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**ORIGINAL: ENGLISH** 

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-first Meeting
Montreal, 5-9 December 2022
Item 9(c) of the provisional agenda<sup>1</sup>

**WORLD BANK'S WORK PROGRAMME AMENDMENTS FOR 2022** 

<sup>&</sup>lt;sup>1</sup> UNEP/OzL.Pro/ExCom/91/1

#### COMMENTS AND RECOMMENDATION OF THE FUND SECRETARIAT

1. The World Bank is requesting approval from the Executive Committee for US \$350,000, plus agency support costs of US \$24,500, for its 2022 work programme amendments listed in table 1. The submission is attached to the present document.

Table 1: World Bank's work programme amendments for 2022

Table 1. WUI	nd bank's work programme amendments for 2022		•
Country	Activity/Project	Amount requested (US \$)	Amount recommended (US \$)
<b>SECTION A:</b>	ACTIVITIES RECOMMENDED FOR BLANKET APPROVA	L	
A1: Project pi	reparation for HCFC phase-out management plans (HPMPs)		
Viet Nam	Preparation of an HPMP (stage III)	90,000	90,000
	Subtotal for A1	90,000	90,000
	Agency support costs	6,300	6,300
	Total for A1	96,300	96,300
A2: Project pi	reparation for Kigali HFC implementation plans (KIPs)		
	Preparation of a KIP investment project in the firefighting sector	150,000	150,000
Malaysia	Preparation of a KIP investment project in the mobile air-conditioning sector	30,000	30,000
	Preparation of a KIP investment project in the refrigeration manufacturing sector	80,000	80,000
	Subtotal for A2	260,000	260,000
	Agency support costs	18,200	18,200
	Total for A2	278,200	278,200
	Total for A1, A2	350,000	350,000
	Agency support costs for A1, A2	24,500	24,500
	Grand total	374,500	374,500

#### SECTION A: ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL

#### A1: Project preparation for HCFC phase-out management plans

#### **Project description**

2. The World Bank submitted a request for the preparation of stage III of the HPMP for Viet Nam as the designated implementing agency, as shown in section A1 of table 1. The World Bank provided descriptions of the activities to support the request for project preparation for stage III of the HPMP, which included: justification for the requested project preparation funding; a progress report on the implementation of stage II of the HPMP; the list of activities to be undertaken during project preparation, and the corresponding budgets.

#### **Secretariat's comments**

3. In reviewing this request, the Secretariat took into account the guidelines for funding the preparation of HPMPs for Article 5 countries contained in decision 71/42;<sup>2</sup> the progress on stage II of the HPMP including the status of implementation of the tranches as at the preparation of the present document; and decision 84/46(e).<sup>3</sup> The Secretariat noted that the funding requested is in line with decision 71/42.

<sup>&</sup>lt;sup>2</sup> Guidelines for funding the preparation of stage II of the HCFC phase-out management plans for Article 5 countries

<sup>&</sup>lt;sup>3</sup> Inclusion of stage III of HPMPs in the business plan is allowed only for those countries with an approved stage II of HPMPs with reduction targets below the 2025 compliance targets.

- 4. The Secretariat observed that stage II of the HPMP had been revised at the 90<sup>th</sup> meeting including an extension of the date of completion of the project to 31 December 2023; that the last tranche of stage II with a revised agreement has been submitted to the present meeting in line with decision 90/22;<sup>4</sup> and noted that the request is in accordance with decision 82/45 that requests for stage III of the HPMP could be submitted two years before the end date of stage II of the HPMP.
- 5. The World Bank confirmed that the request for project preparation for stage III of the HPMP for Viet Nam will phase out 100 per cent of HCFC consumption by 1 January 2030.

#### Secretariat's recommendations

6. The Secretariat recommends blanket approval of project preparation for stage III of the HCFC phase-out management plan for Viet Nam, at the level of funding shown in section A1 of table 1.

#### A2: Project preparation for Kigali HFC implementation plans (KIP)

## **Project description**

7. World Bank submitted three requests for the preparation of KIP investment projects, in the firefighting sector, in the mobile air-conditioning (MAC) sector and in the refrigeration manufacturing sector, for Malaysia as the designated implementing agency, as shown in section A2 of table 1. Malaysia received funding for the preparation of the KIP at the 87<sup>th</sup> meeting.<sup>5</sup>

#### Secretariat's comments

8. In reviewing these requests, the Secretariat took into account the guidelines for the preparation of KIPs as contained in decision 87/50; the activities proposed for project preparation and their connection with enabling activities and other HFC-related projects in their countries. The World Bank, as the designated agency, provided descriptions of the activities to support the requests for the the preparation of the KIP investment projects using the format for requests for project preparation for KIPs.

#### 9. The Secretariat observed that:

- (a) The project preparation activities for the KIP investment project in the firefighting sector would include consultations with fire protection experts and national stakeholders to review the availability, accessibility, and cost of suitable alternatives; an assessment to determine the extent that the sector plan can build upon the previously Multilateral Fund-supported halon recycling programme; and the development of a sector plan that is expected to consist of a combination of investment, technical assistance, and policy measures to support eligible enterprises to eliminate supply and installation of new HFC systems and gradually eliminate service demand. The sector consists of 38 enterprises that import or source HFCs from the domestic market for manufacturing and/or installing new or servicing existing fire suppression systems. Malaysia reported a consumption of 299.13 mt of HFC-227ea for the firefighting sector for 2021, and this consumption may increase if no plan for the sector is prepared; HFC-23 is also used in much smaller amounts in this sector;
- (b) The project preparation of a KIP investment project in the MAC sector would address one car manufacturing enterprise, Proton, for which 2019-2021 consumption data has been provided. The project preparation activities would include technical support in cooperation with its two component suppliers to assess technologies that use alternative refrigerants;

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<sup>&</sup>lt;sup>4</sup> UNEP/OzL.Pro/ExCom/91/57

<sup>&</sup>lt;sup>5</sup> Decision 87/34

international expertise; a review of Malaysia's transport policy related to MAC and fuel efficiency; consultation with relevant government agencies, regulator, associations, and suppliers; and the promotion of project results among the remaining vehicle manufacturers; and

- (c) For the project preparation of a KIP investment project in the refrigeration manufacturing sector, the activities would prepare projects for three to seven enterprises manufacturing stand-alone refrigeration equipment, which would include data surveys, consultations, and preparation of the final project proposals. The objective would be to convert these enterprises from HFC-134a refrigerant to hydrocarbons.
- 10. Following this review, the Secretariat noted that Malaysia has ratified the Kigali Amendment; that the country has provided an endorsement letter signifying their intention to take action on HFC phase-down; and that the funding requested is in accordance with decision 87/50(f)(v) on the preparation of investment projects/sector plans of KIPs.

#### Secretariat's recommendation

11. The Secretariat recommends blanket approval of the preparation of the Kigali HFC implementation plan investment projects, in the firefighting sector, the mobile air-conditioning (MAC) sector and the refrigeration manufacturing sector in Malaysia at the level of funding shown in section A2 of table 1.

<sup>6</sup> Date of ratification (or acceptance) of the Kigali Amendment: Malaysia (21 October 2020)

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# 2022 BUSINESS PLAN WORK PROGRAM



# WORLD BANK IMPLEMENTED MONTREAL PROTOCOL OPERATIONS

Presented to the 91st Meeting of the Executive Committee of the Multilateral Fund

10 October 2022

#### WORK PROGRAM FOR

#### WORLD-BANK IMPLEMENTED MONTREAL PROTOCOL OPERATIONS

- 1. This proposed work program for Bank-Implemented Montreal Protocol Operations is prepared on the basis of the 2022-2024 World Bank Business Plan which was approved by the Executive Committee at its 88<sup>th</sup> meeting.
- 2. The 2022-2024 World Bank Business Plan consists of investment and non-investment activities to assist Article 5 partner countries to meet their HCFC reduction target, the 2020 35% reduction in both production and consumption sectors. 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 2 countries.
- 3. The 2022-2024 Business Plan also includes investment and non-investment activities for the World Bank client countries that either have ratified or in the process of ratifying the Kigali Amendment to phasedown HFCs. These activities will ensure their compliance with the 2024 freeze target and the 2029 10% reduction in the consumption sectors.

### 2022 Work Program - ExCom 91 Amendment

- 4. The proposed 2022 Work Program being submitted for consideration at the 91<sup>st</sup> Meeting of the Executive Committee, includes four (4) funding requests:
  - (i) One (1) for preparation of HFC investment project in fire fighting sector for Malaysia
  - (ii) One (1) for preparation of HFC investment project in MAC sector for Malaysia
  - (iii) One (1) for preparation of HFC investment projects in refrigeration sector for Malaysia
  - (iv) One (1) for preparation of Stage III HPMP for Vietnam
- 5. Brief description of the work program amendment activity requests are highlighted below.

Table 1: Funding Requests Submitted for Consideration by the 91st Meeting of the Executive Committee

Country	Request (US\$)	Support Costs (US\$)	Duration (months)	Description	Supporting document
Malaysia	150,000	10,500	12-18	Preparation of HFC investment projects in fire fighting sector	Annex 1
Malaysia	30,000	2,100	12-18	Preparation of HFC investment project in mobile air- conditioning sector	
Malaysia	80,000	5,600	12-18	Preparation of HFC investment projects in refrigeration sector	
Vietnam	90,000	6,300	12-18	Preparation of Stage III HPMP for Vietnam	Annex 2
Total	350,000	24,500			

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# Annex 1: Request for project preparation of HFC investment projects for Malaysia

# B. Information required for PRP funding request for investment projects/sector plans as part of or in advance of the KIP

	Agency:			World Bank			
2.	Sector:			Firefighting			
				Mobile Air-conditioning			
				Refrigeration			
3. HFC consumption in item #2 reported under			☐ Yes, plea	ise specify	reporte	d amount and year:	
	country programme data?						
				$\square$ No			
4.			phase out the HFC	☐ Yes, please p	provide suppo	rt lettei	r
			th the proposed	$\boxtimes$ No			
		oject, if approve	d by the Executive	The enterprises	HFC consum	nption t	to be phased out will be
	Committee?				ng the prepara	ation of	the investment project.
5.			quested in advance	$\square$ Yes			
			t provide a written	⊠ No			
			mption associated	Investment pro	jects will be	submit	ted as part of the final
			ts, once approved,	KIP.			
			country's starting				
6.	point, once est		investment project	Investment proj	ects will cont	rihute t	to Malaysia curbing the
0.			ng strategy for the				etion target in 2029. The
			nal KIP will be				m meeting in 2023.
		cision 87/50(e))		iniai illi wiii o	e saoimitea te	Liteo	m meeting in 2023.
7.			ption (specify previo	us year HFC consui	mption)		
		Substance		Consumption (metric tonnes)			
	HFC-22	27ea, HFC-23, H	FC-125	325 (FIRE FIGHTING)			
		HFC-134a		186.8 (MAC)			
HFC-134a				10 (DI	יתר		
<u> </u>		HFC-134a			18 (RE	2F)	
					18 (KE	2F)	
8.		n enterprise(s) fo	or which funding is		,	EF)	HEC. 1
	Information o Enterprise	n enterprise(s) fo Year		nsumption (metric t	,	EF)	HFC phase-out to
		n enterprise(s) fo	HFC co	nsumption (metric t (last three years)	tonnes)	EF)	be achieved (metric
		n enterprise(s) fo Year		nsumption (metric t	,	EF)	be achieved (metric tonnes and CO <sub>2</sub> -eq.
		n enterprise(s) fo Year	HFC co	nsumption (metric t (last three years)	tonnes)	EF)	be achieved (metric
	Enterprise	n enterprise(s) fo Year	HFC co	nsumption (metric t (last three years)	tonnes)	58.6	be achieved (metric tonnes and CO <sub>2</sub> -eq.
Pro		n enterprise(s) fo Year established	HFC co	nsumption (metric t (last three years) 2020	tonnes)		be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)
Pro Fire Ref	ton (MAC) E Fighting and TBD during	n enterprise(s) fo Year established	HFC co	nsumption (metric t (last three years) 2020	tonnes)		be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)
Pro Fire Ref	ton (MAC) E Fighting and	n enterprise(s) fo Year established	HFC co	nsumption (metric t (last three years) 2020	tonnes)		be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)
Pro Fire Ref pre	ton (MAC) E Fighting and TBD during paration	n enterprise(s) fo Year established	2019 52.4	nsumption (metric to (last three years) 2020 56.8	zonnes)	58.6	be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)  TBD
Pro Fire Ref	ton (MAC) E Fighting and TBD during paration	n enterprise(s) fo Year established 1985	HFC co	nsumption (metric to (last three years) 2020 56.8	2021	58.6 equest	be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)  TBD
Pro Fire Ref pre	ton (MAC) E Fighting and TBD during paration  Activities to be	n enterprise(s) for Year established  1985  e undertaken for Activity	2019 52.4 r preparation of the	1 Indicative fund	2021	58.6	be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)  TBD  ed lateral/implementing agency
Pro Fire Ref pre	ton (MAC) E Fighting and TBD during paration  Activities to be	n enterprise(s) for Year established  1985  e undertaken for Activity	2019  52.4  preparation of the eletermine the extent the	1 Indicative fundation (ast three years) 2020 56.8	2021	58.6	be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)  TBD  ed lateral/implementing
Pro Fire Ref pre 9.	ton (MAC) E Fighting and TBD during paration  Activities to be expreparation activities	n enterprise(s) for Year established  1985  1985  e undertaken for Activity  evity will seek to do build upon the pre	2019  52.4  preparation of the eletermine the extent th	150,000	2021	58.6	be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)  TBD  ed lateral/implementing agency
Pro Fire Ref pre 9.	ton (MAC) E Fighting and TBD during paration  Activities to be expreparation activities activities to be expreparation activities ac	n enterprise(s) for Year established  1985  1985  e undertaken for Activity  evity will seek to do build upon the preogram. The sectors	2019  52.4  repreparation of the eletermine the extent the extent the extent the extent the extent or plan is expected.	150,000 to	2021	58.6	be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)  TBD  ed lateral/implementing agency
Pro Fire Ref pre 9.	ton (MAC) E Fighting and TBD during paration  Activities to be preparation activities activities to be preparation activities to be preparation activities activit	n enterprise(s) for Year established  1985  1985  e undertaken for Activity  evity will seek to do outled upon the precogram. The sectation of investments	2019  52.4  tetermine the extent the extent the extent the extent the extent or plan is expected ent, technical assistan	investment project a Indicative fundated 150,000 to cee	2021	58.6	be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)  TBD  ed lateral/implementing agency
Pro Fire Ref pre 9.	ton (MAC) e Fighting and TBD during paration  Activities to be expreparation activities to be expressed as a combination of the policy measurement of the policy meas	n enterprise(s) for Year established  1985  1985  e undertaken for Activity  evity will seek to do outly upon the present of investments of investments to support	2019  52.4  bettermine the extent	investment project a Indicative fund  at ed 150,000 to ce to	2021	58.6	be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)  TBD  ed lateral/implementing agency
Pro Fire Ref pre 9.	ton (MAC) e Fighting and TBD during paration  Activities to be expreparation activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities activities to the expression activities activities to the expression activities activities activities activities to the expression activities activitie	n enterprise(s) for Year established  1985  1985  e undertaken for Activity  vity will seek to do ouild upon the presogram. The sectivation of investment in the section of investment in the	2019  52.4  tetermine the extent the extent the extent the extent the extent or plan is expected ent, technical assistan	investment project a Indicative fund  at ed 150,000 to ce to	2021	58.6	be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)  TBD  ed lateral/implementing agency
Pro Fire Ref pre 9.  The hald con and elim	ton (MAC) e Fighting and TBD during paration  Activities to be expreparation activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities to be expressed as a complete to the expression activities activities to the expression activities activities to the expression activities activities activities activities to the expression activities activitie	n enterprise(s) for Year established  1985  1985  e undertaken for Activity  evity will seek to do outly upon the present of investments of investments to support	2019  52.4  bettermine the extent	investment project a Indicative fund  at ed 150,000 to ce to	2021	58.6	be achieved (metric tonnes and CO <sub>2</sub> -eq. tonnes)  TBD  ed lateral/implementing agency

<ul> <li>International technical expertise for sector advice, and designing the interventions &amp; proposed measures</li> <li>Data collection at beneficiary enterprises</li> <li>Consultations with regulators, association and other stakeholders</li> <li>Travel</li> </ul>		
A demonstration activity is proposed for the existing automobile manufacturing (internal combustion engines) whereby the enterprise would be supported on the technical side on assessment of technologies (in cooperation with its MAC component suppliers (compressor, evaporator/condenser, hoses)), possible investments, TA and R&D to develop more efficient MACs that use alternative refrigerant, while its pathway to this transition would be documented for the remaining vehicle manufacturers and accompanied by concrete evidence to inform transport policy under Malaysia's national policy, strategy and action plan. The company would work with its partner in parallel to plan and develop the MAC system with electric compressors for its future EV production.  • International technical expertise  • Deep-dive in Malaysia transport policy related to MAC & fuel efficiency  • Consultations with relevant Government agencies, regulators, association, component suppliers, and site visits  • Preparation of investment activity at 1 car company in cooperation with its 2 suppliers of MAC components to convert from HFC-134a to R-1234yf	30,000	World Bank
Prepare investment project for 3-7 enterprises manufacturing stand-alone refrigeration equipment to convert from HFC-134a refrigerant to hydrocarbons	80,000	World Bank
TOTAL	260,000	

#### Annex 2

## MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL HPMP PROJECT PREPARATION REQUEST FORM HCFC PHASE-OUT MANAGEMENT PLAN (OVERARCHING STRATEGY)

# **Part I: Project Information**

Project title:	Project Preparation Request: Vietnam Stage III HCFC Phase-out Management Plan (HPMP)					
Country:	Viet Nam					
Lead implementing	World Bank					
agency:						
Implementation period:	18-24 months					
<b>Funding requested:</b>	Funding requested:					
Agency	Sector	Funding requested (US \$)*				
World Bank	Overarching	90,000				

# Part II: Prerequisites for submission

Iter	m	Yes	No
1. Official endorsement letter from	Government specifying roles of	$\boxtimes$	
respective agencies (where more the			
2. Written confirmation – balances	s from previous PRP funding		
approved for stage I HPMP had 1			
(decision 71/42(i))			
Specify meeting at which P.	RP funding balance had been	Not Applical	ble
returned/will be returned			

# C. Information required to support PRP funding (Overarching strategy)

1. Montreal Protocol compliance target to be met in □ stage II / ☒ stage III of the HPMP					
Phase-out	100% (with a servicing tail in line with the	Year of	2030		
commitment (%)	MP)	commitment			
<b>⊠</b> Servicing only			☐ Servicing and		
		Manufacturing	manufacturing		
		only			
2. Brief background	on previous stage of the HPMP (i	i.e., when the HPM	P was approved; a		
description of the pr	rogress in implementation of the prev	ious stage of the HP	MP to demonstrate		
that substantial progress had been made.)					
Following the "HCFC Phase-out Management Plan Stage I" (HPMP I) which was successfully					
implemented in the period 2012-2017, the second phase of the HCFC phase-out management plan was					
approved with a total funding of US\$14,644,834 by the Executive Committee (ExCom) of the					
Multilateral Fund (MLF)	) through the World Bank with Japan	as a Cooperating Ag	ency. The HPMP II		
project was approved by	the Minister of Natural Resources and	Environment on 13 J	une 2018 (Decision		

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No.1888/QD-BTNMT). The Grant Agreement between the Government of Viet Nam and the World Bank was signed on 7 March 2019 (Grant No. TF0A6361). The first tranche of US\$439,345 was approved at the 76th Meeting of the ExCom in 2016, but the actual receipt of the tranche by Viet Nam was 19 August 2019 once the project account became effective.

Since the approval of the Stage II HPMP, there have been several funding tranche-releases as well as adjustments to the funding envelope. The first tranche amount was reduced to \$345,987 through Executive Committee (ExCom) Decision 82/37 as a result of a change in technology at one of the planned beneficiary enterprises. The second tranche was approved at the 84th Meeting of the ExCom in 2019 and the third tranche was approved at the 87thMeeting through an intersessional process. At this latter meeting, Viet Nam returned \$613,568 that had been approved for one enterprise found to be no longer eligible. At the 90th ExCom Meeting and subsequent to an in-depth project review and recommended restructuring by DCC and the Bank, an additional US\$5,750,752 was cancelled from the overall Stage II multiyear agreement pertaining to the investments targeted in the foam, air-conditioning (AC) and refrigeration sectors as well as in technical assistance (TA) and project management. The ExCom also approved a reallocation of US\$1,330,000 from the refrigeration sector to servicing but in return for the deduction of 5.84 ODP tons from Viet Nam's remaining eligible HCFC consumption. In addition, the ExCom agreed to extending the Stage II HPMP by one year, to end-2023 and including 2022 in Schedule 2-A of the Stage II multi-year agreement with a maximum allowable consumption level of 143.78 ODP MT.

As of 26 September 2022, the PMU has disbursed US\$2,394,179 for subprojects, project management and technical assistance activities. PMU also secured the agreement or interest of more than 30 enterprises to participate in conversions or technical assistance activities that would be delivered in the last 15 months of the project. A third-party consumption verification confirmed that Viet Nam met its 2021 HCFC consumption obligation to both the MP and to the MLF ExCom.

3. Current progress in implementation of previous stage of the HPMP				
Activity	Description	Implementing		
		agency		
Manufacturing-AC	AC manufacturing enterprises have adjusted business operations in accordance with the rapidly evolving AC market due to continued growing demand for specific types of air conditioners. Subproject preparation was initiated for these enterprises as soon as the Stage II HPMP project became effective with frequent meetings and clarifications on details of implementation but shifting market demand, in combination with COVID has led to challenges that have now affected the number and level of participation of the four companies in the project. Two enterprises have signed SGAs and are in the equipment procurement stage while another two (Midea and ReeTech) will not participate in the project.	World Bank		
Manufacturing-Foam PU	Five enterprises have signed individual subgrant agreements under the foam sector. These five SGAs	World Bank		

The Multilateral Fund Secretariat

Manufacturing-REF	cover 147.95 MT, or 22% of the originally targeted phaseout (684 MT). Due in part to COVID and in part to regional market trends, consumption of only 148 MT of HCFC-141b contained in preblended polyol was imported in 2020 and this officially decreased further to 88 MT in 2021. It was confirmed that some larger companies have converted operations on their own but small enterprises continue business as usual where supplies of imported preblended polyol permit. Due to supply chain issues, prices of pre-blended polyol have been unstable and generally high. To improve reliability of on the ground supply of alternative pre-blended polyols, the PMU concluded negotiations with 1 of 5 potential suppliers/ blending houses, Green Materials Co. (GreenMat) that will act as an intermediary and technology provided to downstream SMEs for provision of HFO-based preblended polyol. GreenMat will first receive TA to source the technology and choose a formulation that it will apply and market in Viet Nam. The second part of GreenMat's subproject will be to assist more than 20 SMEs on technology transfer/assistance, advisory support on minimum requirements to effectively and safely use the technology, and training and trials — in exchange for SME commitment letters to completely end the use of HCFC-141b contained in imported pre-blended polyols.  The PMU experienced a low response rate for subprojects in the commercial refrigeration sector and has been able to secure SGAs with 2 companies to date. After careful	World Bank
	reassessment and discussion with the industry, it is believed that some companies originally identified as manufacturers have changed to or are operating more in assembly, installation and charging field, while others remain in manufacturing but are small with little administrative and financial capacity to meet SGA requirements. These enterprises make low numbers of equipment based on orders and generally require the same basic equipment and safety measures to adopt the use of natural refrigerants (the approved technologies). Disinterest in participating in the project also continues to be linked to the unwillingness to forfeit the use of HFCs and HFC blends as per the conditions of the ExCom. As a result of these circumstances and consultations, 60% of the original US\$3.64 million in grants was cancelled or reallocated to servicing. As of the	

	end of September, 11 SMEs have confirmed interest to	
	participate; 6 of these have already been deemed as	
	eligible to receive MLF support under a group project and	
	a 7th is under review for preparation of an individual	
	subproject. Review of the remaining 4 are underway to	
	be completed by 10 October 2022.	
Refrigeration	The PMU has procured and delivered toolkits for	World Bank
servicing sector	servicing equipment related to flammable refrigerants to	
	100 servicing centers and to 65 vocational schools as	
	planned. Curriculum on good practice on handling	
	flammable refrigerant developed. Training for	
	technicians started in October 2021 subsequent to the	
	completion of the train-the-trainers program for the first	
	round of vocational schools with 50 technicians trained	
	then and as of end September 2022, that number has	
	increased to about 1,200. With the reallocation of \$1.33	
	million to this sector as agreed at the 90th Meeting, the	
	PMU has put forward a plan of implementation for the	
	sector for the remaining 15 months of the project.	
Legal/regulatory	The Government of Vietnam has put into place a ban of	World Bank
framework	imports and manufacturing of HCFC-22 based AC on 1	WOIIG Dalik
Hamework		
	January 2022 as per Decision 76/42. A similar ban on	
	imported HCFC-141b for foam has been formulated but	
	will be effective on 1 January 2023 to give the foam	
	sector more time subsequent to COVID and other related	
	delays.	
4. Overview of curre	ent HCFC consumption in metric tonnes by substance (la	st three vears)

4. Overview of current HCFC consumption in metric tonnes by substance (last three years)

Substance	Sector	2019	2020	2021
HCFC-22	Manufacturing-REF	889.64	517	266
HCFC-22	RAC servicing	2,668.91	2,068.024	2,308.948
HCFC-123	RAC servicing	16.344	0	8.172
HCFC-225ca	Solvent	21.46	0	0

5. Based on the consumption data given above, please provide a description of the sector/subsector that use HCFCs in the country, including a short analysis and explanation of the consumption trends (i.e., increasing or decreasing)

HCFC consumption for manufacturing has dropped precipitously between 2019, when the project started implementation (after some procedural delays in approving the project and legal agreement) and 2021. The decrease in consumption was in part due to the signals received by the industry on the inevitable bans through workshops and outreach but also due to changes in the market and more recently the COVID pandemic. A number of manufacturers have converted on their own or moved operations (such as Midea AC manufacturing). Remaining HCFC consumption for manufacturing is in the refrigeration sector and expected to drop in 2022 and 2023 following several conversion activities and the overall trend in the sector to move to HFCs. Similarly, imports of HCFC-141b preblended polyol has been on a decline with only in 88 MT of HCFC used in imported polyol in 2021, Final investment

activities in the foam sector are expected to tackle all remaining use along with the ban in early 2023. The bulk of remaining HCFC consumption, by large HCFC-22, is for the servicing sector.

6. Description of information that needs to be gathered and updated. Explain why this has not been undertaken during preparation for the previous stage of the HPMP.

Information needed	Description	Agency
Updated data on HCFC	To better assess the type/size of typical	World Bank
consumption in	providers, nature of work and options/readiness	
manufacturing/servicing sector	for introduction of climate-friendly, potentially	
	flammable replacements.	
Analysis of the types of	To estimate needs for servicing tail after 2030	World Bank
equipment using HCFCs		
Updated sectoral consumption	The Stage III HPMP will review and address the	World Bank
information	use of HCFCs in the solvents sector	
New information on ODS	In accordance with the higher level 2022 decree	World Bank
regulations	on GHG emission reductions and ozone layer	
	protection, the government may need to	
	promulgate circulars specific to the servicing	
	sector, remaining HCFC users and related	
	stakeholders	

7. Activities to be undertaken for project preparation and funding

Activity	Indicative funding (US \$)	Agency
Data updates, reconciliation, and analysis	45,000	World Bank
Technology and servicing needs assessment	10,000	World Bank
Stakeholder workshops (2) and consultations and associated travel	25,000	World Bank
Policy and institutional framework review, including aspects	10,000	World Bank
related to gender, and actions needed if any		
TOTAL	90,000	

# 8. How will activities related to implementation of the Kigali Amendment to phase down HFCs be considered during project preparation for stage III of the HPMP?

Efforts will be undertaken to coordinate activities in servicing subsectors such as air-conditioning and commercial refrigeration that may use both HCFCs and HFCs. During preparation, survey data from the KIP preparation will be compared to that collected/updated under the HPMP to better identify consumption and use patterns in the servicing sector of the different types of refrigerants as well as to assess and understand supply and distribution channels beginning with imports to end-users and service shops. Efforts will be made in training and awareness workshops and other events to provide consistent messaging on phaseout and phasedown requirements.

### 9. How will the Multilateral Fund gender policy be considered during project preparation?

In Stage III preparation, first an assessment will be made of how gender was addressed in Stage II, lessons learned and results if any given that the MLF policy was adopted after the Stage II project was prepared and launched. The data update and collection period will be an opportunity to establish the starting point for measuring progress in integrating gender considerations. A WB gender specialist will be included in the preparation team to determine how to integrate gender into the project in accordance with the WBG gender policy and that of the MLF and to work with the government on incorporating practicable measures and indicators into the project design.

The Multilateral Fund Secretariat