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执行蒙特利尔议定书  
多边基金执行委员会  
第七十六次会议  
2016年5月9日至13日，蒙特利尔

世界银行 2016 年工作方案

## 基金秘书处的评论和建议

1. 世界银行要求执行委员会为其 2016 年的工作方案核准经费 247,500 美元，外加机构支助费用 19,525 美元，细目如表 1 所列。提交的申请附于本文件附件。

表 1. 世界银行 2016 年工作方案

国家	活动/项目	申请数额 (美元)	建议数额 (美元)
<b>A 部分：建议一揽子核准的活动</b>			
<b>A1: 对筹备调查消耗臭氧层物质替代品提供技术援助</b>			
约旦	筹备调查消耗臭氧层物质替代品	110,000	110,000
	方案支助费用（技术援助费用的 9%）	9,900	9,900
	A1 共计	119,900	119,900
<b>B 部分：建议需要进行单独审议的活动</b>			
<b>B1: 项目编制</b>			
阿根廷	编制氟氯烃淘汰投资活动（第二阶段）（泡沫塑料行业）	137,500	0
	方案支助费用（项目编制费用的 7%）	9,625	0
	B1 共计	147,125	0
	A 和 B 共计	267,025	119,900

### A 部分：建议一揽子核准的活动

#### A1: 对筹备调查消耗臭氧层物质替代品提供技术援助

约旦：对筹备国家调查消耗臭氧层物质替代品提供技术援助：110,000 美元

#### 项目说明

2. 世界银行根据第 XXVI/9 号决定第 4 段的要求<sup>1</sup>，提交了约旦进行调查消耗臭氧层物质替代品的申请。进行这项调查的目的是协助该国更好地了解国内非消耗臭氧层物质替代品的消费趋势以及各行业和次级行业的分配情况。

#### 秘书处的评论

3. 秘书处注意到，供资申请符合第 74/53(d)号决定的规定，其中还提交了约旦政府的核准信函。秘书处通知世界银行指出，供资申请将建议以一揽子方式核准，但有一项了解，即依照第 74/53 号决定的要求，有关调查约旦消耗臭氧层物质替代品的最后报告将在 2016 年底提交，供秘书处进行分析。

#### 秘书处的建议

4. 秘书处建议按本文件表 1 所列供资数额一揽子核准调查约旦消耗臭氧层物质替代品的申请，但有一项了解，即最后调查报告将在 2017 年 1 月 1 日以前提交秘书处。

<sup>1</sup> 《蒙特利尔议定书》缔约方会议决定“要求多边基金执行委员考虑提供额外资助，对根据第 5 条第 1 款行事的缔约方在其要求下盘点或调查消耗臭氧层物质的替代品”。

## B 部分：建议需要进行单独审议的活动

### B1: 编制氟氯烃淘汰投资项目（第二阶段）

阿根廷：编制氟氯烃淘汰投资活动（第二阶段）（泡沫塑料行业）：137,500 美元

#### 项目说明

5. 世界银行代表阿根廷政府提交了编制泡沫塑料行业淘汰氟氯烃投资活动项目的申请，这项活动是氟氯烃淘汰管理计划第二阶段的一部分，申请供资数额如表 1 所示。

#### 秘书处的评论

6. 秘书处根据第 71/42 号决定所载第 5 条国家编制氟氯烃淘汰管理计划第二阶段项目的供资准则审议了这项申请。提出的申请没有提供阿根廷执行氟氯烃淘汰管理计划取得的总体进展信息，显示氟氯烃淘汰管理计划第一阶段的执行工作已经取得大幅进展（准则的要求）；但只涉及至今尚未处理的泡沫塑料行业。

7. 秘书处无法审议这项申请，因为它并非是提交整个氟氯烃淘汰管理计划第二阶段的申请的一部分，因此，要求世界银行将这个项目延后到第七十七次会议提出，那时提出的全面提案将包括执行氟氯烃淘汰管理计划第二阶段的总体战略，同时考虑到需要该国履行的所有活动。秘书处还注意到，阿根廷的氟氯烃淘汰管理计划第一阶段第二次付款在第七十四次会议得到核准（2015 年 5 月），并且最后一次付款的供资申请将在 2017 年提出。

8. 世界银行解释指出，必须核准供资申请，因为对这个行业的投资考虑根据世界银行的规则和程序已经列入与该国签订的赠款协定，并且阿根廷政府已经确认，世界银行将继续作为泡沫塑料行业的执行机构参与氟氯烃淘汰管理计划第二阶段的工作。

9. 在若干回合讨论后，秘书处最后认定，这项申请必须与牵头执行机构编制总体战略的申请一起向未来的会议提出。

#### 秘书处的建议

10. 基金秘书处建议，编制阿根廷淘汰氟氯烃投资活动（第二阶段）的项目申请将与阿根廷氟氯烃淘汰管理计划第二阶段的项目编制申请一起提交，供供执行委员会审议。

2016 BUSINESS PLAN  
WORK PROGRAM AMENDMENT



**WORLD BANK GROUP**

WORLD BANK IMPLEMENTED  
MONTREAL PROTOCOL OPERATIONS

Presented to the  
76<sup>th</sup> Meeting of the Executive Committee  
of the Multilateral Fund

14 March 2016

## **WORK PROGRAM FOR WORLD-BANK IMPLEMENTED MONTREAL PROTOCOL OPERATIONS**

1. This proposed work program amendment for Bank-Implemented Montreal Protocol Operations is prepared on the basis of the 2016-2018 World Bank Business Plan which was approved by the Executive Committee at its 75<sup>th</sup> meeting.
2. The 2016-2018 World Bank Business Plan consists of investment and non-investment activities to assist Article 5 partner countries to meet their two HCFC reduction targets, the 2015 10% reduction and the 2020 35% reduction. The Business Plan includes, in addition to deliverables associated with previously approved and new investment activities, requests to extend support for implementation of existing institutional strengthening projects in two countries.
3. As part of the 2016-2018 Business Plan, the World Bank plans to submit new preparation fund requests for HCFC sector plans Stage II for Argentina, Jordan, and Thailand, including foam demonstration project for Thailand, and project proposals for Argentina, Argentina, Indonesia, Jordan, the Philippines, Thailand and Vietnam.

### **2016 Work Program – ExCom 76 Amendment**

4. The proposed 2016 Work Program Amendment being submitted for consideration at the 76<sup>th</sup> Meeting of the Executive Committee, includes two funding requests. One activity in Argentina to prepare stage II HPMP (foam sector) in accordance with Executive Committee Decision 71/42(f). Another one for survey of ozone depleting substances (ODS) alternatives in Jordan in accordance with Executive Committee Decision 74/53(d).
5. The funding requested per activity is outlined in Table 1 below. Please refer to **Error! Reference source not found.** for the Stage II HCFC Foam Sector Plan preparation request for Argentina.

*Table 1: Funding Requests Submitted for Consideration by the 76<sup>th</sup> Meeting of the Executive Committee*

<b>Country</b>	<b>Request (US\$)</b>	<b>Support Costs (US\$)</b>	<b>Duration</b>	<b>Description</b>
Argentina	137,500	10,313	1 year	Project preparation for Stage II HPMP (foam sector) in accordance with ExCom Decision 71/42
Jordan	110,000	9,900	1 year	Preparation of an ODS Alternatives Survey in accordance with MOP Decision XXVI/9 and ExCom Decision 74/53
<b>Total</b>	<b>247,500</b>	<b>20,213</b>		

## Annex I

### Request for Project Preparation (PRP) for stage II PHMP (Foam Sector) in Argentina

#### 1. Background

At the 19th Meetings of the Parties held in September 2007, the Parties agreed to accelerate the HCFC phase-out schedule. As an Article 5 country, Argentina was required to freeze the production and consumption of HCFCs at the average level of 2009 - 2010 (baseline) by 2013, to realize 10%, 35%, 67.5% reductions in 2015, 2020 and 2025, respectively, and achieve complete phase-out of HCFCs by 2030 with a 2.5% remaining allowed production and consumption of HCFCs to meet the residual demand in the servicing sector during the period of 2030 – 2040.

In cooperation with the World Bank, one of the implementing agencies to the Multilateral Fund for the implementation of the Montreal Protocol, Argentina submitted a project to phase out HCFC-141b in the production of PU foam for domestic refrigerators at Mabe Argentina to the 66<sup>th</sup> ExCom meeting in July 2012 which was approved at the same meeting for a funding of US\$914,612 grant. The objective of the Mabe project is to phase out the use of 167.8 tons (19.5 ODP tons) of HCFC-141b in the polyurethane (PU) rigid insulation foam production for domestic refrigerators.

In the second stage (2016-2020), to continue the phase-out of HCFCs and achieve, at a minimum, the 2020 target of phasing out 35% of HCFC consumption from the baseline level, the foam sector plan is to be prepared, and will continue to organize the investment activities, policy development, and technical assistance (TA) activities. This document presents the intended coverage, time-lines and costs for the preparation for Stage II.

#### 2. Sector Background and Coverage

##### 2.1. Foam Sector Background

Argentina consumed 983 tons of HCFC-141b, HCFC-22, and HCFC-142b in the production of PU and XPS foam in 2010. The survey identified following the HCFC consumptions per application as shown in Table 1 below.

**Table 1: Consumption of HCFC by Foam Applications, 2010 (MT)**

Category	Application	HCFC-141b	HCFC-22	HCFC-142b	Total HCFCs	%
PU Insulation Foams	Domestic Appliances	240	-	-	240	24%
	Commercial refrigeration	54	-	-	54	5%
	Sandwich panels	282	-	-	282	29%
	Spray and pour in place	250	-	-	250	25%
	Box foaming	54	-	-	54	5%
	Doors insulation	30	-	-	30	3%

Category	Application	HCFC-141b	HCFC-22	HCFC-142b	Total HCFCs	%
PU Other Foams	Integral skin	7	-	-	7	1%
	Other	9	-	-	9	1%
XPS	Insulation boards	-	16	41	57	6%
<b>Total</b>		<b>926</b>	<b>16</b>	<b>41</b>	<b>983</b>	<b>100%</b>

Based on stage I HPMP, there are 600 foam producers in Argentina with the approximate distribution as shown in Table 2.

**Table 2: Break-down of Foam Enterprises by their Consumption**

Consumption (MT)	Number
>20	12
10-20	3
5-10	12
3-5	18
1-3	75
0.5-1	70
<0.5	176
<0.1	193

Stage I HPMP identified five system houses in Argentina: BASF Poliuretano, Huntsman, Dow, Ecopor and Quimica del Caucho (QdC).

## 2.2. Implementation Progress of Mabe Argentina project

As part of stage I HPMP for Argentina approved by the 66<sup>th</sup> ExCom, an investment project for Mabe Argentina was approved for a funding of US\$914,612 to phase out 167.8 tons (19.5 ODP tons) of HCFC-141b. Mabe manufactures domestic refrigerators and freezers using polyurethane rigid foam insulation with a production of ~250,000 units per year. Since the approval of the project in April 2012, Mabe had carried out the following activities:

- **Hydrocarbon storage and blending:** Installation of a horizontal cylindrical single compartment storage tank for hydrocarbons with a capacity of 30 m<sup>3</sup> along with a blending station that included two tanks for cyclo-pentane and polyol, a pre-mixer and a buffer tank.
- **Replacing of foaming equipment:** Installation of two new high-pressure foam injection machines, one per line.
- **Installation of a safety control system and gas monitoring:** Installation of infrared sensors and alarm systems in the critical areas (storage and premixing, cabinet and door injection), a proper ventilation system, the retrofitting of the moulds/fixtures for cabinets and doors, the respective safety control panels for foaming lines to handle all the infrared sensors and suction points, anti-spark electric fans, leak detection sensors; a fire extinguishing system based on CO<sub>2</sub> and duly interfaced with the general system; the electric grounding of all equipment and the developing of proper safety procedures.



- **Polyurethane system development and qualification:** The conduction of the required trials, training and refrigerators testing had been completed. Mabe had started to use cyclopentane as blowing agent in all models since April 8, 2015.
- **Comprehensive safety audit:** The conduction of a detailed safety audit of the whole process (European directive ATEX 94/9/EC) was conducted by Cannon and the issue of the respective certification.

### 3. Preparation of Foam Sector Plan

#### 3.1. Objective

The objective of this assignment is to develop a Foam Sector Plan for Argentina to completely phase-out HCFCs in foam production by 2020. The plan will include individual investment projects for large and medium-size foam enterprises and umbrella type projects for small and micro-size enterprises with related technical assistance activities through foam system house. The plan will also include a Project Management Unit to implement a foam sector plan.

#### 3.2. Scope of works

In order to properly develop the foam sector plan, the preparation work will mainly include the following activities:

- Review and assessment of the degree of validity of Stage I HPMP data in the foam sector as well as gaps that need to be filled since 2011 data collection;
- Data collection and validation on the consumption patterns by HCFC substance by the foam enterprises and subsector;
- Consideration of the range of non-ODS, technically proven, and commercially available alternatives, including climate-friendly alternatives to HCFCs; will supplement the requisite assessments at the sector, subsector level;
- Develop an integrated phase-out strategy for the foam sector, reduction schedule, implementation modality, policies framework, and technical assistance activities;
- Consultations with national stakeholders from public and private sector on survey results, replacement technologies, foam sector strategy, policy framework and measures, and secure stakeholders commitment;
- Determine the funding needed for a comprehensive foam sector plan, taking into account relevant ExCom policies and guidelines, and key sensitivity parameters;
- Prepare along with the eligible foam manufacturers the corresponding individual and umbrella type projects to ensure the achievement of the strategic goals;

### 4. Timelines for preparation

Overall time plan for implementation of the preparation project during the 12 months is given in the table below:

Activity	Q1	Q2	Q3	Q4
Inception meeting	X			
Collect current HCFCs consumption in the foam sector	X	X	X	

Stakeholder consultations on survey results and technology choices		X	X	
Stage II HPMP foam sector plan formulation		X	X	
Stakeholder consultations on strategy, policy framework and measures, and project and incremental costs			X	X
Preparation of the individual and umbrella type projects			X	X
Finalization of stage II HPMP foam sector plan				X

## 5. Project costs

During the preparation of HCFC phase-out investment activities for inclusion in stage I HPMP, the World Bank received two project preparation funding: \$30,000 (64<sup>th</sup> ExCom) and \$120,000 (65<sup>th</sup> ExCom). The World Bank utilized full amount of funding on project preparation from the first approval while disbursed \$11,439 from the second approval. The balance of \$108,561 was returned to the Multilateral Fund in December 2013. The initial survey identified large and medium-size foam enterprises, system houses and HCFC importers. However, there was not much information collected on the small and micro-size enterprises as stage I HPMP focused more on the larger enterprises. In addition, considering that the survey was carried out more than 4 years ago, there is a need to carry out a comprehensive survey in order to have the latest HCFC consumption by foam enterprises and subsector with additional emphasis on the small and micro-size foam enterprises.

Taking the above consideration that into account, the project preparation costs for sector projects can be given in the table below.

Particulars	Unit cost	Number	Value in USD
National consultant service (survey of foam sector, support in project preparation)	250	80	<b>20,000</b>
National consultant service (policy development)	400	20	<b>8,000</b>
International consultant service (alternative technology review, reduction schedule, cost calculation and project formulation)	700	50	<b>35,000</b>
Domestic travel for enterprise visits (for international and national consultants)	400	40	<b>16,000</b>
International travels and accommodation for International Consultant (10-day per trip)	10,000	2	<b>20,000</b>
Consultation workshops	8,000	2	<b>16,000</b>
Communication, interpretation, translation, printing, etc.	5,000	2	<b>10,000</b>
<b>Sub-total</b>			<b>125,000</b>
Contingency (10%)			<b>12,500</b>
<b>Total</b>			<b>137,500</b>