联 合 国

EP

联 合 国

环 境 规 划 署

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/87/15
16 June 2021

CHINESE
ORIGINAL: ENGLISH

执行蒙特利尔议定书
多边基金执行委员会
第八十七次会议
2021 年 6 月 28 日至 7 月 2 日，蒙特利尔[1]

开发署 2021 年工作方案

[1] 由于 2019 年冠状病毒病（COVID-19），将于 2021 年 6 月和 7 月举行在线会议和闭会期间批准程序。

基金秘书处的评论和建议

1. 开发署要求执行委员会为其 2021 年工作方案核准经费 3,368,102 美元，外加机构支助费用 235,767 美元，细目如表 1 所列。[2]该工作方案附于本文件附件。

表 1：开发署 2021 年工作方案

国家	活动/项目	申请数额（美元）	建议数额（美元）
A 部分：建议一揽子核准的活动			
A1：延长体制强化项目			
智利	延长体制建设项目（第十四阶段）	238,784	238,784
巴基斯坦	延长体制建设项目（第十一阶段）	287,318	287,318
	A1 小计	526,102	526,102
	机构支助费用	36,827	36,827
	A1 共计	562,929	562,929
A2：氟氯烃淘汰管理计划的项目编制			
印度 [ab]	编制氟氯烃淘汰管理计划（第三阶段）	30,000	30,000
印度	筹备氟氯烃淘汰投资活动（空调）	150,000	150,000
印度	筹备氟氯烃淘汰投资活动（制冷）	150,000	150,000
印度	筹备氟氯烃淘汰投资活动（消防）	60,000	60,000
印度尼西亚	编制氟氯烃淘汰管理计划（第三阶段）	90,000	90,000
伊朗伊斯兰共和国 [abc]	编制氟氯烃淘汰管理计划（第三阶段）	25,000	25,000
伊朗伊斯兰共和国 [a]	筹备氟氯烃淘汰投资活动（工业制冷和空调）	25,000	25,000
马来西亚	编制氟氯烃淘汰管理计划（第三阶段）	90,000	90,000
	A2 小计	620,000	620,000
	机构支助费用	43,400	43,400
	A2 共计	663,400	663,400
B 部分：建议需要进行单独审议的活动			
B1: 逐步减少使用氢氟碳化物管理计划的项目编制			
国家	**提交的会议**	**活动/项目**	**申请数额（美元）**	**建议数额（美元）**
不丹 [d]	**86**	编制逐步减少使用氢氟碳化物管理计划	10,000	*
哥伦比亚	**87**	编制逐步减少使用氢氟碳化物管理计划	205,000	*
哥斯达黎加	**85**	编制逐步减少使用氢氟碳化物管理计划	150,000	*
古巴	**85**	编制逐步减少使用氢氟碳化物管理计划	150,000	*
多米尼加共和国	**87**	编制逐步减少使用氢氟碳化物管理计划	170,000	*
斯威士兰 [d]	**87**	编制逐步减少使用氢氟碳化物管理计划	30,000	*
加纳 [b]	**86**	编制逐步减少使用氢氟碳化物管理计划	105,000	*
吉尔吉斯斯坦 [b]	**86**	编制逐步减少使用氢氟碳化物管理计划	60,000	*
老挝人民民主共和国	**86**	编制逐步减少使用氢氟碳化物管理计划	10,000	*
黎巴嫩	**86**	编制逐步减少使用氢氟碳化物管理计划	150,000	*

[2] 包括本文件所附向第八十七次会议提出的新申请以及第八十五次和第八十六次会议转交的编制逐步减少使用氢氟碳化物管理计划的申请，这些申请分别载于 UNEP/OzL.Pro/ExCom/85/15 号文件和 UNEP/OzL.Pro/ExCom/86/33 号文件。

国家	活动/项目		申请数额（美元）	建议数额（美元）
马尔代夫 [d]	**86**	编制逐步减少使用氢氟碳化物管理计划	10,000	*
墨西哥 [be]	**86**	编制逐步减少使用氢氟碳化物管理计划	90,000	*
尼日利亚 [bc]	**86/87**[3]	编制逐步减少使用氢氟碳化物管理计划	137,000	*
巴拿马	**87**	编制逐步减少使用氢氟碳化物管理计划	190,000	*
巴拉圭	**87**	编制逐步减少使用氢氟碳化物管理计划	170,000	*
秘鲁	**86**	编制逐步减少使用氢氟碳化物管理计划	150,000	*
斯里兰卡 [b]	**87**	编制逐步减少使用氢氟碳化物管理计划	135,000	*
特里尼达和多巴哥	**87**	编制逐步减少使用氢氟碳化物管理计划	150,000	*
乌拉圭	**85**	编制逐步减少使用氢氟碳化物管理计划	150,000	*
		B1 小计	2,222,000	*
		机构支助费用	155,540	*
		B1 共计	2,377,540	*
		总计（A1，A2，B1）	3,603,869	1,226,329

[a] 德国政府作为合作双边机构
[b] 环境署作为合作执行机构
[c] 工发组织作为合作执行机构
[d] 环境署作为牵头执行机构
[e] 工发组织作为牵头执行机构
* 供个别审议

A 部分：建议一揽子核准的活动

A1：延长体制强化项目

项目说明

2. 开发署在表 1 的 A1 部分为所列的国家提出延长体制强化项目的申请。这些项目的说明载于本文件附件一。

秘书处的评论

3. 秘书处审查了开发署代表相关政府根据有关资格及供资数额的准则和相关决定提出延长两项体制强化项目的申请。根据前一阶段体制强化项目的原来工作计划、国家方案和第 7 条数据、氟氯烃淘汰管理计划执行情况的最新报告、相关机构的工作进度报告和缔约方会议的任何相关决定，对这些申请进行了核对。注意到这些国家已提交了 2020 年国家方案数据并遵守了《蒙特利尔议定书》规定的控制目标，其年度氟氯烃消费量未超过其与执行委员会签订的氟氯烃淘汰管理计划的协定规定的年度最大允许消费量。此外，根据第 74/51 号决定（e）段，提交的申请包括体制强化项目下一阶段计划进行的活动的绩效指标。

秘书处的建议

4. 秘书处建议按照本文件表 1 的 A1 部分所示的供资水平一揽子批准智利和巴基斯坦延长体制强化项目的申请。执行委员会不妨告知上述政府在本文件附件二中提出的意见。

[3] 重新提交给第八十七次会议，将工发组织和环境署作为合作机构。

A2：氟氯烃淘汰管理计划的项目编制

项目说明

5. 开发署作为指定的执行机构，为两个第 5 条国家提交了编制氟氯烃淘汰管理计划第三阶段的申请；对另外两个第 5 条国家，它作为牵头执行机构，和对印度与德国政府和环境署作为合作机构；德国政府、环境署和工发组织作为伊朗伊斯兰共和国的合作机构。此外，开发署为四项投资活动申请编制项目的资金：三项是印度的制冷、空调和消防制造行业、一项是伊朗伊斯兰共和国的工业制冷和空调行业，它们作为这两个第 5 条国家氟氯烃淘汰管理计划第三阶段的一部分。这些申请载于表 1 的 A2 部分。

6. 德国政府作为印度和伊朗伊斯兰共和国的合作机构，要求为双边合作事项提供 80,000 美元，外加机构支助费用 10,400 美元；[4]环境署根据其 2021 年工作方案，要求提供总额 35,000 美元，外加机构支持费用 4,550 美元；[5]工发组织作为伊朗伊斯兰共和国的合作执行机构，要求为其 2021 年的工作计划提供 65,000 美元，外加机构支持费用 4,550 美元。[6]

7. 开发署提供了对这些活动的说明，以支持编制项目的申请。提交的文件包括：申请为编制项目供资的理由；其各自氟氯烃淘汰管理计划第二阶段的实施进度报告；相关费用可能进行的活动。

秘书处的评论

8. 在审查这四项申请时，秘书处考虑到第 71/42 号决定所载编制第 5 条国家氟氯烃淘汰管理计划的供资准则；已核准的氟氯烃淘汰管理计划第二阶段以及在编写本文件时各次付款的执行情况；第 82/45 号决定(c)(一)段。[7]秘书处指出，为每个国家申请的供资符合第 71/42 号决定的规定，[8]开发署并确认，对这些国家的剩余供资付款将按其与执行委员会达成的协定中的时间表交付。

9. 开发署确认，印度、印度尼西亚、伊朗伊斯兰共和国和马来西亚的氟氯烃淘汰管理计划第三阶段将在 2030 年 1 月 1 日之前淘汰 100%的氟氯烃基准消费量。

10. 开发署为编制印度制冷、空调和消防制造行业的转换的三个投资项目的供资申请，提供了所需的信息（企业数量和氟氯烃消费量），这些行业在印度氟氯烃淘汰管理计划第二阶段没有得到援助；为编制伊朗伊斯兰共和国工业用制冷和空调的转换的投资项目的供资申请，提供了所需的信息（企业数量和氟氯烃消费量），制冷和空调制造行业在伊朗伊斯兰共和国氟氯烃淘汰管理计划第二阶段未得到援助。

[4] UNEP/OzL.Pro/ExCom/87/14。

[5] UNEP/OzL.Pro/ExCom/87/16。

[6] UNEP/OzL.Pro/ExCom/87/17。

[7] 将氟氯烃淘汰管理计划第三阶段纳入 2019-2021 年综合业务计划仅适用于其氟氯烃淘汰管理计划第二阶段已达到其 2020 年减排目标的国家。

[8] 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。

秘书处的建议

11. 秘书处建议按照表 1 的 A2 部分所示的供资水平，一揽子批准印度、印度尼西亚、伊朗伊斯兰共和国和马来西亚的氟氯烃淘汰管理计划第三阶段的项目编制申请。

B 部分：建议需要进行单独审议的活动

提交第八十五次会议和第八十六次会议的项目编制申请

12. 按表 1 的 B1 部分所示，在第八十五次会议上，开发署作为指定的执行机构，为三个第 5 条国家编制逐步减少使用氢氟碳化物管理计划的供资申请。[9]

13. 如表 1 的 B1 部分所示，在第八十六次会议上，开发署作为指定的执行机构为两个第 5 条国家、作为牵头执行机构为三个国家和作为合作执行机构为四个国家，[10]编制逐步减少使用氢氟碳化物管理计划的供资申请。

14. 这些提交单独审议的供资申请未在第八十五次会议和第八十六次会议得到审议，根据第八十六次会议对第 5 条国家编制逐步减少使用氢氟碳化物计划的供资准则草案的讨论[11]和第 86/56 号决定，它们被推迟到第八十七次会议审议。因此，提交第八十五次会议和第八十六次会议的提案被列入本文件。

B1: 逐步减少使用氢氟碳化物管理计划的项目编制

项目说明

15. 如表 1 的 B1 部分所示，开发署作为指定执行机构为五个第 5 条国家、作为牵头执行机构为两个国家[12]和作为合作执行机构为一个国家提交了编制逐步减少使用氢氟碳化物管理计划的供资申请。环境署作为斯威士兰的牵头执行机构和作为尼日利亚和斯里兰卡的合作执行机构申请了 183,000 美元，外加机构支助费用 23,790 美元；[13]工发组织作为合作执行机构为尼日利亚在其 2021 年工作方案中申请了 25,000 美元，外加机构支助费用 1,750 美元。[14]

秘书处的评论

16. 开发署作为牵头执行机构，对哥伦比亚、多米尼加共和国、巴拿马、巴拉圭、斯里兰卡和特立尼达和多巴哥编制逐步减少使用氢氟碳化物总体战略所需的活动以及为尼日利亚的修订活动作了说明，其中列入了以氟氯烃淘汰管理计划各阶段的项目编制费用的申请格式开列的每项活动的相应费用。提交的文件包括哥伦比亚、多米尼加共和国、巴拿马、巴拉圭、特立尼达和多巴哥（即 2017-2019 年或 2018-2020 年）氢氟碳化物和氢氟碳化物混合物的估计进口量的最新信息以及尼日利亚（2012-2015 年）和斯里兰卡（2012-2017 年）

[9] UNEP/OzL.Pro/ExCom/85/15。
[10] 包括尼日利亚，重新提交给第八十七次会议，将工发组织和环境署列为合作执行机构。
[11] 议程项目 13(c)。
[12] 包括尼日利亚，重新提交给第八十七次会议，将工发组织和环境署列为合作执行机构。
[13] UNEP/OzL.Pro/ExCom/87/16。
[14] UNEP/OzL.Pro/ExCom/87/17。

的旧数据；项目编制活动的清单包括所有七个国家的利益攸关方的协商、制定沟通和外联计划以及编制逐步减少使用氢氟碳化物的战略；对六个国家的氢氟碳化物的行业分布情况和消费量进行了分析，并对培训和认证以及再循环和回收的需求进行了评估；哥伦比亚和斯里兰卡的活动包括对消费氢氟碳化物的子行业进行调查；在斯里兰卡和尼日利亚的活动包括与海关和执法相关的能力建设；在尼日利亚，活动还包括对制造行业的评估。申请供资的基础是拟议的编制逐步减少使用氢氟碳化物计划的准则草案，[15]该草案已提交给第八十六次会议并推迟到第八十七次会议进行进一步讨论。

17. 第八十五次会议为编制项目提案申请的供资数额以扶持活动的供资为基础（载于第79/46 号决定（c）段）；不过，第八十六次会议申请的供资以编制氟氯烃淘汰管理计划第一阶段的项目供资为基础（载于第56/16 号决定（c）段），因为双边和执行机构在编制其提交给第八十六次会议的 2021-2023 年业务计划时使用了这笔资金。秘书处指出，为编制项目所申请的供资数额是指示性的数额，因为实际数额将在执行委员会结束对第 5 条国家编制逐步减少使用氢氟碳化物计划的供资准则草案后作出决定（第 86/93 号决定）。[16]

18. 秘书处根据审查编制氟氯烃淘汰管理计划的申请的经验，并考虑到执行委员会为这些项目提供的指导和通过的决定，审查了提交的文件。

19. 经过这次审查后，秘书处注意到以下情况：

(a) 开发署作为指定执行机构或牵头执行机构为编制逐步减少使用氢氟碳化物管理计划提出供资申请的所有七个国家都批准了《基加利修正案》；[17]根据第79/46 号决定(b)(三)段，每个国家都有资格获得编制项目的供资；[18]这些国家还提供了认可信函，表明它们打算尽早采取逐步减少使用氢氟碳化物的行动；和

(b) 列入项目编制的活动类似于编制氟氯烃淘汰管理计划所需的活动。有些活动类似于根据逐步减少使用氢氟碳化物的扶持活动所列入的活动，已向每个国家提供进行这些活动的资金，并且这些活动都正在进行之中。

20. 开发署指出，这些国家编制逐步减少使用氢氟碳化物的总体战略的项目将借鉴在扶持活动下开展的活动，因为这些活动是与逐步减少使用氢氟碳化物相关的首批活动，并曾对批准《基加利修正案》有所帮助。第八十七次会议批准这些申请提出的供资将使 2022 年开始时就可开始逐步减少使用氢氟碳化物并实现《基加利修正案》的履约规定。

21. 秘书处告知开发署，它无法对这些申请提出建议，因为第八十七次会议将继续讨论为这些申请提供资金的准则。

[15] UNEP/OzL.Pro/ExCom/86/88。

[16] UNEP/OzL.Pro/ExCom/87/46。

[17] 批准（或接受）《基加利修正案》的日期：哥伦比亚，2021 年 2 月 25 日；多米尼加共和国，2021 年 4 月 14 日；尼日利亚，2018 年 12 月 20 日；巴拿马，2018 年 9 月 29 日；巴拉圭，2018 年 11 月 1 日；斯里兰卡 2018 年 9 月 28 日；特立尼达和多巴哥，2017 年 11 月 17 日。

[18] 国家一旦批准《基加利修正案》后，即可最早在有关义务之前五年，并在将要核准的准则的基础上，为编制实现逐步减少使用氢氟碳化物的初步削减义务的国家实施计划提供资金。

秘书处的建议

22. 执行委员会不妨根据议程项目 9(a)“项目审查期间所查明问题概览”和议程项目 13(c)“编制第 5 条国家逐步减少使用氢氟碳化物计划准则草案（第 86/93 号决定）”下的讨论，审议为表 1 的 B1 部分所列国家编制逐步减少使用氢氟碳化物管理计划供资的申请。

Annex I

INSTITUTIONAL STRENGTHENING PROJECT PROPOSALS

Chile: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US $):		
	Phase I: Jun-92	213,000
	Phase II: Oct-96	113,500
	Phase III: Jul-98	143,500
	Phase IV: Dec-00	143,500
	Phase V: Nov-02	186,550
	Phase VI: Apr-05 and Nov-05	186,550
	Phase VII: Mar-07	186,550
	Phase VIII: Apr-09	186,550
	Phase IX: Apr-11	186,550
	Phase X: Apr-13	186,550
	Phase XI: May-15	186,550
	Phase XII: Jul-17	238,784
	Phase XIII: May19	238,784
	Total:	2,396,918
Amount requested for renewal (phase XIV) (US $):		238,784
Amount recommended for approval for phase XIV (US $):		238,784
Agency support costs (US $):		16,715
Total cost of institutional strengthening phase XIV to the Multilateral Fund (US $):		255,499
Date of approval of country programme:		1992
Date of approval of HCFC phase-out management plan (stage I):		2011
Date of approval of HCFC phase-out management plan (stage II):		2018
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		6.4
Annex C, Group I (HCFCs) (average 2009-2010)		87.5
Annex E, (methyl bromide) (average 1995-1998)		212.5
Latest reported ODS consumption (2019) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.00
Annex C, Group I (HCFCs)		32.21
Annex E, (methyl bromide)		0.00
	Total:	32.21
Year of reported country programme implementation data:		2020
Amount approved for projects (as at December 2020) (US $):		21,413,168
Amount disbursed (as at December 2019) (US $):		16,409,118
ODS to be phased out (as at December 2020) (ODP tonnes):		1,333.6
ODS phased out (as at December 2019) (ODP tonnes):		1,040.0

1.

Summary of activities		**Funds approved (US $)**
(a)	Investment projects:	12,535,861
(b)	Institutional strengthening:	2,396,918
(c)	Project preparation, technical assistance, training and other non-investment projects:	6,480,389
	Total:	21,413,168
(d)	HFC activities funded from additional voluntary contributions	150,000

Progress report

2. During phase XIII, the NOU continued to coordinate ozone matters and assist in the implementation of stage II of the HPMP through working closely with local authorities and stakeholders on several activities including training of refrigeration and air-conditioning technicians, and in the formulation of stage III of the HPMP. The control on imports and exports of HCFCs, including those contained in pre-blended polyols, continues to be implemented in coordination with the National Customs Service. The HFC licensing system has also been established and is fully operational and the country is preparing for the implementation of the Kigali Amendment. The NOU participated in meetings relevant to the implementation of the Montreal Protocol. Of the ten performance indicators, eight were fully achieved, with two partially achieved. During the pandemic, the country continued to carry out the activities programmed in a satisfactory manner.

Plan of action

3. During phase XIV, the Government of Chile will maintain the ban on CFC and halons, and the reductions achieved in HCFC consumption. The Government will establish the HFC baseline and its quota system. The NOU will work with public and private entities to enforce the control measures on the HCFC consumption, and assist in organizing and implementing activities including investment projects, a training programme on good refrigeration practices and awareness. Additionally, the Government will finalize the implementation of stage II of the HPMP and achieve compliance with the next HCFC reduction targets. The Government will continue the internal process for the implementation of the Kigali Amendment, and the NOU will continue its participation in network and global Montreal Protocol meetings, so as to exchange information and experience that will foster the implementation of national policies and strategies for the protection of the ozone layer.

Pakistan: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US $):		
Phase I:	Sept-94	259,000
Phase II:	Dec-01	172,666
Phase III:	Dec-03	224,467
Phase IV:	Mar-07and Nov-07	224,467
Phase V:	Apr-09	224,467
Phase VI:	Dec-10	224,467
Phase VII:	Dec-12	224,467
Phase VIII:	Nov-14	224,467
Phase IX:	Dec-16	287,318
Phase X:	Dec-18	287,318
	Total:	2,353,104
Amount requested for renewal (phase XI) (US $):		287,318
Amount recommended for approval for phase XI (US $):		287,318
Agency support costs (US $):		20,112
Total cost of institutional strengthening phase XI to the Multilateral Fund (US $):		307,430
Date of approval of country programme:		1996
Date of approval of HCFC phase-out management plan:		2010
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		2.3
Annex C, Group I (HCFCs) (average 2009-2010)		248.1
Annex E, (methyl bromide) (average 1995-1998)		14.0
Latest reported ODS consumption (2020) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.00

Annex C, Group I (HCFCs) Annex E, (methyl bromide) Total:	122.21 0.00 122.21
Year of reported country programme implementation data:	2020
Amount approved for projects (as at December 2020) (US $):	34,974,127
Amount disbursed (as at December 2019) (US $):	27,181,695
ODS to be phased out (as at December 2020) (ODP tonnes):	2,605
ODS phased out (as at December 2019) (ODP tonnes):	2,569

4.

Summary of activities		**Funds approved (US $)**
(a)	Investment projects:	28,002,723
(b)	Institutional strengthening:	2,353,104
(c)	Project preparation, technical assistance, training and other non-investment projects:	4,618,300
	Total:	34,974,127
(d)	HFC activities funded from additional voluntary contributions	0

Progress report

5. Phase X of the institutional strengthening project provided policy-level support to the HCFC phase-out strategy and helped the Government of Pakistan to meet its Montreal Protocol commitments through enforcement of regulation, monitoring, and collaboration with key stakeholders. The NOU worked closely with other agencies and stakeholders to ensure monitoring of ODS phase-out, and assist in the implementation of stage II of the HPMP and preparation of stage III. All four of the performance indicators for the reporting period were fully achieved.

Plan of action

6. Phase XI will continue to support the HPMP activities for stage II and stage III to achieve and sustain the HCFC reduction as agreed under the Montreal Protocol. Workshops for industry, importers and the public will be held regularly to raise awareness regarding the harmful effects of ODS, as well as the linkage to climate change. Close coordination will be maintained with academia and all relevant stakeholders for awareness-raising of the environment. In addition to implementation of policy, training and awareness activities, will ensure that all HPMP targets are met. Enabling activities will also be implemented which will help prepare the roadmap for HFC phase-down in Pakistan.

附件二

执行委员会对提交给第八十七次会议的延长体制强化项目的看法草案

智利

1. 执行委员会审查了关于申请延长智利体制强化（IS）项目（第十三阶段）的报告，赞赏地注意到智利政府向基金秘书处报告了 2018 年、2019 年和 2020 年国家方案执行数据和向臭氧秘书处报告了第 7 条数据，显示该国履行了《蒙特利尔议定书》。执行委员会还注意到智利政府已采取措施淘汰消耗臭氧层物质的消费量；特别是通过许可证颁发和配额制度管制氟氯烃的进口以及培训海关官员和制冷技术人员。执行委员会还赞赏地注意到为促进《基加利修正案》的实施而开展的活动，包括建立和实施氢氟碳化物许可证颁发制度。执行委员会承认智利政府作出的努力，希望未来两年智利政府将继续实施氟氯烃淘汰管理计划和体制强化项目的活动，实现和维持《蒙特利尔议定书》规定的氟氯烃削减量。

巴基斯坦

1. 执行委员会审查了关于申请延长巴基斯坦体制强化（IS）项目（第十一阶段）的报告，赞赏地注意到根据《蒙特利尔议定书》第 7 条向臭氧秘书处和根据国家方案执行报告向基金秘书处及时提交 2018 年和 2019 年的消费量数据，证实该国正在履行《蒙特利尔议定书》。委员会还注意到，巴基斯坦政府继续与利益攸关方密切合作，管理和监测消耗臭氧层物质的消费量，并维持已实现的消耗臭氧层物质淘汰量。委员会承认该国政府作出的努力，因此希望巴基斯坦将继续及时和成功地执行《蒙特利尔议定书》的活动，包括完成氟氯烃淘汰管理计划的第二阶段、启动氟氯烃淘汰管理计划的第三阶段、继续开展逐步减少使用氢氟碳化物的扶持活动和体制强化项目的活动。

United Nations Development Programme
Montreal Protocol Unit / Chemicals and Waste

87th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol

(25 – 28 June 2021)

UNDP
2021 WORK PROGRAMME

18 June 2021

2021 WORK PROGRAMME

I. EXECUTIVE SUMMARY

The present document constitutes UNDP's 2021 Work Programme and is being submitted for consideration of the Executive Committee (ExCom) at its 87th Meeting. The list of submissions for all funding requests (including investment projects) that will be submitted by UNDP to the 87th ExCom meeting in Annex 1 to this document is provided for information. Project documentation such as multi-year agreements (MYA) tranche requests, investment and demonstration project proposals and other individual/investment proposals are not included in this document and are submitted separately as per normal practice. Only the following (non-investment) submissions are part of this document.

II. FUNDING REQUESTS PART OF THE WORK PROGRAMME

Institutional Strengthening Extensions

UNDP is submitting the requests for funding the extension of institutional strengthening projects to the 87th ExCom Meeting as tabulated below. Relevant terminal reports and requests for extension of funding are being submitted separately.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Chile	INS	Institutional Strengthening Renewal (Phase XIV)	24	238,784	16,715	255,499
Pakistan	INS	Institutional Strengthening Renewal (Phase XI)	24	287,318	20,112	307,430
Total (2 requests)				**526,102**	**36,827**	**562,929**

Preparation funding requests for HPMP stage III

UNDP is submitting the following funding requests for the preparation of stage III of HPMPs to the 87th ExCom meeting. The Annex 2 contains PRP submissions.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
India	PRP	Stage III HPMP Preparation (overarching)	18	30,000	2,100	32,100
India	PRP	Stage III HPMP Preparation (refrigeration)	18	150,000	10,500	160,500
India	PRP	Stage III HPMP Preparation (air-conditioning)	18	150,000	10,500	160,500
India	PRP	Stage III HPMP Preparation (firefighting)	18	60,000	4,200	64,200
Indonesia	PRP	Stage III HPMP Preparation (overarching)	18	90,000	6,300	96,300
Iran	PRP	Stage III HPMP Preparation (overarching)	24	25,000	1,750	26,750
Iran	PRP	Stage III HPMP Preparation (industrial RAC)	24	25,000	1,750	26,750
Malaysia	PRP	Stage III HPMP Preparation (overarching)	18	90,000	6,300	96,300
Total (8 requests)				**620,000**	**43,400**	**663,400**

Requests for funding for the preparation of HFC phase down plans

UNDP is submitting the requests for the preparation of HFC phase down plans as per the table below. The request for the preparation of HFC phase down plan for Nigeria has been revised to include an additional cooperating agency and the revised version is being submitted. The

requests can be found in the Annex 3; the request for Eswatini will be submitted by UNEP in their role of a Lead Agency.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Colombia	PRP	PRP for HFC phase-down plan	24	205,000	14,350	219,350
Dominican Republic	PRP	PRP for HFC phase-down plan	24	170,000	11,900	181,900
Eswatini	PRP	PRP for HFC phase-down plan	24	30,000	2,100	32,100
Nigeria	PRP	PRP for HFC phase-down plan	24	137,000	9,590	146,590
Panama	PRP	PRP for HFC phase-down plan	24	190,000	13,300	203,300
Paraguay	PRP	PRP for HFC phase-down plan	24	170,000	11,900	181,900
Sri Lanka	PRP	PRP for HFC phase-down plan (overarching)	24	135,000	9,450	144,450
Trinidad and Tobago	PRP	PRP for HFC phase-down plan	24	150,000	10,500	160,500
Total (8 requests)				**1,187,000**	**83,090**	**1,270,090**

Requests for extensions of enabling activities to support the phase-down of HFCs for Article 5 countries

UNDP is submitting the requests for extension of the enabling activities as per the table below.

Country	Type	Title	Extension Duration (months)	Reason for extending the duration
Belize	TAS	Request to extend the Enabling Activities for Kigali Amendment	12	The requested extension is required to accomplish the workplan set forth by the country. The activities are in progress. A review of the legal framework that will allow ratification of the Kigali Amendment is underway. Furthermore, a review of HFC consumption as well as the development of a national licensing system for HFCs is being performed. The strengthening of technical skills of RAC technicians have not been addressed mainly due to the COVID-19 pandemic. The country expects that as lockdown continute to be lifted, in-person consultation and activities will take place, allowing pending activities to be performed.
Haiti	TAS	Request to extend the Enabling Activities for Kigali Amendment	12	The extension is required due to the delays related to the COVID-19 pandemic. During the extension an update of the HFC consumption data will be undertaken as well as consultations with extended range of stakeholders considering the implications of the Kigali Amendment for climate change.
Moldova	TAS	Request to extend the Enabling Activities for Kigali Amendment	12	The project initiated its activities. However, due to COVID-19 and the late start the activities are being delayed. The main activities (legislative review, public and indusrty consultations, workshops) will be rolled out after the team is in place. The extension is needed to ensure enough time for a proper implementation of the project activities.
Total (3 requests)				

III. SUMMARY OF FUNDING REQUESTS (WORK PROGRAMME)

The table below summarizes the funding requests for non-investment activities and proposals being submitted to the 87th ExCom Meeting as part of UNDP's Work Programme for 2021:

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Chile	INS	Institutional Strengthening Renewal (Phase XIV)	24	238,784	16,715	255,499
Colombia	PRP	PRP for HFC phase-down plan	24	205,000	14,350	219,350
Dominican Republic	PRP	PRP for HFC phase-down plan	24	170,000	11,900	181,900
Eswatini	PRP	PRP for HFC phase-down plan	24	30,000	2,100	32,100
India	PRP	Stage III HPMP Preparation (overarching)	18	30,000	2,100	32,100
India	PRP	Stage III HPMP Preparation (refrigeration)	18	150,000	10,500	160,500
India	PRP	Stage III HPMP Preparation (air-conditioning)	18	150,000	10,500	160,500
India	PRP	Stage III HPMP Preparation (firefighting)	18	60,000	4,200	64,200
Indonesia	PRP	Stage III HPMP Preparation (overarching)	18	90,000	6,300	96,300
Iran	PRP	Stage III HPMP Preparation (overarching)	24	25,000	1,750	26,750
Iran	PRP	Stage III HPMP Preparation (industrial RAC)	24	25,000	1,750	26,750
Malaysia	PRP	Stage III HPMP Preparation (overarching)	18	90,000	6,300	96,300
Nigeria	PRP	PRP for HFC phase-down plan	24	137,000	9,590	146,590
Pakistan	INS	Institutional Strengthening Renewal (Phase XI)	24	287,318	20,112	307,430
Panama	PRP	PRP for HFC phase-down plan	24	190,000	13,300	203,300
Paraguay	PRP	PRP for HFC phase-down plan	24	170,000	11,900	181,900
Sri Lanka	PRP	PRP for HFC phase-down plan (overarching)	24	135,000	9,450	144,450
Trinidad and Tobago	PRP	PRP for HFC phase-down plan	24	150,000	10,500	160,500
Total (18 requests)				**2,333,102**	**163,317**	**2,496,419**

ANNEX 1

List of all UNDP submissions for funding to the 87th ExCom Meeting

No	Country	Type	Description	Funding Request to the 87th ExCom (US$)		
				Amount	Agency Fee	Total
1	Belize	INV	Stage II HPMP - 1st tranche	73,854	5,170	255,499
2	Chile	INS	Institutional Strengthening Renewal (Phase XIV)	238,784	16,715	255,499
3	Colombia	PRP	PRP for HFC phase-down plan	205,000	14,350	219,350
4	Dominican Republic	PRP	PRP for HFC phase-down plan	170,000	11,900	181,900
5	El Salvador	INV	Stage II HPMP - 1st tranche	169,000	11,830	180,830
6	Eswatini	PRP	PRP for HFC phase-down plan	30,000	2,100	32,100
7	Ghana	INV	Stage II HPMP - 1st tranche	713,135	49,919	763,054
8	India	PRP	Stage III HPMP Preparation (overarching)	30,000	2,100	32,100
9	India	PRP	Stage III HPMP Preparation (refrigeration)	150,000	10,500	160,500
10	India	PRP	Stage III HPMP Preparation (air-conditioning)	150,000	10,500	160,500
11	India	PRP	Stage III HPMP Preparation (firefighting)	60,000	4,200	64,200
12	Indonesia	PRP	Stage III HPMP Preparation (overarching)	90,000	6,300	96,300
13	Iran	PRP	Stage III HPMP Preparation (overarching)	25,000	1,750	26,750
14	Iran	PRP	Stage III HPMP Preparation (industrial RAC)	25,000	1,750	26,750
15	Malaysia	PRP	Stage III HPMP Preparation (overarching)	90,000	6,300	96,300
16	Nigeria	PRP	PRP for HFC phase-down plan	137,000	9,590	146,590
17	Pakistan	INS	Institutional Strengthening Renewal (Phase XI)	287,318	20,112	307,430
18	Panama	PRP	PRP for HFC phase-down plan	190,000	13,300	203,300
19	Paraguay	INV	Stage II HPMP - 1st tranche	255,724	17,901	273,625
20	Paraguay	PRP	PRP for HFC phase-down plan	170,000	11,900	181,900
21	Republic of Moldova	INV	Stage II HPMP - 1st tranche	147,500	10,325	157,825
22	Sri Lanka	PRP	PRP for HFC phase-down plan (overarching)	135,000	9,450	144,450
23	Trinidad and Tobago	PRP	PRP for HFC phase-down plan	150,000	10,500	160,500
Total (23 requests)				**3,692,315**	**258,462**	**4,127,252**

Notes:

a. All amounts in are in US dollars.
b. Special reports due (delays, balances, status reports, etc.) as well as other projects not part of the WPA will be submitted separately.

ANNEX 2

Requests for the preparation of stage III of HPMPs in:

1. **India**
2. **Indonesia**
3. **Iran**
4. **Malaysia**

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL
HPMP STAGE-III PROJECT PREPARATION REQUEST FORM
HPMP (OVERARCHING + INV)

Part I: Project Information

Project title:	Project preparation for stage III of the HPMP/HCFC phase-out investment Activities	
Country:	India	
Lead implementing agency:	UNDP	
Cooperating agency (1):	UNEP	
Cooperating agency (2):	Other (Bilateral), specify.	Government of Germany
Implementation period:	18 months	
Funding requested:		
Agency	**Sector**	**Funding requested (US $) ***
UNDP	Overarching	30,000
UNEP	Overarching	20,000
Other (Bilateral)	Overarching	40,000
UNDP	INV - REF	150,000
UNDP	INV - AC	90,000
UNDP	INV- Firefighting	60,000
Total		**450,000**

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government specifying roles of respective agencies (where more than one IA is involved)	☒	☐
2. Written confirmation – balances from previous PRP funding approved for stage I HPMP had been returned / will be returned (d**ecision 71/42(i)**)	☒	☐
• Specify meeting at which PRP funding balance had been returned/will be returned	82nd meeting	

A. 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 commitment (%)	**100% (with a servicing tail in line with the Protocol)**	**Year of commitment**	**2030**
☐ **Servicing only**		☐ **Manufacturing only**	☒ **Servicing and manufacturing**

2. Brief background on previous stage of the HPMP (i.e., when the HPMP was approved; a description of the progress in implementation of the previous stage of the HPMP to demonstrate that substantial progress had been made.)

The Executive Committee (Ex-Com) of the Multilateral Fund (MLF), vide decision 77/43, approved the Stage II of the HPMP to support India to achieve complete phase-out of use of HCFC-141b in foam manufacturing by1 January 2020. In the air-conditioning sector, India will converting 10 AC manufacturing lines from HCFC-22 to HFC-32in six (6) air-conditioning manufacturing enterprises, that are participating in the HPMP Stage-II, by. The quantity of HCFC-22 to be phased out of HCFC-22 will be 1,140 MT, in addition, 1,250 MT of HCFC-22 will also be phased out through activities in the servicing sector implemented by GIZ and UNEP. The successful implementation of the Stage II of HPMP for India will result in reducing HCFC consumption levels by 60% of the baseline level by 2023.

3. Current progress in implementation of previous stage of the HPMP

Activity	**Description**	**Implementing agency**

Legal/regulatory framework	(Completed) Ozone Depleting Substances (Regulation and Control) Rules have been amended prohibiting the import of pure HCFC-141b (or contained in pre-blended polyols/fully formulated systems) in the country from 1 January 2020.	UNDP
Manufacturing-Foam PU	(On-going) 160 foam manufacturing enterprises were verified and are participating in HPMP Stage-II out of which 100 projects have been fully completed, including on-site third-party verification. Remaining 60 companies are in advanced stage of conversion and/or claimed completion and will be subject of third-party verification to formally complete the project. Financial disbursements to the companies upon conversion performance are being conducted.	UNDP
Manufacturing-AC	(On-going) 3 out of 6 enterprises have completed the conversion activities and on-site third-party verification was carried out. ICC-related disbursements to these had been completed. Assistance to remaining 3 companies is being delivered to complete the remaining activities in time	UNDP
Refrigeration servicing sector	GIZ, Government of Germany is implementing the servicing sector activities. 60 trainers have been trained through the train-the-trainer programmes. The 15 training partners in the country have been equipped with equipment and tools for conducting practical training. About 7500 RAC service technicians have been trained. Draft concept developed for national certification system for RAC technicians and discussed in stakeholder consultative workshop. All the planned activities will be completed in time	Other (Bilateral)
Others, specify.	Ten Workshops have been organized for the customs and enforcement personnel. In preparation for enforcing import ban on HCFC 141b starting 1.1.2020, a special module was introduced in customs trainings. Five studies relating to promotion of non-ODS and low GWP alternatives have been commissioned, which will be completed and published by mid-2021. All the planned activities will be completed in time.	UNEP
Others, specify.	(On-going) The PMU component of HPMP Stage-II inter alia includes project management, coordination amongst stakeholders and implementing agencies and Government, monitoring and verification of progress of implementation by the enterprise at sectoral level, technical assistance etc. These activities are being implemented as per plan.	UNDP

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

Substance	Sector	2017	2018	2019
HCFC-22	Manufacturing-REF/AC	4,125.86	4,372.18	3,995.37
HCFC-22	RAC servicing	4,969.78	5,266.48	5,693.42
HCFC-22	Manufacturing-Foam PU	281.31	298.10	299.65
HCFC-123	RAC servicing	207.84	67.55	116.18
HCFC-123	Other, specify.(Fire fighting)	45.62	14.83	61.50
HCFC-141b	Manufacturing-Foam PU	2,298.89	2,871.29	3,394.18
HCFC-141b	Other, specify.(Aerosol)	25.26	25.00	20.00
HCFC-141b	Manufacturing-REF	126.31	-	-
HCFC-141b	Solvent	75.79	-	-
HCFC-142b	Manufacturing-Foam PU	27.60	-	-
HCFC-142b	RAC servicing	92.40	-	-
Total		**12,276.66**	**12,915.43**	**13,580.30**

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

The consumption of HCFC 22 in the refrigeration and air conditioning manufacturing sector has shown consistent decline in last few years. The rate of decline is gradual. The HCFC-22 consumption in the Servicing Sector, conversely, has been relatively maintained at the same level possibly due to the deployment

of continues quantities of HCFC-22 based units to cope with hot weather demands, as this sector not only depends on the installed base of RAC equipment, but also the new equipment that enter the market over and increases the inventory of the installed base (The servicing requirement for existing equipment also increases as the increase in new equipment continues) These have a direct impact on the HCFC-22 demand for servicing. The continued and increase number of hot days during the year is also a factor that demand more servicing in the equipment since their usage is increased.

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 consumption in manufacturing/servicing sector	The previous survey was carried out in 2014-15 and the information needs to be updated.	UNDP UNEP Other (Bilateral)
Analysis of the types of equipment using HCFCs	To be assessed in terms of eligibility and modifications required for adoption of alternative non-HCFC and low GWP technology	UNDP Other (Bilateral)
New information on ODS regulations	Review current baseline regulations, analyze best practices and lessons learned on compliance of participating enterprises with respect to ODS Regulation and Control Rules and potentially propose revised or new mechanism to improve the legal framework.	UNDP UNEP
Updated sectoral consumption information	Carry on bottom-up surveys and enterprise-level data collection for sub-sector not covered in the earlier PRP stages that would be assisted under the Stage III with investment and non-investment projects	UNDP UNEP Other (Bilateral)
Others, specify.	Carry on proper consultations with stakeholders, validate results of the surveys and the PRP process, draft the updated over-arching strategy, investment projects and sector plans, endorse strategies with stakeholders, obtain approvals from institutions responsible for the MP framework in country, translate HPMP-III, submit document to ExCom and follow up negotiation and approval process.	UNDP UNEP Other (Bilateral)

7. Activities to be undertaken for project preparation and funding

Activity	Agency	USD
Stakeholders Consultations, data collection	UNDP	10,000
Meetings and mission costs		7,500
Collation, compilation and analysis of information		5,000
Draft overarching strategy, consultation, review and submission		5,000
Validation workshop		2,500
Subtotal		**30,000**
Stakeholders Consultations, data collection	GIZ	20,000
Draft sector plan, validation of data (inc. mission costs)		20,000
Subtotal		**40,000**
Stakeholders Consultations, data collection	UNEP	10,000
Draft sector plan and validation		10,000
Subtotal		**20,000**

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?

The overarching strategy will focus on the HCFC phase-out, however the Government of India has consciously chosen a low carbon growth path while undertaking technology transition under HPMP Stage-II. All the participating enterprises, have moved to low global warming potential alternatives. The strategy will also support, at the possible extent given the MLF guidelines, to raise awareness of stakeholders on the Kigali Amendment and its future obligations and the relationship with the reduction of HCFCs, focussing on low GWP alternatives.
9. How will the Multilateral Fund gender policy be considered during project preparation?
In line with the decision 84/92, the operational policy on gender mainstreaming would be applied wherever feasible in the preparation of HPMP Stage-III including in the following activities (a) Encouraging participation in the awareness workshops/stakeholder consultative meetings organized as part of HPMP Stage-III preparation. (b) Promoting training and awareness campaigns to develop staff competency and awareness on gender mainstreaming. (c) Discussing gender issues during the workshops to share experiences and lessons learned on gender mainstreaming.

B. Information required for PRP funding request for investment projects as part of the HPMP – REFRIGERATION MANUFACTURING SECTOR

1. Agency:	UNDP
2. Sector:	Refrigeration
3. HCFC consumption in item #2 reported under country programme (CP) data?	☒ **Yes**, please specify reported amount and year: 3995.38 MT – 2019 (REF and AC)

4. Information on remaining eligible consumption

Substance	Remaining eligible consumption (ODP tonnes)
HCFC-22	439.29
	About 57% of the annual consumption is accounted for servicing
Others, specify. (HCFC 124)	13.50
Others, specify. (HCFC 123)	3.50

5. Information on enterprise(s) for which funding is being sought

Enterprise	Year established	HCFC consumption (ODP tonnes) (last three years)			HCFC phase-out to be achieved
		2017	2018	2019	

As per the market survey conducted under the HPMP-II preparation, supported by the Industry Associations, there are about 316 enterprises using HCFC-22 in the Refrigeration sectors, comprising 34 large, 28 medium-, and 254 small-sized enterprises. (ExCom/77/49). The detailed enterprise wise information will be available after conducting a survey and collecting updated information regarding HCFC consumption, baseline equipment, etc.

As submitted in the Stage II, the strategy to achieve the reductions under the Stage II was 60% of the baseline, which also has been reflected in the HPMP Stage-II agreement. Refrigeration manufacturing sector is very large in terms of sub sectors, it involves variety of equipment manufactured, including, , display cabinets, freezers. Ice-candy machine, milk chilling, other dairy product processing equipment, fish/meat processing, cold rooms etc. The manufacturers in these sub sectors are mainly in MSME sector which are having small consumption but spread all over the country. It would require extraordinary efforts for updating information that is available from 2015 survey. It would take lot of efforts, among other factors, as not all companies could be fully assessed to obtain the granular data required to properly design each investment project.

Therefore, the funding being requested, in line with Decision 71/42, is critical to improve and extend the bottom up assessment of each company, re-confirm eligibility, update HCFCs usage data until the year 2020/2021, collect granular information required to design sound investment projects, compile aggregated information and design an updated and effective Refrigeration Manufacturing Sector Plan, validate the Sector Plan with stakeholders and submit it along the HPMP-III Over-arching strategy

In addition, there are a number of refrigeration compressor SME manufacturers, which are to be identified and addressed in this stage

6. Activities to be undertaken for preparation of the investment project and funding requested

Activity	Indicative funding (US $)
Carry out sectoral survey for getting enterprise wise information comprising consumption, baseline equipment, etc.	70,000

Organise stakeholder consultative workshops with industry for creating awareness on eligibility for participation in HPMP, the funding guidelines and on alternative technologies. Workshops will be conducted for refrigeration enterprises manufacturing various kinds of equipment such as cold chain equipment, food processing equipment including ice-candy machines, etc., and air-	40,000
Compilation and analysis of survey information -- Includes data validation with respect to information available with Ozone Cell and seeking further clarifications wherever needed from the enterprises	30,000
Preparation of draft Sector Plan and Investment Projects - Includes expenditure for discussing the draft sector plan with industry and other stakeholders. Small group physical meetings will be organised wherever needed.	10,000
Finalisation of HPMP Stage-III and submission after seeking required approvals from the Government	
TOTAL	**150,000**

C. Information required for PRP funding request for investment projects as part of the HPMP – AIR CONDITIONING MANUFACTURING SECTOR

1. Agency:		UNDP			
2. Sector:		Air-conditioning			
3. HCFC consumption in item #2 reported under country programme (CP) data?		☒ **Yes**, please specify reported amount and year: 3995.38 MT – 2019 (REF and AC)			
4. Information on remaining eligible consumption					
Substance		**Remaining eligible consumption (ODP tonnes)**			
HCFC-22		439.29			
		About 57% of the annual consumption is accounted for servicing			
Others, specify.	(HCFC 124)	13.50			
Others, specify.	(HCFC 123)	3.50			
5. Information on enterprise(s) for which funding is being sought					
Enterprise	**Year established**	**HCFC consumption (ODP tonnes) (last three years)**			**HCFC phase-out to be achieved**
		2017	**2018**	**2019**	
As per the market survey conducted under the HPMP-II preparation, supported by the Industry Associations, the AC manufacturing sector had approximately 37 enterprises that manufacture about 4.5 million AC units per year in 2014, with room air-conditioning units accounting for approximately 77 per cent of the sector consumption. Of the 37 enterprises, approximately 20 enterprises were large-sized enterprises, six of which were non-Article 5 owned. There were also approximately 22 SMEs in the market (ExCom/77/49). The HPMP-II has supported six room air conditioning manufacturers, article 5 owned, to convert their production from HCFC-22 to HFC-32. The enterprise wise information will be available after conducting a survey and collecting updated information regarding HCFC consumption, baseline equipment, etc. The information from the last survey conducted in 2014-15 needs updating. Therefore, the funding being requested, in line with Decision 71/42, is critical to improve and extend the bottom up assessment of each company, re-confirm eligibility, update HCFCs usage data until the year 2020/2021, collect granular information required to design sound investment projects, compile aggregated information and design an updated and effective air-conditioning Manufacturing Sector Plan, validate the Sector Plan with stakeholders and submit it along the HPMP-III Over-arching strategy. **IN ADDITION THERE ARE SMES IN BUS AIR CONDITIONER MANUFACTURES AND AIR CONDITIONING COMPRESSOR MANUFACTURERS SUB-SECTORS, THESE NEEDS TO BE IDENTIFIED AND ADDRESSED IN THIS SECTOR WHICH WERE NOT CONSIDERED IN STAGE-II SURVEY AND THESE ARE ALSO TO BE ADDRESSED IN THIS SECTOR.**					
6. Activities to be undertaken for preparation of the investment project and funding requested					
Activity					Indicative funding (US $)
Carry out sectoral survey for getting enterprise wise information comprising consumption, baseline equipment, etc.					40,000

Organise stakeholder consultative workshops with industry for creating awareness on eligibility for participation in HPMP, the funding guidelines and on alternative technologies Workshops will be conducted air-conditioning enterprises manufacturing various kinds of equipment such as room and commercial ACs, small and medium size chillers, etc.	20,000
Compilation and analysis of survey information	20,000
Preparation of draft Sector Plan and Investment Projects - Includes expenditure for discussing the draft sector plan with industry and other stakeholders. Small group physical meetings will be organised wherever needed	10,000
Finalisation of HPMP Stage-III and submission after seeking required approvals from the Government	-
TOTAL	**90,000**

D. Information required for PRP funding request for investment projects as part of the HPMP FIRE FIGHTING MANUFACTURING SECTOR

1. Agency:	UNDP
2. Sector:	Fire Fighting
3. HCFC consumption in item #2 reported under country programme (CP) data?	☒ **Yes**, please specify reported amount and year: 61.50 - 2019

4. Information on remaining eligible consumption

Substance	Remaining eligible consumption (ODP tonnes)
Others, specify. (HCFC 123)	3.50

5. Information on enterprise(s) for which funding is being sought

Enterprise	Year established	HCFC consumption (ODP tonnes) (last three years)			HCFC phase-out to be achieved
		2017	2018	2019	

The market survey conducted under the HPMP-II preparation, HCFC-123 is used as a blend component for portable fire extinguishing systems (ExCom/77/49). Two enterprises are associated with manufacturing fire fighting equipment are eligible and their information will be available after conducting a survey and collecting updated information regarding HCFC consumption, baseline equipment, etc.

Although the consumption of HCFCs in this sector is low, but is used in variety of applications especially in electronic products manufacturing and special situation where other technologies like ABC powder or water mists are not recommended. These sectors are likely to be spread across the country, a survey and stakeholder consultations will be needed.

It is clarified that the funding request for this sector is solely for preparation activities that entail the detailed assessment of the sector and verification of companies, collection of data and designing of investment projects.

HPMP-II PRP had initially identified two companies that are eligible for assistance under current MLF guidelines (established before 21 September 2007), however further detailed information about production process, baseline equipment, products produced and technologies can only be obtained through the preparation process, for which funding is being requested

6. Activities to be undertaken for preparation of the investment project and funding requested

Activity	Indicative funding (US $)
Carry out sectoral survey for getting enterprise wise information comprising consumption, baseline equipment, etc.	25,000
Organise stakeholder consultative workshops with industry for creating awareness on eligibility for participation in HPMP, the funding guidelines and on alternative technologies	20,000
Compilation and analysis of survey information	10,000
Preparation of draft Sector Plan and Investment Projects	5,000
Finalisation of HPMP Stage-III and submission after seeking required approvals from the Government	-
TOTAL	**60,000**

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:	Preparation of Stage III of the HCFCs Phase-out Management Plan	
Country:	Indonesia	
Lead implementing agency:	UNDP	
Cooperating agency (1):	(select)	Click or tap here to enter text.
Implementation period:	18 months	
Funding requested:		
Agency	**Sector**	**Funding requested (US $)***
UNDP	Overarching	90,000

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	**Yes**	**No**
1. Official endorsement letter from Government specifying roles of respective agencies (where more than one IA is involved)	☒	☐
2. Written confirmation – balances from previous PRP funding approved for stage I HPMP had been returned / will be returned (d**ecision 71/42(i)**)	☒	☐
• Specify meeting at which PRP funding balance had been returned/will be returned	81st ExCom	

A. 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 commitment (%)	**100% (with a servicing tail in line with the Protocol)**	**Year of commitment**	**2030**
☒ **Servicing only**		☐ **Manufacturing only**	☐ **Servicing and manufacturing**
2. Brief background on previous stage of the HPMP (i.e., when the HPMP was approved; a description of the progress in implementation of the previous stage of the HPMP to demonstrate that substantial progress had been made.)			

1. The HPMP of Indonesia (Stage I) was approved at the 64th Meeting of the Executive Committee in July 2011 at a total funding level of US$ 12,692,684, plus agency support costs of US$ 968,452 for the period of 2011 to 2018 to reduce HCFC consumption by 20% of the baseline.
2. The 76th ExCom has considered an issue related to the RAC sector when 12 enterprises in the refrigeration sector (with a total consumption of 38 mt (2.09 ODP tonnes)) and 16 enterprises in the air-conditioning sector (with a total consumption of 233.27 mt (12.83 ODP tonnes)) requested to be removed from the HPMP as they decided to convert to high-GWP refrigerants without funding from the Multilateral Fund.
3. Further, Intersessional Process of the 85th ExCom also considered the additional challenges on RAC sector conversion when, by the time, additional 11 companies under the refrigeration manufacturing sector requested to be removed from the Stage I as they decided to convert to high-GWP refrigerants without funding from the Multilateral Fund.
4. Decision 81/49 has decided to return of US $35,000, plus agency support costs of US $2,450 for the World Bank, associated with the withdrawal of the foam enterprise CV Laksana Teknik Makmur, because it has been converted to plastics product.
5. As per decision 83/22, PT. TSG Chemical had decided to withdraw from stage I of the HPMP and that US $301,539, plus agency support costs of US $22,615 for the World Bank, associated with the enterprise had already been returned at the 83rd meeting.
6. The Stage 1 of the HPMP has been completed on 31 December 2020, and the relevant Final Report and Project Completion Reports are to be submitted to the ExCom no later than 30 June 2021 (IAP Decision 85/XX).
7. Finally, The Executive Committee approved HPMP Stage II for Indonesia in the 76th Meeting in May 2016 with a total funding level of US$ 8,883,314 for the period of 2016 to 2023 to reduce HCFC consumption by 55% from the baseline. In Stage-II, Indonesia is focusing on the phase-out of HCFCs in RAC servicing and fire-fighting sectors and the remaining PU foam sectors. The total phase-out of HCFC-22 in servicing sector will be 41,63 ODP tonnes and HCFC-141b in foam sector will be 42,70 ODP tonnes.

3. Current progress in implementation of previous stage of the HPMP		
Activity	**Description**	**Implementing agency**
Legal/regulatory framework	(Completed) Mandatory certification of technicians servicing RAC equipment	UNDP
Legal/regulatory framework	(On-going) Ban on imports ofHCFC-141b in bulk and contained in imported pre-blended polyols is delayed to 1st January 2022 due to pandemic covid-19	World Bank
Others, specify.	(On-going) technical assistance to phase-out 1.04 ODP tonnes of HCFC-123 used for production of firefighting equipment. Activity planned for 2020, but actions were put on hold due to COVID-19 pandemic.	UNDP
Manufacturing-Foam PU	(Completed) Conversion of 1 System Houses under HPMP Stage I had been completed in 2018 and conversion of 2 System Houses under HPMP Stage II had been completed in 2020;	World Bank
Manufacturing-Foam PU	(Completed) 6 medium and 4 large sized companies had been completed their technology conversion in 2020. (On-going) The conversion of 2 remaining medium sized companies are still ongoing and expected to complete in 2021.	World Bank
Manufacturing-Foam PU	(On-going) The Conversion mechanism for 200 SMEs is being developed by involving support from System House. This conversion is conducted by giving voucher system until end 2022.	World Bank
Refrigeration servicing sector	474 of 700 Custom Officers has been trained	UNDP
Refrigeration servicing sector	25 of 90 trainers has been trained	UNDP
Refrigeration servicing sector	549 of 2,000 technicians has been trained	UNDP
Refrigeration servicing sector	287 of 1,000 units training materials have been printed and delivered	UNDP
Refrigeration servicing sector	2 RAC training equipment have been delivered and 4 RAC training equipment is being delivered	UNDP
Refrigeration servicing sector	1 reclaim centers is being established	UNDP
Refrigeration servicing sector	50 RAC tool kits delivered to service shops	UNDP
Refrigeration servicing sector	832 of 1,000 people attended Seminars on HCFCs Phase-out and alternative technologies	UNDP
Others, specify.	(On-going) continuous implementation and monitoring support delivered by PMU staffs and consultants.	UNDP

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

Substance	Sector	2017	2018	2019
HCFC-22	RAC servicing	3,171	3,114.31	2,993.63
HCFC-141b	Manufacturing-Foam PU	570	560	440
HCFC-142b	RAC servicing	6.41	8,2	6.41
HCFC-123	Other, specify.	51.99	43.14	49.54
HCFC-123	RAC servicing	58.01	56.78	56.98
HCFC-225ca	Solvent	1	2	2

All	Exports - All	0	0	0
All	**TOTAL**	**3,954.41**	**3,873.93**	**3,684.31**

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

The HCFCs consumption in Indonesia has shown consistent and gradual decrease as direct results from GOV enforcement activities, institutional support and the investment and non-investment projects implemented under the Stage II of the HPMP.

As agreed in the Stage I, the ban on the use of HCFC-22 in manufacturing sector has been successfully implemented, for this reason the only manufacturing servicing still with remaining consumption is the PU Foam (HCFC-141b). Other than that, large share of HCFCs consumption is under servicing sector with a minimal consumption in the solvent sector. It is also important to note the use of HFC-123 in the fire-fighting sector that has show a steady consumption to cope with the national demand.

It is expected that the consumption will continue to decrease with the compliance target of 2020 and the gradual reduction steps required to fulfill the commitments of the Stage II of the HPMP by 2022.

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 consumption in manufacturing/servicing sector	Review data and cross-check "bottom-up" information gathered in the past Country Programmes	UNDP
Updated sectoral consumption information	Assess granular data per sub-sector/application since the Stage II preparation (2014/2015) and better assess downstream trends.	UNDP
Analysis of types of equipmentt using HCFCs	Update current market profile and trends of use of HCFCs-based equipment	UNDP
New information on ODS regulations	Review current regulatory framework and carry on a holistic assessment on their effectiveness to better capture lessons learned and identify potential remaining barriers to be removed.	UNDP
Others, specify.	Carry on proper consultations with stakeholders, validate results of the surveys and the PRP process, draft the updated over-arching strategy and the RAC servicing sector plan, endorse strategies with stakeholders, obtain approvals from institutions responsible for the MP framework in country, translate HPMP-III, submit document to ExCom and follow up negotiation and approval process.	UNDP
7. Activities to be undertaken for project preparation and funding		
Activity	**Indicative funding (US $)**	**Agency**
Update HCFCs downstream data.	10,000	UNDP
Assess HCFCs and HCFCs-based equipment market	25,000	UNDP
Review Institutional and Regulatory baselines	10,000	UNDP
Carry on Gender Assessment	7,500	UNDP
Carry on Stakeholders Meetings (including missions)	22,500	UNDP
Sundry (draft and translations, printed materials)	15,000	UNDP
TOTAL	**90,000**	
8. How will activities related to implementation of the Kigali Amendment to phase down HFCs be considered during project preparation stage II of the HPMP?		
The overarching strategy will focus on the HCFC phase-out, however the Government of Indonesia is keen in promoting ozone-friendly, climate-friendly and energy-efficient technologies to the extent that this is possible within the current guidelines and available funding under the Stage II. The strategy will also support, at the possible extent given the MLF guidelines, to raise awareness of stakeholders on the Kigali Amendment and its future obligations and the relationship with the reduction of HCFC in parallel to the Enabling Activities Project carried out by the World Bank.		
9. How will the Multilateral Fund gender policy be considered during project preparation?		
During the project preparation, gender considerations and actions on gender mainstreaming will be assessed and a proper Gender Management Plan is to be included in the HPMP-III Over-arching strategy: The following actions are expected to be carried in the preparation phase: • To collect data to produce gender-disaggregated indicators		

- Look into introduction of gender considerations when designing components and activities o (presentation of sex-disaggregated data and visuals of women and men where applicable);
- To establish a baseline of women technicians in R&AC sector and compare it with the number of women involved in NOU R&AC activities.
- To incorporate gender aspects in the recruitment of staff for the PRP (emphasizing that female candidates are welcome and encouraged to apply)
- Assurance that consultants and project personnel have the required gender competence to reflect on progress and challenges related to gender.
- Draft a Gender Management Plan to be supported as part of the HPMP-III over-arching strategy

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL
HPMP PROJECT PREPARATION REQUEST FORM
HPMP (OVERARCHING + INV)

Part I: Project Information

Project title:	HPMP Stage III	
Country:	Islamic Republic of Iran	
Lead implementing agency:	UNDP	
Cooperating agency (1):	UNIDO	
Cooperating agency (1):	UNEP	
Cooperating agency (1):	Other (Bilateral), specify.	Government of Germany
Implementation period:	24 Months	
Funding requested:		
Agency	**Sector**	**Funding requested (US $)***
UNDP	Overarching	25,000.00 USD
UNIDO	Overarching	15,000.00 USD
UNEP	Overarching	15,000.00 USD
Other (Bilateral)	Overarching	15,000.00 USD
UNDP	INV - REF	25,000.00 USD
UNIDO	INV - AC	50,000.00 USD
Other (Bilateral)	INV - REF	25,000.00 USD

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government specifying roles of respective agencies (where more than one IA is involved)	☒	☐
2. Written confirmation – balances from previous PRP funding approved for stage I HPMP had been returned / will be returned (d**ecision 71/42(i)**)	☒	☐
• Specify meeting at which PRP funding balance had been returned/will be returned	82nd ExCom	

A. 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 commitment (%)	**100% (with a servicing tail in line with the Protocol)**	**Year of commitment**	**2030**
☐ **Servicing only**		☐ **Manufacturing only**	☒ **Servicing and manufacturing**

2. Brief background on previous stage of the HPMP (i.e., when the HPMP was approved; a description of the progress in implementation of the previous stage of the HPMP to demonstrate that substantial progress had been made.)

The 77th meeting of the ExCom has approved stage II of the HCFC phase-out management plan (HPMP) for Iran to HPMP will phase-out 162.37 ODP tonnes of HCFCs to meet the 75 per cent reduction in HCFC consumption by 2023 taking note of the approach taken for the refrigeration and air-conditioning manufacturing sector was agreed on an exceptional basis owing to the special circumstances in the country.

The related funding for the HPMP amounted to US $12,279,534, consisting of:

- US $4,905,361, plus agency support costs of US $343,375 for UNDP,
- US $ 700,000, plus agency support costs of US $87,000 for UNEP,
- US $2,103,205, plus agency support costs of US $147,224 for UNIDO,
- US $2,672,404, plus agency support costs of US $303,964 for the Government of Germany, and
- US $ 907,207, plus agency support costs of US $109,793 for the Government of Italy;

3. Current progress in implementation of previous stage of the HPMP		
Activity	**Description**	**Implementing agency**
Manufacturing-Foam PU	Equipment delivered for conversion of one system house to introduce pre-blended pentane technology (on-going)	UNDP
Manufacturing-Foam PU	Conversion of 3 enterprises to pentane: equipment procured and delivery in progress (on-going)	UNDP
Manufacturing-Foam PU	Introduction of water-blown technology in 40 SMEs: 15 companies converted, 35 companies in pipeline for conversion with 3rd and 4th Tranches (on-going)	UNDP
Manufacturing-Foam PU	Conversion of 7 enterprises to pentane (DRF) + Conversion of 2 enterprises to pentane (DPF): technical specifications for conversion finalized and procurement on-going	UNIDO
Manufacturing-Foam PU	Conversion of 2 Sprayfoam enterprises: Technical assistance to Spray companies initiated (on-going)	Other (Bilateral)
Manufacturing-Foam PU	Introduction of water-blown technology in SMEs: technical assistance initiated at System House level (on-going)	Other (Bilateral)
Manufacturing-Foam PU	Technical assistance to 95 SMEs for introduction of water-blown systems: one (1) company converted and 17 companies trained. (on-going)	Other (Bilateral)
Others, specify. Assembling Sector	Conversion kits for low-GWP alternatives to 48 assembling companies: 15 companies converted under 1st tranche, 10 companies under conversion under 2nd Tranche; technical specs defined for 15 companies under 3rd tranche (on-going)	UNDP
Others, specify. Assembling Sector	Establish two (2) Refrigerant distribution systems, including industrial recovery and recycling equipment: one (1) Operator selected and equipment being delivered in 2021; one (1) additional centre operator being selected, technical specifications of equipment being designed (on-going)	UNDP
Others, specify. Assembling Sector	TA. For 48 assembling companies: 1) training materials for CO2 and other refrigerants 2) University training3) lab testing Island case in EU4) Certification Island case in EU5) Gap analysis standards union/ TVTO 6) training of 8 companies, TA UNDP 7) preparation of leaflets for capacity building reusable cylinders 8) lead agency servicing coordination 9) installation and commissioning CO2 units, preparation of second demo with high tech controlsother: several webinars (on-going)	Other (Bilateral)
Refrigeration servicing sector	Webinar workshop for master trainiers of SRTTU for "National curriculum update to introduce new long-term alternatives to HCFCs" with collaboration of SRTTU;- Webinar workshop for customs officers at customs training institutes all over the country on ODS risk profiling;- Webinar workshop for updating the existing certification programme;- Print and disseminate the translated ISO 5149-1 standard;- Awareness raising activities;- Project monitoring; (on-going)	UNEP
Refrigeration servicing sector	Equipment for technician training and multi-refrigerant identifiers delivered (completed)	UNIDO
Others, specify. PMU	Continuous support to HPMP-II Implementation (on-going)	UNDP

4. Overview of current HCFC consumption in metric tonnes by substance (last three years)				
Substance	**Sector**	**2017**	**2018**	**2019**
HCFC-22	Manufacturing-REF	852	691	404
HCFC-141b	Manufacturing-Foam PU	1,024	576	50.88

HCFC-22	RAC servicing	1,234.19	1,090	636
TOTAL	**ALL**	**3,110.19**	**2,357**	**1090.88**

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

It is noted the actions committed by the Government of Iran under the framework of the Stage II:

(i) To reduce HCFC consumption by 75 per cent of the baseline by 2023;
(ii) To issue a ban on the import and use of HCFC-141b pure or contained in pre-blended polyols upon the completion of the conversion of all the eligible enterprises and no later than 1 July 2023;
(iii) To issue a ban on new manufacturing capacity using HCFC-22 by 1 January 2020;
(iv) Further to issue a ban on the use of HCFC-22 in the manufacturing of refrigeration and air-conditioning equipment upon completion

Following the legal actions aligned with the activities under the HPMP-II:

- The consumption of HCFC-22 and HCFC-141b in the manufacturing sector has showed a consistent decrease as result of the T.A. and investment projects and in preparation for the sector bans to be implemented.
- The consumption of HCFC-22 in the servicing sector also showed a consistent decrease in demand.

In the servicing sector, However, it is believed that this trend is not only due to the activities under the HPMP-II, but is also direct reflection of current economic challenges faced by Iran. And though then 2020 data is not yet available, it is believed that COVID-19 had also deeply impacted the economical activity and the actions in the servicing sector. Once these barriers are overcome it might be expected that a repressed demand could put pressure on the Iranian control system and require effective actions under the HPMP-II.

The economical situation also played important role to allow assembling and manufacturing companies to carry on fast conversion as per lower temporary demand of products allowed time and human resources to be diverted for conversion. It is also important to mention geopolitical issues, including sanctions, led some companies to become active or inactive for different periods of time to reduce their operational costs during shortage of HCFCs or other raw materials/supplies.

Therefore, the Stage III will likely rely mostly in the activities in servicing sector and the possibility of repressed demand of HCFCs once economic situation improves and COVID-19 pandemic subsides.

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 consumption in manufacturing/servicing sector	Review data and cross-check "bottom-up" information gathered in the past Country Programmes. Update current market profile and trends of use of HCFCs-based equipment	UNDP
Updated sectoral consumption information	Assess granular data per sub-sector/application since the Stage II preparation (2014/2015) and better assess downstream trends and support development of sub-sector and end-user driven activities for the Sector Plan.	UNDP UNIDO Bilateral
New information on ODS regulations	Review current regulatory framework and carry on a holistic assessment on their effectiveness to better capture lessons learned and identify potential remaining barriers to be removed and updated training capabilities.	UNEP
Others, specify.	Carry on proper consultations with stakeholders, validate results of the surveys and the PRP process, draft the updated over-arching strategy and the RAC servicing sector plan, endorse strategies with stakeholders, obtain approvals from institutions responsible for the MP framework in country, translate HPMP-III, submit document to ExCom and follow up negotiation and approval process.	UNDP

7. Activities to be undertaken for project preparation and funding		
Activity	**Indicative funding (US $)**	**Agency**
Constituting the PRP development and oversight team (recruitment of national and international experts)	10,000.00	UNDP
Conducting needs assessment gaps analysis and compiling Agencies sectors data	5,000.00	UNDP
Consultation meetings for stakeholders and coordination among agencies and their field work experts	5,000.00	UNDP
Draft document preparation, translation, national validation and submission	5,000.00	UNDP
Subtotal	**25,000.00**	**UNDP**
Constituting the national PRP sector team (recruitment of national expert) for data collection	10,000.00	UNIDO
Consultations and industry interaction (sector-level workshops)	5,000.00	UNIDO
Subtotal	**15,000.00**	**UNIDO**
Constituting the national PRP sector team (recruitment of national expert) for data collection	10,000.00	Bilateral
Consultations and industry interaction (sector-level workshops)	5,000.00	Bilateral
Subtotal	**15,000.00**	**Bilateral**
Assessment of regulatory and training baselines	10,000.00	UNEP
Consultation meetings with stakeholders (meetings with government agencies for policy review and meetings with industry representatives for sector-level approaches)	5,000.00	UNEP
Subtotal	**15,000.00**	**UNEP**
TOTAL	**70,000.00**	

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

The overarching strategy will focus on the HCFC phase-out, however the Government of the Islamic Republic of Iran has consciously chosen a low carbon growth path while undertaking technology transition under HPMP Stage-II. All the participating enterprises, have moved to low global warming potential alternatives. The strategy will also support, at the possible extent given the MLF guidelines, to raise awareness of stakeholders on the Kigali Amendment and its future obligations and the relationship with the reduction of HCFCs, focussing on low GWP alternatives.

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

In line with the decision 84/92, the operational policy on gender mainstreaming would be applied wherever feasible in the preparation of HPMP Stage-III including in the following activities (a) Encouraging participation in the awareness workshops/stakeholder consultative meetings organized as part of HPMP Stage-III preparation. (b) Promoting training and awareness campaigns to develop staff competency and awareness on gender mainstreaming. (c) Discussing gender issues during the workshops to share experiences and lessons learned on gender mainstreaming.

B. Information required for PRP funding request for investment projects as part of the HPMP
INDUSTRIAL REFRIGERATION

1. Agency:	UNDP
	Other (Bilateral)
2. Sector:	Refrigeration
3. HCFC consumption in item #2 reported under country programme (CP) data?	☒ **Yes**, please specify reported amount and year**:** **404 mt (2019)**
4. Information on remaining eligible consumption	
Substance	**Remaining eligible consumption (ODP tonnes)**
HCFC-22	**53.73**

5. Information on enterprise(s) for which funding is being sought

Enterprise	**Year established**	**HCFC consumption (ODP tonnes) (last three years)**			**HCFC phase-out to be achieved**
		2017	**2018**	**2019**	

As per the market survey conducted under the HPMP-II preparation, there were still enterprises using HCFC-22 in industrial refrigeration and AC sectors (including several companies simultaneously operating in this same sectors) that were not assisted under the Stage II of the HPMP

The detailed enterprise wise information will be available after conducting a survey and collecting updated information regarding eligibility, HCFC consumption, baseline equipment, etc.

We note the assistance provided in the Stage II focused in domestic and commercial refrigeration, but it was also noted at the time the existence of companies operating in the industrial refrigeration and air conditioning subsector. Therefore, the INV PRP requested now covers the industrial sector, left unassisted (i.e. Condensing units, Ice Bank, Ice Maker, Industrial refrigerator and milk coolers).

Is also important to mention geopolitical issues, including sanctions, led some companies to become active or inactive for different periods of time to reduce their operational costs during shortage of HCFCs or other raw materials/supplies.

Upon consultation with local Association and stakeholders during the HPMP-II implementation, it was noted that these units are still being produced by at least 16 companies and action is thus necessary to reduce HCFC-22 demand at the same time, trying to prevent a migration to high-GWP HFCs.

Therefore, the funding being requested, in line with Decision 71/42, is critical to improve and extend the bottom up assessment these companies, verify eligibility, collect HCFCs usage data and products profiling, collect granular information required to design sound investment projects, compile aggregated information and design an effective Manufacturing Sector Plan, validate the Sector Plan with stakeholders and submit it along the HPMP-III Over-arching strategy

6. Activities to be undertaken for preparation of the investment project and funding requested

Activity	Indicative funding (US $)
Carry out sectoral survey for getting enterprise wise information comprising consumption, baseline equipment, etc.	30,000
Organise stakeholder consultative workshops with industry for creating awareness on eligibility for participation in HPMP, the funding guidelines and on alternative technologies.	10,000
Compilation and analysis of survey information -- Includes data validation with respect to information available with NOU and bottom-up validation	5,000
Preparation of draft Sector Plan and Investment Projects - Includes expenditure for discussing the draft sector plan with industry and other stakeholders. Small group physical meetings will be organised wherever needed.	5,000
Finalisation of HPMP Stage-III and submission after seeking required approvals from the Government	Included above
TOTAL	**50,000**

C. Information required for PRP funding request for investment projects as part of the HPMP ROOM AIR CONDITIONING

1. Agency:	UNIDO
2. Sector:	Air-conditioning
3. HCFC consumption in item #2 reported under country programme (CP) data?	☒ **Yes**, please specify reported amount and year: **404 mt (2019)**

4. Information on remaining eligible consumption

Substance	Remaining eligible consumption (ODP tonnes)
HCFC-22	**53.73**

5. Information on enterprise(s) for which funding is being sought

Enterprise	Year established	HCFC consumption (ODP tonnes) (last three years)			HCFC phase-out to be achieved
		2017	2018	2019	

As per the market survey conducted under the HPMP-II preparation, there were still enterprises using HCFC-22 in the room AC sector that were not assisted under the Stage II of the HPMP**.**

The detailed enterprise wise information will be available after conducting a survey and collecting updated information regarding eligibility, HCFC consumption, baseline equipment, etc.

Under the PRP of the Stage II initially 28 companies were surveyed, when 20 companies, though established before 21 September 2007, seemed to import AC units and proceed to charging during the equipment installation, as noted by the Secretariat.

Is also important to mention geopolitical issues, including sanctions, led some companies to become active or inactive for different periods of time to reduce their operational costs during shortage of HCFCs or other raw materials/supplies

Upon consultation with local Association during the HPMP-II implementation, it was found a list of additional 27 companies that would still be operating in Iran. For this reason, PRP INV funding is needed to carry on the bottom up assessment of each company, verify eligibility, collect HCFCs usage data and equipment profiling and design sound investment projects, compile aggregated information and design an effective Manufacturing Sector Plan, validate the Sector Plan with stakeholders and submit it along the the over-arching strategy.

6. Activities to be undertaken for preparation of the investment project and funding requested

Activity	Indicative funding (US $)
Carry out sectoral survey for getting enterprise wise information comprising consumption, baseline equipment, etc.	30,000
Organise stakeholder consultative workshops with industry for creating awareness on eligibility for participation in HPMP, the funding guidelines and on alternative technologies.	10,000
Compilation and analysis of survey information - Includes data validation with respect to information available with NOU and bottom-up validation	5,000
Preparation of draft Sector Plan and Investment Projects - Includes expenditure for discussing the draft sector plan with industry and other stakeholders. Small group physical meetings will be organised wherever needed.	5,000
Finalisation of HPMP Stage-III and submission after seeking required approvals from the Government	Included above
TOTAL	**50,000**

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:	HCFCs Phase-out Management Plan – Stage III (preparation)	
Country:	Malaysia	
Lead implementing agency:	UNDP	
Cooperating agency (1):	n/a	Click or tap here to enter text.
Implementation period:	July 2021 – December 2022 (18 months)	
Funding requested:		
Agency	**Sector**	**Funding requested (US $)***
UNDP	Overarching	90,000

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	**Yes**	**No**
1. Official endorsement letter from Government specifying roles of respective agencies (where more than one IA is involved)	☒	☐
2. Written confirmation – balances from previous PRP funding approved for stage I HPMP had been returned / will be returned (d**ecision 71/42(i)**)	☒	☐
a. Specify meeting at which PRP funding balance had been returned	82nd ExCom	

A. 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 commitment (%)	**100% (with a servicing tail in line with the Protocol)**	**Year of commitment**	**2030**
☒ **Servicing only**		☐ **Manufacturing only**	☐ **Servicing and manufacturing**

2. Brief background on previous stage of the HPMP (i.e., when the HPMP was approved; a description of the progress in implementation of the previous stage of the HPMP to demonstrate that substantial progress had been made.)

a. The Stage I of the HCFC phase-out management plan (HPMP) for Malaysia was approved at the 65th meeting, to meet 15 per cent reduction from the baseline by 2016, at a total cost of US $9,587,470, plus agency support costs of US $719,060, and to phase-out a total of 103.02 ODP tonnes of HCFCs (consisting of 94.6 ODP tonnes of HCFC-141b and 8.42 ODP tonnes of HCFC-22).

b. The Agreement between the Government of Malaysia and the Executive Committee for the Stage I was further updated at the 75th meeting to reflect additional reduction of 8.83 ODP tonnes of HCFC-22, associated with the reallocation of savings of US $722,952 from the PU foam sector, resulting in a total reduction of 111.85 ODP tonnes of HCFCs.

c. The Stage I of the HPMP was successfully completed in 2018, with the submission of the Project Completion Report, while the Final Progress Report was submitted to the 82nd ExCom Meeting confirming all remaining committed funds had been disbursed.

d. The Stage II of the HCFC phase-out management plan (HPMP) for Malaysia was approved at the 77th meeting of the ExCom at a total cost of US $ 6,567,728 (US $ 6,138,063 for investment and non-investment projects plus agency support costs of US $ 429,665) to phase-out 76.83 ODP tonnes of HCFC-

22 and 66.94 ODP tonnes of HCFC-141b and assist Malaysia in meeting the Montreal Protocol compliance target of 42.9 per cent reduction by the year 2022.

e. The activities being implemented under the Stage II include a series of regulatory actions on ban of substances, the complete phase-out of HCFC-141b in the PU foam and of HCFC-22 in the RAC manufacturing sectors and a series of investment and non-investment activities to support the servicing sector to reduce consumption of HCFC-22.

(a.1) Completion Report of STAGE I of the HPMP

Activity	Description	Implementing agency
Manufacturing-Foam PU	13 large sized companies converted to Cyclopentane technology	UNDP
Refrigeration servicing sector	51 ATC (Authorized Training centers) equipped with 53 recovery units	UNDP
Refrigeration servicing sector	220 master trainers trained	UNDP
Refrigeration servicing sector	6, 056 technicians trained	UNDP
Refrigeration servicing sector	Six (6) reclaim centers established	UNDP
Refrigeration servicing sector	Online Certification Portal established to support technicians to access training schedules and register for training, download materials and practice for examinations.	UNDP
Refrigeration servicing sector	Certification Programme launched, pilot certification scheme has certified 2,268 technicians	UNDP
Refrigeration servicing sector	Training manuals produced in English and Bahasa	UNDP
Refrigeration servicing sector	82 HCFC-22 based AC units replaced for HFC-32 units in the pilot replacement programme	UNDP
Refrigeration servicing sector	One (1) cascade CO2 demonstration project completed at Jaya Grocer Supermarket	UNDP
Refrigeration servicing sector	Five (5) workshops on RAC technological issues conducted	UNDP
Legal/regulatory framework	166 Custom Officers trained	UNDP
Legal/regulatory framework	1,200 Fire and Rescue Department officers trained on safety standards for flammable refrigerants and halon management	

(a.2) Current progress in implementation of STAGE II of the HPMP

Activity	Description	Implementing agency
Manufacturing-Foam PU	(Completed) Ten (10) medium sized companies converted to Cyclopentane	UNDP
Manufacturing-Foam PU	(On-going) 26 small sized companies received ExCom approval to change technology from HFOs to cyclopentane: conversion process at advanced stage.	UNDP
Manufacturing-Foam PU	(On-going) 27 micro sized companies being assisted on trials in order to make final decision about technology choice	UNDP
Manufacturing-REF	(On-going) T.A. for two (2) AC Manufacturers and eight (8) Refrigeration Manufacturers for the phase-out of HCFC-22.	UNDP
Refrigeration servicing sector	(On-going) 238 Custom & DoE Enforcement Officers trained • *Target 480 Officers by end of Stage II*	UNDP
Refrigeration servicing sector	(Completed) 104 trainers trained • *Target 100 trainers by end of Stage II*	UNDP
Refrigeration servicing sector	(On-going) 2,954 technicians trained • *Target 3,500 technicians by end of Stage II*	

Refrigeration servicing sector	(On-going) 49 training equipment delivered to ATCs • *Target 51 ATCs supported by end of Stage II*	UNDP
Refrigeration servicing sector	(On-going) 48 RAC good practices equipment being procured to Training Institutions • *Target 21 Institutions supported by end of Stage II*	UNDP
Refrigeration servicing sector	(Completed) 2 Flammable Refrigerants Refrigeration assembling equipment delivered to ATCs • *Target 2 ATCs supported by end of Stage II*	UNDP
Legal/regulatory framework	(Completed) Ban on the use, import and export of HCFC-22 in RAC manufacturing enacted as of 1 January 2020 and being enforced	UNDP
Legal/regulatory framework	(Completed) Ban on the import and export of HCFC-141b contained in pre-blended polyols from 1 January 2022 enacted.	UNDP
Legal/regulatory framework	(On-going) Ban on all uses of HCFC-141b, both in bulk and contained in imported pre-blended polyols, except for the solvent sector, from 1 January 2022,	UNDP

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

Substance	Sector	2017	2018	2019
HCFC-22	Manufacturing-REF	1,520.0281	1,705.742	647.906
HCFC-22	RAC servicing	1,693.562	1,900.478	2,591.624
HCFC-141b	Manufacturing-Foam PU	528.79	441.6	323.49
HCFC-123	Manufacturing-REF	17.3513	64.45	10.263
HCFC-123	RAC servicing	19.3322	0.13	11.527
HCFC-225	Solvent	1.95	1.93	-
HCFC-225ca	Solvent	-	-	0.295
HCFC-225cb	Solvent	-	-	0.295
TOTAL	Exported (all)	(30.356)	(32.266)	(33.5)
TOTAL	**Consumption**	**3,781.0136**	**4,114.33**	**3,585.40**

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

As per agreed in the approval of the Stage II of the HPMP for Malaysia, the use of HCFC-22 for the manufacturing refrigeration industries (non-A5 owned) was allowed until 31 December 2019, and the consumption of this sector has followed a decrease trend until the enforcement of the 1st January 2020 ban. The same scenario is expected to follow in the PU Foam manufacturing sector in which the ban will be enforced from 1 January 2022. Over the years, the HCFC-141b consumption has also showed consistent decrease following the investment projects carried out under the framework of the Stage II of the HPMP. The remaining consumption of HCFCs is concentrated in the RAC servicing sector (HCFC-22 and HCFC-123), and the limited manufacturing sector (HCFC-123) as well as a limited consumption of HCFC-225 in the solvents sector.

d. 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 consumption in manufacturing/servicing sector	Review data and cross-check "bottom-up" information gathered in the past Country Programmes	UNDP
Updated sectoral consumption information	Assess granular data per sub-sector/application since the Stage II preparation (2014/2015) and better assess downstream trends t.	UNDP
Analysis of types of equipmentt using HCFCs	Update current market profile and trends of use of HCFCs-based equipment	UNDP
New information on ODS regulations	Review current regulatory framework and carry on a holistic assessment on their effectiveness to better capture lessons learned and identify potential remaining barriers to be removed.	UNDP
Others, specify.	Carry on proper consultations with stakeholders, validate results of the surveys and the PRP process, draft the updated over-arching strategy and the RAC servicing sector plan, endorse strategies with stakeholders, obtain approvals from institutions responsible for the MP framework in country, translate HPMP-III, submit document to ExCom and follow up negotiation and approval process.	UNDP

e. Activities to be undertaken for project preparation and funding

Activity	Indicative funding (US $)	Agency
Update HCFCs downstream data.	10,000	UNDP
Assess HCFCs and HCFCs-based equipment market	25,000	UNDP
Review Institutional and Regulatory baselines	10,000	UNDP
Carry on Gender Assessment	7,500	UNDP

Carry on Stakeholders Meetings (including missions)	22,500	UNDP
Sundry (draft and translations, printed materials)	15,000	UNDP
TOTAL	**90,000**	

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

The overarching strategy will focus on the HCFC phase-out, however the Government of Malaysia is keen to promoting ozone-friendly, climate-friendly and energy-efficient technologies to the extent that this is possible within the current guidelines and available funding under the Stage II.

The strategy will also support, at the possible extent given the MLF guidelines, to raise awareness of stakeholders on the Kigali Amendment and its future obligations and the relationship with the reduction of HCFC in parallel to the preparation of the HFCs Phase-out Management Plan to be carried out by the World Bank.

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

During the project preparation, gender considerations and actions on gender mainstreaming will be assessed and a proper Gender Management Plan is to be included in the HPMP-III Over-arching strategy: The following actions are expected to be carried in the preparation phase:

- To collect data to produce gender-disaggregated indicators
- Look into introduction of gender considerations when designing components and activities o (presentation of sex-disaggregated data and visuals of women and men where applicable);
- To establish a baseline of women technicians in R&AC sector and compare it with the number of women involved in NOU R&AC activities.
- To incorporate gender aspects in the recruitment of staff for the PRP (emphasizing that female candidates are welcome and encouraged to apply)
- Assurance that consultants and project personnel have the required gender competence to reflect on progress and challenges related to gender.
- Draft a Gender Management Plan to be supported as part of the HPMP-III over-arching strategy

B. Information required for PRP funding request for investment projects as part of the HPMP

n/a

ANNEX 3

Preparation funding requests for HFC phase-down in:

1. **Colombia**
2. **Dominican Republic**
3. **Nigeria**
4. **Panama**
5. **Paraguay**
6. **Sri Lanka**
7. **Trinidad and Tobago**

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL
HFC PROJECT PREPARATION REQUEST FORM
HFC Phase-down Management plan (OVERARCHING)

Part I: Project Information

Project title:	HFC Phase-Down Management Plan Preparation	
Country:	Colombia	
Lead Implementing agency:	UNDP	
Cooperating Agency	GIZ-Proklima	
Implementation period:	November 2021 – October 2023	
Funding requested:	US $ 300,000	
Agency	Sector	Funding requested (US $) *
UNDP	Overarching	205,000
GIZ-Proklima	RAC servicing sector (Training activities)	95,000

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government for choice of agency	☒	☐
2. Letter of intent to ratify the KA – Colombia ratified the KA.	☒	☐

A. Information required to support PRP funding (Overarching strategy)

1. Brief background on previous activities related to the Kigali amendment and the HFC phase-down

Following the outcomes of the 79th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol that approved enabling activities for Article 5 Parties (ExCom Decision 79/46) and subsequently ExCom Decision 80/41 that approved funding for Colombia for *Enabling Activities to prepare for the HFC phase-down* and to assure the early ratification of the Kigali Amendment (KA).

The Kigali Amendment has been sanctioned by Law 1970 of 2019 and approved by the Constitutional Court through ruling C-494-2, therefore the legal framework is enabled for Colombia to begin compliance with the obligations derived from this Amendment for the reduction of HFC consumption.

2. Current progress in implementation of Enabling Activities for HFC phase-down
Budget: USD $ 250,000 (plus support funds USD $ 17,500)

Colombia has completed most of the implementation of the Enabling Activities project in the country, the following activities were developed:

Information awareness activities have developed to support targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

The review of the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment was developed to speed up the process and assure that the correct information and legal support is delivered to the decision makers.

The coordination mechanism of the Ozone Technical Unit and other governmental institutions and stakeholders (private and public sectors) has been assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment and propose interventions were formulated to better integrate these stakeholders.

An assessment of the current Licensing and Quota Systems applied to HFCs and the new series of pure and blended HFCs (at national level) and a proposal of roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs.

A complementary bottom-up information survey on HFC consumption was conducted in some subsectors of the country.

3. Overview of estimated use of HFC in Mt

Current use of HFCs in Colombia is estimated through the imports data. There is no production and export of HFCs in the country.

The table below lists the consumption of HFCs during past three years.

HFCs (pure and blends/mixtures)				
Substance	**Type**	**2017**	**2018**	**2019**
HFC-125	HFC	13.65	0.00	2.62
HFC-134a	HFC	1,148.81	1,207.40	1,483.29
HFC-143a	HFC	3.27	0.00	0.00
HFC-152a	HFC	17.38	10.50	24.04
HFC-227ea	HFC	5.02	3.00	2.52
HFC-245fa	HFC	0.32	0.00	0.00
HFC-32	HFC	0.00	0.00	0.06
HFC-4310	HFC	0.00	0.00	0.00
Chesterton 296 EU	blend HFC	0.32	0.11	0.37
HFC 365mfc/HFC 227 ea (93/7)	blend HFC	30.21	11.88	22.08
POLYCOLD-1102	blend HFC	0.07	0.24	0.00
R-404A	blend HFC	166.89	194.70	188.3
R-407C	blend HFC	28.59	15.15	13.91
R-407F	blend HFC	0.00	0.00	0.00
R-410A	blend HFC	295.75	418.50	594.88
R-413A	blend HFC	4.24	3.21	4.48
R-417A	blend HFC	0.00	0.91	0.00
R-422A	blend HFC	0.88	0.00	0.22
R-422D	blend HFC	14.76	29.47	7.0
R-437A	blend HFC	44.40	43.11	22.00
R-449A	blend HFC	0.00	0.00	2.11
R-452A	blend HFC	0.00	0.00	0.23
R-507A	blend HFC	239.79	372.04	259.36
R-508B	blend HFC	0.00	0.02	0.04
R-513A	blend HFC	0.00	0.00	0.27
	Total	2,014.33	2,310.24	2,627.63

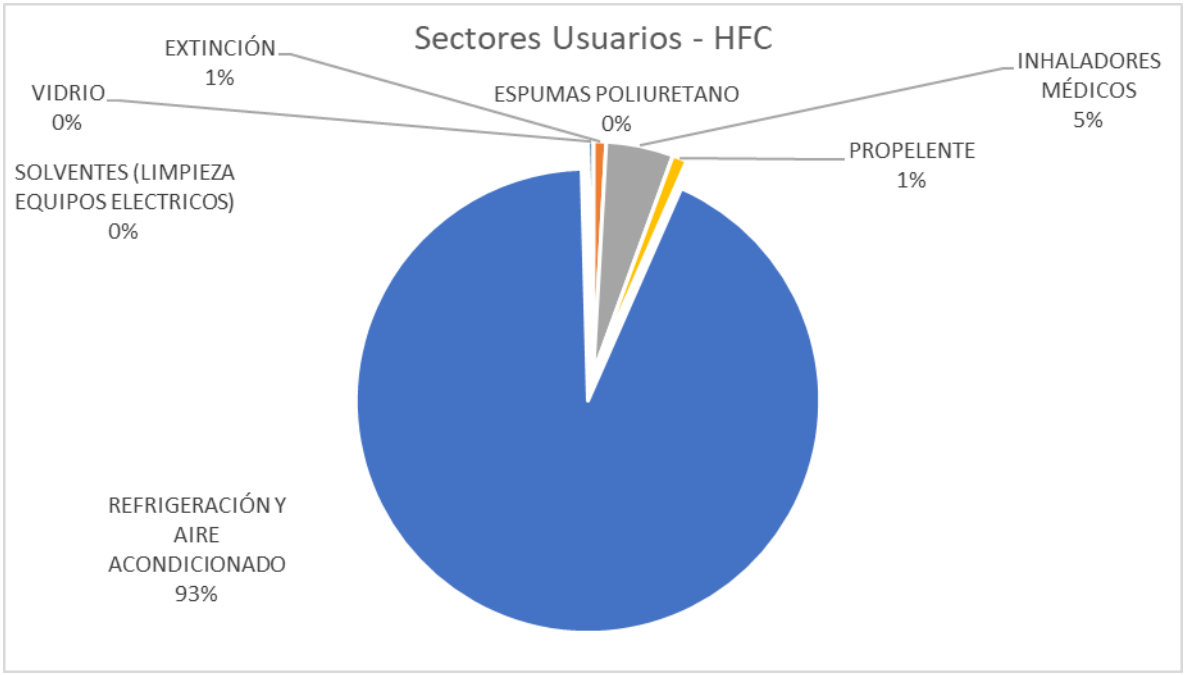
4. Based on the consumption data given above, please provide a description of the sector/sub-sector that use HFCs in the country, including a short analysis and explanation of the consumption trends (i.e., increasing or decreasing)

The HFC consumption has increased in the last years. The main consumption as pure substance is: HFC-134a in the commercial refrigeration equipment manufacturing sector, servicing sector of MAC, domestic refrigeration and MDI.

There is also an important consumption of HFCs blends (mainly R-404A, R4-07C, R-410A and R-507A) in the commercial and industrial refrigeration manufacturing sector and air conditioning manufacturing sector. There is a small-scale consumption of R-452A and R-513A that have being tested in the manufacturing sector of commercial refrigeration equipment and chillers. The other HFCs blends such as R-413A, R-422A, R-422D, R-437A and R-508B are being used in dropping and retrofit activities in the servicing sector.

There has been a small consumption of HFC-365mfc/HFC-227ea (93/7) in the polyurethane foam sector.

Finally, the consumption of HFC-125 and HFC-227ea in the fire extinguishing sector varies according to the demand for national infrastructure, so constant quantities are not recorded. HFC-152a has been used for the glass industry.



Source: Ozone Technical Unit, Colombia.

5. Activities to be undertaken for project preparation and funding.

The main objective of this funding request is to prepare the HFC Phase Down Overarching strategy and to prepare Colombia for the implementation of the first stage of HFCs phase-down activities, considering the legislative framework that is already in place in Colombia and the requirements for additional policies and national regulations for enforcement. This proposal includes UNDP as the lead agency and GIZ-Proklima as a bilateral agency.

Activity	Indicative funding (US $)	Lead Agency
International expert review	15,000	UNDP
International expert review	15,000	Other (Bilateral)
Conducting interviews, organizing workshops and stakeholders' consultations for the integration of national regulations and procedures for KA implementation and	30,000	UNDP

consolidation of technical capacities in the institutions involved in HFC control.		
Additional surveys in other subsectors that consume HFCs.	70,000	UNDP
Consolidation and detailed analysis of the sectorial distribution, consumption trends of HFCs (pure and blends) and HFC banks management options	50,000	Other (Bilateral)
Assessment of country level needs for trainings and infrastructure in use of natural refrigerants, developing training plan and organizing workshops with main stakeholders and training institutions.	30,000	Other (Bilateral)
Assessment of the needs for promotion of the national certification scheme and enhancing the network of recovery, recycling, reclaiming and destruction.	30,000	UNDP
Communication and outreach plan preparation and development of awareness raising activities.	30,000	UNDP
Consolidated overarching HFC phase down strategy.	30,000	UNDP
TOTAL	**300,000**	

6. How will activities related to the stage II of the HPMP implementation be considered during project preparation for the HFC phase-down management plan?

Colombia is ongoing to phase-out of use the HCFCs. The stage II HPMP is facing to the final step phased-out 65 % of HCFCs by 2021. The activities in the HPMP stage II are focusing on the sustainable elimination in the use of HCFCs and, to the extent possible, promote the safe use of low GWP alternatives, especially natural refrigerants.

National Ozone Unit (Unidad Técnica de Ozono – UTO) will also be in charge of the preparation of the overarching strategy for the HFC phase down in Colombia and subsequent implementation. Some awareness and preparation activities of HFC management will generate synergies between the HPMP and the HFC phase-down. However, it is important to note that HCFC phase-out can be achieve by applying currently available non-flammable /non-toxic technologies mainly the HFCs. The HFC phase down is a much more complex task as it requires inevitably the full-scale introduction of flammable and/or toxic refrigerants in Colombia.

The safe handling of these substances by technicians in the country is a task of a completely different and complex magnitude compared to what has been developed before. This includes not only the training of technicians, but also an associated update/introduction of standards, safety guidelines, regulation, etc. for the safe handling of refrigerants.

It is also important that based on lessons learned and established infrastructure from the different activities implemented for the phase out of CFCs and HCFCs, the management of HFCs banks would be considered as a part of the overarching strategy for the HFC phase down in Colombia and its subsequent implementation. It is clear that servicing and end-user sector activities generate HFC waste during replacement and other activities including refrigerant recovery; therefore, it would be useful to analyze the necessary steps for the management of future HFC banks and end-of-life RAC equipment.

A permanent monitoring sectoral and subsectoral HCFC and HFC consumption will be necessary.

UNDP and GIZ see that the main synergy is being achieved by coordinating all the activities by the same governmental entity – UTO in this case – for both the HPMP and the HFC phase down.

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL
HFC PROJECT PREPARATION REQUEST FORM
HFC Phase-down Management plan (OVERARCHING)

Part I: Project Information

Project title:	HFC Phase-Down Management Plan Preparation	
Country:	Dominican Republic	
Lead Implementing agency:	UNDP	
Cooperating Agency	UNEP	
Implementation period:	October 2021 – May 2023	
Funding requested:	USD$ 190,000	
Agency	Sector	Funding requested (US $)*
UNDP	Overarching	170,000
UNEP	Overarching	20,000

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government for choice of agency	☒	☐
2. Dominican Republic ratified the KA.	☒	☐

A. Information required to support PRP funding (Overarching strategy)

1. Brief background on previous activities related to the Kigali amendment and the HFC phase-down

Following the outcomes of the 80th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol and subsequently Decision 80/49, funding was approved for Dominican Republic for *Enabling Activities to prepare for the HFC phase-down* and to assure the early ratification of the Kigali Amendment (KA) which happened on April 14, 2021.

Taking into consideration that the Kigali Amendment to the Montreal Protocol came into force on the 1st of January 2019, and Dominican Republic has updated its reporting mechanism to include HFC, the country will be able to follow up on the standard reporting obligation under the Kigali Amendment. Dominican Republic has already created an enabling environment for the phasedown of HFCs.

2. Current progress in implementation of Enabling Activities for HFC phase-down Budget: 150,000 USD

The Dominican Republic ratified the Montreal Protocol on Substances that Deplete the Ozone Layer on May 18, 1993, the London Amendments, and Copenhagen on December 24, 2001, the Montreal and Beijing Amendments were ratified on October 17, 2008. As the Kigali Amendment (KA) to the Montreal Protocol came into force on 1st January 2019, the Amendment was approved in the Dominican Republic on October 26, 2020 and the instrument of ratification finalized in April 14, 2021.

Dominican Republic is in the process of completing the implementation of the Enabling activity in the country. The implementation of the enabling activities was carried out using the existing national infrastructure and the institutional environment already established for the ODS elimination activities in order to guarantee that the Ministry of Environment and Natural Resources personnel, through the National Programme for the Protection of the Ozone Layer (PRONAOZ) obtain the best knowledge and skills to assume the challenges and new responsibilities, in particular, to monitor the consumption of HFCs, as well as the incorporation of a joint approach between the phase-out of HFCs and national policy energy efficiency of the Dominican Republic.

The refrigeration and air conditioning sector of the Dominican Republic can significantly influence the improvement of Energy Efficiency by identifying the energy consumption of equipment and the impacts of

refrigerant gases on their global warming potential, generating synergies between the implementation of the Kigali Amendment and other national programmes. In this regard, the PRONAOZ has strengthened the partnership with the Ministry of Energy and Mines/Directorate of Environmental Affairs and Climate Change to identify the linkage between the HFC phase-down and energy efficiency and aimed to jointly build the capacity of National Ozone Officers and national energy policymakers for linking energy efficiency with Montreal Protocol objectives in support of the Kigali Amendment, as well as discussed policies to ensure an energy efficient RAC sector.

The ratification process of the Kigali Amendment was led by PRONAOZ, it was presented at different levels of the government through several meetings with stakeholders such as associations of the RAC sector, universities and vocational institutes, where training has traditionally been provided for the refrigeration and air conditioning sector. With the implementation of the enabling activities, awareness raising activities were provided to the technicians of the Ministry of Environment and Natural Resources, technicians, companies in the service sector and end-users through PRONAOZ, on the responsibilities emerging from the Kigali Amendment, its scope and impact; Also, the needs and requirements of the service sector were identified to facilitate the phase-out of HFCs.

Dominican Republic has made an initial analysis about the use of HFCs in the country, but additional work will be needed.

3. Overview of estimated use of HFC in Mt

Current consumption of HFCs in Dominican Republic is presented in the table below. There is no production of ODS alternatives in the Dominican Republic and there is no export of HFCs. In accordance with the consumption estimation under Montreal Protocol, the table reports the difference between imports and exports.

HFC consumption, 2017-2019 (in metric tons)

Substance	2017	2018	2019	TOTAL	Average
HFC-134A	712.84	703.22	1,055.44	**2,471.50**	*823.83*
R-404A	358	365.70	240.70	**964.35**	*321.45*
R-410A	184	229.90	646.20	**1,059.60**	*353.20*
R-407C	-	5.30	9.56	**14.86**	*4.95*
R-507A			24.00	**24.00**	*24.00*
R-507C	18	14.16	-	**31.82**	*10.61*
R-438		4.08	2.06	**6.14**	*3.07*
R-422A		1.36	0.78	**2.14**	*1.07*
R-452A			0.22	**0.22**	*0.22*
TOTAL	**1,271.95**	**1,323.72**	**1,978.96**	**4,574.63**	***1,524.88***

Source: PRONAOZ

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

As part of the implementation of the Enabling Activities for the implementation of the Kigalie Amendment project, the Dominican Republic has collected information on the consumption of HFCs.

The main HFC consumed in the country is HFC-134a, the consumption is divided in three main categories: a) Domestic Refrigeration, b) commecial refrigeration, and c) MAC. Until 2020, HFC-134a was also used for the manufacture of commercial refrigerators at Farco.

There is also an important use of HFCs in Commercial Refrigeration (mainly R-404A and R-507A and C). It the consumption of these very high GWP refrigerants has been growing as they are the main alternative provided by the distributors that supply Dominican Republic. Consumption has an irrecular trend, as they depend on specific project within the refrigeration sector (i.e. the construction of new supermarkets or commercial centres).

Finally, the consumption of R-410A for AC has increased as imports of AC equipment with HCFC-22 has been banned since 2017 in the country as part of the activities conducted in the implementation of the HPMP Stage II. There is a clear upward trend in the use of HFC 410A, being the second most used refrigerant in the country.

The MAC sector in Dominican Republic needs to be analyzed as there has been no activities in this sector in the past 10 years as HCFCs are not used in MAC and there is a growing fleet of vehicles. It will be important to better understand the dynamics of this sector.

The are small imports of blends such as R-438, R-422A and R-452A used to retrofit existing equipment with HCFC.

5. Activities to be undertaken for project preparation and funding

The main objective of this funding request is to prepare the HFC Phase Down Overarching strategy and to prepare Dominican Republic for the implementation of the first stage HFCs phase-down activities, considering already the legislative framework in place in Dominican Republic and the requirements for additional policies and national regulations for enforcement.

Activity	Indicative funding (US $)	Lead Agency
Conducting interviews, organizing workshops and stakeholders' consultations for the integration of national regulations and procedures for KA implementation and consolidation of technical capacities in the institutions involved in HFC control	20,000	UNEP
Assessment of country level needs for trainings and certification in use of alternative refrigerants, developing training plan and organizing workshops with main stakeholders and training institutions.	30,000	UNDP
Assessments of the needs for enhancing training programs on GRP, recovery, recycling and destruction.	25,000	UNDP
Communication and outreach plan preparation and development of awareness raising activities.	30,000	UNDP
Detailed analysis of the sectorial distribution and consumption trends of HFCs (pure and blends).	30,000	UNDP
Consultations, review and validation of the consolidated overarching HFC phase down strategy	40,000	UNDP
International consultant for the preparation of the proposal.	15,000	UNDP
TOTAL	**190,000**	

6. How will activities related to the stage III of the HPMP implementation be considered during project preparation for the HFC phase-down management plan?

Dominican Republic is well on its way to phase-out of use the HCFCs. The stage III HPMP was approved at Intersessional Approval Process of the 86th meeting of the ExCom, along its final tranche. The Stage III HPMP for Dominican Republic will phase-out 97.5 % of HCFCs by 2028 and 100% by 2030. The activities in the stage III HPMP will focus on the sustainable elimination in the use of HCFCs and, to the extent possible, promote the safe use of low GWP alternatives. The stage III HPMP for Dominican Republic is being implemented via the National Implementation Modality (NIM) by PRONAOZ in Dominican Republic, part of the Ministry of Environment and Natural Resources (MARN) in Dominican Republic. PRONAOZ will also be in charge of the

preparation of the overarching strategy for the HFC phase down in Dominican Republic and subsequent implementation.

It is expected that there will be synergies among the HPMP and the HFC phase-down. However, it is important to note that HCFC phase-down can be achieved by applying currently available non-flammable /non-toxic technologies mainly the HFCs. The HFC phase down is a much more complex task as it requires inevitably the full-scale introduction of flammable and/or toxic refrigerants in Dominican Republic. The safe handling of these substances by ALL technicians in the country is a task of a completely different magnitude compared to what has been seen before. This includes not only the training of technicians, but an associated update/introduction of standards, safety guidelines, regulation, etc. for the safe handling of refrigerants.

Synergies will be achieved by coordinating all the activities by the same governmental entity – PRONAOZ in this case – for both the HPMPs and the HFC phase down.

The funding request has been based on existing HCFC PRP funding guidelines and HFC PRP funding guidelines currently under discussion. The government of Dominican Republic and UNDP believe that additional resources would be needed to fully conduct the preparation work that is needed for all the tasks listed in this document.

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL
HFC PROJECT PREPARATION REQUEST FORM
HFC Phase-down Management plan (OVERARCHING)

Part I: Project Information

Project title:	HFC Phase-Down Management Plan Preparation	
Country:	NIGERIA	
Lead Implementing agency:	UNDP	
Cooperating Agency	UNEP, UNIDO	
Implementation period:	July 2021 – June 2023	
Funding requested:	US$ 220,000	
Agency	Sector	Funding requested (US $)*
UNDP	Overarching	137,000
UNEP	Overarching	58,000
UNIDO	Overarching	25,000

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government for choice of agency	☒	☐
2. Nigeria ratified the KA.	☒	☐

A. Information required to support PRP funding (Overarching strategy)

1. Brief background on previous activities related to the Kigali amendment and the HFC phase-down

In 2016, with MLF funding, Nigeria in collaboration with UNEP, conducted an ODS Alternatives survey in response to decision XXVI/9 of the Meeting of Parties to the Montreal Protocol with funding support from the MLF after approval at the 74th meeting of its ExCom. This complemented the HFC survey conducted by Nigeria and UNDP with CCAC funding (completed in 2015). The ODS alternatives survey enabled Nigeria to better understand her historical consumption and predict future consumption trends of ODS & HFC Alternatives in different sectors and sub-sectors. The survey gave some background on the availability of some HFC alternatives in the country.

Following the outcomes of the 80th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol and subsequently Decision 80/50(e), funding was approved for Nigeria to carry out *Enabling Activities for HFC phase-down* to facilitate the early ratification of the Kigali Amendment (KA). The specific objectives of the Enabling Activities Project were to raise awareness amongst stakeholders on the need to ratify the Kigali Amendment at the earliest possible time, build capacity of HFC stakeholders and policy makers for adoption of HFC refrigerants and to update ODS legislation, incorporate Customs Codes for HFCs and Quota System to facilitate monitoring of HFCs importation and Develop ODS Alternatives Data Hub. Nigeria, in collaboration with UNEP, has completed its activities for the EA project and since ratified the Kigali Amendment in 2018.

2. Current progress in implementation of Enabling Activities for HFC phase-down Budget: 250,000 USD

The Enabling Activities project for HFC phasedown for Nigeria commenced in 2018 and ended in 2020. In order to make stakeholders aware of the benefits of the Kigali Amendment and need to ratify it, a number of Stakeholders consultation meetings and awareness programmes were carried out, to facilitate the ratification process at national level. These initiated the process and stakeholders' readiness to cooperate with the government. Consultants were engaged to carry out various needs assessments, and to provide technical assistance to the NOO to carry out the agreed activities. Awareness workshops were conducted for major HFC and HFC alternatives importers, RAC associations, customs and users on the provisions of the Kigali Amendment and the benefits of its ratification. Awareness workshops were also conducted for the various

stakeholder agencies of the government on the need to ratify the Kigali amendment. The Department of Pollution Control and the NOO held several meetings with the Honourable Minister of Environment and made presentations on the Kigali Amendment. There were also collaborations between the legal unit of the Federal Ministry of Environment and the Federal Ministry of Justice regarding drafting of the ratification documents and other necessary documents.

The Minister of Environment presented the council memo to the Federal Executive Council on the importance of the Kigali Amendment and the need for Nigeria to ratify the Amendment. The Federal Executive Council convinced on the need to ratify the Amendment recommended that the president sign the Kigali Amendment. Other judicial processes were followed by the cabinet office in the presidency.

Thereafter, the President on behalf of the Federal Republic of Nigeria ratified the Kigali Amendment to the Montreal Protocol on 26th October 2018 and the instrument of ratification has since been deposited to the UN General Assembly.

3. Overview of estimated use of ODS alternatives:

Based on the ODS Alternatives Survey completed in 2016, the uses can be broken down as follows:

Estimated use by ODS Alternative (Metric Tonnes)

Alternatives	Estimated use (Mt)			
	2012	2013	2014	2015
HFC*				
HFC-134a	789.87	687.20	666.70	638.84
HFC blends				
R-404A	41.00	50.66	64.23	13.50
R-407C	46.21	50.66	54.20	58.96
R-410A	47.35	50.10	54.20	55.10
R-507A				
HFO				
Other alternatives				
HC-290	10.02	41.47	26.42	92.29
HC-600a	772.66	1988.32	2720.85	220.81
R-744	7.06	2.43	549.40	1.64
R-717	1150.80	878.11	2242.85	1942.08

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

The commonest HFC on the Nigeria market is R-134a used in refrigeration, mobile air-conditioning, stationary air-conditioning, domestic refrigeration, and transport.

The most common blend in the country is R-410A, which comes in different names as Puron, Suva 410A, Genetron AZ20, Forane 410A, or Klea 66. It is a blend of HFC-32 and HFC-125 in 50/50 percent by weight. R-410A is being used as a replacement for R-22 by some air-conditioning manufacturing outfits.

The sectors that use HFCs are described as follows:

Domestic Refrigeration- In Nigeria, the most widely used refrigerant in the domestic refrigeration sub sector is HFC-134a which is used in servicing of some stand-alone units such as fridges and freezers.

The use of R-600a in domestic refrigeration is slowly increasing in servicing of domestic refrigeration appliances. Some imported domestic fridges are now charged with R-600a. The Government is taking steps to produce HC refrigerants (R-290 and R-600a) in a large scale from the HC plant established in the country with support from the MLF. Once the Plant is commercialized and training and certification of RAC technicians on the safe use of HC refrigerants which is planned for stage 2 of the HPMP to commence in 2020 is achieved, the use of HC refrigerants in the RAC servicing and RAC manufacturing sectors in Nigeria is expected to sharply increase.

Commercial & Industrial Refrigeration- This includes ice-makers, cold room/stores, display cabinets, refrigerated transport (trucks, vans), fishing trawlers, and industrial refrigeration. The use of R-404A to replace R-22 is also common in some large applications and for servicing some commercial refrigerators.

Transport Refrigeration- R-134a and R-404A are the main refrigerants used in transport refrigeration in the country with R-404A being used in newer refrigerated trucks. The refrigerants are used in refrigerated trucks and railway wagons.

Refrigeration & Air-conditioning Manufacturing- The Refrigeration & Air-conditioning Manufacturing Sector in Nigeria comprises of manufacturers of ice cube making machines, cold rooms/houses and manufacturers of Air-conditioners. The major HFC used is HFC-134a. Others include R-404a, R-410A, among others. R-410A is being used as a replacement for R-22 by some air-conditioning manufacturing outfits in Nigeria. R-404A is used in the manufacturing and servicing of commercial refrigeration appliances such as cold rooms and freezers.

Currently (2020), use of HFCs is decreasing in several sectors. R-600a is now more used in domestic refrigeration than HFC-134a, thus, the use of HFC-134a and other HFCs is decreasing steadily in this sector. This is due to findings that R600a is cheaper for the RAC practitioners and seen to be more effective in domestic refrigerators, compared to R-134a.

Use of R-410a is increasing in the Air conditioning sector, while R-134a and R-404a use is increasing in the cold storage and chiller applications respectively.

5. Activities to be undertaken for project preparation and funding
UNDP budget: USD 137,000 – UNEP budget: USD 58,000 – UNIDO budget: USD 25,000

Activity	Indicative funding (US $)	Lead Agency
Stakeholder consultation: Consultant to prepare and conduct questionnaires and interviews with relevant stakeholders to update available data on ODS alternatives; Conducting interviews, organizing workshops and stakeholders' consultations for the integration of national regulations and procedures for KA implementation and consolidation of technical capacities in the institutions involved in HFC control	45,000	UNDP
HFC phase-down strategy development: Technical and legal experts to prepare all legal and technical documents, consult all key stakeholders and develop detailed strategy, including assessment of needs to develop/update trainings and certification scheme in use of flammable refrigerants, developing training plan and organizing workshops with main stakeholders and training institutions, including assessments of the needs for enhancing training programs on recovery, recycling and destruction	20,000	UNDP
	20,000	UNEP

	5,000	UNIDO
Data collection by sector/sub-sector/HFC substance	47,000	UNDP
Communication and outreach plan: Preparation of a comprehensive communication and outreach plan in consultation with key stakeholders including hotel managers, investors, building planners, end-users, consumer associations, RAC associations, private sector, supermarkets, cold chain, media experts etc. The plan will focus on technology and policy awareness raising to influence the investment and user behavior.	18,000	UNEP
Capacity building activities related to RAC sector activities and enforcement: Review and assessment of innovative tools and approaches to build the capacity of relevant actors including OzonAction's tools related to HFC phase-down, review of training curricula of vocational schools, university and customs, online training and certification tools, participation of key stakeholders in international conferences, review of energy-efficiency and performance standards, case studies, public procurement policies, potential impact of incentives and taxes, gender considerations, HFC-free labeling, equipment inventories / logbooks, potential of not-in-kind alternatives etc.	20,000	UNEP
Newly identified and existing stakeholders in the manufacturing sector will be assessed to plan the capacity building and conversion activities for HFC-free options. Private and public operators for reclamation activities for HFC will be identified in partnering with both refrigerant suppliers, training centres and waste management operators for end-of-life vehicles and mobile cold rooms as well as refrigerator and air-conditioning equipment. Other activities include hydrocarbon supply chain management, mainstreaming energy efficiency promoted by the eco-labeling and gender equity into all the activities.	20,000	UNIDO
Inception and Validation	25,000	UNDP
TOTAL	**220,000**	

6. How will activities related to the stage II of the HPMP implementation be considered during project preparation for the HFC phase-down management plan?

The second stage of the HPMP covers the period up to 2023 and has already been approved (agencies: UNDP as lead; cooperating: UNIDO and Government of Italy); it aims at a phase-out of 51.35% of HCFC consumption by 2023. Stage 3 is in preparation, to reach 67.5% HCFC phase-out by 2025.

The Ozone Unit will also oversee the preparation of the overarching strategy for the HFC phase down in Nigeria and subsequent implementation.

It is expected that there will be synergies among the HPMP and the HFC phase-down. However, it is important to note that HCFC phase-down can be achieved by applying currently available non-flammable / non-toxic technologies, which are mainly HFCs. The HFC phase-down is a much more complex task as it requires inevitably the full-scale introduction of flammable and/or toxic refrigerants in Nigeria.

Additionally, some other technologies are not even available in the country and the technical knowledge needs to be created from the ground.

The safe handling of these substances by all technicians, designers and end-users in the country is a task of a completely different magnitude compared to what has been seen before. This includes not only the training of technicians, but an associated update / introduction of standards, safety guidelines, regulation, etc. for the safe handling of refrigerants. Nigeria is dedicated to these changes, but these are demanding tasks.

There will be synergy by coordinating all the activities by the same governmental entity – the National Ozone Office in this case – for both the HPMPs and the HFC phase-down. The funding request has been based on existing HCFC PRP funding guidelines. It is believed that additional resources would be needed to fully conduct the preparation work that is needed for all the tasks listed in this document.
7. **How will the Multilateral Fund gender policy be considered during project preparation?**
The Government of Nigeria is aware of the Multilateral Fund gender policy contained in ExCom document 84/73, and the related Executive Committee decision 84/92. During project preparation, relevant stakeholders will be sensitized on the gender policy. Efforts will be made to encourage women experts to attend training and awareness activities. The HFC phase-down plan and related activities shall be gender-sensitive. To the extent possible, gender-disaggregated data will be collected.

PROJECT CONCEPT – PANAMA

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL HFC PROJECT PREPARATION REQUEST FORM HFC Phase-down Management plan (OVERARCHING)

Part I: Project Information

Project title:	HFC Phase-Down Management Plan Preparation	
Country:	Panama	
Lead Implementing agency:	UNDP	
Cooperating Agency	N/A	
Implementation period:	October 2021 – May 2023	
Funding requested:	USD$ 190,000	
Agency	Sector	Funding requested (US $)*
UNDP	Overarching	190,000

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government for choice of agency	☒	☐
2. Panama ratified the KA.	☒	☐

A. Information required to support PRP funding (Overarching strategy)

1. Brief background on previous activities related to the Kigali amendment and the HFC phase-down

Following the outcomes of the 81st Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol and subsequently Decision 81/34, funding was approved for Panama for *Enabling Activities to prepare for the HFC phase-down* and to assure the early ratification of the Kigali Amendment (KA) which happened on September 28, 2018.

Taking into consideration that the Kigali Amendment to the Montreal Protocol came into force on the 1st of January 2019, and Panama has updated its reporting mechanism to include HFC, the country will be able to follow up on the standard reporting obligation under the Kigali Amendment. Panama has already created an enabling environment for the phasedown of HFCs.

2. Current progress in implementation of Enabling Activities for HFC phase-down Budget: 150,000 USD

Panama is in the process of completing the implementation of the Enabling Activity project for the implementation of the Kigali Amendment in the country which has been implemented with support of UNDP and Canada. The country has ratified the Kigali Amendment and an HFC licensing system is in place.

Meetings and dialogues with specific working groups for strengthening procedures have been conducted between Customs and the National Ozone Unit to control HFC imports and export. The licensing system was evaluated during the implementation of the Enabling Activity and it was concluded that it captures HFC imports into the country, quota system for the importation of HFC is not yet in place.

The project prepared a road map for the implementation of its activities which was discussed with local authorities, importers, and cooperation agencies, and the UNDP international expert for the implementation of the enabling activity projects in the region.

The NOU has held discussions with the National Secretariat about opportunities to make synergies between the need to have a national system for the final disposal of HFC and the GEF/UNIDO project that they are implementing to develop a system for the final disposal of obsolete RAC equipment.

A socialization process on the Kigali Amendment, the commitments in the reduction schedule and the challenges to be faced for its implementation has been initiated with stakeholders such as the Ministry of Health, the Ministry of Environment, the Ministry of Commerce and Industry, the National Customs Authority, the National Secretariat of Energy, the Ministry of Education, two main institutes for training RAC technicians, the Colon Free Trade Zone, and eight refrigerants importing companies.

While an initial analysis of HFC use has been conducted in Panama, additional work will be required in the country to detail consumption and sectoral trends.

3. Overview of estimated use of HFC in MT

Current consumption of HFCs in Panama is presented in the table below. There is no production of ODS alternatives in the Panama and there is no export of HFCs. In accordance with the consumption estimation under Montreal Protocol, the table reports the difference between imports and exports.

HFC consumption, 2018-2020 (in metric tons)

Substance	2018	2019	2020	Total	Average (18-20)
Pure substances					
HFC-134a	247.7	407.9	348.7	**1,004.2**	**334.7**
HFC-32	0.1	-	-	**0.1**	**0.0**
Blends					
R-404A	173.9	72.8	76.7	**323.4**	**107.8**
R-407A	-	0.3	-	**0.3**	**0.1**
R-407C	16.1	3.9	12.0	**32.0**	**10.7**
R-410A	340.9	221.6	160.2	**722.7**	**240.9**
R-417A	-	0.4	1.4	**1.7**	**0.6**
R-422D	0.4	0.0	-	**0.4**	**0.1**
R-425A	-	0.1	-	**0.1**	**0.0**
R-437A	-	0.1	-	**0.1**	**0.0**
R-438A	4.5	3.2	1.2	**8.9**	**3.0**
R-452A	-	-	0.1	**0.1**	**0.0**
R-507A	89.2	54.9	54.6	**198.7**	**66.2**
TOTAL	**872.7**	**765.1**	**654.8**	**2,292.6**	**764.2**

Source: NOU

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

As part of the implementation of the Enabling Activities for the implementation of the Kigali Amendment project, the Panama has collected information on the consumption of HFCs.

There is not local production of HFC in the country, all its consumption come from imports from a limited number of importers. There are not export of HFC. In general, the Panamanian market is no different from other Article 5 countries with a minimal local manufacturing of RAC equipment that rely entirely on import of such equipment.

Although, total consumption of HFCs has decreased in recent years, it is important to highlight the impact of the COVID-19 pandemic in the refrigerant market. The government of Panama took drastic measures to control the COVID-19 pandemic, imposing a long lockdown that impacted the general economy, including the RAC sector then reducing the imports of all refrigerants, including HFC.

HFC-134a is the main HFC used in the country, covering applications such as domestic refrigeration, stand-alone commercial refrigeration units and MAC. Another HFC of interest is the R-410A, its consumption has had an irregular trend, but considering the impact of the pandemic, it is expected that its consumption will grow in the

next years, as most of the AC equipment imported into the country use this refrigerant. R-404A and R-507A is used in commercial refrigeration, its consumption has been relatively stable in the last couple of years.

Small quantities of R-407F, R-417A, R-422D and R-438A refrigerants are used as substitutes for R-22 in stationary AA, commercial refrigeration and industrial refrigeration applications. Depending on the refrigerant, the replacement can be done without an oil change "drop-in" or with an oil change "retrofit".

5. Activities to be undertaken for project preparation and funding

The main objective of this funding request is to prepare the HFC Phase-down Overarching strategy and to prepare Panama for the implementation of the first stage HFCs phase-down activities, considering already the legislative framework in place in Panama and the requirements for additional policies and national regulations for enforcement.

Activity	Indicative funding (US $)	Lead Agency
Conducting interviews, organizing workshops and stakeholders' consultations for the integration of national regulations and procedures for KA implementation and consolidation of technical capacities in the institutions involved in HFC control.	20,000	UNDP
Assessment of country level needs for trainings and certification in use of alternative refrigerants, developing training plan and organizing workshops with main stakeholders and training institutions.	35,000	UNDP
Assessments of the needs for enhancing training programs on GRP, recovery, recycling and destruction.	25,000	UNDP
Communication and outreach plan preparation and development of awareness raising activities.	25,000	UNDP
Detailed analysis of the sectorial distribution (including subsectors) and consumption trends of HFCs (pure and blends).	40,000	UNDP
Consultations, review and validation of the consolidated overarching HFC phase down strategy.	30,000	UNDP
International consultant for the preparation of the proposal.	15,000	UNDP
TOTAL	**190,000**	

6. How will activities related to the stage II of the HPMP implementation be considered during project preparation for the HFC phase-down management plan?

Panama is well on its way to phase-out of use the HCFCs. The Stage III HPMP was approved during the IAP of the 86th meeting of the ExCom. Final tranche of the Stage II of the HPMP was approved in the IAP for the 85th meeting of the ExCom. The Stage III HPMP for Panama will phase-out 97.5% of HCFCs consumption by 2028 and 100 % by 2030. The activities in the stage III HPMP will focus on the sustainable elimination in the use of HCFCs and, to the extent possible, promote the safe use of low GWP alternatives.

The stage III HCFC phase-out management plan for Panama will be implemented through the General Sub Directorate of Environmental Health through the National Ozone Unit (NOU) within the Ministry of Health (MINSA) in Panama. The NOU will also be in charge of the preparation of the overall strategy for HFC phase-out in Panama and its subsequent implementation.

The scope of the Stage III of the HPMP will be considered when designing the HFC phase-down management plan, so its components, activities complement each other. It is expected that there will be synergies among the HPMP and the HFC phase-down.

However, it is important to note that HCFC phase-down can be achieved by applying currently available non-flammable /non-toxic technologies mainly the HFCs. The HFC phase down is a much more complex task as it requires inevitably the full-scale introduction of flammable, high pressure and/or toxic refrigerants in Panama. In addition, some technologies are not yet available or have not yet been identified as available technologies to replace HFCs in some sectors at the local level, know-how to adopt these technologies needs to be built at the local level.

The safe handling of these substances by ALL technicians in the country is a task of a completely different magnitude compared to what has been seen before. This includes not only the training of technicians, but an associated update/introduction of standards, safety guidelines, regulation, etc. for the safe handling of refrigerants.

Synergies will be achieved by coordinating all the activities by the same governmental entity – NOU in this case – for both the HPMPs and the HFC phase down.

The funding request has been based on existing HCFC PRP funding guidelines and HFC PRP funding guidelines currently under discussion. The government of Panama and UNDP believe that additional resources would be needed to fully conduct the preparation work that is needed for all the tasks listed in this document.

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL
HFC PROJECT PREPARATION REQUEST FORM
HFC Phase-down Management plan (OVERARCHING)

Part I: Project Information

Project title:	HFC Phase-Down Management Plan Preparation	
Country:	Paraguay	
Lead Implementing agency:	UNDP	
Cooperating Agency	N/A	
Implementation period:	October 2021 – May 2023	
Funding requested:	USD$ 170,000	
Agency	Sector	Funding requested (US $)*
UNDP	Overarching	170,000

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government for choice of agency	☒	☐
2. Paraguay ratified the KA.	☒	☐

A. Information required to support PRP funding (Overarching strategy)

1. Brief background on previous activities related to the Kigali amendment and the HFC phase-down

Following the outcomes of the 81st Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol and subsequently Decision 81/34, funding was approved for Paraguay for *Enabling Activities to prepare for the HFC phase-down* and to assure the early ratification of the Kigali Amendment (KA) which happened on November 1, 2018.

Taking into consideration that the Kigali Amendment to the Montreal Protocol came into force on the 1st of January 2019, and Paraguay has updated its reporting mechanism to include HFC, the country will be able to follow up on the standard reporting obligation under the Kigali Amendment. Paraguay has already created an enabling environment for the phasedown of HFCs.

2. Current progress in implementation of Enabling Activities for HFC phase-down Budget: 150,000 USD

Paraguay is in the process of completing the implementation of the Enabling Activity project for the implementation of the Kigali Amendment in the country. The country has ratified the Kigali Amendment and an HFC licensing system is in place. The licensing system was thoroughly evaluated during the implementation of the Enabling Activity and it was concluded that it captures HFC imports into the country well, quota system for the importation of HFC is not yet in place.

The project prepared a road map for the implementation of its activities which was discussed with the General Directorate of Air and Ozone Department, local authorities, and cooperation agencies, and the UNDP international expert for the implementation of the enabling activity projects in the region.

In addition, in the framework of the enabling activities project, an international expert has reviewed the current import, export and transit framework to propose improvements in the control of HFCs.

A socialization process has been initiated with stakeholders in Paraguay on the Kigali Amendment, the commitments in the reduction schedule and the challenges to be faced for its implementation.

While an initial analysis of HFC use has been conducted in Paraguay, additional work will be required in the country to detail consumption and sectoral trends.

3. Overview of estimated use of HFC in MT

Current consumption of HFCs in Paraguay is presented in the table below. There is no production of ODS alternatives in the Paraguay and there is no export of HFCs. In accordance with the consumption estimation under Montreal Protocol, the table reports the difference between imports and exports.

HFC consumption, 2018-2020 (in metric tons)

Substance	2018	2019	2020	Total	Average (18-20)
Pure					
HFC-134a	345.0	338.0	411.9	**1,094.9**	**365.0**
HFC-227ea	-	-	2.3	**2.3**	**0.8**
HFC-236fa	6.0	-	6.0	**12.0**	**4.0**
HFC-245fa	-	-	0.1	**0.1**	**0.0**
Subtotal	***351.0***	***338.0***	***420.2***	***1,109.3***	***369.8***
Blends					
R-404A	102.8	74.1	83.6	**260.6**	**86.9**
R-407C	7.0	6.0	8.8	**21.8**	**7.3**
R-410A	61.4	69.1	180.9	**311.4**	**103.8**
R-507	-	1.5	0.2	**1.7**	**0.6**
R-427A	11.3	-	-	**11.3**	**3.8**
R-417A	11.0	-	-	**11.0**	**3.7**
R-417B	-	-	27.8	**27.8**	**9.3**
R-407F	9.5	-	-	**9.5**	**3.2**
Whacool38A	-	-	2.3	**2.3**	**0.8**
Subtotal	***202.9***	***150.7***	***303.7***	***657.3***	***219.1***
Pre-blended polyols					
HFC-365mfc/227ea in polyols	-	-	13.1	**13.1**	**4.4**
Subtotal	-	-	*13.1*	***13.1***	***4.4***
TOTAL	**554.0**	**488.7**	**737.1**	**1,779.7**	**593.2**

Source: NOU

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

As part of the implementation of the Enabling Activities for the implementation of the Kigali Amendment project, the Paraguay has collected information on the consumption of HFCs.

There is not local production of HFC in the country, all its consumption come from imports from a limited number of importers. There are not export of HFC. In general, the Paraguayan market is no different from other Article 5 countries without local manufacturing of RAC equipment that rely entirely on import of such equipment. R-404A is used in commercial refrigeration, its consumption has been relatively stable in the last years.

The consumption of HFCs has increased in recent years due to the phase-out of HCFCs, used in the servicing sectors of the RAC sector, fire extinguishers and in formulated polyols. HFC-134a is the main HFC used in the country, covering applications such as domestic refrigeration, stand-alone commercial refrigeration units and

MAC. Another HFC of interest is the R-410A, its consumption has sharply increased in the last years due to increase imports of domestic AC units and replacement of HCFC-22 based equipment.

R-407F, R-417A, R-417B and R-427A refrigerants are used as substitutes for R-22 in stationary AA, commercial refrigeration and industrial refrigeration applications. Depending on the refrigerant, the replacement can be done without an oil change "drop-in" or with an oil change "retrofit".

Since 2020, some imports of pre-blended polyols for the manufacture of polyurethane foams using a blend HFC-365mfc/227ea were identified.

5. Activities to be undertaken for project preparation and funding

The main objective of this funding request is to prepare the HFC Phase-down Overarching strategy and to prepare Paraguay for the implementation of the first stage HFCs phase-down activities, considering already the legislative framework in place in Paraguay and the requirements for additional policies and national regulations for enforcement.

Activity	Indicative funding (US $)	Lead Agency
Conducting interviews, organizing workshops and stakeholders' consultations for the integration of national regulations and procedures for KA implementation and consolidation of technical capacities in the institutions involved in HFC control.	20,000	UNDP
Assessment of country level needs for trainings and certification in use of alternative refrigerants, developing training plan and organizing workshops with main stakeholders and training institutions.	25,000	UNDP
Assessments of the needs for enhancing training programs on GRP, recovery, recycling and destruction.	25,000	UNDP
Communication and outreach plan preparation and development of awareness raising activities.	20,000	UNDP
Detailed analysis of the sectorial distribution and consumption trends of HFCs (pure and blends).	35,000	UNDP
Consultations, review and validation of the consolidated overarching HFC phase down strategy.	30,000	UNDP
International consultant for the preparation of the proposal.	15,000	UNDP
TOTAL	**170,000**	

6. How will activities related to the stage II of the HPMP implementation be considered during project preparation for the HFC phase-down management plan?

Paraguay is well on its way to phase-out of use the HCFCs. The Stage II HPMP has been submitted to the 87th meeting of the ExCom. Final tranche of the Stage I of the HPMP was approved in the IAP for the 86th meeting of the ExCom. The Stage II HPMP for Paraguay will phase-out 100 % of HCFCs by 2030. The activities in the stage II HPMP will focus on the sustainable elimination in the use of HCFCs and, to the extent possible, promote the safe use of low GWP alternatives.

The stage II HCFC phase-out management plan for Paraguay will be implemented through the General Directorate of Air through the Ozone Department within the Ministry of Environment and Sustainable Development (MADES) in Paraguay. The General Directorate of Air through the Ozone Department will also be in charge of the preparation of the overall strategy for HFC phase-out in Paraguay and its subsequent implementation.

The scope of the Stage II of the HPMP will be considered when designing the HFC phase-down management plan, so its components, activities complement each other. It is expected that there will be synergies among the HPMP and the HFC phase-down.

However, it is important to note that HCFC phase-down can be achieved by applying currently available non-flammable /non-toxic technologies mainly the HFCs. The HFC phase down is a much more complex task as it requires inevitably the full-scale introduction of flammable, high pressure and/or toxic refrigerants in Paraguay. In addition, some technologies are not yet available or have not yet been identified as available technologies to

replace HFCs in some sectors at the local level, know-how to adopt this technologies needs to be built at the local level.

The safe handling of these substances by ALL technicians in the country is a task of a completely different magnitude compared to what has been seen before. This includes not only the training of technicians, but an associated update/introduction of standards, safety guidelines, regulation, etc. for the safe handling of refrigerants.

Synergies will be achieved by coordinating all the activities by the same governmental entity – PRONAOZ in this case – for both the HPMPs and the HFC phase down.

The funding request has been based on existing HCFC PRP funding guidelines and HFC PRP funding guidelines currently under discussion. The government of Paraguay and UNDP believe that additional resources would be needed to fully conduct the preparation work that is needed for all the tasks listed in this document.

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL
HFC PHASE-DOWN MANAGEMENT PLAN PROJECT PREPARATION REQUEST (OVERARCHING)

Part I: Project Information

Project title:	HFC phase-down management plan (preparation)	
Country:	Sri Lanka	
Lead implementing agency:	UNDP	
Cooperating agency:	UNEP	
Implementation period:	July 2021-June 2023 (24 months)	
Funding requested: US $ 170,000*		
Agency	**Sector**	**Funding requested (US $)**
UNDP	Overarching	135,000
UNEP	Overarching	35,000

* As per proposed cost guidelines (http://www.multilateralfund.org/86/English/1/8688.pdf)

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government specifying roles of respective agencies (where more than one IA is involved)	☒	☐
2. Ratification of the Kigali Amendment	☒	☐

A. Information required to support PRP funding (Overarching strategy)

1. Montreal Protocol compliance target to be met in ☒ stage I of the HFC phase-down plan			
Phase-down commitment	**Freeze and 10 %**	**Year of commitment**	**2024 and 2029**
☒ **Servicing only**		☐ **Manufacturing only**	☐ **Servicing and manufacturing**

2. Brief background on previous activities related to the Kigali Amendment and HFC phase-down, as well as HPMP stages (i.e., information on approval and implementation of ODS alternatives survey; approval and progress in implementation of Enabling Activities project with the expected completion date; HPMP implementation)

a. The funding for Survey of ODS alternatives for Sri Lanka was approved at the 74th meeting of the Executive Committee (Decision 74/30) at the amount of US $35,000 plus agency support costs for UNEP. The project was completed, and survey report was submitted to the 79th Meeting of the Executive Committee in July 2017.

b. At the 81st Meeting of the Executive Committee, the Enabling Activities for HFC phase-down for Sri Lanka was approved by the Executive Committee with the

funding level of US$ 150,000 as per decision 81/31. The implementation of the EA projects is still on going (delayed due to the COVID 19). Sri Lanka ratified the Kigali Amendment on 28th September 2018.

c. The 62nd meeting of the Executive Committee approved the funding for HPMP Stage I at amount of US$ 647,866 plus agency support cost of US$ 62,285 for Sri Lanka for the period 2011-2020. Currently, Sri Lanka is implementing the fourth and last tranche of the HPMP and the same will be completed by December 2021.

d. The intersessional 86th Executive Committee meeting approved HPMP Stage II for an amount of US$ 1,040,000 plus agency support cost US$ 97,700. However, fund release will be effected after review and discussion on verification report submitted during extended 86th ExCom meeting (March-April 2021).

3. Current progress in the implementation of Enabling Activities for HFC phase-down project

Activity	Description	Implementing agency
Develop Country Assessment Report and national implementation strategy	Country Assessment Report (CAR) finalised. The CAR includes a survey on historical data of import of HFCs and HFC based equipment, policy review and capacity need assessment for the implementation of the Kigali Amendment and recommendations for the implementation of the Kigali Amendment	UNEP
Capacity building and Training on ODS alternatives	-Undertaken training needs assessment for the introduction of low-GDP alternatives, assessment on availability of tools and equipment, availability of standards etc. -Conducted a training programme on Refrigerant Driving License programme and two roundtable discussions on zero ODP and low GWP alternatives for large end-user groups.	
Article 4B licensing and reporting system. (Integration of legal and policy instruments to Kigali Amendment)	-Reviewed and identified method to include HFCs, and HFC based equipment into the licensing system in Coordination with Sri Lanka Customs and Import & Export Control Department. National HS codes for commonly imported HFCs and its alternative substances were introduced. -Gazette Notification Number 2182/10 was issued in 2020 to include HFCs to the list of substances controlled under the Import & Export Control Act No.1 of 1969, and to extend licensing system to HFCs. -Existing policies are to be reviewed by relevant government agencies to include provisions of the KA.	
Communication & Awareness	-Produced a documentary film for the general public and a video documentary on GSP for technicians. Other	

	awareness activities were also conducted for public including school children and teachers and government employees.	

4. Overview of estimated consumption of ODS alternatives as per Country Assessment Report developed under the EA project (data is in MT)

Substance	2012	2013	2014	2015	2016	2017	2018
HFC-134a	198.41	215.04	194.34	177.30	143.05	307.43	253.61
HFC-32	0.00	0.00	0.00	0.00	0.80	0.00	5.60
R-404A	14.33	17.76	20.44	26.95	11.34	27.81	15.14
R-407C	6.64	8.19	6.56	4.99	2.95	6.55	7.91
R-410A	4.66	8.46	7.11	5.20	12.43	24.75	18.75
R-507A	4.14	8.00	12.55	5.36	4.20	8.14	8.07
Total	**228.18**	**257.45**	**241.00**	**219.80**	**174.77**	**374.68**	**309.08**

Note: data as per Country assessment report developed under the Enabling Activity

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

The survey on ODS alternatives in Sri Lanka was conducted in 2016; a Country Assessment Report was prepared in 2020 to get a better understanding of consumption trends for HFCs.

As seen from the table above, the annual demand of HFCs has grown consistently from 228.18 tons in 2012 to 374.68 in 2017 and 309.08 tons in 2018. It is also evident that the demand for HFC in RAC sector has been steadily increasing for the same period, due to the replacement of HCFCs with ODS alternatives (mainly HFCs) for most of the RAC applications, there has been a significant increase in HFCs demand due to the growth in emerging market in the country. Demand and consumption of HFCs cannot be accurately calculated yet as control (i.e., licensing system) for import of HFCs was introduced following the 30 June 2020 gazette notice.

An estimation of sector wise data for HFC consumption for the year 2018 is as below: (This is assumption based on discussion with stakeholders during survey and national cooling plan development. Actual sector wise consumption will only be available after survey is conducted under preparation of HFC phase down project)

Sector/ Sub-sector	% consumption	HFCs used
1 Air conditioning		
Residential air conditioning	7%	R410A, R32
Commercial air conditioning/VRF	3%	R407C, R410A

Chillers/Heat pumps	21%	R134a, R410A
Mobile Air Conditioning (MAC)	49%	R134a
2 Domestic, Commercial and industrial refrigeration		
Domestic refrigeration	4%	R134a
Commercial refrigeration	9%	R134a, R404A, R507A
Industrial refrigeration	5%	R404A, R507A
3. Transport refrigeration		
Transport refrigeration	1%	R404A, R507A

The HFCs are mainly consumed in servicing of RAC equipment. MAC subsector has the largest consumption of HFCs in RAC servicing sector. It is estimated that about 50% of the total consumption of HFCs is used in MAC, followed by Chillers with about 20%. The Commercial refrigeration sector is the next larger sector consuming HFCs which is associated with the consumption of HFC-404A, HFC-134a, and HFC-507A. High demand from stationary AC sector is associated with the consumption of HFC-410A and HFC-407C. HFCs are also widely used in industrial refrigeration and transport refrigeration.

While HFCs are majorly used in RAC servicing sector, a small amount of HFCs are also used in refrigeration manufacturing sector. Through the survey conducted under enabling activity, HPMP II and further discussion with associations, it was found that there are a few commercial/industrial manufacturers/assemblers in Sri Lanka that produce RAC equipment and supply mainly to the local market. The majority of these large refrigeration systems are manufactured and installed by the local manufacturers or assemblers who imports compressors/condensers while other parts are manufactured locally.

Due to the steady economic growth in the last decade, the buying capacity of RAC equipment including vehicles with Mobile Air Conditioning (MAC) by the low- and middle-income group population has substantially increased. The rise in the residential and commercial construction with high growth in the tourism and hospitality industries in the recent past also created a higher demand for RAC equipment in the country. Thus, it is expected that improving economic conditions, increasing urbanization, and rising per capita income of the country will drive the growth of the RAC sector in the future.

It is predicted that the trend of HFC-134a consumption which is mainly in the domestic refrigeration/ air conditioning and MAC would continue to grow, because repairs and service has an upward trend with the annual increase of purchases. Further, considerable amounts of R-134a chillers are operating in central air conditioning systems and the old R-22 chillers are being replaced with either R-134a or R-410A mainly because these chillers are energy efficient in operation and commercially available. This means that getting more HFC-based AC systems for servicing is expected with an increasing trend in the future. Based on experts and industry inputs, it is estimated that the annual growth of HFC consumption would be high in coming years.

6. Activities to be undertaken for project preparation and funding

Activity	Cost items	Indicative funding (US $)	Agency
National Survey for data collection, stakeholder consultation, data analysis	Conduct interviews, identify stakeholders, organize national consultation workshops and stakeholder meetings	30,000	UNDP
	Data collection by sector/sub-sector/HFC Substances and equipment, and servicing sector usage and needs	40,000	UNDP
HFC phase-down strategy development	-Consultations with key stakeholders and development of detailed strategy with cost action plan, including assessment of needs for policy/regulation development and enacting, capacity building of various stakeholders, as well as the outreach/awareness to support the HFC phasedown. -National consultation workshop for finalization of overarching strategy and HFC Phase-down Management Plan -Development of the Gender strategy	40,000	UNDP
	Supporting strategy and action plan development, travel and workshop related to non-investment component	35,000	UNEP
Analysis and Validation	-Analysis of the Sectoral distribution and consumption trend of HFCs-Consultation, review and validation of the consolidated overarching HFC phase down Strategy	25,000	UNDP
TOTAL		**170,000**	

7. How will activities related to the implementation of the HPMP be considered during project preparation for HFCs phase-down plan?

The Stage II HPMP for Sri Lanka was approved at the 86th meeting of the ExCom and HCFCs will be phased out 100% by 2030. The activities in the stage II of HPMP will focus on the sustainable phaseout of HCFCs and, to the extent possible, promote the safe use of low-GWP alternatives. The stage II HPMP will be implemented by the Ministry of Environment (MoE) and supported by UNDP as Lead Agency and UNEP as Cooperating Agency.

It is expected that there will be synergies among the HPMP and the HFC phase-down. However, the HFC phase-down is a much more complex task as it makes the full-scale introduction of flammable and/or toxic refrigerants. The safe handling of these substances by all technicians in the country is a task of a completely different magnitude compared to what has been seen before. This includes not only the training of technicians, but an associated update / introduction of standards, safety guidelines, regulation, etc. for the safe handling of refrigerants.

The National Ozone Unit will also oversee the preparation of the overarching strategy and investment projects for the HFC phase down in Sri Lanka and subsequent implementation. Lessons learned from HPMP implementation will be considered at preparation of the overarching strategy for the HFC phase down.

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

The Government of Sri Lanka is aware of the Multilateral Fund gender policy contained in ExCom document 84/73, and the related Executive Committee decision 84/92.

The RAC sector is crucial to all countries in the successful phaseout of HCFCs and forthcoming phase-down of HFCs under the Montreal Protocol. The fast-growing RAC sector in Sri Lanka also can offer a wide variety of interesting and fulfilling careers for women as well as men.

During the project preparation, gender considerations and actions on gender mainstreaming will be assessed and a Gender Management Plan is to be included in the HFC phase down over-arching strategy: The following actions are expected to be carried in the preparation phase:

- Look into introduction of gender considerations when designing components and activities
- Assess barriers or bottlenecks for women engagement in the sector
- To establish a baseline of women technicians in RAC sector and compare it with the number of women involved in NOU RAC activities
- To incorporate gender aspects in the recruitment of staff for the PRP and consultants (emphasizing that female candidates are welcome and encouraged to apply)
- Draft a Gender Management Plan to be supported as part of the HFC phase down management plan - over-arching strategy

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL
HFC PROJECT PREPARATION REQUEST FORM
HFC Phase-down Management plan (OVERARCHING)

Part I: Project Information

Project title:	HFC Phase-Down Management Plan Preparation	
Country:	Trinidad and Tobago	
Lead Implementing agency:	UNDP	
Cooperating Agency		
Implementation period:	January 2021 – June 2022	
Funding requested:		
Agency	Sector	Funding requested (US $)*
UNDP	Overarching	150,000

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government for choice of agency	☒	☐
2. Letter of intent to ratify the KA – Trinidad and Tobago ratified the KA.	☒	☐

A. Information required to support PRP funding (Overarching strategy)

1. Brief background on previous activities related to the Kigali amendment and the HFC phase-down

Following the outcomes of the 80th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol and subsequently Decision 80/50(e), funding was approved for Trinidad and Tobago for *Enabling Activities to prepare for the HFC phase-down* and to assure the early ratification of the Kigali Amendment (KA) which happened on Nov 11, 2017.

Taking into consideration that the Kigali Amendment to the Montreal Protocol came into force on the 1st of January 2019, and that Trinidad and Tobago has updated its reporting mechanism to include HFCs, the country will be able to follow up on the standard reporting obligation under the Kigali Amendment. Trinidad and Tobago has already created an enabling environment for the phasedown of HFCs.

Likewise, under the aforementioned project, it should be noted that information was obtained on the consumption and use of HFCs and their substitutes for the period 2013-2018; as well as an estimate of its imports by 2030. In addition, the economic evaluation of the implications that the implementation of the Kigali amendment would generate in the country was estimated. All this, focused on the consumption of said substances in the refrigeration and air conditioning sector, pending the collection of information in sectors such as the production of foams, solvents, aerosols, fire fighting and others that are identified as consuming HFCs.

2. Current progress in implementation of Enabling Activities for HFC phase-down Budget: 150,000 USD

In the Project "Enabling Activities for the Kigali Amendment", activities were carried out, including the following:

- Evaluation and analysis to adapt the existing licensing system, which is applicable for HCFCs, in order to implement control for HFCs.
- Preparation of the proposal to open tariff codes for HFCs, in order to have specific codes for each type of HFC substance.
- Dissemination activities on the commitments made in the framework of the Kigali Amendment and the promotion of environmentally friendly alternatives to HFCs.

• Collection of information on HFC consumption in the refrigeration and air conditioning sectors.

In this sense, it is necessary to complement the information on the consumption of HFCs, focusing on the uptake of the consumption of these substances in the foam, solvent, aerosol, firefighting, and other production sectors. In addition to this, identify their training and certification needs, which will constitute inputs for the elaboration of the national strategy that will allow the country to comply with the first stage of the HFC gradual reduction calendar.

3. Overview of estimated use of ODS alternatives 2016 – 2018 in Mt

Information on the consumption of HFCs was obtained under the activities of the "Enabling Activities for the Kigali Amendment" project, which is detailed in the following table, which specifies each type of HFC that is used as a refrigerant in the refrigeration and air conditioning sector. In this sense, according to what has been indicated above, is important to obtain information on the consumption of HFCs in other sectors in order to identify them, evaluate their consumption, the available alternatives and thus form part of the national strategy that allows the country compliance with the first control measures for HFCs, related to freezing and a 10% reduction in the consumption of these substances.

Main HFC Consumption in MT

Substance	2017	2018	2019	2020
HFC-134a	366.69	384.25	344.63	543.07
HFC-404A	171.46	178.05	123.69	306.68
HFC-410A	328.91	362.14	565.05	134.03
HFC-407A	0	0	1.13	22.94
HFC-407C	184.02	207.47	0	0
HFC-407F	0	0	2.57	0.51
HFC-507	127.85	129.13	52.50	51.50
HFC- 417A	7.47	7.51	0	0
HFC- 32	0	0	2.59	1.5
HFC-227ea	0	0	64.31	59.94
HFC-417	0	0	3.54	2.27
HFC-152	0	0	1.53	2.07
HFC-438	0	0	0.23	2.16
HFC-448	0	0	0.03	0
HFC-408	0	0	0	2
Total (Kg)	**1,186.41**	**1,268.55**	**1,161.80**	**1,128.67**

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

The following table details the main refrigeration and air conditioning sub-sectors that consume HFCs (data available 2017 - 2020), these being the commercial refrigeration subsector and the commercial air conditioning subsector. However, the main uses of HFCs are distributed as follows:

The HFC consumption in MT increased only 4.87 % from 2017 to 2020, this slow increase was due to the pandemic of Covid-19 that reduced the economic activity during 2020. The main uses of HFCs are distributed as follows:

Sector	2020 %
MAC	23.06%
Commercial AC	6.15%
Residential AC	9.38%
Industrial AC	NA
Commercial Refrigeration	35.32%

Domestic Refrigeration	3.46%
Industrial Refrigeration	2.37%
Transport Refrigeration	14.95%
Fire Extinguishers	5.31%
Aerosols	0.18%

Studies performed during the implementation of the Kigali EA have shown the distribution of HFC consumption among the following sectors:

Sector	2017	2018	2019	2020	Total
MAC					
R-134a (HFC-134a)	175.7	184.1	165.2	260.2	785.2
Commercial AC					
R-134a (HFC-134a)	27.2	28.5	25.5	40.2	121.4
R-404A (HFC-404A)	9.9	10.2	7.1	17.62	44.82
Residential AC					
R-410A (HFC-410A)	240.4	264.7	413.1	97.9	1,016.1
R-32			2.6	1.5	4.1
Commercial Refrigeration					
R-134a (HFC-134a)	65.9	69.1	61.9	97.6	294.5
R-404A (HFC-404A)	126.4	131.2	91.2	226.0	574.8
R-407C (HFC-407C)	175.7	198.1	3.5	22.2	399.5
R-410A (HFC-410A)	41.8	46.1	71.9	17.05	176.8
R-417A (HFC-417A)	7.5	7.5	0	2.27	17.3
R-507A (HFC-507A)	88.2	89.1	36.2	35.53	249.0
Domestic Refrigeration					
R-134a (HFC-134a)	26.4	27.6	24.8	39.0	117.8
Industrial Refrigeration					
R-134a (HFC-134a)	0.5	0.5	0.5	0.7	2.2
R-410A (HFC-410A)	6.4	7.0	10.9	2.6	26.9
R-404A (HFC-404A)	13.0	13.5	9.41	23.3	59.2

R-407C (HFC-407C)	0.5	0.6	0.01	0.1	1.2
Transport Refrigeration					
R-134a (HFC-134a)	71.1	74.5	66.8	105.23	317.6
R-404A (HFC-404A)	22.2	23.0	16.0	39.7	100.9
R-507A (HFC-507A)	15.9	16.1	6.5	6.4	44.9
R-407C (HFC-407C)	7.9	8.9	0.2	1.0	18.0
R-410A (HFC-410A)	40.3	44.3	69.2	16.4	170.2
Others					
R-507A (HFC-507A)	23.7	23.9	9.72	9.5	57.3
R-227ea			64.3	59.94	124.2
R-152A			1.5	2.07	3.6
Other refrigerants (new blends)			3.7	14.16	17.9
Total	1,186.4	1,268.6	1,161.8	1,128.7	3,813.8

The table above sheds some light towards the main sectors that the phasedown plan should focus on, however, additional information towards the alternatives and strategies for the technologies to be introduced should be performed.

It is important to highlight that some new sectors have been appearing with regards to HFC usage in the Trinidadian markets, such as fire extinguishers. There is also a possibility that some aerosols may be filled in country. However, this information will need to be confirmed directly, as this is due to the consumption of HFC-227ea and HFC-152a respectively.

Finally, the MAC sector in Trinidad and Tobago played an important role during CFC phase-out but there have been no activities in this sector in the past 10 years as HCFCs are not used in MAC. It will be important to better understand the dynamics of this area as it is a key sector in the country.

5. Activities to be undertaken for project preparation and funding

Activity	Indicative funding (US $)	Lead Agency
Collection of information on consumption of HFCs and its substitutes in sectors pending analysis such as foam production, solvents, aerosols, fire fighting and others that are identified. This will be done through the execution of interviews and surveys that will make it possible to determine the sectoral distribution and consumption projections of HFCs in their pure state and in mixtures; specifically, the development of an economic evaluation of the replacement of HFCs to environmentally friendly substitutes within the controlled sectors	60,000	UNDP

Assessment of and the addressing of training and certification needs at the country level in the use of flammable, high pressure and hazardous refrigerants through the development of a training plan, and the organization of workshops with the main stakeholders and training institutions.	40,000	UNDP
Preparation of the national strategy for the gradual reduction of HFCs, which includes the evaluation and identification of sectors to prioritize. This will include the analysis of emission reductions (CO2-equiv.) according to the global warming potential (GWP) of each substance, the uses, and the availability of alternatives in each sector.	20,000	UNDP
Dissemination and awareness-raising actions for the actors involved, in order to present the results obtained on the consumption of HFCs and to raise awareness of them in order to reduce them.	30,000	UNDP
TOTAL	**150,000**	
Activity	**Indicative funding (US $)**	
TOTAL		

6. How will activities related to the stage II of the HPMP implementation be considered during project preparation for the HFC phase-down management plan?

The Stage II HPMP for Trinidad and Tobago was submitted and approved at the 86th meeting of the ExCom and HCFCs will be phased-out (100 %) by 2029 with the allowance of 2.5% from 2030 to 2040. The activities in the stage II HPMP focus on the sustainable phaseout in the use of HCFCs and, to the extent possible; to increase technical capacity for RRR network as well as promote the safe use of low GWP alternatives through the certification of technicians. The stage II HPMP for Trinidad and Tobago will be implemented by the Ministry of Planning and Development of Trinidad and Tobago.

It is expected that there will be synergies among the HPMP and the HFC phase-down. However, it is important to note that HCFC phase-down can be achieved by applying currently available non-flammable /non-toxic technologies mainly the HFCs. The HFC phase down is a much more complex task as it requires inevitably the full scale introduction of flammable and/or toxic refrigerants in Trinidad and Tobago. The safe handling of these substances by ALL technicians in the country is a task of a completely different magnitude compared to what has been seen before. This includes not only the training of technicians, but an associated update / introduction of standards, safety guidelines, regulation, etc. for the safe handling of refrigerants.

UNDP recognizes that the main synergies are being achieved by coordinating all the activities through the same governmental entity –Ministry of Planning and Development– for both the HPMPs and the HFC phase down.

The funding request has been based on existing HCFC PRP funding guidelines. The government of Trinidad and Tobago and UNDP believe that additional resources would be needed to fully conduct the preparation work that is needed for all the tasks listed in this document.