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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Forty-ninth Meeting  
Montreal, 10-14 July 2006

**PROJECT PROPOSAL: ECUADOR**

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

Phase-out

- National CFC phase-out plan: 2006 annual programme

World Bank

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issue of the document.

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**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS  
ECUADOR**

<b>PROJECT TITLE</b>	<b>BILATERAL/IMPLEMENTING AGENCY</b>
National CFC Phase-out Plan	The World Bank

<b>NATIONAL CO-ORDINATING AGENCY:</b>	MICIP
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**LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT**

**A: ARTICLE-7 DATA (ODP TONNES, 2005, AS OF DECEMBER 2005)**

Annex A Group	Annex A Group II
132.48	0.0

**B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2005, AS OF DECEMBER 2005)**

ODS	Foam	Ref.	Aerosol	Fire Protection	Solvent	Fumigant
CFCs	7.34	124.99	0.00	0.0	0.15	0.0

<b>CFC consumption remaining eligible for funding (ODP tonnes)</b>	132.48
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**CURRENT YEAR BUSINESS PLAN:** Total funding \$227,410      Total phase-out 70 ODP tonnes.

<b>PROJECT DATA</b>		<b>2004*</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Total</b>
Annex A Group I  (ODP tonnes)	Montreal Protocol limits	301.4	150.7	<b>150.7</b>	45.2	45.2	45.2	0.0	301.4
	Annual consumption limit	235.0	150.0	<b>80.0</b>	42.0	21.0	21.0	0.0	235.0
	Annual phase-out from ongoing projects		0.0	<b>0.0</b>	0.0	0.0	0.0	0.0	
	Annual phase-out newly addressed		85.0	<b>70.0</b>	38.0	21.0	0.0	21.0	235.0
	Annual unfunded phase-out								
<b>TOTAL ODS CONSUMPTION TO BE PHASED OUT</b>									
Total ODS consumption to be phased-in (HCFCs)									
<b>Project costs (US \$):</b>									
Funding for World Bank		777,326	439,319	<b>227,410</b>	227,411	18,334	0.0	0.0	1,689,800
<b>Total project funding</b>		<b>777,326</b>	<b>439,319</b>	<b>227,410</b>	<b>227,411</b>	<b>18,334</b>	<b>0.0</b>	<b>0.0</b>	<b>1,689,800</b>
<b>Support costs (US \$)</b>									
Support cost for World Bank		58,300	32,349	<b>17,055</b>	17,056	1,375	0.0	0.0	
<b>Total support costs</b>		<b>58,300</b>	<b>32,349</b>	<b>17,055</b>	<b>17,056</b>	<b>1,375</b>	<b>0.0</b>	<b>0.0</b>	<b>126,135</b>
<b>TOTAL COST TO MULTILATERAL FUND (US \$)</b>		<b>835,626</b>	<b>471,668</b>	<b>244,465</b>	<b>244,467</b>	<b>19,709</b>	<b>0.0</b>	<b>0.0</b>	<b>1,815,935</b>
Project cost effectiveness (US \$/kg)									7.19

\* This first tranche was approved at the last Executive Committee Meeting in December 2003

**FUNDING REQUEST:** USD 227,410 plus support cost of USD 17,055. Total USD 244,465

<b>SECRETARIAT'S RECOMMENDATION</b>	Blanket approval at the costs indicated above.
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## PROJECT DESCRIPTION

### Background

1. On behalf of Government of Ecuador, the World Bank has submitted a request amounting to US \$227,410 plus agency support cost of US \$17,055 for the third tranche of the National CFC phase-out plan. The World Bank has also submitted a verification report prepared by a national consulting company on activities implemented in 2005 and results achieved, together with the 2005 progress report and 2006 annual implementation programme.
2. The National CFC Phase-out Plan for Ecuador (NPP) was approved at the 41st Meeting of the Executive Committee in December 2003. The Government of Ecuador was provided with financial support of US \$1,679,800 from the Multilateral Fund to completely phase out its CFC consumption in accordance with annual targets set in the Agreement between the Government and the Executive Committee. The NPP will phase out the remaining consumption of 242.95 ODP tonnes of Annex A, Group I substances over the 2004–2010 period. To achieve this target, a series of investment, non-investment, technical assistance, and capacity building activities will have to be carried out. No Refrigeration Management Plan activities have been funded previously by the Multilateral Fund in Ecuador. Therefore, activities proposed in the NPP include support for training refrigeration technicians and customs officers, and the establishment of an import licensing system.
3. The NPP will enable the Ecuadorian Government to ban the use of CFCs in the manufacturing sector by the end of 2006 and the use of virgin CFCs in the servicing sector by 2010. The Agreement between the Government of Ecuador and the Executive Committee approved at the 41st Meeting established CFC consumption and annual reduction targets as shown in the project cover sheet.

### 2005 Progress Report

4. The 2005 Annual Implementation Programme approved by the 45<sup>th</sup> Meeting of the Executive Committee outlined activities to be accomplished and performance indicators to facilitate the monitoring of the progress achieved. The World Bank identified a local auditing company (Corporation Enya), which has undertaken evaluation of the progress achieved in implementation of the 2005 programme and verified the CFC phase-out targets. The following activities have been undertaken:
  - (a) The import/export licensing and quota system has been further strengthened. Import quotas have been issued to national importers to maintain the import of CFCs not exceeding the consumption targets established in the Agreement;
  - (b) Altogether, 132.5 ODP tonnes of CFC-11 and CFC-12 had been imported by Ecuador in 2005. This quantity is below the annual consumption limit of 150 ODP tonnes established in the Agreement;
  - (c) Three manufacturing companies in the foam sector have been identified. The purchase of foam production equipment (high pressure foaming machines), and the cost of installation and trials have been funded by the World Bank. The companies are using HCFC-141b-based polyol systems. With conversion of the

three foam companies CFC consumption will be completely phased-out in manufacturing sectors in Ecuador;

- (d) The first batch of 15 recovery and recycling machines from the total number of 48 machines has been delivered. The remaining portion will be delivered by mid-2006. The total demand of 130 recovery and recycling machines will be met over 2006 to 2008 period. The World Bank authorized the purchase of 130 recovery and recycling machines amounting to US \$614,405;
- (e) The training in good practices in refrigeration and chiller servicing sectors has continued: two train-the-trainer programmes and five workshops on good practices were completed in 2005;
- (f) Six portable ODS identifiers have been delivered to the national custom office and a training course of custom officers was carried out. To date, three training courses have been accomplished. The World Bank has approved the purchase of a gas chromatograph and hydrogen generator for the amount of US \$39,565 for the custom office in Guyaquil;
- (g) Information related to the Government of Ecuador's policies in phasing-out CFCs has been disseminated to the industrial sectors. Public awareness of the environmental and economic impact of ozone layer depletion has been raised through training courses, an art contest, and publications in media.

5. The development and implementation of legal instruments for certifying refrigeration technicians was included in the 2005 programme but could not be accomplished. There is no respective national accreditation entity in the country and there are no technical standards that could be used to achieve such a goal.

6. The 2005 programme envisaged the ratification of the Beijing Amendment to the Montreal Protocol. The required documentation has been prepared and forwarded to the National Congress. The motion is still under consideration by the national legislative body.

7. From the total US \$1,216,645 allocated to Ecuador under the Agreement, the amount of US \$289,130 has been disbursed for activities accomplished in 2004 – 2005 and US \$653,970 was committed to activities to be implemented in 2006-2008. The remaining balance is equal to US \$273,545.

### **2006 Annual Implementation Programme**

8. The phase-out targets of the 2006 Annual Programme are to ensure that CFC consumption during the year does not exceed 80 ODP tonnes. Ecuador is requesting the release of US \$227,410 to achieve this objective. The following specific activities will be implemented in 2006:

- (a) Policy measures: Ratification of the Beijing Amendment; follow-up of the Import/Export Licensing system and import quotas;
- (b) Enterprise activities: Completion of investment sub-projects for manufacturing enterprises;

- (c) Technical assistance: Development of the second and third phases of the R&R programme targeting selected refrigeration workshops; conducting training courses on good practices in refrigeration servicing by authorized training centers;
- (d) Preparation and implementation of a chiller replacement project; training in the chillers servicing sector;
- (e) Preparation and implementation of a CFC banking system, including the purchase of a distillation tower to increase the reclamation capabilities in the country;
- (f) Other activities: Dissemination of information related to the Government's policy to phase out CFCs in the manufacturing sector, including information on the availability of funds provided by the Multilateral Fund to support CFC phase-out in Ecuador; raising public awareness of the environmental and economic impact of ozone layer depletion to the public via newsletters, articles, seminars and radio spots; conducting awareness programmes for the general public encouraging servicing refrigeration and MAC systems by trained technicians.

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

### **COMMENTS**

9. The Secretariat noted with appreciation the comprehensive verification report prepared by the national consulting company. The Secretariat noted from the verification report that out of 20 enterprises in the foam and commercial refrigeration manufacturing sectors identified as eligible for funding in the Plan only three enterprises had received assistance through sub-grant agreements with the World Bank. The World Bank clarified that several other companies have recently ceased the use of CFCs for several reasons.

10. The Secretariat noted from the verification report that one company had received assistance from the World Bank amounting to US \$103,172.10 for purchasing a high pressure foaming machine. The foaming machine is delivered and will be installed shortly replacing similar high pressure dispenser, which is being currently used by the enterprise. According to the Multilateral Fund rules, the replacement of a high pressure foaming machine with a new one is not eligible since high pressure equipment is capable of handling HCFC-141b formulations. As per the verification report, the company is currently applying HCFC-141b formulation using the existing equipment. The World Bank clarified that the replacement of foaming equipment in this company was a priority for the Government in addressing the CFC phase-out in the foam sector. The flexibility in using allocated resources was applied in accordance with Decision 35/57 and as formulated in the Agreement.

11. The Secretariat noted also that another foam company, Rojas Cepero, had received assistance amounting to US \$18,087 as a reimbursement for the acquisition of a high pressure machine which had been originally purchased by its affiliated Colombian company Rojas Hnos in Bogota (project COL/FOA/28/INV/35 approved for the World Bank at the 28<sup>th</sup> Meeting of the Executive Committee). It would appear that the disbursement of US \$18,087 to Rojas Cepero could represent double counting and would not be consistent with the Fund rules. The World Bank clarified that the funds provided to Rojas Cepero were to cover the cost of transportation,

installation, trials, training and operating costs. Thus, the use of these funds is consistent with the rules of the Multilateral Fund.

12. The World Bank has approved the purchase of a gas chromatographer and a hydrogen generator at a cost of US \$39,565 for the customs office in Guayaquil. This equipment was not listed in the budget attached to the 2005 implementation programme. It is for the first time that such sophisticated and expensive equipment requiring special training and costly maintenance has been provided to customs offices. So far, portable gas identifiers have been considered as quite reliable and sufficient equipment in projects approved for custom offices by the Executive Committee. The World Bank clarified that only 6 out of 18 portable ODS identifiers have been purchased. These identifiers work satisfactorily with pure gases but fail in analysing blends showing CFC-12 content in non-CFC blends (for example R406). This lack of reliability generated concern for custom officials. More reliable and more expensive equipment was therefore purchased not exceeding the total budget item.

13. The Secretariat noted that 15 sets of recovery and recycling machines, together with refrigeration servicing equipment has been provided to training centres. Altogether 48 recovering and recycling machines are expected to be provided as a first batch to selected servicing workshops by mid 2006. Additionally, the World Bank has already approved the purchase of about 130 recovery and recycling machines amounting to US \$614,405. This purchase was not part of the approved 2005 budget. In this regard, the Secretariat drew the World Bank's attention to Decision 41/100 which urges Article 5 countries and implementing agencies in developing appropriate programmes in refrigeration servicing sector to be more selective in providing new recovery and in particular recycling equipment. The World Bank reassured the Secretariat that it will follow the recommendations of the Executive Committee regarding implementation of recovery and recycling programmes. The programme in Ecuador will be developed in phases and delivery of the equipment will only be done upon completion of respective training sessions and taking into account the lessons learned from the use of the first batch of equipment. The Bank's authorisation to purchase 130 machines was done as an operational measure and a mechanism to simplify the procurement process and ensure prompt delivery of equipment as the project advances.

14. The Secretariat noted that the request for the third funding tranche of the Plan for Ecuador is in accordance with the agreement between the Government and the Executive Committee approved at the 41st Meeting. The Secretariat also noted that the majority of phase-out activities included in the 2005 annual implementation programme have been completed. The Government of Ecuador reported to the Secretariat 2005 CFC consumption data which are below the limit established in the Agreement.

## RECOMMENDATION

15. The Fund Secretariat recommends blanket approval of the third tranche of the project with associated support costs at the funding levels shown in the table below:

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	National CFC phase-out plan: 2006 annual programme	227,410	17,055	World Bank

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