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

### PROJECT PROPOSALS: BOLIVIA

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

Foam:

- Foam sector ODS phaseout UNDP

Fumigant:

- Terminal methyl bromide phase-out (excluding QPS) UNDP

**PROJECT EVALUATION SHEET  
BOLIVIA**

SECTOR: Foam ODS use in sector (2000): 10.9 ODP tonnes

Sub-sector cost-effectiveness thresholds: Rigid US \$7.83/kg

**Project Titles:**

(a) Foam sector ODS phaseout

Project Data	Multiple-subsectors
Enterprise consumption (ODP tonnes)	5.40
Project impact (ODP tonnes)	4.90
Project duration (months)	36
Initial amount requested (US \$)	226,131
Final project cost (US \$):	
Incremental capital cost (a)	137,000
Contingency cost (b)	13,700
Incremental operating cost (c)	10,511
Total project cost (a+b+c)	161,211
Local ownership (%)	100%
Export component (%)	0%
<b>Amount requested (US \$)</b>	<b>161,211</b>
Cost effectiveness (US \$/kg.)	20.55
Counterpart funding confirmed?	Yes
National coordinating agency	COGO
Implementing agency	UNDP

<b>Secretariat's Recommendations</b>	
Amount recommended (US \$)	161,211
Project impact (ODP tonnes)	4.90
Cost effectiveness (US \$/kg)	20.55
Implementing agency support cost (US \$)	20,957
Total cost to Multilateral Fund (US \$)	182,168

## PROJECT DESCRIPTION

### Sector background

- Latest available total ODS consumption (2000)	43.06 ODP tonnes
- Baseline consumption of Annex A Group I substances (CFCs)	75.67 ODP tonnes
- Consumption of Annex A Group I substances for the year 2000	41.14 ODP tonnes
- Baseline consumption of CFCs in foam sector	10.33 ODP tonnes
- Consumption of CFCs in foam sector in 2000	10.90 ODP tonnes
- Funds approved for investment projects in foam sector as of end of July 2001	US \$108,480.00
- Quantity of CFC to be phased out in investment projects in foam sector as of end of July 2001	5.00 ODP tonnes
- Quantity of CFC phased out from approved investment projects in the foam sector as of end of July 2001 (including CFC phased out in projects not yet reported as completed)	0 ODP tonnes
- Quantity of CFCs in approved ongoing investment projects in the foam sector as of end of July 2001	5.00 ODP tonnes
- Quantity of CFCs remaining to be phased out in the foam sector as of end of July 2001	0 ODP tonnes
- Quantity of CFCs to be phased out in investment projects being submitted to the 35 <sup>th</sup> ExCom (December 2001).	5.40 ODP tonnes
- Quantity of CFCs remaining to be phased out in the foam sector by the end of 2001	0 ODP tonnes

### Multiple-Subsectors

1. UNDP reported that a joint survey with the National Ozone Unit (COGO) has identified 6 small rigid foam enterprises. COGO estimates that there are about 10-15 small scale enterprises with a total estimated consumption of 15-20 ODP tonnes, some of which are too small for individual consideration.

2. The project addresses the remaining ODS users in Bolivia's foam industry. It has two main components. Company specific projects for two identified small ODS-consuming rigid foam enterprises (Isolcruz and Teplo) and technical assistance including a management plan. Bolivia will enact legislation to prohibit the use of CFCs in foam applications, to coincide with the implementation of the project. If the project is approved, there will be no further request from Bolivia for Multilateral Fund resources for the foam sector.

3. The costs of the two components of the project are as follows:

Technical assistance	US \$60,500
Investment projects	US \$165,631
Total	US \$226,131

Isolcruz, Teplo

4. The two enterprises, Isolcruz and Teplo produce a variety of rigid foam products, including insulation panels half shells and sprayfoam. The CFC consumption of the enterprises was 3.4 ODP tonnes and 2 ODP tonnes respectively in 2000. It is proposed to replace a low pressure dispenser installed at Isolcruz in February 1995 with a high pressure dispenser and provide another high pressure dispenser for a handmixing operation at Teplo. The summary of the project costs is as follows:

	Foam Equipment US \$	Trials US \$	Technical assistance and training	Contingency	Incremental operating cost	Total US \$	Cost-effectiveness US \$/kg*
Isolcruz	50,000	25,535	10,000	8,353	7,356	99,244	28.36
Teplo	25,000	19,995	10,000	5,500	5,892	66,387	33.19
Total	75,000	43,530	20,000	13,853	13,248	165,631	30.67

\* Since Bolivia is an LVC, cost-effectiveness thresholds do not apply.

Justification for the use of HCFC-141b

5. The project proposal meets the Executive Committee's requirements for the selection of HCFC-141b technology as the alternative technology. The letter of transmittal of the Government of Bolivia endorsing the enterprises' use of the technology is attached.

**SECRETARIAT'S COMMENTS AND RECOMMENDATIONS****COMMENTS**

6. The investment projects meet the relevant requirements of Executive Committee Decision 33/2.

7. The Secretariat identified some technical issues in the investment projects. These were discussed with UNDP and the project was agreed as follows:

Technical assistance:	US \$60,500
Investment projects:	US \$100,711
<b>Total</b>	<b>US \$161,211</b>

8. The agreement was reached with the understanding that the Government of Bolivia will not submit any further requests for assistance in the foam sector. UNDP requested flexibility for the Government in the disbursement of the approved funds.

**RECOMMENDATIONS**

9. The Fund Secretariat recommends blanket approval of the Bolivia Foam Sector ODS Phase-out project with the level of funding and associated support cost indicated below.

	<b>Project Title</b>	<b>Project Funding (US\$)</b>	<b>Support Cost (US\$)</b>	<b>Implementing Agency</b>
(a)	Foam sector ODS phaseout	161,211	20,957	UNDP

10. The approval of the project is on the understanding that the Government of Bolivia will not submit any further requests for assistance in the foam sector.

11. The Government of Bolivia will have the flexibility in disbursing the approved funds provided that all the project objectives are met.

**PROJECT EVALUATION SHEET  
BOLIVIA**

SECTOR: Fumigant ODS use in sector (2000): 1.5 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

**Project Titles:**

(a) Terminal methyl bromide phase-out (excluding QPS)

<b>Project Data</b>	<b>Methyl bromide</b>
Enterprise consumption (ODP tonnes)	1,525.00
Project impact (ODP tonnes)	1,525.00
Project duration (months)	48
Initial amount requested (US \$)	270,652
Final project cost (US \$):	
Incremental capital cost (a)	
Contingency cost (b)	
Incremental operating cost (c)	
Total project cost (a+b+c)	221,032
Local ownership (%)	100%
Export component (%)	0%
<b>Amount requested (US \$)</b>	<b>221,032</b>
Cost effectiveness (US \$/kg.)	
Counterpart funding confirmed?	
National coordinating agency	COGO
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**

### Terminal methyl bromide phase-out (excluding QPS)

12. The methyl bromide (MB) baseline for Bolivia has been calculated at 0.6 ODP tonnes. Recently, economic policies introduced in the country opened the market for import of goods including pesticides. Over the last year, MB consumption increased by almost 3 times the average consumption over the period 1995-1998. Future consumption is expected to increase substantially.

13. The Government of Bolivia is submitting a project to phase out the entire consumption of MB (1.5 ODP tonnes) used for soil disinfestation in the production of certified seed potato, and vegetable, strawberry and flower nurseries.

14. The project will adapt to local conditions the following alternative technologies to MB that have been successfully demonstrated in other countries: solarization in combination with alternative chemicals (strawberry and vegetable nurseries), bio-fumigation and floating tray systems (vegetable nurseries) and steam pasteurisation (potato seeds and cut flowers). The main equipment requirements are 3 small-capacity boilers and other farm materials (plastic trays, soil thermometers, seeders at a cost of US \$77,000).

15. The Government of Bolivia is proposing: to establish a national commission for the replacement of MB, procure and disburse the equipment and materials to nurseries/farms who use MB; to implement an initial technology transfer and training programme to a small number of MB users and technicians and then extended to all MB users; to raise awareness among farmers about the need to phase out MB; and develop a policy package and MB action plan to ensure that the alternatives selected will be sustainable, and to ensure that MB will not be re-introduced after it has been phased out. This will include measures to restrict imports of MB to comply with the agreed schedule. The cost of the training and extension programme, and project management is US \$174,000.

16. The project will be implemented by UNDP in co-operation with the Ministry of Agriculture, Cattle and Rural Development, Customs, agricultural producers associations, and national research centres, under the national co-ordination of the Ozone Unit.

17. The estimated time for the implementation of the project is 4 years.

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

### **COMMENTS**

18. This is the first activity in the fumigation sector (MB) submitted by the Government of Bolivia for consideration by the Executive Committee.

19. The MB baseline consumption has been established at 0.6 ODP tonnes and the 2000 consumption at 1.5 ODP tonnes. Therefore, Bolivia would not be able to meet the 2002

freeze, since it requires to phase out 0.9 ODP tonnes by the end of 2001. In this regard, the Government of Bolivia commits to stabilising consumption in 2002 through the development and adoption of an appropriate legislative framework to control MB consumption, start implementation of the investment project to achieve a complete phase out of MB by the end of 2006.

20. Regarding the time frame for the project implementation, UNDP informed the Secretariat that there is a substantial amount of work to be done to phase out MB in Bolivia, for the following reasons: MB is used for the production of a variety of crops. Bolivia has not had a demonstration and/or technical assistance project in this sector; therefore, significant technical work needs to be done with growers to adapt alternative technologies for each crop from other countries (requiring inputs from regional experts). MB is used in 8 regions and the users are diffuse. Following the adaptation of alternatives, the project has to provide training and extension for more than 90 small farmers, producers and technicians, in 5 crops and diverse parts of the country.

21. The Secretariat and UNDP discussed issues related with the size and the cost of the training programme, project management and transportation component. Subsequently, UNDP agreed to adjust these costs by US \$44,000.

22. UNDP is assisting the Government of Bolivia in drafting a proposal for an agreement between the Government and the Executive Committee with the commitments proposed and action plan for the phase out of MB in Bolivia. The draft agreement will be finalised prior to the 35<sup>th</sup> Meeting of the Committee.

## **RECOMMENDATION**

23. The Fund Secretariat and UNDP have agreed on the total cost of the project (US \$221,032). Based on the above considerations, specifically the project duration and the possible non-compliance with the 2002 freeze by Bolivia, the Executive Committee may wish to consider the project.

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*Ministerio de Desarrollo Sostenible y Planificación*  
*Viceministerio de Medio Ambiente, Recursos Naturales y Desarrollo Forestal*

La Paz, October 15 of 2001  
**MDSP - VMARNDF N° 3008/2001**

Mr.  
Frank Pinto  
**Principal Technical Advisor and Chief Montreal  
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**Ref.: PROJECTS OF THE GOVERNMENT OF BOLIVIA**

The Government of Bolivia requests United Nations Development Programme to submit the projects listed in Table 1 below. Table 1 to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 35th Meeting.

**Section I: ODS Consumption Data**

1. The ODS consumption figure of the projects have been validated by the Comisión Gubernamental del Ozono (COGO).
2. The consumption data have been retained in the records of the COGO for reference and/or future verification.
3. The Government has been advised by the COGO that the agreement to the projects indicates a commitment to ensure that the validated phase-out figure was realized and yielded a sustained reduction from the 2000 consumption of 10.4 ODP tonnes for the foam sector.

**Table 1: Projects Submitted to the 35<sup>th</sup> Meeting of the Executive Committee**

Project Title/Sector	Type of ODS	Consumption (ODP Tonnes), (2000)	Amount to be Phased Out (ODP T), (year)	Implementing Agency
<b>Foam Sector</b>				
TEPLO – Conversion from CFC-11 to HCFC-141b in the Manufacture or rigid polyurethane foam.	CFC-11	2.0	1.8	UNDP
ISOLCRUZ S.R.L. - Conversion from CFC-11 to HCFC-141b in the Manufacture or rigid polyurethane foam.	CFC-11	3.4	3.1	UNDP
<b>Total</b>		6.4	4.9	

*Ministerio de Desarrollo Sostenible y Planificación*  
*Viceministerio de Medio Ambiente, Recursos Naturales y Desarrollo Forestal*

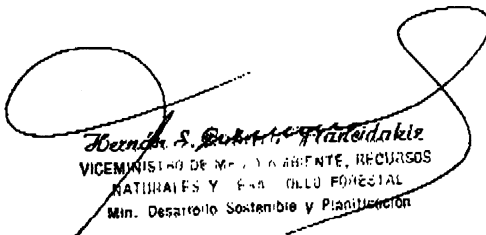
**Section II: Other Relevant Actions Arising from Decision 33/2**

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 from CFC-11 on the manufacture of rigid polyurethane foam.**

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 projects Teplo and Isolcruz S.R.L. 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:  
**Sr. Hernán Cabrera Francidakiz**  
**Viceministro de Medio Ambiente, Recursos**  
**Naturales y Desarrollo Forestal.**

  
VICEMINISTRO DE MEDIO AMBIENTE, RECURSOS  
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