



## Montreal Protocol Hydrochlorofluorocarbons (HCFC) Phase-out Project (P129397)

LATIN AMERICA AND CARIBBEAN | Argentina | Environment & Natural Resources Global Practice |  
Montreal Protocol | Investment Project Financing | FY 2014 | Seq No: 9 | ARCHIVED on 26-Oct-2018 | ISR34135 |

Implementing Agencies: Ministry of Production, The Argentine Republic

### Key Dates

#### Key Project Dates

Bank Approval Date: 30-Jul-2013

Effectiveness Date: 30-Jan-2015

Planned Mid Term Review Date: 25-Apr-2016

Actual Mid-Term Review Date: 16-Aug-2016

Original Closing Date: 30-Apr-2021

Revised Closing Date: 30-Apr-2021

### Project Development Objectives

Project Development Objective (from Project Appraisal Document)

The project development objective is to support Argentina in phasing out controlled ozone-depleting substances in accordance with the country's obligations under the Montreal Protocol.

Has the Project Development Objective been changed since Board Approval of the Project Objective?

No

### Components

Name

Component 1: HCFC Phase-out at Mabe Argentina S.A.:(Cost \$0.84 M)

Component 2: CFC Replacement in Chillers:(Cost \$0.14 M)

Component 3: Technical Assistance:(Cost \$0.07 M)

Component 4: Project Management:(Cost \$0.05 M)

### Overall Ratings

Name	Previous Rating	Current Rating
Progress towards achievement of PDO	● Satisfactory	● Satisfactory
Overall Implementation Progress (IP)	● Moderately Unsatisfactory	● Moderately Unsatisfactory
Overall Risk Rating	● Moderate	● Moderate

### Implementation Status and Key Decisions

**Component 1 on Mabe Argentina S.A. conversion from HCFC-141b to hydrocarbon** was completed successfully in April 2015, achieving 100 percent of the targeted HCFC consumption reduction of 167.80 metric tons. In March 2016, a technical verification visit was conducted by WB and PCU at the Mabe plant in San Luis. In April 2016, Mabe got fully reimbursed and the respective Sub-Grant Agreement completed. In terms of the related PDO indicator on the associated direct climate benefit in terms of greenhouse gas (GHG) emission reductions, Component 1 achieved 100 percent of its share of the total indicator target, i.e. 121,655 tCO<sub>2</sub>e annual reduction after the Mabe HCFC phase-out was completed in April 2015.



**Component 2 on chlorofluorocarbon (CFC) chiller conversions** was not part of the Argentina HPMP Phase I, but remnant resources from a MLF-funded Global Chiller Replacement Program implemented by the WB that the ExCom approved for implementation in Argentina until the end of 2017. Due to several factors, Component 2 resulted with poor performance as it implemented only three CFC chiller conversions against the targeted 20 conversions. The complemented conversions included two units of 350 tons of refrigeration (TR) of a health institute “Fundacion Favalaro”, and a unit of 400 TR of a consortium of building owners “Consorcio de Propietarios de Calle Rivadavia 601, Edificio Florida 2”.

In August 2016 the project’s mid-term review conducted an analysis of the challenges encountered in implementing Component 2 and two major reasons were identified: 1) the climatic conditions in Argentina don’t require maximum performance of chillers, and many CFC chillers despite of their old age still have a useful life of up to 10 years; and 2) the manifold macroeconomic challenges faced by the country and extremely low energy prices until mid-2016 had not favored investments in imported goods that are not essential for key enterprise/agency functions. Further, chiller conversions usually imply almost the same amount of investment needed in supporting works as the actual equipment purchase. Consequently, conversion of functioning chillers to new and more energy efficient models with a 20 percent subsidy only of the new equipment was not a priority investment for enterprises and agencies that own functioning CFC chillers. WB agreed to increase the chiller conversion subsidy from the 20 to the maximum 33 percent of the cost of a new chiller equipment allowed by the applicable MLF rules. At the July 2017 ExCom meeting, the Government negotiated an additional year for Component 2 implementation until December 2018. The three chiller conversions delivered were subject to a technical audit contracted by the MLF Secretariat in August 2017. The only concern raised by the audit was the slow implementation progress. No new Sub-Grant Agreement was signed and disclosure of a call for proposals with the increased subsidy remained pending until November 2017, when the remaining Component 2 balance of USD 808,438 was transferred to UNIDO as the new responsible MP Implementing Agency.

**Component 3 on periodic monitoring and reporting on FIASA S.A., the only HCFC producer in Argentina**, delivered a retroactive monitoring of FIASA’s HCFC-22 production during 2015, quarterly control and monitoring visits and reports during 2016, and starting in 2017, the PCU conducted biannual monitoring and reporting until June 2018. FIASA proved compliant with its production quotas assigned by SAyDS. From July 2018, FIASA monitoring will continue supported by UNIDO. Component 3 also financed development and start-up of a public monitoring platform for documents related with the MP portfolio of subprojects and related documents in Argentina, including digitization of the MoP and SAyDS paper archives.

**Component 4 on project management** completed implementation on June 29 prior to project’s anticipated closing date on June 30, 2018. The PCU carried out project’s fiduciary and environmental management and was responsible for collaboration with the beneficiary/affected enterprises and interinstitutional collaboration with the involved Government agencies.

**Component 5 on a Foam Sector Plan (FSP)**, the main contribution to the HCFC phase-out to be delivered under the HPMP Phase II, was prepared with WB technical lead and in close collaboration with the beneficiary/affected and stakeholder companies between August 2016 and March 2017. The FSP funding was approved by the MLF ExCom in July 2017 to phase out HCFC consumption at the sector level, targeting four major HCFC consumers through individual subprojects, and around 160 small and medium enterprises eligible for MLF funding through umbrella projects. The latter were designed with seven polyurethane system houses that provide products and services to foam enterprises. The FSP preparation was launched and finalized through a public event organized at the MoP on August 16, 2016 and March 31, 2017, respectively. Representatives of the foam sector and other involved actors took part in these events, where the implied phase-out targets and the available technological alternatives were presented and discussed. Even though the major part of the foam sector conversions is expected to take place by the end of 2019, the Government will ban HCFC-141b imports only starting in January 2022. This decision aims to safeguard the production and overall viability of all the foam enterprises, including those with challenges in terms of adopting an alternative technology that in most cases is expected to base on hydrofluoroolefins (HFOs).

## Risks

### Systematic Operations Risk-rating Tool

Risk Category	Rating at Approval	Previous Rating	Current Rating
Political and Governance	--	● Moderate	● Moderate
Macroeconomic	--	● Substantial	● High
Sector Strategies and Policies	--	● Moderate	● Moderate
Technical Design of Project or Program	--	● Substantial	● Substantial
Institutional Capacity for Implementation and Sustainability	--	● Moderate	● Moderate



Fiduciary	--	● Moderate	● Moderate
Environment and Social	--	● Moderate	● Moderate
Stakeholders	--	● Moderate	● Moderate
Other	--	--	--
Overall	--	● Moderate	● Moderate

## Results

### PDO Indicators by Objectives / Outcomes

Support AR in phasing out controlled ODS in accordance with the country's obligations under the MP				
▶ Initial foam sector HCFC consumption reduction (Metric ton, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	167.80	167.80	167.80
Date	02-Dec-2013	08-Apr-2015	08-Apr-2015	31-Dec-2014
Comments:	Target achieved 100 percent. HCFC phase-out under Component 1 was successfully completed in April, 2015. Despite the remarkable delay suffered by the project effectiveness, the result suffered only a slight delay as the original target deadline for the phase-out was December, 2014. This still allowed Argentina to comply with its Montreal Protocol obligations.			
▶ CO2e emissions (Tones/year, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	135,905.00	135,905.00	216,655.00
Date	02-Dec-2013	18-Dec-2017	18-Dec-2017	31-Dec-2018
Comments:	Target achieved at 63 percent. The associated direct climate benefit from conversion at Mabe S.A. represents 121,655 tCO2e per year after the respective HCFC phase-out completion that took place in April 2015. The remaining target relates with the planned chiller conversions to eliminate residual CFC consumption used as refrigerant in the servicing of older chillers. The project target was to subsidize the conversion of an estimated 20 chillers to CFC-free, more energy-efficient models, resulting in an associated reduction of app. 20 t of CFC-11. This would have represented 95,000 tCO2e per year upon completion (based only on GWP of the refrigerant; without calculating associated energy efficiency gains). Only 3 chillers were converted due to implementation delays by the closing of Component 2 implementation with Bank support in November 2017. The final result reflects completion of two Sub-Grant Agreements on conversion of two CFC chillers with capacity of 340 TR each and the second on conversion of a CFC chiller with capacity of 400 TR. The respective tCO2e emission reduction was calculated simply by dividing the initial 95,000 tCO2e reduction target by 20 (the number of the targeted chillers) and multiplied by 3 (the number of converted chillers).			

### Overall Comments

The first PDO indicator is the core indicator to measure the country compliance with its Montreal Protocol obligations. The second PDO indicator does not measure a direct MP obligation of Argentina, yet it relates with Decision XIX/6 of the MP Parties that asks said Parties to take climate impacts into account when phasing out



HCFCs. Thus, CO<sub>2</sub>e emissions avoided through the CFC chiller replacements subsidized under Component 2 was included as a second-tier PDO indicator in the original Project design.

The differing end target dates, December 2014 and December 2018 for the two PDO indicators are due to the applicable MP decisions that determined the implementation schedule of Components 1 and 3.

### Intermediate Results Indicators by Components

Component 1: HCFC Phase-out at Mabe Argentina S.A.				
▶HCFC-141b consumption phase-out at Mabe Argentina S.A. (Metric ton, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	167.80	167.80	167.80
Date	02-Dec-2013	08-Apr-2015	08-Apr-2015	31-Dec-2014
Comments:	HCFC phase-out under Component 1 was successfully completed in April, 2015. Despite the remarkable delay suffered by the project effectiveness, the result suffered only a slight delay as the original target deadline for the phase-out was December, 2014. Said delay did not affect Argentina's compliance with its MP obligations.			
Component 2: CFC Replacement in Chillers				
▶Replaced and destroyed CFC-chillers (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	3.00	3.00	20.00
Date	02-Dec-2013	18-Dec-2017	30-Jun-2018	31-Dec-2018
Comments:	Target achieved at 15 percent. Two Sub-Grant Agreements that covered three CFC chiller conversions (2 x 350 tons of refrigeration and 400 TR) were completed.			
Component 3: Technical Assistance				
▶Compliance with the monitoring and control protocol on HCFC-22 production (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	Yes	Yes	Yes
Date	02-Dec-2013	18-Dec-2017	30-Jun-2018	31-Dec-2015
Comments:	Target achieved 100 percent. Component 3 delivered a report on retroactive monitoring of the FIASA HCFC-22 production during 2015, four quarterly monitoring reports covering 2016, and three semester reports from January 2017 to June 2018. FIASA complied with its respective HCFC-22 production quotas during the whole of the monitoring period.			

### Overall Comments



Component 4 on project management does not have a related indicator. Component 5 on Foam Sector Plan under Phase II of the project was to have its proper intermediate results indicator in line with the IRI of Component 1 on Mabe, and the first PDO indicator "Initial foam sector HCFC consumption reduction" was to be revised to cover Component 5 as well.

The differing end target dates, December 2014 and December 2018 for the two PDO indicators are due to the applicable MP decisions that determined the implementation schedule of Components 1 and 3.

## Data on Financial Performance

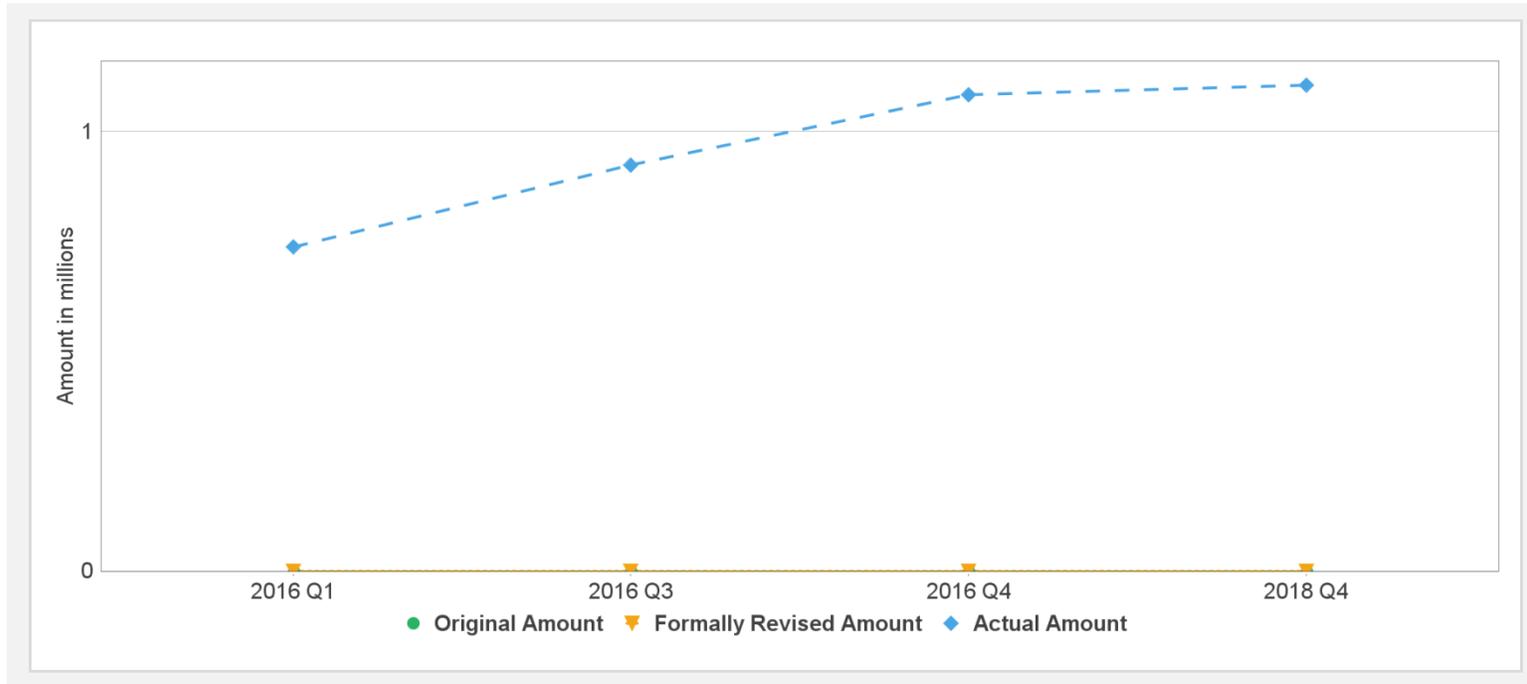
### Disbursements (by loan)

Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P129397	TF-14897	Effective	USD	1.91	1.91	0.00	1.11	0.81	58%

### Key Dates (by loan)

Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
P129397	TF-14897	Effective	30-Jul-2013	19-Dec-2014	30-Jan-2015	30-Apr-2021	30-Apr-2021

### Cumulative Disbursements



## Restructuring History

Level 2 Approved on 28-Jun-2018

## Related Project(s)

There are no related projects.