</b>	<b>Support Cost (US\$)</b>	<b>Implementing Agency</b>
(a)	Conversion from CFC-11, CFC-12, CFC-113 and MCF into HCFC for technical aerosols at Electroquímica Delta	264,000	34,320	World Bank

**PROJECT EVALUATION SHEET  
ARGENTINA**

SECTOR: Fumigant ODS use in sector (1998): 505 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

**Project Title:**

(a) Methyl bromide phase-out in tobacco and non-protected vegetable seedbeds: request for first tranche

<b>Project Data</b>	<b>Methyl bromide</b>
Enterprise consumption (ODP tonnes)	178.80
Project impact (ODP tonnes)	33.10
Project duration (months)	60
Initial amount requested (US \$)	250,000
Final project cost (US \$):	
Incremental capital cost (a)	16,849,592
Contingency cost (b)	420,000
Incremental operating cost (c)	1,438,278
Total project cost (a+b+c)	18,707,870
Local ownership (%)	100%
Export component (%)	0%
<b>Amount requested (US \$)</b>	250,000
Cost effectiveness (US \$/kg.)	27.90
Counterpart funding confirmed?	Yes
National coordinating agency	OPROZ
Implementing agency	UNDP

<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 \$)	

## PROJECT DESCRIPTION

### Methyl bromide phase-out in tobacco and non-protected vegetable seedbeds: request for first tranche

11. The Government of Argentina is submitting a project to phase out 178.8 ODP tonnes of MB used in tobacco seedlings and non-protected vegetable seedbeds.

12. Currently, Argentina is implementing an investment project to phase out 330 ODP tonnes of MB in the strawberry, cut flower and greenhouse vegetable sectors (under UNIDO's implementation, at a cost of US \$3,183,390); and a Phase I of an investment project for MB phase out in post-harvest uses (under World Bank's implementation, at a cost of US \$375,000).

13. In 1999, almost 42 per cent of tobacco products were exported to Article 2 countries. However, tobacco is not exported by the farmers; farmers sell their tobacco to 13 companies who in turn process the tobacco and export cigarettes and tobacco products.

14. The alternative technologies to replace MB in the production of tobacco seedlings are the floating and non-floating tray systems installed in micro-tunnels and alternative chemicals (metam sodium) in specific areas. The selection of these technologies is based on the results of two demonstration projects, one for tobacco seedbeds (under UNDP work programme) and another for strawberry, cut flower and protected vegetable sectors (under UNIDO work programme).

15. Implementation of this project will lead to the phase out of 178.8 ODP tonnes of MB representing all controlled uses of MB, except for 18 ODP tonnes in post-harvest uses, and for critical quarantine and pre-shipment applications.

16. The total capital cost of the project has been estimated at US \$13.8 million; the cost for technology transfer and training has been estimated at US \$3.46 million and the operating costs at US \$1.43 million (total cost of US \$18.69 million). However, the amount requested by the Government of Argentina from the Multilateral Fund is US \$5 million. The cost effectiveness of the project is US \$27.9/kg.

17. Argentina has issued legal norms related to MB including Decree No. 3489/58 (mandatory registration of trade, import and export of plant protection products including MB); Resolution No. 440/98 (procedures and criteria for registration of phytosanitary products); Resolution No. 20/96 (regulates the waste present in products treated with fumigants); Resolution No. 280/98 (bans use of MB in urban plague control campaigns); Disposition No 28/99 (establishes the MB Consultative Group). In addition, this project will be accompanied by a package of policy measures to ensure that the MB phased out by this project will not be re-introduced at a later stage.

18. The project will be implemented by UNDP, under national co-ordination by the Ozone Office, in close co-operation with National Institute of Agricultural Technology. The estimated time for the implementation of the project is 5 years.

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

19. The Government of Argentina first submitted this project for consideration of the Executive Committee at its 34<sup>th</sup> Meeting in July 2001. However, prior to the Meeting, an official communication from the Government of Argentina was received at the Secretariat requesting that the project be withdrawn.

#### Export component

20. UNDP informed the Secretariat that about 42 per cent of the tobacco produced in Argentina is exported to non-Article 5 countries. However, farmers cultivate the tobacco and sell it to nationally owned industries who export it. The percentage of export to non-Article 5 countries has not been taken into consideration in the calculation of the project's incremental costs.

#### Level of MB eligible for funding

21. The Secretariat discussed with UNDP the level of consumption of MB eligible for funding through the Multilateral Fund. At its 30<sup>th</sup> Meeting, the Executive Committee approved an investment project for the phase out of MB in strawberry, protected vegetables and cut flower productions in Argentina, with a total phase out of 331 ODP tonnes. The project proposal was approved together with an agreement between the Government and the Executive Committee (UNEP/OzL.Pro/ExCom/30/48, Annex III), through which Argentina committed "to reduce total national consumption of controlled uses of methyl bromide to no more than the following levels during the 12-month period of the following listed years:

2001	471.9 tonnes (505 tonnes baseline consumption - 33.1 tonnes)
2002	405.8 tonnes (reduction of 66.1 tonnes from 2001 level as in project document)
2003	306.6 tonnes (reduction of 99 tonnes from 2002 level as in project document)
2004	74.4 tonnes (reduction of 132.2 tonnes as in project document)".

22. On the basis of this agreement, the remaining MB consumption in the country eligible for funding would be 174 ODP tonnes.

#### Incremental costs

23. The Secretariat noted that the capital cost of the project was calculated considering the price of the polystyrene tray at US \$1.17/unit; however, the price of similar trays in other approved projects (Brazil and Malawi) was below US \$1.00/unit. Using a value of US \$1.00/tray, the cost of the project would be reduced by US \$0.86 million.

24. The Secretariat also pointed out the high sensitivity of the methodology used for calculating the operating cost of the project, whereby any small change in the amounts of fertilisers, labour, trays and their costs will result in major changes in the overall calculation. For example, the ratio of the labour associated with the traditional seedbeds compared to the floating

tray system used in the calculation of the operating cost was 1.7 to 1; however, a ratio of 3 to 1 has been reported in a case study on tobacco seed-beds in Argentina. By applying a 3 to 1 ratio, over US \$5 million would be realised in savings.

25. The Secretariat considered that the cost of the training programme was excessive (US \$3.46 million) and sought clarification on the need for four training leaders (US \$2,000/month each) and 50 extensionists; US \$433,000 for training programmes, workshops and training material; and US \$591,000 for transportation. UNDP reported that the project will have to train 24,400 farmers working in farms which are located under very different climates; the project covers five different crops, with a production season of almost 12 months for some vegetables and 5 months for tobacco. The training leaders will be contracted for 45 months (82 per cent of the time) and extensionists will be contracted for only 5 months per year (counterpart funding will cover the additional time which is necessary to transfer the technology and train farmers).

26. The Fund Secretariat and UNDP being aware of the sensitivity of the methodology used for calculating operational costs, agreed to determine the total project cost on the basis of similar, but more cost-effective phase-out investment projects in tobacco seedlings in other countries. Therefore, the total project cost was agreed at US \$5 million which covers the equipment, training and technical assistance requirements for achieving the phase out of 178.8 ODP tonnes of MB representing the total consumption in the tobacco and horticulture sectors in Argentina.

#### Agreement between the Executive Committee and the Government of Argentina

27. UNDP is assisting the Government of Argentina in drafting a proposal for a revised agreement between the Government and the Executive Committee with the commitments proposed and action plan for the phase out of MB in the tobacco and horticulture sectors in Argentina, taking into account the current agreement covering the phase out of MB in strawberries, flowers and protected vegetable crops, approved at the 30<sup>th</sup> Meeting of the Executive Committee. The draft agreement will be finalised prior to the 36<sup>th</sup> Meeting of the Executive Committee.

#### **RECOMMENDATION**

28. This project is submitted for individual consideration by the Executive Committee.

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**GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS  
TO THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR  
THE IMPLEMENTATION OF THE MONTREAL PROTOCOL**

**PROJECT OF THE GOVERNMENT OF ARGENTINA**

The Government of Argentina requests the World Bank to submit the project listed in Table I below to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 36<sup>o</sup> Meeting.

**Section I: ODS Consumption Data**

1. The ODS consumption figures of the projects have been validated by the National Ozone Unit (NOU).
2. The consumption data have been retained in the records of the NOU for reference and/or future verification.
3. The Government has been advised by the NOU that the agreement to the project indicates a commitment to ensure that the validated phase-out figure(s) were realized and yielded a sustained reduction from the 2000 consumption of 65.2 ODP tonnes for the aerosol sector.

**Table I: Projects Submitted to the 36<sup>o</sup> Meeting of the Executive Committee**

Project Title/Sector	Type of ODS	Consumption (ODS Tonnes) 2000, (Year)	Amount to be Phased Out (ODP Tonnes), (Year)	Implementing Agency
<b>Aerosol Sector</b>				
Conversion from CFC-11, CFC-12, CFC-113 and MCF into HCFC for technical aerosols at ELECTROQUIMICA DELTA	CFC-11, CFC-12, CFC-113, MCF	45.81 70.19 80.09 543		WORLD BANK
<b>Total</b>			65.2	

**Section II: Other Relevant Actions Arising from Decision 33/2**

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee.
5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional

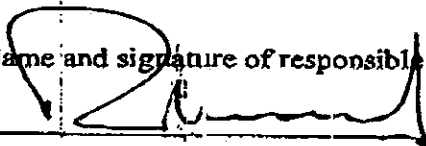
unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs.

6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.

**Section III: Projects Requiring the Use of HCFCs for Conversion**

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government
- (a) has reviewed the specific situations involved with the project(s) *Electroquímica Delta* as well as its HCFC commitments under Article 2F; and
  - (b) has nonetheless determined that, at the present time, the projects needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the company/companies involved.

Name and signature of responsible Officer:



Designation: **PABLO A. ESTRADA OYUELA**  
Embajador

Date:

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