



China HCFC Phaseout Project Stage II (P156397)

EAST ASIA AND PACIFIC | China | Environment, Natural Resources & the Blue Economy Global Practice |
Montreal Protocol | Investment Project Financing | FY 2019 | Seq No: 7 | ARCHIVED on 01-Aug-2022 | ISR50958 |

Implementing Agencies: Ministry of Ecology and Environment, Foreign Economic Cooperation Office, People's Republic of China

Key Dates**Key Project Dates**

Bank Approval Date: 14-Dec-2018

Effectiveness Date: 06-Mar-2019

Planned Mid Term Review Date: 18-Jan-2022

Actual Mid-Term Review Date: 18-Jan-2022

Original Closing Date: 31-Dec-2027

Revised Closing Date: 31-Dec-2027

Project Development Objective (PDO)

Project Development Objective (from Project Appraisal Document)

The project development objective is to reduce HCFC production and consumption, as well as to avoid and reduce the use of high global warming controlled substances in the consumption sector and the emissions of greenhouse gases from the production sector.

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

No

Components Table

Name

Investment in the Reduction of the Consumption of Controlled Substances:(Cost \$229.04 M)

Investment in the Reduction of the Production of Controlled Substances:(Cost \$303.93 M)

Technical Assistance and Policy Support:(Cost \$12.26 M)

Project Management:(Cost \$27.56 M)

Preparation of Phase-out and Emissions Reduction Activities:(Cost \$0.60 M)

Overall Ratings

Name	Previous Rating	Current Rating
Progress towards achievement of PDO	<input type="checkbox"/> Moderately Satisfactory	<input type="checkbox"/> Moderately Satisfactory
Overall Implementation Progress (IP)	<input type="checkbox"/> Moderately Satisfactory	<input type="checkbox"/> Moderately Satisfactory
Overall Risk Rating	<input type="checkbox"/> Low	<input type="checkbox"/> Low

Implementation Status and Key Decisions

The project continues to make good progress in meeting the Project Development Objective (PDO) with a high disbursement rate of funds released to date by the donor, the Multilateral Fund (MLF), and with verified achievement of the 2020 annual HCFC consumption and production targets (65% of China's baseline in accordance with the Montreal Protocol and MLF reduction schedule).

The World Bank and the Ministry of Ecology and Environment (MEE)/Foreign Economic Cooperation Office of the MEE (FECO) conducted a mid-term review for the project in January 2022. This follows the agreement in December 2019, between the Executive Committee of the Multilateral



Fund and China, to reduce the overall funding for this project (along with funding for other HCFC phase-out projects implemented by other agencies). At the same time, China affirmed its commitment to meeting the Montreal Protocol schedule for HCFC production and consumption reduction, and related agreements with ExCom. Therefore, the PDO and main PDO indicator targets – that consumption and production of covered HCFCs be within allowable limits – remain relevant and valid in spite of the reduction in funding. With the increased importance of policy, regulations and enforcement to meet Montreal Protocol targets, the role of MEE and of local and provincial authorities is of even greater importance.

Officially reported consumption through China's country program updates in the polyurethane foam sector in 2020 was slightly below the maximum allowable limit of 26,960 metric tons, at 26,176.41. Independent verification conducted by the World Bank also confirmed China's compliance with the Montreal Protocol and MLF maximum allowable production schedule during the 2019-2020 period, with production of HCFCs in 2020 at 16,123 ODP MT, below the 18,929 ODP MT production limit (65% of baseline). Independent verification of China's consumption and production for 2021 is underway.

Risks

Systematic Operations Risk-rating Tool

Risk Category	Rating at Approval	Previous Rating	Current Rating
Political and Governance	☐ Low	☐ Low	☐ Low
Macroeconomic	☐ Moderate	☐ Moderate	☐ Moderate
Sector Strategies and Policies	☐ Moderate	☐ Low	☐ Low
Technical Design of Project or Program	☐ Substantial	☐ Moderate	☐ Moderate
Institutional Capacity for Implementation and Sustainability	☐ Moderate	☐ Low	☐ Low
Fiduciary	☐ Moderate	☐ Moderate	☐ Moderate
Environment and Social	☐ Moderate	☐ Moderate	☐ Moderate
Stakeholders	☐ Moderate	☐ Low	☐ Low
Other	--	☐ Moderate	☐ Moderate
Overall	☐ Moderate	☐ Low	☐ Low

Results

PDO Indicators by Objectives / Outcomes

Reduce HCFC prod./consump. as well as avoid/reduce use of high global warming controlled substances				
▶ Consumption of HCFC-141b within the allowable limits in 2020 and 2025 (ODP Tones/year) (Tons/year, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	3,774.50	2,965.60	2,879.41	0.00
Date	31-Dec-2018	01-Nov-2021	31-Jan-2022	31-Dec-2026
Comments:	Value is the 2021 consumption which is below allowable limit under the Montreal Protocol. The baseline year and value for this indicator were revised after approval at time of filing the first ISR. The 2018 allowable consumption of HCFC-141b in the foam sector is used as the baseline, instead of the 2017 allowable consumption because the Project became effective at the end of December 2018. This revision was made to better capture the actual impact of the Project.			



The end- target is to be reached December 31, 2026 in line with the HCFC Phase-out Management Plan (HPMP).				
► Production of HCFCs (HCFC-141b, HCFC-142b, HCFC-22, HCFC-123 and HCFC-124) within the allowable limits in 2020 and 2025 (ODP Tones/year) (Tons/year, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	22,742.00	16,103.41	16,123.06	8,292.00
Date	31-Dec-2018	01-Nov-2021	31-Jan-2022	31-Dec-2026
Comments:	<p>Value is the 2021 production which is below allowable limit under the Montreal Protocol. The baseline year for this indicator was revised after approval at time of filing the first ISR. The 2018 allowable HCFC production is used as the baseline because the Project became effective at the end of December 2018. This revision was made to better capture the actual impact of the Project and to align with the Agreement with ExCom. The end-target was revised to reflect the actual Agreement between ExCom and China approved by ExCom.</p> <p>The end-target is to be reached December 31, 2026 in line with the HCFC Production Phase-out Management Plan (HPPMP).</p>			
► Reduction of GHG emissions in the PU foam sector (Tons/year, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	5,335,340.00	601,996.00	3,000,000.00
Date	31-Dec-2018	01-Nov-2021	31-Jan-2022	31-Dec-2026
Comments:	<p>The approach and methodology to estimate GHG emissions reduction from the foam sector was reviewed at MTR, as described in Annex IV of this Aide-Memoire. The reduction is conservatively estimated based on the completed signed subprojects only: eight of eleven subprojects are completed, representing phaseout of 830.34 metric tons of HCFC-141b. The Global Warming Potential of the alternatives (cyclopentane, water-blown technology and HFOs) are considered negligible so that the tCO₂e is 830.34 * 725 = 601,996 The end-target is to be reached December 31, 2026 in line with the HCFC Phase-out Management Plan (HPMP).</p>			
► Reduction of GHG emissions in the production sector (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	108.9 million tCO ₂ equivalent	108.58 million tCO ₂ equivalent	296.94 million tCO ₂ e
Date	31-Dec-2018	01-Nov-2021	31-Jan-2022	31-Dec-2026
Comments:	<p>Target was set following approval of the HPPMP by ExCom as the GWP-weighted difference between allowable production in 2018 minus allowable production in 2026 ('296.94 million tCO₂e – rounded to 290 million t CO₂e). The verified total production for controlled use in 2020 (last verified consumption at time of the MTR) was 67,856.31 MT lower than the 2018 production level. By multiplying GWP of respective HCFCs (HCFC-22, HCFC-141b, HCFC-142b, HCFC-123 and HCFC-124), the total GHG emission reduction is 108.58 million tCO₂ equivalent. The end-target is to be reached December 31, 2026 in line with the HCFC Production Phase-out Management Plan (HPPMP).</p>			

Intermediate Results Indicators by Components

Investment in the Reduction of the Consumption of Controlled Substances				
► Reduction by contracts signed in the PU foam sector (in ODP ton) (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target



Value	0.00	91.30	91.34	3,630.00
Date	31-Dec-2018	01-Nov-2021	31-Jan-2022	31-Dec-2026
Comments:	<p>11 consumption sector subgrants have been signed for the combined phaseout of 1,189.17 MT of HCFC-141b, ie. 130.81 ODP tons. At MTR 8 subgrants are complete, representing phaseout of 830.34 MT, equivalent to 91.34 ODP tons. As part of the upcoming restructuring proposed by the MTR and pending formal request from the client, the End Target is proposed to be revised downwards (to 1,400 ODP MT, tbc).</p> <p>The end-target is to be reached December 31, 2026 in line with the HCFC Phase-out Management Plan (HPMP).</p>			
Investment in the Reduction of the Production of Controlled Substances				
► Reduction by signed contracts in the production sector (in ODP ton) (Text, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	814.25	814.25	TBD
Date	30-Nov-2018	01-Nov-2021	31-Jan-2022	31-Dec-2026
Comments:	<p>The total production reduction based on the production quota reduction contract is 16,210 MT (equivalent to 814.25 ODP tons: 7,019 MT of HCFC-22; 836 MT of HCFC-141b; and 5,173 MT of HCFC-142b). The End Target was reviewed at MTR based on the Agreement approved by ExCom, and is set at 3,600 ODP ton based on expected closure contracts with three HCFC-141b producers that have no capacity for feedstock, to be reflected through restructuring.</p> <p>The end-target is to be reached December 31, 2026 in line with the HCFC Production Phase-out Management Plan (HPPMP).</p>			
Project Management				
► Timely submission of semi-annual reports by FECO (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	Yes	Yes	Yes
Date	01-Jan-2018	14-Nov-2021	26-Jan-2022	31-Dec-2027
Comments:	<p>The semi-annual progress reports for the production and consumption sectors for the period ending December 2021 were submitted to the Bank on time. The audited financial report for the calendar year 2020 and the interim unaudited financial report for the period ending December 2021 were also submitted on time.</p>			
► Timely submission of implementation progress reports to the MLF (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	Yes	Yes	Yes
Date	31-Dec-2018	14-Nov-2021	26-Jan-2022	31-Dec-2026
Comments:	<p>The implementation progress report for 2020 updated to June 2021 was submitted to the ExCom in September 2021, on a timely manner.</p>			

Performance-Based Conditions



Data on Financial Performance

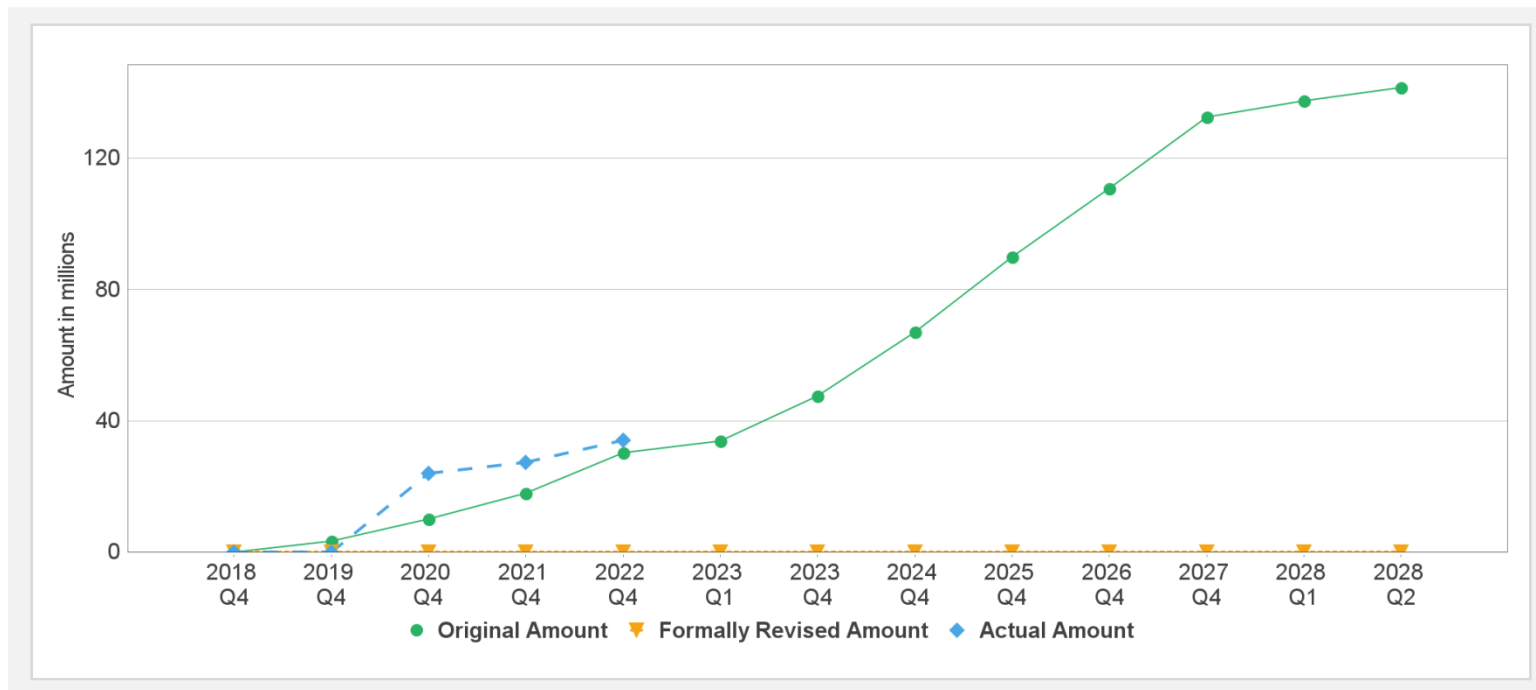
Disbursements (by loan)

Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P156397	TF-A9046	Effective	USD	164.47	164.47	0.00	34.11	130.36	21%

Key Dates (by loan)

Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
P156397	TF-A9046	Effective	08-Jan-2019	08-Jan-2019	06-Mar-2019	31-Dec-2027	31-Dec-2027

Cumulative Disbursements



Restructuring History

There has been no restructuring to date.



Related Project(s)

There are no related projects.
