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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirtieth Meeting
Montreal, 29-31 March 2000

PROJECT PROPOSALS: ARGENTINA

This document includes the comments and recommendations of the Fund Secretariat on the following project proposals:

Foam

- Conversion from CFC-11 to methylene chloride/LIA technology in the manufacture of flexible polyurethane boxfoam at Fasax — UNDP

Fumigant

- Phase-out of methyl bromide in strawberry, protected vegetables and cut flower production — UNIDO

PROJECT EVALUATION SHEET
ARGENTINA

SECTOR: Foam ODS use in sector (1998): 1,370 ODP tonnes

Sub-sector cost-effectiveness thresholds: Flexible Slabstock US $ 6.23/kg

Project Title:

Conversion from CFC-11 to methylene chloride/LIA technology in the manufacture of flexible polyurethane boxfoam at Fasax

Project Data	**Flexible slabstock**
	Fasax
Enterprise consumption (ODP tonnes)	50.00
Project impact (ODP tonnes)	50.00
Project duration (months)	36
Initial amount requested (US $)	129,000
Final project cost (US $):	
Incremental capital cost (a)	85,000
Contingency cost (b)	8,500
Incremental operating cost (c)	158,500
Total project cost (a+b+c)	252,000
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US $)	252,000
Cost effectiveness (US $/kg.)	5.04
Counterpart funding confirmed?	
National coordinating agency	OPROZ
Implementing agency	UNDP

Secretariat's Recommendations	
Amount recommended (US $)	252,000
Project impact (ODP tonnes)	50
Cost effectiveness (US $/kg)	5.04
Implementing agency support cost (US $)	32,760
Total cost to Multilateral Fund (US $)	284,760

PROJECT DESCRIPTION

Sector Background

- Latest available total ODS consumption (1998)*		1,893.6	ODP tonnes
- Baseline consumption** of Annex A Group I substances (CFCs)		5,016.7	ODP tonnes
- 1998 consumption of Annex A Group I substances		1,066.9	ODP tonnes
- Baseline consumption of CFCs in foam sector		Not reported	
- 1998 consumption of CFCs in foam sector		1,370***	ODP tonnes
- Funds approved for investment projects in foam sector as of end of 1999	US $	9,234,133	
- Quantity of CFC to be phased out in foam sector as of end of 1998		1,430.5	ODP tonnes
- Quantity of CFC phased out in foam sector as of end of 1998		749	ODP tonnes
- Quantity of CFC to be phased out in foam projects approved in 1999 (27th to 29th Meetings)		202.4	ODP tonnes
- Funds approved for investment projects in the foam sector in 1999 (27th to 29th Meetings)	US $	1,002,475	

* Including 504.6 tonnes of methyl bromide
** Baseline consumption of Annex A controlled substances refers to average of the consumption for the years 1995-1997 inclusive.
*** Based on information provided in project documents.

1. The data shows a substantial decrease of 3797 tonnes (78%) in the Annex A CFC consumption of Argentina in the period 1997-1998 (from 4863.8 ODP tonnes in 1997 to 1066.9 ODP tonnes in 1998) and a decrease in the baseline consumption in 1998 by 3950 ODP tonnes or 79% (from 5016.7 ODP tonnes to 1066.9 ODP tonnes).

FLEXIBLE SLABSTOCK

Fasax

2. Fasax used of 50 tonnes of CFC-11 in production of flexible polyurethane boxfoam in 1998. Under this project, the production is to be converted to methylene chloride/LIA technology. The project includes retrofit of the existing boxfoam dispenser with a methylene chloride metering system (US $5,000), a softening agent metering system (US $15,000) and ventilation (US $30,000). Other costs include trials (US $15,000), technology transfer and training (US $20,000). There is incremental operational cost for four years of US $158,000 due to the higher cost of the Santofoam additive used for conversion.

3. The project document indicates that the enterprise has determined that it wishes to convert the boxfoam operation to a more efficient slabstock continuous production line, and may incorporate LCD technology in order to eliminate the use of CFCs as well as methylene chloride

in its flexible slabstock production. Thus it wishes the project to be approved with the stipulation that the eligible funds may be applied against its expansion programme.

4. The consumption of CFC to be phased out in the project (50 ODP tonnes) will eliminate about 5% of Argentina's 1998 consumption but 1.0% of the baseline consumption of Annex A Group I substances.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. This project was first submitted to the 29th Meeting for individual consideration. However, following further discussion between the Secretariat and UNDP the Project Review Sub-Committee was informed that the Secretariat and UNDP had reached agreement on the cost of the project with a proviso which requires the company to implement the project with the technology for which the grant is approved. UNDP, however, could not reach the beneficiary company (Fasax) to endorse the agreement. It therefore withdrew the project from consideration by the Executive Committee (Decision 29/49) with the request that it be maintained in its 1999 Business Plan for resubmission to the 30th Meeting. UNDP has subsequently informed the Secretariat of the company's endorsement of the agreement.

2. The issues related to the project were as follows:

(a) In view of the fact that the company (Fasax) had indicated its intention not to use the LIA technology and was requesting Executive Committee approval to apply the approved grant to its expansion programme, the Secretariat had difficulty addressing the project cost eligibility. The Secretariat was concerned that if the company was not intending to convert to the LIA technology whose cost is high on account of very high operational cost (US $158,500) resulting from the high cost of the substitute chemical it did not intend to use, and the project cost was based on this technology, a precedent would be set whereby companies would request funding based on a high cost technology only to apply the grant to ineligible development costs. Therefore it advised UNDP to use methylene chloride which is a standard technology (in all countries except those where the LIA technology has been introduced through UNDP or World Bank projects) for which the Executive Committee has approved a specific methodology for calculation of incremental operational costs (UNEP/OzL./Pro/ExCom/6/20, para. 85 (b) and Annex IV). However, UNDP was of the view that the calculation should be based on LIA in view of the country's standing objection to the use of methylene chloride. Correspondence from the Government indicated later that the presumption against the use of methylene chloride was not supported by any national legislation or regulations.

(b) The cost of the project based on LIA will be US $252,000 including US $158,500 in incremental operational costs due to the high cost of the Santofoam additive of the LIA technology. The cost of the project based on methylene chloride will be

about US $80,000 in view of the savings of about US $14,500. The capital costs in both cases are the same. The occupational safety and hygiene measures undertaken in both cases are the same since the methylene chloride continues to be used with the LIA.

3. The Secretariat and UNDP agreed on the level of funding of US $252,000 for the project provided that the funds approved are used for the conversion from CFC-11 to LIA technology as proposed in the project. This implies that, should the company carry out its original intention of embarking on an expansion programme, the amount eligible to be applied to such programme should not exceed US $80,000 and the balance should be returned to the Fund.

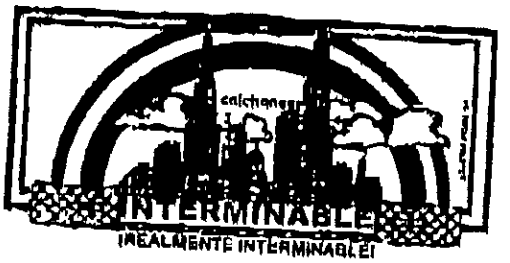
4. A letter of commitment from the company which indicates that the approved grant will be applied to conversion from CFC-11 to the LIA technology is attached as Annex I to this document.

RECOMMENDATIONS

1. The Secretariat recommends blanket approval of the Fasax project with the level of funding and associated support cost indicated below.

Project Title	Project Funding (US$)	Support Cost (US$)	Implementing Agency
Conversion from CFC-11 to methylene chloride/LIA technology in the manufacture of flexible polyurethane boxfoam at Fasax	252,000	32,760	UNDP

2. The approved grant should be applied to the conversion from CFC-11 to methylene chloride/LIA technology in line with paragraph 3 of the Secretariat's comments.



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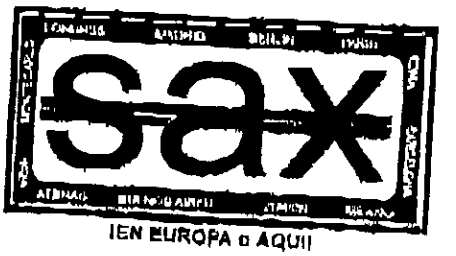

CARTA DE COMPROMISO DE LA EMPRESA

Por la presente, la empresa FASAX representada por JOSE EDUARDO VAZQUEZ ESTEVEZ y CARLOS AGOSTINO, confirma haber recibido copia de un proyecto destinado a la eliminación gradual de SAO, preparado por el Programa de la Naciones Unidas para el Desarrollo (PNUD) en nombre y representación de la empresa y del Gobierno de la Argentina.

La empresa FASAX expresa lo siguiente:

1. Que concuerda en que el PNUD/ UNOPS ejecutan el proyecto tal como fuera aprobado por el Comité Ejecutivo del Fondo Multilateral del Protocolo de Montreal y según la descripción que se realiza en el documento de proyecto, recibido por FASAX y del cual la empresa FASAX resultara beneficiaria;

2. Que acepta el proyecto tal como se lo propone en el documento de proyecto, es decir, la reconversion de CFC-11 a cloruro de metileno/ tecnología LIA (aditivo de bajo índice) en la producción de espumas de poliuretano flexible;

3. Que al finalizar el proyecto habrá eliminado gradualmente el uso de CFCs en forma total;

4. Que eliminara todo el equipo que ha sido reemplazado bajo el presente proyecto en cumplimiento de las disposiciones del documento de proyecto;

5. Que proporcionara los fondos para los ítems incluidos en el presente proyecto de corresponder y que se encuentran excluidos de la financiación por parte del Fondo Multilateral del protocolo de Montreal así como para los ítems incluidos en el proyecto y que se requieran a fin de completar exitosamente el mismo, aquellos que, aunque elegibles, excedan el presupuesto disponible y la previsión por contingencias;

6. Que permitirá las visitas de monitoreo por parte del PNUD/ OPROZ o quien este organismo designe a tal fin durante la implementacion del proyecto y con posterioridad al mismo, para verificar la correcta ejecución y el subsiguiente funcionamiento de la empresa sin utilización de CFCs.

Buenos Aires, 14 de Enero de 2000.

FASAX S.A.

J. EDUARDO VAZQUEZ
PRESIDENTE

FASAX S.A.

ENTERPRISE LETTER OF COMMITMENT

By this letter, the enterprise **FASAX**, represented by JOSE EDUARDO VAZQUEZ ESTEVEZ and CARLOS AGOSTINO, hereby confirms having received a copy of a project destined to ODS gradual elimination, prepared by the United Nations Development Programme (UNDP) on behalf of and represented by the enterprise and the Government of Argentina.

The enterprise **FASAX** hereby acknowledges the following:

1. It agrees that UNDP/UNOPS implement this project according to the approved by the Multilateral Fund Executive Committee of the Montreal Protocol and following the description in the project document received by **FASAX** which will the beneficiary.

2. It accepts the project as proposed in the project document, i.e., it will convert CFC-11 to Methylene Chloride/ **LIA** technology (low index additive) in the manufacture of flexible polyurethane foam.

3. By the end of the project, will have eliminated gradually the use of CFCs totally.

4. It will dispose all equipment that has been replaced under this project in compliance with the stipulations in the project document;

5. It will provide funds for items that are included in this project but are excluded from funding by Multilateral Fund of the Montreal protocol as well as for items included in this project and required for a successful completion that, while eligible, exceed the available budget and contingencies;

6. It will allow monitoring inspections by the UNDP/OPROZ or whoever designated by them for that effect, during project implementation and thereafter to verify that the implementation is correct as well as the subsequent enterprise operations without the use of CFCs.

Buenos Aires, 14 January 2000.

FASAX S.A.

J.Eduardo Vazquez
President

PROJECT EVALUATION SHEET

ARGENTINA

SECTOR: Fumigant ODS use in sector (1998): 536 ODP tonnes

Sub-sector cost-effectiveness thresholds: N/A

Project Titles:

(a) Phase-out of methyl bromide in strawberry, protected vegetables and cut flower production

Project Data	**Methyl bromide**
Enterprise consumption (ODP tonnes)	331
Project impact (ODP tonnes)	331
Project duration (months)	54
Initial amount requested (US $)	3,183,390
Final project cost (US $):	
Incremental capital cost (a)	1,200,000
Contingency cost (b)	120,000
Training costs (c)	1,863,390
Incremental operating cost (d)	0
Total project cost (a+b+c+d)	3,183,390
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US $)	3,183,390
Cost effectiveness (US $/kg.)	9.61
Counterpart funding confirmed?	
National coordinating agency	Oficina del Programa de Ozono
Implementing agency	UNIDO

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

PROJECT DESCRIPTION

Phaseout of methyl bromide in strawberry, protected vegetables and cut flowers

Background

1. The Government of Argentina is submitting a project to phase out: (a) 210 ODP tonnes of MB used for soil disinfestation in protected vegetables (tomato, lettuce, pepper, celery, spinach, cucumber, melon) and cut flower production, covering 728 ha which represents the total commercial production in the country; and (b) 121 ODP tonnes of MB used for soil disinfestation in strawberry production, covering 130 ha for strawberry nurseries and 970 ha for production (open field), representing the entire commercial strawberry production in the country.

2. The project is a combination of the two projects that were first submitted to the 29th meeting of the Executive Committee (UNEP/OzL.Pro/ExCom/29/25 pages 8 to 14), and is being submitted to the 30th meeting of the Executive Committee according to Decision 29/56.

Consumption in the Sector

3. In 1998, the estimated consumption of methyl bromide (MB) in Argentina was 536 ODP tonnes. Approximately 487 ODP tonnes is for soil fumigation: 186 ODP tonnes for horticulture, mostly tomatoes, celery and peppers; 138 ODP tonnes in tobacco seedbeds; 42 ODP tonnes for ornamental and cut-flowers; and 121 ODP tonnes for strawberry crops. Consumption for citrus and cotton post-harvest operations is 18 ODP tonnes and for the quarantine and storage of grains and legumes totals 31 ODP tonnes.

Alternatives selected

4. The alternatives selected for phasing out MB are:

   (a) Metam sodium, for controlling the main soil-borne pests and diseases in the production of horticulture and flowers (428 ha) and strawberries (790 ha); and

   (b) Steam pasteurisation, for controlling weeds and nematodes particularly in heavily infested soil. Due to the high cost of steam, the surface area to be treated with steam pasteurization is 610 ha (300 ha used for the production of ornamentals and cut-flowers and 310 ha for strawberry production).

5. The application of the steam technology requires the use of 20 steam generators (at a cost of US $60,000 per unit). The number of units has been based on parameters obtained during the visits to the different producing areas (planted area, distribution in the region and the feasibility of establishing farmer's associations that will operate the steam generators).

Training programme

6. The project includes comprehensive training programmes in the use of the alternative technologies (over 3,900 farmers are distributed through out the country, of which 600 work in strawberries production and 3,300 in flowers and vegetables). They will be implemented using extension personnel from the National Institute of Technology for Agricultural and Livestock (INTA).

7. The project also proposes the establishment of farmers' associations during the first year of project implementation, responsible for: (i) keeping and maintaining the equipment provided under the project (steam boilers), (ii) providing steam service to farmers, (iii) receiving and distributing consumable agricultural inputs, and (iv) collecting fees associated with basic operating costs.

Policy measures

8. The Government of Argentina has already enacted the following legislation regarding MB: (a) Decree 3489/58, which makes compulsory the registration of trade, importation and exportation of phytochemicals (pesticides, fumigants, including MB); (b) Resolution 440/98, which provides the procedures, criteria and scope for registration of phytosanitary products; (c) Resolution 20/96, which regulates the waste present in products treated with fumigants (including MB); (d) Disposition 28/98, which establishes the Methyl Bromide Consultative Group within the Secretariat of Natural Resources and Sustainable Development; (e) Resolution 280/98, which bans the use of MB in urban plague control.

9. The Government of Argentina has agreed to issue and implement the following policies specifically related to MB: (a) during project implementation, a regulation will be enacted prohibiting the use of MB in the production of vegetables, flower crops and strawberries. The Government has also agreed to reduce consumption of MB according to the following schedule (only essential and critical uses of MB will be allowed after 1st January 2007):

Year	Reductions in MB consumption(ODP tonnes)			%age reduction
	Strawberry	Horticulture	Total	
Baseline (*)			428.0	
1998	120.6	210.0	330.6	
2001	108.5	189.0	297.5	10.0%
2002	84.4	147.0	231.4	30.0%
2003	48.2	84.0	132.2	60.0%
2004	0.0	0.0	0.0	100.0%

(*) Including 100 ODP tonnes of MB used in tobacco seedlings.

10. The Government has also decided to phase out the consumption of MB in the production of tobacco seedbeds (138 ODP tonnes) before the end of 2007 (the phaseout schedule

will be defined after completion of the demonstration project on tobacco seedbeds under current implementation). The phase out of MB in post harvest applications (18 ODP tonnes) will be achieved before end-2007, if alternatives are proven effective.

Implementation modalities

11. Incremental operating costs are not being requested.

12. The project will be implemented by UNIDO under national coordination by the Ozone Office, in close cooperation with SENASA ("Servicio Nacional de Sanidad Agroalimentaria") and INTA. UNIDO will monitor the phase-out of MB according to the established phase-out schedule as well as the operational costs resulting from the substitution of MB.

13. UNIDO will inform the Executive Committee about the progress achieved (through annual reports) indicating phase out achievements and costs involved. UNIDO will also inform the Committee in cases of unjustified project delays, which would potentially result in cancellation of the project.

14. The estimated time for the implementation of the two projects is 4.5 years.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

Selection of alternatives

1. The Executive Committee approved at its 23rd Meeting a project to demonstrate the technical and economic feasibility of soil solarization, steam pasteurization, non-soil cultivation techniques and alternative chemicals as part of an integrated pest management (IPM) system as alternative technologies to the use of MB in the production of tomato, cut flowers and strawberries, and allocated US $482,000 to UNIDO for its implementation.

2. Findings from the demonstration project, which is in the final phase of implementation, show that metam sodium is an effective chemical in controlling the main soil-borne pests and diseases, has a low cost and is easy to use. Based on these results, the Secretariat sought a clarification from UNIDO on the reasons for not replacing MB completely with metam sodium. UNIDO explained that the main problem present in several regions in the country is a perennial weed that grows well under the soil, is very resistant to herbicides, cannot be controlled through good management practices as the seeds diffused through wind and human activities. Thus, it has been demonstrated that steam is the only effective alternative to control this weed.

Capital costs

3. The Secretariat questioned the cost of steam generators (at US $60,000 each) taking into account that the cost of similar equipment approved under demonstration projects was

US $27,000 and that the cost of small self-contained steam generators in the United States is US $6,000. UNIDO stated that the equipment must be capable of treating the large surface area covered under the project in a limited period of time available (15 to 30 days for strawberry crops). The steam generator proposed by the Secretariat would not be effective since it is very small, is mainly used for substrate treatment, and has a low working capacity.

4. Regarding the large number of units originally requested (15 units for vegetables and 16 units for strawberries), UNIDO indicated that the request for 31 boilers was based on the number of days in which the technology can be technically applied (2 days/ha with a duration of the season of two months) and the surface area to be treated (over 900 ha); this estimation, however, does not account for the time to transfer the equipment to the different farms and maintenance. Further to discussions on this issue, UNIDO agreed to reduce the size of the surface area to be treated with steam (from 490 ha to 310 ha in strawberry crops and from 446 ha to 300 ha in horticulture) and to proportionally increase the area to be treated with metam sodium (from 610 ha to 790 ha in strawberry crops and from 282 ha to 428 ha in horticulture). As a result, the total number of steam generators was adjusted to 20 units (capital cost of the project was adjusted accordingly).

Training programmes and farm associations

5. The main purpose of the training programmes is to group farmers in order to provide them with the services necessary to phase out MB and establish an extension programme. The project proposes to create and establish 22 farmer associations (15 for the vegetables and 7 for the strawberries) and to train their staff to initiate and carry out the extension services (training and steam applications). In this regard, the Secretariat and UNIDO discussed the potential for failure of such an approach. UNIDO stated that while the probability of failure for farmers associations is high, the failure rate in any extension system can be reduced by proper selection of staff and training. Thus, this appeared to be the only possible solution. The success of the investment project is based on the change and adoption of the alternatives, breaking the natural resistance to change from MB, because of the good results obtained when using this gas.

6. The Secretariat considered that the cost for the training programmes was high (US $2.2 million), considering that a training programme was included under the demonstration project. UNIDO responded that the scope of the training component in the demonstration project is very limited. While dissemination of the results of the demonstration project is being carried out successfully, they do not reach all the farmers who will be involved in the investment project.

7. In order to rationalize the costs of the training programmes, instead of hiring the staff on a full time basis (at US $1,500/month), UNIDO considered that the trainers could be hired on a part time basis (US $1,000/month). Thus, the training costs were adjusted accordingly (US $1,863,390).

Operating costs/savings

8. Operational costs are not claimed in the revised project.

Conclusion

9. The Fund Secretariat and UNIDO have agreed on the total cost of the project. Based on the above considerations, the Executive Committee may wish to consider approval of the project in the amount of US $3,183,390. The Executive Committee may also wish to request UNIDO to disburse the funds approved in tranches according to the proposed MB phase out schedule indicated in the project proposal; if Argentina does not meet the reduction requirements outlined in the proposal, the Multilateral Fund, through UNIDO, will withhold funding for the subsequent tranche of funding until such time as the required reduction has been met.

10. The Executive Committee may also wish to request UNIDO to submit an annual progress report on the implementation of the project to the Fund Secretariat.