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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Ninety-fourth Meeting  
Montreal, 27-31 May 2024  
Item 9(d) of the provisional agenda<sup>1</sup>

**PROJECT PROPOSAL: HONDURAS**

This document consists of the comments and recommendation of the Secretariat on the following project proposal:

Phase-down

- Kigali HFC implementation plan (stage I, first tranche) UNIDO and UNEP

<sup>1</sup> UNEP/OzL.Pro/ExCom/94/1

**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**

**Honduras**

<b>PROJECT TITLE</b>	<b>AGENCY</b>
Kigali HFC implementation plan (stage I)	UNIDO (lead), UNEP

<b>LATEST ARTICLE 7 DATA (Annex F)</b>	<b>Year: 2022</b>	644.26 mt	1,057,751 CO <sub>2</sub> -eq tonnes
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<b>SECTORAL HFC CONSUMPTION DATA (CO<sub>2</sub>-eq tonnes) AND ACTIVITIES</b>							
	Aerosol	Foam	Fire-fighting	AC and refrigeration		Solvent	Other
				Manufacturing	Servicing		
As submitted (2022)	7,034		4,287		1,030,648		
Latest CP report (2022)	7,034		4,287		1,030,648		
KIP stage I activities (as agreed)	No	No	No	No	Yes	No	No

<b>AVERAGE 2020-2022 HFC CONSUMPTION IN SERVICING</b>	496.73 mt	1,055,789 CO <sub>2</sub> -eq tonnes
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<b>BASELINE CONSUMPTION DATA (CO<sub>2</sub>-eq tonnes)</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>Average 2020-2022</b>
HFC annual consumption	1,061,901	1,082,441	1,057,751	1,067,364
HCFC baseline (65%)				393,310
HFC baseline				1,460,674

<b>HFC CONSUMPTION ELIGIBLE FOR FUNDING</b>	
Starting point for sustained aggregate reductions	n/a
Previously approved HFC phase-down investment projects	No
Aggregate reductions from previously approved projects (CO <sub>2</sub> -eq tonnes)	n/a

<b>PROJECT DATA AS AGREED</b>		<b>2024*</b>	<b>2025 2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>Total</b>	
Consumption (CO <sub>2</sub> -eq tonnes)	Montreal Protocol limits	1,460,674				1,314,606	n/a	
	Maximum allowable	1,455,413				1,229,146	n/a	
	Maximum allowable (%)	100				84.5	n/a	
Amounts recommended in principle (US \$)	UNIDO	Project costs	<b>226,918</b>	0	178,000	0	27,292	432,210
		Support costs	<b>15,885</b>	0	12,460	0	1,910	30,255
	UNEP	Project costs	<b>70,000</b>	0	65,000	0	30,000	165,000
		Support costs	<b>9,100</b>	0	8,450	0	3,900	21,450
	Total project costs		<b>296,918</b>	0	243,000	0	57,292	597,210
	Total support costs		<b>24,985</b>	0	20,910	0	5,810	51,705
Total funds		<b>321,903</b>	0	263,910	0	63,102	648,915	

\* Recommended for approval at the present meeting

Reduction from stage I in CO <sub>2</sub> -eq tonnes	226,267
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<b>Secretariat's recommendation:</b>	Individual consideration (Secretariat presentation not required)
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## PROJECT DESCRIPTION

1. The present document contains the following sections:
  - I. Summary of the proposal as submitted
  - II. Background: Implementation status of the country’s HCFC phase-out management plan
  - III. HFC consumption: Overview of the country’s HFC consumption levels, trends, and sectoral uses
  - IV. Stage I of the Kigali HFC implementation plan, as submitted: Overarching strategy and implementation plan for the first tranche
  - V. Secretariat’s comments, including the agreed cost of activities
  - VI. Recommendation

### I. Summary of the proposal as submitted

2. On behalf of the Government of Honduras, UNIDO as the lead implementing agency has submitted a request for stage I of the Kigali HFC implementation plan (KIP), at a total cost of US \$649,515, consisting of US \$422,210, plus agency support costs of US \$29,555, for UNIDO and US \$175,000, plus agency support costs of US \$22,750, for UNEP, as originally submitted.<sup>2</sup>

3. The implementation of stage I of the KIP will assist the Government of Honduras in meeting the target of 15 per cent reduction from its HFC baseline consumption by 1 January 2029.

4. The first tranche of stage I of the KIP has been requested at this meeting in the amount of US \$321,903, consisting of US \$226,918, plus agency support costs of US \$15,885, for UNIDO and US \$70,000, plus agency support costs of US \$9,100, for UNEP, as originally submitted, for the period of June 2024 to December 2026.

### II. Background

#### Status of implementation of the HCFC phase-out management plan

5. Table 1 presents information on the implementation of the HCFC phase-out management plan (HPMP) in Honduras as of April 2023.

**Table 1. HPMP implementation status for Honduras**

	Stage I	Stage II
Meeting when HPMP was approved/ updated	63 <sup>rd</sup>	86 <sup>th</sup> /92 <sup>nd</sup>
Reduction from baseline	35% by 2020	67.5% by 2025 and 100% by 2030
<b>Total project cost (US \$)</b>	630,000	1,290,000
<b>Date of completion (actual/planned)</b>	30 September 2022	31 December 2031

#### Status of implementation of previous HFC-related activities

6. Table 2 presents an overview of activities implemented in Honduras in the context of the Kigali Amendment that have been funded by the Multilateral Fund.

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<sup>2</sup> As per the letter of 2 February 2024 from the Secretariat of Natural Resources and the Environment of Honduras to UNIDO.

**Table 2. Previously approved HFC-related activities in Honduras**

Approval meeting	Project title	Implementing agency	Cost (US \$)	Date of completion
74 <sup>th</sup>	Survey of ODS alternatives at the national level	UNIDO	70,000	November 2017
81 <sup>st</sup>	Enabling activities for HFC phase-down	UNEP	150,000	December 2019

### III. HFC consumption overview

#### HFC consumption levels

7. Honduras only imports HFCs for use in the refrigeration and air-conditioning (RAC) servicing, aerosol, foam, and firefighting sectors. The most consumed substances in 2022 were HFC-134a (41.6 per cent of total HFC consumption in CO<sub>2</sub>-equivalent (CO<sub>2</sub>-eq) tonnes), R-410A (23.4 per cent), R-404A (20.1 per cent), R-507A (6.8 per cent), and other HFCs (6.5 per cent). Table 3 presents the country's HFC consumption as reported to the Ozone Secretariat under Article 7 of the Montreal Protocol.

**Table 3. HFC consumption in Honduras (2019–2022 Article 7 data)**

HFC	GWP	2019	2020	2021	2022	2023**
<b>Metric tonnes (mt)</b>						
HFC-134a	1,430	440.43	270.36	275.13	307.36	
HFC-152a	124	0.18	1.17	28.25	127.46	
R-404A	3,922	102.15	114.62	120.82	54.26	
R-410A	2,088	121.56	76.94	78.67	118.81	
R-507A	3,985	35.90	11.30	6.32	18.17	
R-507C	3,985	0	0	0	13.56	
Others*		1.68	11.05	11.80	4.64	
<b>Total (mt)</b>		<b>701.90</b>	<b>485.44</b>	<b>520.99</b>	<b>644.26</b>	<b>956.00</b>
<b>CO<sub>2</sub>-eq tonnes</b>						
HFC-134a	1,430	629,815	386,615	393,436	439,525	
HFC-152a	124	22	145	3,503	15,805	
R-404A	3,922	400,591	449,494	473,808	212,786	
R-410A	2,088	253,757	160,612	164,224	248,016	
R-507A	3,985	143,062	45,031	25,185	72,407	
R-507C	3,985	0	0	0	54,037	
Others*		3,832	20,004	22,285	15,175	
<b>Total (CO<sub>2</sub>-eq tonnes)</b>		<b>1,431,079</b>	<b>1,061,901</b>	<b>1,082,441</b>	<b>1,057,751</b>	

\* Including HFC-125, HFC-143a, HFC-227ea, HFC-236fa, HFC-365mfc, R-407A, R-407C, R-417A and R-448A.

\*\* Estimated consumption in mt at the time of issuance of the document. CP data not available yet.

#### *Established HFC baseline*

8. The Government of Honduras reported the Article 7 data for 2020–2022. The country's HFC consumption baseline was established at 1,460,674 CO<sub>2</sub>-eq tonnes by adding 65 per cent of its HCFC baseline (expressed in CO<sub>2</sub>-eq tonnes) to its average HFC consumption in 2020–2022, as shown in table 4.

**Table 4. HFC baseline calculation for Honduras (CO<sub>2</sub>-eq tonnes)**

Baseline calculation components	2020	2021	2022
HFC annual consumption	1,061,901	1,082,441	1,057,751
HFC average consumption in 2020–2022			1,067,364
HCFC baseline (65%)			393,310
<b>HFC baseline</b>			<b>1,460,674</b>

*Country programme implementation report*

9. The sectoral HFC consumption data provided by the Government of Honduras in its country programme (CP) implementation report for 2022 is consistent with the HFC consumption data obtained in the survey completed during the preparation of the KIP. To ensure consistency of all data reported, the Government of Honduras has requested the Ozone Secretariat to correct the consumption of HFC-152a reported in 2022 under Article 7 from 127.46 mt to 31.37 mt, and to reflect other minor differences identified during the preparation of the KIP. The CP implementation report for 2023 will be submitted on 1 May 2024.

HFC consumption trends

10. The 30 per cent reduction in HFC consumption in Honduras in 2020, as compared to the 2019 levels, has been attributed to the effects of the COVID-19 pandemic. HFC consumption, expressed in metric tonnes, increased in 2021 and 2022, although in terms of CO<sub>2</sub>-eq tonnes it was slightly lower in 2022 than in 2021 due to a reduction in imports of R-404A. It is expected that the overall consumption of HFCs will continue to grow in 2023.

HFC consumption by sector

11. HFCs are mainly consumed for servicing purposes in the mobile air-conditioning (MAC) (31.4 per cent in mt and 23.6 per cent in CO<sub>2</sub>-eq tonnes), stationary air-conditioning (AC) (22.5 per cent in mt and 24.4 per cent in CO<sub>2</sub>-eq tonnes), domestic refrigeration (19.6 per cent in mt and 14.8 per cent in CO<sub>2</sub>-eq tonnes), commercial refrigeration (11.7 per cent in mt and 20.4 per cent in CO<sub>2</sub>-eq tonnes) and other subsectors, as shown in tables 5 and 6.

**Table 5. HFC consumption in Honduras by sector in mt (2022)**

Sector	HFC-134a	R-404A	R-410A	R-507A	Others	Total	Share of total (%)
<b>Refrigeration and air-conditioning servicing sector</b>							
Domestic refrigeration	107.58	0.00	0.00	0.00	0.00	<b>107.58</b>	19.7
Commercial refrigeration:							
Stand-alone units	15.37	0.00	0.00	0.00	0.00	<b>15.37</b>	2.8
Condensing units	0.00	3.97	0.00	0.00	0.00	<b>3.97</b>	0.7
Centralized systems*	0.00	24.42	0.00	10.99	9.50	<b>44.91</b>	8.2
Industrial refrigeration*	9.22	22.68	0.00	7.33	5.44	<b>44.67</b>	8.2
Transport refrigeration	0.00	2.83	0.00	0.00	0.00	<b>2.83</b>	0.5
Residential AC	0.00	0.00	96.24	0.00	0.00	<b>96.24</b>	17.6
Commercial AC	3.07	0.00	22.58	0.00	1.11	<b>26.76</b>	4.9
MAC	172.12	0.00	0.00	0.00	0.00	<b>172.12</b>	31.4
<b>Subtotal for RAC servicing</b>	<b>307.36</b>	<b>53.90</b>	<b>118.82</b>	<b>18.32</b>	<b>16.05</b>	<b>514.45</b>	<b>94.0</b>
<b>Other sectors</b>							
Aerosol	0.00	0.00	0.00	0.00	32.17	<b>32.17</b>	5.9
Firefighting	0.00	0.00	0.00	0.00	0.79	<b>0.79</b>	0.1
<b>Subtotal for other sectors</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>32.96</b>	<b>32.96</b>	<b>6.0</b>
<b>Total</b>	<b>307.36</b>	<b>53.90</b>	<b>118.82</b>	<b>18.32</b>	<b>49.01</b>	<b>547.40</b>	<b>100</b>

\*Out of the total HFC consumption recorded for the industrial and commercial (centralized systems) refrigeration, an estimated 5.40 mt are used for the first charge of new systems (local installation and assembly subsector).

**Table 6. HFC consumption in Honduras by sector in CO<sub>2</sub>-eq tonnes (2022)**

Sector	HFC-134a	R-404A	R-410A	R-507A	Others	Total	Share of total (%)
<b>Refrigeration and air-conditioning servicing sector</b>							
Domestic refrigeration	153,839	0	0	0	0	153,839	14.8
Commercial refrigeration:							
Stand-alone units	21,979	0	0	0	0	21,979	2.1
Condensing units	0	15,569	0	0	0	15,569	1.5
Centralized systems*	0	95,765	0	43,775	9,251	148,792	14.3
Industrial refrigeration*	13,185	88,942	0	29,210	42,270	173,607	16.7
Transport refrigeration	0	11,098	0	0	0	11,098	1.1
Residential AC	0	0	200,893	0	0	200,893	19.3
Commercial AC	4,390	0	47,136	0	7,214	58,740	5.6
MAC	246,132	0	0	0	0	246,132	23.6
<b>Subtotal for RAC servicing</b>	<b>439,525</b>	<b>211,374</b>	<b>248,028</b>	<b>72,985</b>	<b>58,735</b>	<b>1,030,648</b>	<b>98.9</b>
<b>Other sectors</b>							
Aerosol	0	0	0	0	7,034	7,034	0.7
Firefighting	0	0	0	0	4,287	4,287	0.4
<b>Subtotal for other sectors</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11,321</b>	<b>11,321</b>	<b>1.1</b>
<b>Total</b>	<b>439,525</b>	<b>211,374</b>	<b>248,028</b>	<b>72,985</b>	<b>70,057</b>	<b>1,041,968</b>	<b>100</b>

\*Out of the total HFC consumption recorded for the industrial and commercial (centralized systems) refrigeration, an estimated 21,177 CO<sub>2</sub>-eq tonnes are used for the first charge of new systems (local installation and assembly subsector).

#### *Manufacturing sectors*

12. There is no consumption of HFCs in the RAC or foam manufacturing sectors in Honduras. In 2022, around 32 mt of HFC-152a, HFC-143a, and HFC-125 were used in aerosols for lubricants and compressed air, and small quantities of HFC-227ea and HFC-236fa were consumed in firefighting. These applications are not being addressed in stage I of the KIP.

#### *Refrigeration and air-conditioning servicing sector*

13. There are approximately 3,600 technicians (an estimated 1 per cent of whom are women) and 1,800 RAC workshops in Honduras. Around 95 per cent of those are small and independent, serving mostly the residential RAC and MAC sectors, while the remaining ones are part of large chains servicing the commercial and industrial RAC sectors. Most technicians have received some training in RAC from one of the vocational institutes in the country. However, around 3,000 technicians have not yet received any training on handling flammable refrigerants, some are inadequately equipped to handle HFCs, and most are unequipped to handle flammable refrigerants.

14. A licensing and registration system for RAC technicians has been mandatory since 2012. The official labour competency standard on good practices in RAC was approved in September 2019 and the technician certification programme is starting to be implemented within the framework of the HPMP.

15. The National Institute of Professional Training (INFOP), the governing national institution for vocational training, continues to work on strengthening the sector's technical capacity. It is also updating its training offer to include alternative refrigerants in its RAC mechanics programme. There are 20 relevant technical and vocational training institutes in the country, including three INFOP branches, one private centre of excellence and one university.

#### *Domestic refrigeration*

16. Domestic refrigerators are used by approximately 80 per cent of all households in the country and by some commercial establishments (e.g., restaurants). An estimated 98 per cent of the domestic refrigerators in the country are based on HFC-134a, while the remaining 2 per cent are R-600a-based.

Around 30 per cent of the installed equipment, especially units older than 10 years, require regular servicing and recharging. Imports of used HFC-based equipment are also common in this sector.

### Commercial refrigeration

17. Commercial refrigeration equipment in Honduras includes self-contained plug-in freezers, display cabinets and beverage coolers, condensing units at convenience stores and centralized units in supermarkets.

18. While most self-contained refrigerators are currently HFC-134a-based, R-290 is considered as a viable alternative. About 80 per cent of condensing units and centralized systems are charged with HFCs and the remaining 20 per cent use HCFC-22. R-404A is used mostly in condensing and centralized units, and R-507A is used primarily as a substitute for HCFC-22 in centralized systems. Some factors that drive the high demand for refrigerants in these applications include the size and age of equipment (especially for centralized systems), frequent leaks due to the lack of preventive maintenance, and the lack of refrigerant recovery practices. The availability of alternatives with low global-warming potential (GWP) is limited and work is required to develop components and safety standards.

### Industrial and transport refrigeration

19. Most of the industrial refrigeration equipment installed in the country is charged with ammonia; however, HFCs (i.e., R-404A, HFC-134a, R-407C and R-507A) are widely used for the servicing and maintenance of refrigeration chambers, process coolers, and, to a lesser extent, distributed systems. Most of the sector's refrigerant consumption is for food processing and distribution and for agro-industrial cold rooms and chambers. The estimated 1,680 HFC-based equipment units operating in the sector have charges ranging from 10 kg to 2.6 mt of refrigerant for large-capacity chillers; around 10 per cent of them are serviced each year.

20. Refrigerated transport includes maritime transport vessels, road vehicles and containers used for the distribution of food and pharmaceuticals, with 94 per cent of the sector's equipment based on HCFC-22. Due to intensive use, these applications require frequent refrigerant recharging. The need for cooling in transport and storage is expected to grow in the coming years, entailing a significant increase in the consumption of HFCs and their alternatives.

### Residential and commercial air-conditioning

21. In 2022, the stationary AC equipment servicing subsector was the second largest consumer of HFCs in the country in terms of metric tonnage, and the main consumer in terms of CO<sub>2</sub>-eq tonnes. Following an import ban on HCFC-based equipment in 2012 and a drop in prices of R-410A-based mini-split units, R-410A has become the preferred alternative, representing 79 per cent of all installed self-contained and split residential AC units. Variable speed (inverter) AC units are the most popular as they offer higher energy savings than units using traditional single-speed compressors. R-407C is used as an alternative to HCFC-22 in installed equipment.

22. About 54 per cent of all commercial AC units (whether rooftop, packaged or split) currently in use are based on R-410A, while the rest still use HCFC-22. High refrigerant consumption in the sector is linked to the servicing and maintenance needs of the existing equipment, with R-407C being a second preferred alternative to HCFC-22, and HFC-134a mainly used for servicing chillers.

### Mobile air-conditioning

23. In 2022, the servicing of MAC units accounted for the highest metric tonnage of HFC consumption in the country, and the second highest consumption in CO<sub>2</sub>-eq tonnes of all servicing subsectors.

Approximately 64 per cent of the estimated 1.4 million vehicles circulating in Honduras are equipped with AC units. More than 20 per cent of vehicles that are over 10 years old require annual refrigerant recharging, and an estimated 5 per cent of the country's large vehicle fleet is serviced annually. Light motor vehicles consume the most HFCs due to frequent leaks in their AC systems, particularly in regions with extreme climate conditions. The existing stock of MAC equipment is currently almost entirely based on HFC-134a. The imports and sales of vehicles with AC units based on HFO-1234yf are negligible but are expected to gradually grow by 2030.

#### Local installation and assembly subsector

24. It is primarily R-404A that is consumed for the assembly and initial charge of new centralized systems and condensing units in the expanding commercial refrigeration subsector, especially in supermarkets and convenience stores, as well as in some cold room applications. The refrigeration capacity of typically installed condensing units is up to 5 tonnes of refrigeration (TR), with refrigerant charges ranging from 1 to 10 kg, while the capacity of centralized systems ranges from 10 to 50 TR, with charges from 200 to 800 kg. Detailed information on the profile of the installation and assembly enterprises will be collected in the course of implementation of stage I of the KIP.

### **IV. Stage I of the Kigali HFC implementation plan as submitted**

#### Institutional, policy and regulatory framework

25. Embedded within the Secretariat of Natural Resources and the Environment, the national ozone unit (NOU) coordinates and monitors all measures adopted regarding the import, export, production and consumption of substances controlled by the Montreal Protocol, including the application of the licensing and quota system, which was extended to cover HFCs in January 2024. Executive Agreement 006/2012 is the legal instrument used to establish annual import and export quotas for ozone-depleting substances (ODSs) and HFCs. HFC quotas are allocated to importers in metric and CO<sub>2</sub>-eq tonnes and are valid for 30 calendar days up to 31 December of the year, with a reserve that can be allocated in extraordinary cases.

26. In the context of the Paris Agreement, Honduras updated its Nationally Determined Contributions in 2021, committing to achieving a 16 per cent reduction of its greenhouse gas (GHG) emissions by 2030. The implementation of the Kigali Amendment is considered relevant in the context of GHG reductions.

27. The energy sector accounts for over 40 per cent of national GHG emissions. The Secretariat of Energy (SEN) is the institution responsible for governing and guiding the development of the energy sector. The Honduran Standardization Organization, composed of representatives of the private, public, academic and consumer sectors, coordinates *inter alia* the development and issuance of standards related to energy efficiency in the RAC sector, including two minimum energy performance standards (MEPS), so far voluntary, and the labelling requirements for stationary AC units issued in 2022. The SEN is currently drafting a new Law on the Rational Use of Electric Energy in the electrical subsector, including making the MEPS mandatory.

#### Phase-down strategy for stage I of the Kigali HFC implementation plan

##### *Overarching strategy*

28. Stage I proposes to eliminate 218,813 CO<sub>2</sub>-eq tonnes of HFCs, reducing the country's HFC consumption by 15 per cent of its baseline level by 2029. It prioritizes the strengthening of the regulatory framework to reduce the HFC supply and demand, regulatory support, training and certification on the handling of available low-GWP technologies (R-600a and R-290) to facilitate their adoption in domestic and commercial stand-alone refrigeration applications, and good servicing practices to reduce HFC-134a consumption in the MAC sector, where no alternatives are available yet. For commercial and industrial



refrigeration, where the availability of low-GWP alternatives is limited, stage I proposes gaining additional understanding of the sectors and strengthening the capacity of technical institutions to provide training to large end users on potential low-GWP alternatives and associated energy-efficiency savings.

### Proposed activities and total cost

29. The budget for stage I has been established at US \$597,210, as submitted. The costs of activities in the refrigeration servicing sector have been established in line with decision 92/37. The proposed activities and their costs are summarized in table 7.

**Table 7. Activities planned for implementation in stage I of the KIP for Honduras (as submitted)**

Project component / Planned activities	Cost (US \$)	
	UNEP	UNIDO
<b>1. Limiting HFC demand and supply</b>		
<b>1.1. Customs and trade control</b>		
Development of a handbook on HFC controls and related training material for the Customs Department	15,000	0
Training of 40 customs officers in the prevention of illegal trade in HFC-containing products and equipment, and in the handling of flammable refrigerants	15,000	0
Two-day international workshop in the Central American region for customs officers to exchange information on HFC controls and energy-efficiency standards	10,000	0
Design of a guideline and a training course on Harmonized System codes for HFC brokers and importers	10,000	0
Distribution of 5 refrigerant identifiers to customs entry points and central laboratory	0	30,000
<b>Subtotal 1.1</b>	<b>50,000</b>	<b>30,000</b>
<b>1.2. Regulatory framework</b>		
Establishment of an online platform for the management of the HFC quota and licensing system	30,000	0
Feasibility study and drafting of a regulatory proposal to restrict imports of second-hand HFC-based domestic refrigerators, with dissemination of results to the national association of the importers and retailers of second-hand RAC products	30,000	0
<b>Subtotal 1.2</b>	<b>60,000</b>	<b>0</b>
<b>Subtotal 1</b>	<b>110,000</b>	<b>30,000</b>
<b>2. Kigali refrigerant management programme</b>		
<b>2.1. MAC and domestic and commercial stand-alone refrigeration</b>		
Design of manuals, training programmes and teaching material for servicing technicians working with MAC and domestic and commercial stand-alone refrigeration	0	12,918
Development of a competency-based labour standard for handling refrigerants in the MAC sector to allow certification of technicians	15,000	0
Training and certification of at least 10 trainers in selected training institutes, study tour to an international training centre for 4 instructors to receive training in handling low-GWP alternatives, and training and certification of 400 technicians in the proper handling of flammable refrigerants in the servicing of MAC systems and in good practices for handling R-600a and R-290 in domestic and commercial stand-alone refrigeration	20,000	45,000
Acquisition of workstations and simulators <sup>3</sup> for 2 training institutions for the training on MAC and domestic and commercial refrigeration	0	160,000
<b>Subtotal 2.1</b>	<b>35,000</b>	<b>217,918</b>
<b>2.2. Commercial and industrial refrigeration</b>		
Assessment of the installed inventory of condensing units and centralized systems and of the market penetration of low-GWP technologies, establishment of an energy consumption	30,000	0

<sup>3</sup> Equipment and tools for hands-on training on brazing and electrical work in residential and commercial refrigeration and MAC, including *inter alia* refrigeration and MAC units, recovery and recycling units, vacuum pumps, cylinders, manifolds, brazing units, welding kits, tube cutters, expanders and benders, pinch-off pliers, telescopic inspection mirrors, multimeters, energy monitoring devices and consumables.

Project component / Planned activities	Cost (US \$)	
	UNEP	UNIDO
baseline, and dissemination of results and information on feasible low-GWP technologies and energy-efficiency improvement opportunities among large end users		
Installation of dual cold room simulators based on low-GWP refrigerants in 2 training centres for practical training on low-GWP technologies and energy efficiency in the commercial and industrial refrigeration sectors, and related training courses for large end users and instructors	0	120,000
<b>Subtotal 2.2.</b>	<b>30,000</b>	<b>120,000</b>
<b>Subtotal 2</b>	<b>65,000</b>	<b>337,918</b>
<b>3. Project coordination and monitoring</b>		
Project coordinator, consultants and experts	0	44,000
Monitoring and coordination visits to HFC importers, associations, industry, Government stakeholders and project beneficiaries	0	10,292
<b>Subtotal 3</b>	<b>0</b>	<b>54,292</b>
<b>Subtotals per agency</b>	<b>175,000</b>	<b>422,210</b>
<b>Total</b>		<b>597,210</b>

#### *Project coordination and monitoring*

30. The NOU will implement the KIP with the assistance of one full-time coordinator working in cooperation with the HPMP coordinator. The coordinators will obtain the assistance of temporary local experts and the support and guidance of one specialist on gender mainstreaming as required.

#### *Gender policy implementation*

31. In line with decisions 84/92(d), 90/48(c) and 92/40(b), meaningful inclusion of women in the RAC sector will be encouraged under the KIP through the creation of a favourable environment. This will include facilitated access to opportunities and good working conditions, as well as the strengthening of technical capacities of female technicians through training courses and the provision of tools and equipment. The KIP plans to train at least one female customs trainer and five female customs officers (out of the total of 20 officers to be trained), ensure that at least two of the engaged experts (i.e., communication specialist and gender specialist) are women, provide training to four female RAC trainers (out of a total of 10 instructors) and at least 20 female technicians (from a total of 340 technicians), and to certify at least 10 female RAC technicians (out of the 100 total) in the safe handling of flammable refrigerants.

#### *Coordination of activities in the servicing sector under HCFC phase-out and HFC phase-down plans*

32. Stage II of the HPMP and stage I of the KIP will be implemented simultaneously. The KIP envisions further strengthening of the regulatory framework, implementation of the quota system for HFCs and training of customs officers, certification of technicians using the labour competency standard for the safe handling of flammable refrigerants established under the HPMP, and expansion of the certification system to MAC servicing. Stage I of the KIP does not include any refrigerant recovery, recycling and reclaim activities further to those being implemented under the HPMP. The demonstration of equipment based on low-GWP refrigerants in commercial refrigeration applications under the HPMP will inform the technical assistance activity proposed for the sector under the KIP. The schedule of HFC phase-down and HCFC phase-out commitments, and of the KIP and HPMP tranches, is presented in annex I to the present document, while activities to be implemented under the HPMP and the KIP are listed in annex II.

Implementation of the first tranche of stage I of the Kigali HFC implementation plan

33. The first funding tranche of stage I of the KIP, in the total amount of US \$296,918, will be implemented between June 2024 and December 2026. The proposed activities and their cost breakdown are detailed in table 8.

**Table 8. Activities planned for the first tranche of stage I of the KIP for Honduras (as submitted)**

Project component / Planned activities	Costs (US \$)	
	UNEP	UNIDO
<b>1. Limiting HFC demand and supply</b>		
<b>1.1. Customs and trade control</b>		
Development of a handbook on HFC controls and related training material for the Customs Department	15,000	0
Distribution of 3 refrigerant identifiers to customs entry points	0	18,000
<b>Subtotal 1.1</b>	<b>15,000</b>	<b>18,000</b>
<b>1.2. Regulatory framework</b>		
Establishment of an online platform for the management of the HFC quota and licensing system	20,000	0
Feasibility study to restrict imports of second-hand HFC-based domestic refrigerators and dissemination of results to the national association of the importers and retailers of second-hand RAC products	20,000	0
<b>Subtotal 1.2</b>	<b>40,000</b>	<b>0</b>
<b>Subtotal 1</b>	<b>55,000</b>	<b>18,000</b>
<b>2. Kigali refrigerant management programme</b>		
<b>MAC and domestic and commercial stand-alone refrigeration</b>		
Design of manuals, training programmes and teaching material for servicing technicians working with MAC and domestic and commercial stand-alone refrigeration	0	12,918
Development of a competency-based labour standard for handling refrigerants in the MAC sector, training and certification of 10 trainers and initiation of training and certification of technicians	15,000	0
Study tour to an international training centre for 4 instructors to receive training in handling low-GWP alternatives	0	12,000
Acquisition of workstations and simulators for 2 training institutions for courses related to MAC and domestic and commercial refrigeration	0	160,000
<b>Subtotal 2</b>	<b>15,000</b>	<b>184,918</b>
<b>3. Project coordination and monitoring</b>		
Coordinator, consultants and experts (US \$19,500), monitoring and coordination visits (US \$4,500)	0	24,000
<b>Subtotal 3</b>	<b>0</b>	<b>24,000</b>
<b>Subtotals per agency</b>	<b>70,000</b>	<b>226,918</b>
<b>Total</b>		<b>296,918</b>

**SECRETARIAT'S COMMENTS AND RECOMMENDATION****V. Comments**Overarching strategy

34. In line with decision 92/44, the Government of Honduras has expressed its strong commitment to supporting reductions in HFC consumption in advance of the Montreal Protocol targets.<sup>4</sup>

<sup>4</sup> As per the letter of 5 March 2024 from the Secretariat of Natural Resources and the Environment of Honduras to UNIDO.

35. Noting with appreciation the country's commitment to achieving reductions beyond 10 per cent of the baseline in 2029, but also considering its moderate HFC consumption between 2020 and 2022, the Secretariat enquired whether the Government had considered accelerating reductions to be achieved in the 2024-2028 period. UNIDO explained that, while it had been considered, setting lower targets for those years would not be advisable, as the 2020-2022 consumption levels were atypically low, with a 30 per cent drop recorded in 2020. As the economy continues to recover, HFC consumption is expected to exceed its pre-pandemic levels, as reflected by the HFC consumption in 2023, already estimated at 956 mt.

36. Noting the information provided by UNIDO, the growing HFC consumption trend since 2020, and that there have been no unexplained increases in HFC consumption during the baseline years in Honduras, the Secretariat considers that the annual targets established by the Government are reasonable. A small adjustment to the 2029 target from 15 per cent to 15.5 per cent was agreed based on the level of funds requested, as explained in detail in paragraph 47.

#### HFC consumption survey and adjustments to Article 7 data

37. The national HFC consumption levels quoted in the submission were based on the survey carried out in preparation for the KIP. The survey indicated that the consumption of HFC-152a in 2022 was erroneously recorded at 127.46 mt instead of 31.37 mt (due to a typographical error) and identified minor adjustments to be made to the 2021 and 2022 consumption figures for other HFCs, which were incorrectly recorded due to database inconsistencies. Once they are processed by the Ozone Secretariat, these corrections will result in a small adjustment to the country's HFC baseline, from 1,460,674 to an estimated 1,455,413 CO<sub>2</sub>-eq tonnes, representing a potential difference of 5,261 CO<sub>2</sub>-eq tonnes or 0.36 per cent.<sup>5</sup>

38. The Government of Honduras has submitted the corrected data to the Ozone Secretariat, which will next communicate it to the Implementation Committee at its 72<sup>nd</sup> meeting, to be held on 7 July 2024, in line with decisions XIII/15, XIV/27 and XV/19 of the Meeting of the Parties on the consideration of requests for the revision of baseline data.

39. Noting that the corrected data may result in a slightly lower baseline, the Government intends to use this updated value as the reference for maximum allowable consumption levels stated in its Agreement with the Executive Committee (as shown in row 1.2 of the table in annex I) and for the annual import quotas to avoid any risk of non-compliance. Accordingly, stage I of the KIP will be recommended on the understanding that once the Meeting of the Parties approves the revised data, relevant adjustments will be made to the Agreement between the Government of Honduras and the Executive Committee.

#### Institutional, policy and regulatory framework

40. In line with decision 87/50(g), UNIDO has confirmed that Honduras has an established and enforceable system of licensing and quotas for monitoring the HFC imports and exports. The HFC import quotas issued for 2024, amounting to 90 per cent of the maximum allowable consumption stated in the Agreement between the Government and the Executive Committee, are to be distributed among enterprises, with the remaining 10 per cent reserved for unexpected circumstances. UNIDO has also confirmed that the Customs Department's electronic codification system, based on the international Harmonized System, is up to date and allows for the identification of all imported HFC blends, as well as other blends that may contain HFCs and HFOs.

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<sup>5</sup> The final value will be established by the Ozone Secretariat once corrections have been introduced to the reports.

## Technical and cost-related issues

### *Component 1. Limiting HFC demand and supply*

41. Noting that R-600a-based domestic refrigerators and R-290-based commercial stand-alone refrigerators were locally available and had proven to be viable in replacing units based on HFC-134a, the Secretariat explored whether the Government had considered regulatory measures to ban, within the implementation period of stage I of the KIP, the import of new HFC-based equipment in these two subsectors. UNIDO explained that, so far, only 2 per cent of the country's refrigerators were R-600a-based, and that the Government would continue assessing the market penetration of these technologies during stage I and potentially propose regulatory measures to ban them during stage II. The Government prioritizes the proposed regulation on restricting the imports of second-hand HFC-based domestic refrigerators, as they are more prone to leaks and require higher refrigerant charges during maintenance, increasing the environmental liability and expenses for users, in terms of both electricity consumption and repairs. This measure will enter into force on 1 January 2029.

42. Regarding the possibility of banning the imports of very high-GWP HFCs that had not been previously used in the country (e.g., HFC-23), UNIDO affirmed that it would be premature to introduce such measures during stage I.

### *Component 2. Kigali refrigerant management programme*

43. Regarding the proposed procurement of two low-GWP cold room simulators<sup>6</sup> to be installed and used for training purposes at two selected vocational schools, UNIDO clarified that the main goal of that activity was to demonstrate the process of controlling the temperature and relative humidity of commercial and industrial cold rooms based on single compressors charged with R-290, and to compare the energy consumption of the newly designed systems against the existing HFC-based systems. The simulators are expected to be supplied by the Colombian enterprise Thermotar.<sup>7</sup>

44. Considering the significant consumption of high-GWP refrigerants such as R-404A and R-507C and the highly emissive nature of RAC systems in the commercial and industrial refrigeration sector, the Secretariat and UNIDO also discussed the possibility of including activities to help reduce these emissions during stage I of the KIP. As a result, UNIDO agreed to include a zero-leak demonstration pilot project at an end user, similar to projects implemented under several other HPMPs in the region. The project will guide one large user in the food processing and distribution sector and demonstrate how to diagnose their HFC-based refrigeration systems, reduce leaks, and collect and report data on the resulting reductions in refrigerant purchases, electricity consumption, equipment shutdowns, and associated direct and indirect emissions. The project will develop a leak-control guide that could be used as a reference by anyone involved in the installation, servicing, maintenance and decommissioning of RAC equipment in the sector. A sum of US \$20,000 was reallocated to this activity from other activities proposed in the same subcomponent, namely, the assessment of the installed inventory of condensing units and centralized systems (US \$10,000) and the installation of dual cold room simulators and associated training (US \$10,000). The revised commercial and industrial refrigeration subcomponent is presented in table 9.

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<sup>6</sup> Each including *inter alia* a steel structure mounted on wheels, a screen-printed schematic diagram of the hydraulic circuit with warning LEDs, an R-290 compressor, a forced-air condenser with variable flow settable by potentiometer, a cold room with separate evaporators, thermostatic expansion valves, an evaporating pressure controller, refrigerated room thermostats, a valve for plant vacuum, refrigerant charging and recovering, and instruments for data acquisition.

<sup>7</sup> Thermotar has previously implemented a Multilateral Fund demonstration project to adopt R-290 in the manufacturing of AC equipment.

**Table 9. Activities planned in the commercial and industrial refrigeration subcomponent (as agreed)**

Project component / Planned activities	Costs (US \$)	
	UNEP	UNIDO
<b>Commercial and industrial refrigeration</b>		
Assessment of the installed inventory of condensing units and centralized systems and of the market penetration of low-GWP technologies	20,000	0
Installation of dual cold room simulators based on low-GWP refrigerants in 2 training centres	0	110,000
Implementation of a zero-leak project in a selected food processing and distribution enterprise, including a training workshop for RAC technicians	0	20,000
<b>Subtotal</b>	<b>20,000</b>	<b>130,000</b>

Total project cost

45. The total cost of stage I of the KIP (without agency support costs) amounts to US \$597,210, as summarized in table 10 below. The only adjustment made to the budget as submitted was the addition of a zero-leak pilot project with funds reallocated from other activities in the same subcomponent (commercial and industrial refrigeration), as explained above.

**Table 10: Activities and cost of the first tranche of stage I of the KIP for Honduras (as agreed)**

Project component / Planned activities	Cost (US \$)	
	UNEP	UNIDO
<b>1. Limiting HFC demand and supply</b>		
1.1 Customs and trade control	50,000	30,000
1.2 Regulatory framework	60,000	0
<b>Subtotal 1</b>	<b>110,000</b>	<b>30,000</b>
<b>2. Kigali refrigerant management programme</b>		
2.1 MAC and domestic and commercial stand-alone refrigeration	35,000	217,918
2.2 Commercial and industrial refrigeration	20,000	130,000
<b>Subtotal 2</b>	<b>55,000</b>	<b>347,918</b>
<b>3. Project coordination and monitoring</b>		
<b>Subtotals per agency</b>	<b>165,000</b>	<b>432,210</b>
<b>Total</b>		<b>597,210</b>

46. Stage I of the KIP only includes activities in the refrigeration servicing sector at an estimated cost of US \$542,918, plus 10 per cent for the project management unit (PMU),<sup>8</sup> which was agreed as requested.

*Reductions associated with the funds approved*

47. To calculate the reductions from the country's remaining HFC consumption eligible for funding associated with activities in the servicing sector, the Secretariat used the methodology for converting US \$/kg to US \$/CO<sub>2</sub>-eq tonne in the servicing sector described in annex I of document 92/46.<sup>9</sup> The average HFC consumption in the country's servicing sector during the baseline years was 496.73 mt, or 1,055,789 CO<sub>2</sub>-eq tonnes, resulting in a cost-effectiveness of US \$2.40/CO<sub>2</sub>-eq tonne. At this level of cost effectiveness, the US \$542,918 requested for the implementation of activities in the servicing sector in Honduras corresponds to 226,267 CO<sub>2</sub>-eq tonnes, amounting to 15.5 per cent of the baseline. Accordingly, the Government agreed to adjust its 2029 reduction target from 15 to 15.5 per cent of the baseline.

<sup>8</sup> The assistance provided under the Multilateral Fund for the implementation of HPMP stages includes, in addition to the funded reductions, a budget for project coordination and monitoring, amounting to between 5 and 10 per cent of the cost of the stage, based on the size and characteristics of the country.

<sup>9</sup> Paper on the starting point for sustained aggregate reductions based on discussions at the 91<sup>st</sup> meeting in the contact group on the cost guidelines for the phase-down of HFCs (decision 91/64(a)).

*Tranche distribution under stage I of the Kigali HFC implementation plan*

48. Stage I of the KIP will be implemented in three tranches. The schedule of HFC phase-down and HCFC phase-out commitments and of the KIP and HPMP tranches is presented in annex I to the present document. Explaining its rationale for programming 50 per cent of total stage I funds in the first tranche, UNIDO quoted the need to use the first few years to effectively set up the infrastructure that will ensure its successful implementation in the medium and long term, including tools, simulators and other equipment required to carry out training on MAC and domestic refrigeration appliances. On this basis, no adjustments were made to the proposed tranche distribution.

Co-financing

49. The Government of Honduras and UNIDO have expressed willingness to explore co-financing possibilities in the implementation of stage I of the KIP.

2024–2026 business plan of the Multilateral Fund

50. UNIDO and UNEP are requesting US \$597,210, plus agency support costs, for the implementation of stage I of the KIP for Honduras. The total value of US \$321,903, including agency support costs, requested for the period of 2024–2026, is US \$180,301 above the amount in the business plan.

Sustainability of the HFC phase-down and assessment of risks

51. HFC consumption levels during the baseline years were lower than in 2018 and 2019 due to the economic effects of the COVID-19 pandemic. Noting that the need for HFCs continues to grow, and in order to mitigate the risk of non-compliance, stage I of the KIP focuses on the comprehensive application of the HFC quota and licensing system, the training of customs officials, and the introduction of regulations on HFC-containing RAC equipment, while prioritizing sectors where technically and economically viable alternatives exist. The HFC reductions proposed for the stage, while going beyond the 10 per cent target established by the Montreal Protocol, can be achieved.

52. The safety risks associated with the use of low-GWP flammable refrigerants as the preferred alternatives to HFCs in the domestic and commercial self-contained refrigeration equipment will be addressed. Support will be provided to public technical schools in the form of workstations and simulators, to be used in courses on handling flammable refrigerants taught to 400 technicians. Furthermore, technicians will be certified using the labour competency standard for the safe handling of flammable refrigerants, established under the HPMP.

53. The Government of Honduras will support sustained HFC reductions through the application of Executive Agreement 006/2012, including the requirements on consumption freeze, quota and licensing import controls, and regulatory measures on both new and second-hand RAC equipment, while the NOU will sign suitable agreements with vocational schools, customs authorities, and other relevant stakeholders to continue providing the required training for HFC controls and the adoption of alternatives.

Impact on the climate

54. The activities proposed, including regulatory measures to restrict the imports of high-GWP refrigerants, the training of technicians in good servicing practices in MAC and in handling low-GWP alternatives in domestic and commercial stand-alone refrigeration units, the zero-leak pilot project and efforts to promote low-GWP alternatives, indicate that the implementation of stage I of the KIP will reduce HFC refrigerant emissions into the atmosphere, resulting in climate benefits. While the Secretariat is not able to provide an estimate of the avoided emissions from the implementation of the KIP at the present

meeting,<sup>10</sup> by 2029 Honduras will have reduced its annual HFC emissions by approximately 226,267 CO<sub>2</sub>-eq tonnes, calculated as the difference between the HFC baseline for compliance and the 2029 target, assuming that all consumed HFCs would eventually have been emitted.

#### Draft Agreement

55. A draft Agreement between the Government of Honduras and the Executive Committee for stage I of the KIP has not been prepared as the Agreement template is still under consideration by the Executive Committee.

56. If the Executive Committee so wishes, the funds for stage I of the KIP for Honduras could be approved in principle, and funds for the first tranche could be approved on the understanding that the Agreement would be prepared and presented at a future meeting, before the submission of the second tranche, and once the Agreement template has been approved.

#### **VI. Recommendation**

57. The Executive Committee may wish to consider:

- (a) Approving, in principle, stage I of the Kigali HFC implementation plan (KIP) for Honduras for the period 2024-2029 to reduce HFC consumption by 15.5 per cent of the country's baseline by 2029, in the amount of US \$648,915, consisting of US \$432,210, plus agency support costs of US \$30,255, for UNIDO and US \$165,000, plus agency support costs of US \$21,450, for UNEP, as reflected in the schedule contained in annex I to the present document;
- (b) Noting:
  - (i) That the Government of Honduras will establish its starting point for sustained aggregate reductions in HFC consumption based on guidance provided by the Executive Committee;
  - (ii) That, once the cost guidelines for HFC phase-down are agreed by the Executive Committee, reductions from the country's remaining HFC consumption eligible for funding will be determined in line with these guidelines;
  - (iii) That the reductions from the country's remaining HFC consumption eligible for funding referred to in subparagraph (b)(ii) above will be deducted from the starting point referred to in subparagraph (b)(i);
- (c) Also noting:
  - (i) The strong commitment of the Government of Honduras to support reductions in HFC consumption in advance of the Montreal Protocol targets;
  - (ii) The commitment from the Government of Honduras to issue a ban on the imports of used HFC-based domestic refrigerators from 1 January 2029;

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<sup>10</sup> As noted in document UNEP/OzL.Pro/ExCom/94/14, Overview of issues identified during project review, the Secretariat is in the process of developing a methodology to estimate the avoided emissions from the implementation of HFC phase-down projects supported by the Multilateral Fund.



- (iii) That the Government of Honduras has made a request for correction of its Article 7 data for the years 2021 and 2022 to the Ozone Secretariat and that once these changes have been approved by the Meeting of the Parties, the Secretariat and UNIDO will adjust the HFC consumption baseline and maximum allowable consumption, as relevant, in the KIP Agreement between the Government of Honduras and the Executive Committee;
- (d) Approving the first tranche of stage I of the KIP for Honduras and the corresponding tranche implementation plan, in the amount of US \$321,903, consisting of US \$226,918, plus agency support costs of US \$24,985, for UNIDO and US \$70,000, plus agency support costs of US \$9,100, for UNEP; and
- (e) Requesting the Government of Honduras, UNIDO, UNEP and the Secretariat to finalize the draft Agreement between the Government of Honduras and the Executive Committee for the reduction in consumption of HFCs, including the information contained in the annex referred to in subparagraph (a) above, and to submit it to a future meeting once the KIP Agreement template has been approved by the Executive Committee.

## Annex I

**SCHEDULE OF HFC PHASE-DOWN AND HCFC PHASE-OUT COMMITMENTS AND FUNDING TRANCHES  
UNDER THE KIGALI HFC IMPLEMENTATION PLAN AND THE HCFC PHASE-OUT MANAGEMENT PLAN FOR HONDURAS**

**Kigali HFC implementation plan (stage I)**

Row	Particulars	2024	2025	2026	2027	2028	2029	Total
1.1	Montreal Protocol reduction schedule of Annex F substances (CO <sub>2</sub> -eq tonnes)	1,460,674	1,460,674	1,460,674	1,460,674	1,460,674	1,314,606	n/a
1.2	Maximum allowable total consumption of Annex F substances (CO <sub>2</sub> -eq tonnes)	1,455,413	1,455,413	1,455,413	1,455,413	1,455,413	1,229,146	n/a
2.1	Lead IA (UNIDO) agreed funding (US \$)	226,918	0	0	178,000	0	27,292	422,210
2.2	Support costs for Lead IA (US \$)	15,885	0	0	12,460	0	1,910	30,255
2.3	Cooperating IA (UNEP) agreed funding (US \$)	70,000	0	0	65,000	0	30,000	175,000
2.4	Support costs for Cooperating IA (US \$)	9,100	0	0	8,450	0	3,900	21,450
3.1	Total agreed funding (US \$)	296,918	0	0	243,000	0	57,292	597,210
3.2	Total support costs (US \$)	24,985	0	0	20,910	0	5,810	51,705
3.3	Total agreed costs (US \$)	321,903	0	0	263,910	0	63,102	648,915

**HCFC phase-out management plan (stage II) (only remaining tranches)**

Row	Particulars	2024	2025	2026	2027	2028	2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	12.94	6.47	6.47	6.47	6.47	6.47	0.00	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	9.91	6.47	6.47	6.47	2.70	2.70	0.00	n/a
2.1	Lead IA (UNIDO) agreed funding (US \$)	0	298,500	0	157,000	0	0	177,500	<b>633,000</b>
2.2	Support costs for Lead IA (US \$)	0	20,895	0	10,990	0	0	12,425	<b>44,310</b>
2.3	Cooperating IA (UNEP) agreed funding (US \$)	0	36,500	0	43,000	0	0	33,000	<b>112,500</b>
2.4	Support costs for Cooperating IA (US \$)	0	4,745	0	5,590	0	0	4,290	<b>14,625</b>
3.1	Total agreed funding (US \$)	0	335,000	0	200,000	0	0	210,500	<b>745,500</b>
3.2	Total support costs (US \$)	0	25,640	0	16,580	0	0	16,715	<b>58,935</b>
3.3	Total agreed costs (US \$)	0	360,640	0	216,580	0	0	227,215	<b>804,435</b>

**Annex II**

**SIMULTANEOUS IMPLEMENTATION OF THE HCFC PHASE-OUT MANAGEMENT PLAN  
AND THE KIGALI HFC IMPLEMENTATION PLAN IN HONDURAS**

Category of activity	HPMP – stage II		KIP – stage I		HPMP+KIP combined cost (US \$)
	Activity	Cost (US \$)	Activity	Cost (US \$)	
Strengthening of the regulatory framework	Development of HCFC emission/venting control measures Banning the imports of new HCFC-based equipment Banning the use of disposable cylinders Regulating record-keeping and leakage checks	55,000	Automatization of the HFC quota and licensing system Feasibility study and issuance of a restriction on imports of second-hand HFC-based refrigerators Dissemination of results to relevant associations	60,000	115,000
Strengthening of customs and trade control	Updating the online training module Training of 20 customs and enforcement officers Organization of 2 study missions Distribution of 4 refrigerant identifiers	120,500	Development of a handbook, model course and training material focused on HFCs Training of an additional 40 customs officers and regional workshop for the Central American region Design of guidelines and a training course for brokers and importers Distribution of 5 refrigerant identifiers	80,000	200,500
Capacity building, training and certification of RAC technicians	Development of a standards training programme on good servicing practices and distribution of 1,000 copies of the manual on good servicing practices Training of 75 RAC instructors and 1,500 technicians on good servicing practices, certification and licensing of 1,000 RAC technicians Provision of toolkits to technicians Awareness-building campaign Development of a training course and a labour competency standard on handling flammables for technicians' certification on this subject	205,000	Development of a labour competency standard for the MAC sector for technicians' certification Development of manuals, training programmes and teaching material for MAC and domestic refrigeration Training and certification of 10 trainers and 400 technicians in servicing MAC systems and in the proper handling of flammable refrigerants and good practices for R-600a and R-290 in domestic and commercial stand-alone refrigeration, and study tour for 4 instructors Distribution of workstations and simulators to 2 training institutes for training on MAC and domestic and commercial refrigeration	252,918	457,918

Category of activity	HPMP – stage II		KIP – stage I		HPMP+KIP combined cost (US \$)
	Activity	Cost (US \$)	Activity	Cost (US \$)	
Adoption of safety codes and procedures for flammable refrigerants	Development of a guide and training programme Development of 4 specialized courses for engineers Establishment of a specialized training centre Delivery of 20 toolkits to training institutes Training of 45 trainers and 1,500 technicians	296,000			296,000
Improvement of the refrigerant RRR network	Development of a business plan for the RRR network Establishment of 2 reclaiming centres Organization of an awareness-raising campaign	170,000			170,000
Capacity building in commercial and industrial refrigeration			Assessment of the installed inventory of condensing units and centralised systems, penetration of low-GWP technologies and energy consumption baseline, and dissemination of results Installation of dual cold room simulators based on low-GWP refrigerants in two training centres for practical training, and related training courses	130,000	130,000
Technical assistance to RAC end users	Implementation of 2 zero-leak pilot projects for RAC installations based on HCFC-22	147,000	Implementation of a zero-leak pilot project for an installation based on R-404A or R-507A	20,000	167,000
	Two end-user demonstration projects and dissemination of results Creation of an online consultation centre Development of a guide on leak control				
Education and building awareness	Awareness-raising campaign Development of a mobile application	65,000			65,000
Energy efficiency	Capacity building and cooperation between policy makers and industry stakeholders; awareness programme to promote standards and labels; and updates to the training material on energy efficiency in the servicing of RAC equipment	120,000			120,000
Project coordination	Coordination and management	111,500	Coordination and management	54,292	165,792
<b>Total</b>		<b>1,290,000</b>		<b>597,210</b>	<b>1,887,210</b>