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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-seventh Meeting
Montreal, 1–5 December 2025
Item 9(d) of the provisional agenda¹

PROJECT PROPOSAL: MONGOLIA

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) | UNEP and UNIDO | Individual
consideration |
|---|--|----------------|-----------------------------|

¹ UNEP/OzL.Pro/ExCom/97/1

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Mongolia

PROJECT TITLE	AGENCY
Kigali HFC implementation plan (stage I)	UNEP (lead), UNIDO

LATEST ARTICLE 7 DATA (Annex F)	Year: 2024	21.16 mt	55,608 CO ₂ -eq tonnes
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SECTORAL HFC CONSUMPTION DATA (CO ₂ -eq tonnes) AND ACTIVITIES									
	Aerosol	Foam	Fire-fighting	Air-conditioning and refrigeration				Solvent	Other
				Manufacturing			Servicing		
				Refrigeration	AC	Other			
Latest CP report (2024)		453	12,249				43,359		
KIP stage I activities as agreed (Y/N)		N	N				Y		

AVERAGE 2020–2022 HFC CONSUMPTION IN SERVICING	12.89 mt	27,133 CO ₂ -eq tonnes
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BASELINE CONSUMPTION DATA (CO ₂ -eq tonnes)	2020	2021	2022	Average 2020-2022
HFC annual consumption	24,183	31,701	32,305	29,396
HCFC baseline (65%)				27,912
HFC baseline				57,309

HFC CONSUMPTION ELIGIBLE FOR FUNDING (CO ₂ -eq tonnes)	
Starting point for sustained aggregate reductions	n/a
Previously approved HFC phase-down investment projects	No
Aggregate reductions from previously approved projects	n/a
Average consumption of HFCs in imported pre-blended polyols (2022-2024)	1,165

PROJECT DATA AS AGREED		2025*	2026	2027	2028	2029	Total
Consumption (CO ₂ -eq tonnes)	Montreal Protocol limits	57,309	57,309	57,309	57,309	51,578	n/a
	Maximum allowable	57,309	57,309	57,309	57,309	51,578	n/a
	Reduction from baseline (%)	0	0	0	0	10	n/a
Amounts recommended in principle (US \$)	UNEP	Project costs	62,500	0	54,000	0	116,500
		Support costs	8,125	0	7,020	0	15,145
	UNIDO	Project costs	18,500	0	0	0	18,500
		Support costs	2,405	0	0	0	2,405
	Total project costs		81,000	0	54,000	0	135,000
	Total support costs		10,530	0	7,020	0	17,550
	Total funds		91,530	0	61,020	0	152,550

* Recommended for approval at the present meeting

Reduction from remaining HFC consumption eligible for funding in stage I (CO ₂ -eq tonnes)	n/a
Reduction from remaining HFC contained in imported pre-blended polyols (CO ₂ -eq tonnes)*	0

* Included as per decision 96/52.

Secretariat's recommendation	Individual consideration
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PROJECT DESCRIPTION

1. The present document contains the following sections:
 - I. Summary of the proposal as submitted
 - II. Background: Status of implementation of the HCFC phase-out management plan and previous HFC-related activities
 - III. HFC consumption overview: HFC consumption levels, trends, and consumption by sector
 - IV. Stage I of the Kigali HFC implementation plan, as submitted: Regulatory framework, phase-down strategy, total stage cost, 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 Mongolia, UNEP 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 \$152,550, consisting of US \$116,500, plus agency support costs of US \$15,145, for UNEP and US \$18,500, plus agency support costs of US \$2,405, for UNIDO, as originally submitted.²

3. The implementation of stage I of the KIP will assist the Government of Mongolia in meeting the target of 10 per cent reduction from its HFC baseline consumption by 1 January 2029.

4. The first tranche of stage I of the KIP being requested at this meeting amounts to US \$91,530, consisting of US \$62,500, plus agency support costs of US \$8,125, for UNEP and US \$18,500, plus agency support costs of US \$2,405, for UNIDO, as originally submitted, for the period of December 2025 to December 2027.

II. Background

Status of implementation of the HCFC phase-out management plan

5. Table 1 presents information on the HCFC phase-out management plan (HPMP) in Mongolia as of October 2025.

Table 1. HPMP implementation status for Mongolia

Particulars	Stage I	Stage II
Meetings when HPMP was approved/updated	63 rd /77 th	86 th /93 rd
Reduction from baseline	35% by 2020	100% by 2030
Total stage cost (US \$)	366,000	640,000
Date of completion (actual/planned)	31 December 2021	31 December 2031

² As per the letter of 11 August 2025 from the Ministry of Environment and Tourism of Mongolia to UNEP.

Status of implementation of previous HFC-related activities

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

Table 2. Previously approved HFC-related activities in Mongolia

Approval meeting	Project title	Implementing agency	Cost (US \$)	Date of completion
74 th	Survey of ODS alternatives	UNEP	20,000	Aug 2017
80 th	Enabling activities for HFC phase-down	UNEP	95,000	Dec 2020
93 rd	Preparation of a KIP investment project in the foam sector	UNIDO	80,000	Ongoing

III. HFC consumption overviewHFC consumption levels

7. Mongolia only imports HFCs for use in the refrigeration and air-conditioning (RAC) servicing, firefighting, and foam manufacturing sectors. The most consumed substances in 2024 were R-404A (43 per cent of total HFC consumption in CO₂-equivalent (CO₂-eq) tonnes), HFC-227ea (22 per cent), R-410A (19 per cent), and HFC-134a (16 per cent). Table 3 presents the country's HFC consumption as reported to the Ozone Secretariat under Article 7 of the Montreal Protocol and the country's HFC baseline.

Table 3. HFC consumption (2020–2024 Article 7 data) and baseline in Mongolia

HFC	GWP	2020	2021	2022	2023	2024
Metric tonnes (mt)						
HFC-125	3,500	0.00	0.00	0.00	0.03	0.00
HFC-134a	1,430	10.01	8.08	1.50	9.23	6.28
HFC-227ea	3,220	0.00	0.00	2.11	0.05	3.80
HFC-32	675	0.00	0.51	0.00	0.48	0.00
R-404A	3,922	1.48	2.18	2.85	0.70	6.14
R-407C	1,774	0.00	1.49	0.00	2.62	0.00
R-410A	2,088	1.95	4.12	3.00	3.16	4.94
R-507A	3,985	0.00	0.00	1.49	0.00	0.00
Total (mt)		13.44	16.38	10.94	16.27	21.16
HFC-365mfc in imported pre-blended polyol*	794	0.00	0.00	0.00	0.12	0.00
HFC-245fa in imported pre-blended polyol*	1,030	0.00	0.00	2.62	0.24	0.44
CO₂-eq tonnes						
HFC-125	3,500	0	0	0	105	0
HFC-134a	1,430	14,314	11,552	2,139	13,199	8,985
HFC-227ea	3,220	0	0	6,789	161	12,249
HFC-32	675	0	344	0	324	0
R-404A	3,922	5,798	8,549	11,177	2,745	24,066
R-407C	1,774	0	2,646	0	4,647	0
R-410A	2,088	4,071	8,610	6,263	6,597	10,308
R-507A	3,985	0	0	5,938	0	0
Total (CO₂-eq tonnes)		24,183	31,701	32,305	27,778	55,608
HFC-365mfc in imported pre-blended polyol*	794	0	0	0	95	0
HFC-245fa in imported pre-blended polyol*	1,030	0	0	2,698	247	453

HFC baseline calculation (CO ₂ -eq tonnes)	
HFC average consumption in 2020–2022	29,396
HCFC baseline (65%)	27,912
HFC baseline	57,309

* Country programme (CP) data

Country programme implementation report

8. The sectoral HFC consumption data provided by the Government of Mongolia in its CP implementation report for 2024 is consistent with the data reported under Article 7 of the Montreal Protocol.

HFC consumption trends

9. The consumption of HFCs in Mongolia shows an increasing trend, except for 2022. However, there are year-to-year fluctuations in import volumes. These variations are largely due to the impact of the COVID-19 pandemic. In addition, stricter standards set by one of its neighbouring exporting countries on packaging, transport, and facilities requirements for hazardous substances have resulted in import constraints, noting that Mongolia is a landlocked country bordered by only two countries.

HFC consumption by sector

10. HFCs are consumed in the RAC servicing, firefighting, and foam manufacturing sectors, with the highest consumption in the commercial refrigeration servicing subsector (29.2 per cent in mt and 34.3 per cent in CO₂-eq tonnes), followed by mobile air-conditioning (MAC) servicing (17.8 per cent in mt and 11.0 per cent in CO₂-eq tonnes), firefighting (13.8 per cent in mt and 19.2 per cent in CO₂-eq tonnes), industrial refrigeration servicing (13.3 per cent in mt and 11.7 per cent in CO₂-eq tonnes), and other subsectors, as shown in tables 4 and 5.

Table 4. HFC consumption in Mongolia by sector in metric tonnes (2024)

Sector	HFC-227ea	HFC-245fa*	HFC-32	HFC-134a	R-404A	R-407C	R-410A	R-507A	Total	Share of total (%)
Manufacturing										
Foam	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.44	1.6
Subtotal manufacturing	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.44	1.6
Refrigeration and AC servicing										
Refrigeration subsectors										
Domestic	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.07	0.3
Commercial	0.00	0.00	0.00	3.49	3.54	0.46	0.00	0.56	8.05	29.2
Industrial	0.00	0.00	0.00	1.52	0.53	0.36	1.25	0.00	3.66	13.3
Transport	0.00	0.00	0.00	0.32	0.87	0.00	0.00	0.00	1.19	4.3
Air-conditioning subsectors										
Residential	0.00	0.00	0.10	0.00	0.00	0.00	1.70	0.00	1.80	6.5
Commercial	0.00	0.00	0.30	0.00	0.00	0.00	3.31	0.00	3.61	13.1
Mobile	0.00	0.00	0.00	4.91	0.00	0.00	0.00	0.00	4.91	17.8
Subtotal servicing	0.00	0.00	0.40	10.31	4.94	0.82	6.26	0.56	23.29	84.6
Other										
Firefighting	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80	13.8
Subtotal other	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80	13.8
Total	3.80	0.44	0.40	10.31	4.94	0.81	6.26	0.56	27.53**	100

* In pre-blended polyols.

** Difference compared to reported consumption is due to use of best estimates and averaging when calculating the sector-wise consumption.

Table 5. HFC consumption in Mongolia by sector in CO₂-eq tonnes (2024)

Sector	HFC-227ea	HFC-245fa*	HFC-32	HFC-134a	R-404A	R-407C	R-410A	R-507A	Total	Share of total (%)
Manufacturing										
Foam	0	453	0	0	0	0	0	0	453	0.7
Subtotal manufacturing	0	453	0	0	0	0	0	0	453	0.7
Refrigeration and AC servicing										
Refrigeration subsectors										
Domestic	0	0	0	100	0	0	0	0	100	0.2
Commercial	0	0	0	4,991	13,884	807	0	2,232	21,914	34.3
Industrial	0	0	0	2,174	2,079	630	2,610	0	7,493	11.7
Transport	0	0	0	458	3,412	0	0	0	3,870	6.1
Air-conditioning subsectors										
Residential	0	0	68	0	0	0	3,550	0	3,618	5.7
Commercial	0	0	203	0	0	0	6,911	0	7,114	11.1
Mobile	0	0	0	7,021	0	0	0	0	7,021	11.0
Subtotal servicing	0	0	271	14,744	19,375	1,437	13,071	2,232	51,130	80.1
Other										
Firefighting	12,236	0	0	0	0	0	0	0	12,236	19.2
Subtotal other	12,236	0	0	0	0	0	0	0	12,236	19.2
Total	12,236	453	271	14,744	19,375	1,437	13,071	2,232	63,819	100

* In pre-blended polyols.

Polyurethane foam manufacturing

11. The polyurethane (PU) foam sector consumes HFCs contained in imported pre-blended polyols for manufacturing insulation in buildings, as shown in table 6. The decrease in imports for 2023 and 2024 is mainly due to carry-over stock from 2022 and the challenges faced by importers noted in paragraph 9 above. The Government of Mongolia plans to explore a ban on the manufacturing of foam using pure HFC substances during stage I of the KIP.

Table 6. HFCs contained in imported pre-blended polyols used in the foam sector in Mongolia (2022-2024)

Substance	2022	2023	2024	Average
mt				
HFC-245fa	2.62	0.24	0.44	1.10
HFC-365mfc	0.00	0.12	0.00	0.04
Total (mt)	2.62	0.36	0.44	1.14
CO₂-eq tonnes				
HFC-245fa	2,698	247	453	1,133
HFC-365mfc	0	95	0	32
Total (CO₂-eq tonnes)	2,698	342	453	1,165

Firefighting

12. The main HFC substance used in firefighting applications is HFC-227ea, which is primarily used in firefighting systems for occupied spaces. The projected growth in this sector is 2 per cent annually until specific measures for the sector are introduced in a future stage of the KIP. A potential alternative to HFC-227ea is Novec 1230, a compound consisting of carbon, fluorine, and oxygen, that has a global-warming potential (GWP) of 1 and is already available on the market.

Refrigeration and air-conditioning servicing sector

13. In Mongolia, there are approximately 1,534 RAC technicians, of whom an estimated 4.4 per cent are women, and around 340 RAC servicing workshops. In the MAC sector, there are an estimated 1,000 enterprises employing about 2,000 automotive mechanics; however, the exact number of mechanics specifically servicing MAC systems is currently unknown.

14. Among RAC technicians, about 79 per cent of technicians have not received formal education, relying solely on on-the-job training to develop their skills. In contrast, 16 per cent hold a college degree, while only 5 per cent have completed formal technical and vocational education and training (TVET). Despite the limited formal education, 49 per cent of technicians have participated in short-term training programmes, and 31 per cent have obtained competency-based certificates, indicating some level of structured skill development within the workforce.

15. Since most servicing technicians in Mongolia did not receive formal education but possess strong practical experience, the country runs a Recognition of Prior Learning (RPL) scheme. This programme provides certification to technicians that successfully complete the course and pass the qualification assessment.

16. There are seven TVET centres in Mongolia offering heating, ventilation, air-conditioning and refrigeration (HVACR) servicing courses, but only four were still active as of 2024. The other three centres still hold special permission from the relevant ministry but have not resumed courses that were suspended during the COVID-19 pandemic. As of 2024, 780 students graduated from the four active TVET centres.

Local installation and assembly

17. HFC consumption in the local installation and assembly subsector in Mongolia is primarily associated with commercial and industrial refrigeration (large RAC applications including chillers, industrial refrigeration, cold storage, and condensing units). As an exact amount could not be quantified during the survey, interventions for this subsector will be addressed under a later stage of the KIP.

Domestic, commercial, industrial and transport refrigeration servicing

18. There are an estimated 928,236 household refrigeration units (including refrigerators and freezers) in Mongolia. About 16 per cent of these use HFC-134a as a refrigerant, while the remaining 84 per cent use isobutane (R-600a). Although R-600a is widely used in the market, approximately 6.6 per cent of refrigerators imported in the past two years still use HFC-134a.

19. The commercial and industrial refrigeration subsectors consist of an estimated 21,000 stand-alone condensing units and centralized systems using HFC-134a, R-404A, and R-410A, as well as small amounts of R-407C and R-507A. Together these two subsectors account for 42.5 per cent of total HFC consumption in CO₂-eq tonnes in the country, with stand-alone commercial refrigerators based on hydrocarbons also present in the market.

20. The transport refrigeration subsector accounts for 6.1 per cent of total consumption in CO₂-eq tonnes. The main refrigerants used are HFC-134a and R-404A, and a very few devices use R-452A.

Residential and commercial air-conditioning servicing

21. There are 59,524 residential air-conditioning (AC) units, with 22 per cent using HCFC-22, 72 per cent using R-410A, 4 per cent using HFC-32, and 2 per cent using R-290. R-410A is the most widely used refrigerant in this subsector mainly due to the impact of the HCFC phase-out and the ban on importing

HCFC-based residential AC units that was implemented in 2022. In recent years, HFC-32-based equipment has entered the market rapidly, while R-290-based systems are entering more slowly.

22. In the commercial AC subsector, which includes 3,636 units, 86 per cent use R-410A, 7 per cent use HCFC-22, and the remaining 7 per cent use HFC-32. The use of HFC-32 in commercial systems has been growing slowly in recent years.

Mobile air-conditioning servicing

23. The MAC sector comprises approximately 1.19 million vehicles, which primarily use HFC-134a as refrigerant; only around 4,214 vehicles operate on non-HFC technologies. Most vehicles are imported and are typically second-hand, equipped with built-in HFC-based AC systems.

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

Institutional, policy and regulatory framework

24. The Ministry of Environment and Tourism is responsible for the implementation of the licensing and quota systems, including setting the quota limits; approving the list of ODS, HFCs, and alternative refrigerants; and issuing licences for the import, use, and sale of those substances. The Law on Air (2012) was amended on 6 January 2023 to include the quota system for HFC imports, which entered into force on 1 January 2024. Customs authorities and importers are required to submit to the Ministry a report on the import, use, and sale of ODS, HFCs, alternative refrigerants, and equipment. The Ministry may also issue, under the Law on Permits (2022), a special permit for importing, selling, servicing, recycling, and installing ODS, HFCs, alternative refrigerants, and products containing them.

25. Enterprises are required to follow the MS:6458-2014 standard of safe handling and use for compressed gas cylinders, and entities providing HVACR and MAC servicing using ODS, HFCs and/or alternative refrigerants must employ only certified technicians. Enterprises must also submit annual reports detailing the amount of substances and the number of equipment they have imported. Enterprises which submit the required reporting will be included in the following year's quota cycle. A technical committee of RAC equipment was created to support the Mongolian Agency for Standards and Metrology in developing standards on handling ODS, HFCs and other alternative substances and on certification as well as to assist in the verification of the enterprises operating in the HVACR and MAC sectors. Requirements related to alternatives to ODS and high-GWP substances are also included in the national Environment Impact Assessment law for the building sector. Additionally, a tax incentive was introduced on zero- and low-GWP technology under the Corporate Income Tax Law, which includes a list of eco-friendly technologies and equipment.

26. The Energy Conservation Law (2015) requires designated large energy consumers in Mongolia to conduct energy audits and to take appropriate measures to use energy efficiently. Based on this law, the Energy Conservation Council is currently developing regulations for the classification, labelling and monitoring of energy-powered products, such as electronic equipment and home appliances, regarding their energy consumption. The Council is also working on regulations to incentivize/award citizens, enterprises and organizations who construct energy-efficient buildings, import energy-efficient equipment, or improve the energy efficiency. Already certain energy-efficient AC equipment³ is exempt from customs duty and value added tax.

³ AC units with a distributed system or that are designed to be fixed to a window, wall, ceiling, or floor, and AC units with a refrigerating device, valve for adjusting cold/hot air circulation, and heat pump for temperature regulation.

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

Overarching strategy

27. The KIP would be implemented in three stages to meet the goal of an 80 per cent reduction from the HFC baseline by 2045. Stage I of the KIP would meet the 10 per cent reduction compliance target by 2029. The strategic approach to achieve these reductions in stage I will reinforce and expand on activities implemented under the HPMP; target the MAC sector, which was not previously addressed under the HPMP; and prevent new demand of high-GWP HFCs in large RAC equipment through proposed regulatory actions. Future stages will include interventions to reduce HFCs in the local installation and assembling, foam manufacturing, and firefighting sectors.

Proposed reductions

28. The target for stage I of the KIP is to reach a 10 per cent reduction from the baseline HFC consumption by 2029, which amounts to a reduction of 5,731 CO₂-eq tonnes of HFCs. Table 7 presents the Montreal Protocol limits, estimated growth, and proposed HFC consumption targets under stage I of the KIP for Mongolia.

Table 7. HFC consumption forecast under the unconstrained scenario, Montreal Protocol limits, and proposed HFC reductions under stage I (CO₂-eq tonnes)

Particulars	2025	2026	2027	2028	2029
HFC consumption forecast at an annual growth rate of 3.6% of RAC equipment*	61,950	65,742	69,051	71,982	72,960
Montreal Protocol HFC consumption limits	57,309	57,309	57,309	57,309	51,578
HFC consumption levels proposed under the KIP	57,309	57,309	57,309	57,309	51,578
Proposed reductions from the HFC consumption baseline (%)	0	0	0	0	10

* Calculated based on an annual growth rate of 3.6 per cent in RAC equipment, leading to increase of 8.7 per cent in 2025, 6.1 per cent in 2026, 50 per cent in 2027, 4.2 per cent in 2028 and 1.4 per cent in 2029.

Proposed activities

29. Activities in the servicing sector proposed for implementation under stage I and the first tranche and their cost breakdown are presented in table 8.

Table 8. Servicing sector activities and their costs in stage I and the first tranche of the KIP for Mongolia, as submitted

Activity	Agency	Cost (US \$)	
		Stage I	First tranche
<i>Policy and regulations:</i> - Conduct a demand-side technical and economic feasibility study for the introduction of policy measures to curb the demand for high-GWP equipment (US \$15,000) - Undertake a study on commercial refrigeration, chillers, and industrial refrigeration as priority subsectors for reducing leakages (US \$10,000) - Strengthen the HFC quota system and develop standard operating procedures (SOPs) for its implementation, including exploring the introduction of a ban on the use of pure HFCs in PU foam manufacturing (US \$9,500) - Update the standards for the safe transport and storage of HFCs and their alternatives (US \$10,000)	UNEP	44,500	34,500

Activity	Agency	Cost (US \$)	
		Stage I	First tranche
<i>RAC capacity-building:</i> • Train 70 trainers and technicians on leak management and alternatives to R-404A, HFC-134a, and R-410A in specific sectors (includes an international trainer, travel and logistics) (US \$35,000) • Provide international training for four trainers specializing in highly technical subsectors on alternative refrigerants, such as R-717 and R-744 (US \$22,000)	UNEP	57,000	22,000
<i>MAC capacity-building:</i> • Conduct consultations on MAC-related occupational standards and training programmes (US \$3,000) • Provide training on MAC servicing for 25 automotive mechanics in collaboration with TVET institutions and industry (US \$5,000)	UNIDO	8,000	8,000
<i>Awareness and outreach:</i> • Three sector-based dialogues and awareness events in relevant priority sectors (e.g., end users of commercial cold storage, condensing units, chillers, and industrial refrigeration)	UNIDO	10,500	10,500
Project implementation and monitoring activities (see paragraph 30)	UNEP	15,000	6,000
Subtotal for UNEP		116,500	62,500
Subtotal for UNIDO		18,500	18,500
Total		135,000	81,000

Project implementation, coordination and monitoring

30. Following the same approach used for the implementation of the HPMP, the National Ozone Authority, acting as the national ozone unit (NOU) under the Ministry of Environment and Climate Change, will coordinate with national and international agencies to formulate, plan, and implement the HFC phase-down activities. The cost of these activities is proposed at US \$15,000 for consultants and other administrative expenses.

Total cost of stage I of the Kigali HFC implementation plan

31. The budget for stage I has been proposed at US \$135,000. The costs of activities in the refrigeration servicing sector have been proposed in line with decision 92/37. The proposed activities and cost of stage I of the KIP are summarized in table 8 above.

Implementation plan for the first tranche

32. The first funding tranche of stage I of the KIP was submitted at a total amount of US \$81,000, as shown in table 8 above, to be implemented between January 2026 and December 2027. Detailed information on the activities to be implemented under the first tranche are presented in paragraph 46 below.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

V. Comments

Institutional, policy and regulatory framework

HFC licensing and quota system, risk of non-compliance and flexibility provided by the Meeting of the Parties (decision XXXV/16)

33. In line with decision 87/50(g), UNEP has confirmed that Mongolia has an established and

enforceable system of licensing and quotas for monitoring HFC imports/exports in place. The country has already issued HFC import quotas for 2025 at 207,742 CO₂-eq tonnes, which is significantly higher than the Montreal Protocol control targets.

34. The Secretariat inquired about the rationale for the high quota allocated for 2025 that is above the Montreal Protocol limits, given the lower consumption levels observed in recent years. UNEP explained that local importers have faced persistent challenges in importing controlled substances due to the COVID-19 pandemic, followed by strict land transportation requirements for chemicals and hazardous substances set by a neighbouring exporting country. This has caused significant shipment delays, leading to disruption in the supply of HFCs to meet the servicing demand of RAC equipment in the country, particularly larger systems, and a subsequent rise in the import of smaller, self-contained refrigeration units. While local importers tested an alternative import route through the other neighbouring country, the results were very costly and not sustainable as a long-term solution.

35. In response to these ongoing constraints, and following consultations with local importers and RAC service providers, the Government of Mongolia established a higher quota for 2025 as a one-time temporary measure to accommodate unmet demand, on the understanding that this would sustain market needs until the initiation of the KIP with activities that will support reducing the demand and promote the transition to alternative technologies.

36. The Secretariat notes that to address the impacts of the COVID-19 pandemic on HFC baseline consumption for certain Article 5 countries, decision XXXV/16 of the Meeting of the Parties established *inter alia* that the Implementation Committee under the Non-Compliance Procedure of the Montreal Protocol should defer, until 2026 data becomes available, any consideration of compliance status with regard to control measures for consumption of HFCs for eight countries, including Mongolia, on the understanding that the countries will continue to make every effort to comply with these control measures.

37. Accordingly, the Secretariat requested UNEP to explore the possibility of revising the 2025 quota to comply with the Montreal Protocol target. Upon consultations with the Government, UNEP indicated that due to the lengthy administrative procedures and ministerial approval processes, it was not feasible to revise the quota during the last quarter of this year. However, in an effort to avoid any further deviation from the control measure, the country agreed not to issue any licences in addition to the actual licensed quantity of 83,036 CO₂-eq tonnes so far, also noting that the licensed amount has not been fully imported yet. UNEP also confirmed on behalf of the Government that the 2026 quota will be issued as per the established HFC baseline of 57,309 CO₂-eq tonnes.

38. The Secretariat notes that despite the 2025 import quota being above the baseline, the country's commitment to issuing no further licences for the year and establishing a 2026 quota as per the baseline represent an effort from the Government of Mongolia to comply with the Montreal Protocol control measures under the circumstances described.

39. In light of decision XXXV/16, the Secretariat would seek guidance from the Executive Committee on the procedure to be followed if the HFC consumption in 2025 is above the Montreal Protocol target for that year.

Regulatory framework

40. The Secretariat inquired about the regulatory measures to support the reduction in HFC consumption and whether the Government had any plans to implement a ban on the import of HFC-based domestic refrigerators and stand-alone commercial refrigeration units, noting the high market penetration of low-GWP alternative technologies. UNEP informed that the country is considering regulatory approaches to control HFC consumption and would look into the feasibility of introducing a GWP-based quota system or banning the import of equipment based on high-GWP refrigerants, such as cold storages

based on R-404A. This will depend on the availability of appliances based on alternative low/zero-GWP substances and market readiness. The NOU will also prepare draft regulations for a ban on HFCs in small domestic refrigeration equipment and will consider the inclusion of small commercial refrigeration equipment. However, the NOU cannot specify a date for enacting this regulation due to the lengthy regulatory and consultative process. On further discussion, it was agreed that the request for the second tranche of the KIP would include a detailed report on the development of the bans, including a specific timeline for their implementation.

Technical and cost-related issues

Polyurethane foam sector and HFCs contained in imported pre-blended polyols

41. The Secretariat inquired about the status of the preparatory project for the foam sector, which was approved at the 93rd meeting, as well as the submission of the foam sector phase-out plan. UNIDO explained that the request for the preparatory project was based on the historical pre-pandemic manufacturing capacity in the foam sector. However, during the survey, the consumption identified was lower than expected due to the impact of the pandemic on manufacturing enterprises. As a result, the foam sector plan was not included in stage I of the KIP, since the baseline consumption of pure HFCs in the sector was zero during those years, and the sector is currently relying on pre-blended polyols. The country and UNIDO will work together to verify the consumption of pre-blended polyols and will consider submitting a phase-out plan for the foam sector under a future stage of the KIP. UNIDO informed that the preparatory project will be closed by June 2026.

42. Further, as required in line with decision 96/52(a)(i)a., UNIDO submitted the details of enterprises with consumption of HFCs in imported pre-blended polyols, as presented in table 9. UNIDO confirmed that all the listed enterprises had established HFC-based installed capacity prior to 1 January 2020 and that all are nationally owned. The Secretariat requested an explanation for not having any consumption by these enterprises from 2020 to 2021, to which UNIDO informed that this was due to the impact of the COVID-19 pandemic.

Table 9: Enterprises with HFC consumption in imported pre-blended polyols from 2022 to 2024

Enterprise name	Brand name	Year	Substances (kg)*		Exporting country
			HFC-245fa	HFC-365mfc	
Korea Standard LLC	Vsray-3, Vsray-4	2022	1,040	0	China
UJI LLC	DD-44V20		1,501	0	China
Chiglel LLC	INOVOFOAM C3114		78	0	China
Korea Standard LLC	SPR 210	2023	0	40	Turkey
Chiglel LLC	INOVOFOAM C3114		240	0	China
Domog-Impex LLC	SPR 230, SPR 210		0	80	Turkey
Korea Standard LLC	Don spray 5504	2024	440	0	China
Total			3,299	120	-

* Indicates the weight of the HFC substance contained in the polyol.

43. The Secretariat noted the amount and type of HFCs imported in pre-blended polyols for the years 2022 to 2024; the list of three PU foam enterprises established prior to 1 January 2020 that used imported polyol systems, including the amount and type of HFCs contained therein; and the Government's plan to explore the introduction of a ban on the import and use of pure HFCs in the PU foam sector by the end of stage I of the KIP.

Refrigeration servicing sector

44. The Secretariat inquired on the status of making the voluntary technician certification programme based on RPL mandatory, as included in the second tranche of stage II of the HPMP approved at the

93rd meeting.⁴ UNEP clarified that the regulatory framework is in place and that the NOU is considering, within the third tranche of the HPMP, establishing a subsidiary regulation to support the enforcement of a mandatory, competency-based certification scheme along with the institutional capacity needed for its implementation. Creating the mandatory programme would require further strengthening of the training and assessment capacity. The NOU is continuing to support the RPL scheme and is encouraging informal technicians to participate before it becomes mandatory.

Total project cost

45. At the total cost of US \$135,000, stage I of the KIP for Mongolia will result in a reduction of 5,731 CO₂-eq tonnes from the country's HFC consumption eligible for funding, as summarized in paragraph 28 above. Stage I of the KIP will be implemented in two tranches.

Implementation plan for the first tranche of the Kigali HFC implementation plan

46. The plan of action for the first tranche was agreed as submitted and will include the following activities:

- (a) *Policy and regulations*: Demand-side technical and economic feasibility study for the introduction of policy measures to curb the demand for high-GWP equipment; study on commercial refrigeration, chillers, and industrial refrigeration as priority subsectors for reducing leakages; and strengthening of the HFC quota system and development of SOPs for its implementation, including exploring the introduction of a ban on the use of pure HFCs in PU foam manufacturing (UNEP) (US \$34,500);
- (b) *RAC capacity-building*: Training of 44 trainers and technicians on leak management and alternatives to R-404A, HFC-134a, and R-410A in specific sectors (UNEP) (US \$22,000);
- (c) *MAC capacity-building*: Consultations on MAC-related occupational standards and training programmes; training on MAC servicing for 25 automotive mechanics in collaboration with TVET institutions and industry (UNIDO) (US \$8,000);
- (d) *Awareness and outreach*: Three sector-based dialogues and awareness events in priority sectors (e.g., end users of commercial cold storage, condensing units, chillers and industrial refrigeration) (UNIDO) (US \$10,500); and
- (e) *Project implementation and monitoring*: For the incremental cost of additional KIP work by the NOU (UNEP) (US \$6,000).

Co-financing

47. The Government of Mongolia will co-finance stage I of the KIP through in-kind contributions such as Government staff time to support the NOU in the review of regulations. The NOU will explore additional funding opportunities and incentives during implementation, which might involve partnering with educational institutions funded by national budgets and industry associations to enhance training and certification possibilities. It will also determine whether synergies exist with various initiatives funded via global funding facilities focused on social and climate concerns, such as promoting gender equity, advancing green cooling strategies, boosting energy efficiency, and fostering public-private collaborations.

⁴ UNEP/OzL.Pro/ExCom/93/71

2025–2027 business plan of the Multilateral Fund

48. UNEP and UNIDO are requesting US \$135,000, plus agency support costs, for the implementation of stage I of the KIP for Mongolia. The total value of US \$152,550, including agency support costs, requested for the period of 2025–2027, is US \$103,550 above the amount in the business plan.

Gender policy implementation

49. The Government of Mongolia is fully committed to implementing the gender policy of the Multilateral Fund in line with decisions 84/92(d), 90/48(c) and 92/40(b). Efforts will be made during stage I of the KIP to encourage women to participate in the planned activities, including consultation, awareness-raising, and training workshops, and to ensure that, to the extent possible, project committees, management, and monitoring arrangements are responsive to women's participation and engagement in the organizational structure, decision-making, and selection processes. Relevant data will be collected throughout the project and will be reported.

Sustainability of the HFC phase-down and assessment of risks

50. Potential risks to the successful implementation and long-term sustainability of the KIP include institutional challenges, political instability, and limited legislative readiness. Market-related risks such as continued import challenges, limited availability and acceptance of low-GWP alternatives, and technician safety concerns also pose significant threats. These risks are being addressed through measures including strengthened collaboration with Government bodies, targeted training for customs officers under the HPMP, and the development of SOPs for the implementation of the HFC quota system, as well as the training of technicians in the MAC and RAC servicing sectors, stakeholder engagement, and awareness-raising initiatives. Further regulations, including a GWP-based quota system, which would give preference to quotas for low-GWP substances; a potential ban on the import of pure HFCs in the foam sector; and a ban on the import of HFC-based domestic refrigerators, would drive the market to low-GWP technology. The NOU plans to work with the implementing agencies to ensure regulatory preparedness, promote alternative technologies, and maintain momentum through the implementation of stage I and beyond.

Impact on the climate

51. The activities proposed, including efforts to promote low-GWP alternatives through regulations, studies, training, and awareness indicate that the implementation of stage I of the KIP will reduce refrigerant emissions into the atmosphere, resulting in climate benefits. A calculation of the impact on the climate of the activities in the KIP indicates that by 2029, Mongolia will have reduced its emissions by approximately 5,731 CO₂-eq tonnes of HFCs, 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

52. A draft Agreement between the Government of Mongolia and the Executive Committee for stage I of the KIP is contained in annex I to the present document.

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

53. Annex II summarizes the simultaneous implementation of activities under the HPMP and the KIP.

VI. Recommendation

54. The Executive Committee may wish to consider:

- (a) Approving, in principle, stage I of the Kigali HFC implementation plan (KIP) for Mongolia for the period 2025–2029 to reduce HFC consumption by 10 per cent of the country's baseline, in the amount of US \$152,550, consisting of US \$116,500, plus agency support costs of US \$15,145, for UNEP and US \$18,500, plus agency support costs of US \$2,405, for UNIDO;
- (b) Noting that, if the HFC consumption level for Mongolia in 2025 is above the Montreal Protocol control limits or the maximum allowable consumption in the Agreement between the Government of Mongolia and the Executive Committee, on the understanding that the Government of Mongolia would continue to make every effort to meet those control limits, the Secretariat would inform and seek guidance from the Executive Committee on the procedure to follow in light of decision XXXV/16;
- (c) Approving the draft Agreement between the Government of Mongolia and the Executive Committee for the reduction in consumption of HFCs in accordance with stage I of the KIP, contained in annex I to the present document; and
- (d) Approving the first tranche of stage I of the KIP for Mongolia and the corresponding tranche implementation plan, in the amount of US \$91,530, consisting of US \$62,500, plus agency support costs of US \$8,125, for UNEP and US \$18,500, plus agency support costs of US \$2,405, for UNIDO.

Annex I

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF MONGOLIA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROFLUOROCARBONS IN ACCORDANCE WITH STAGE I OF THE KIGALI HFC IMPLEMENTATION PLAN (Period: 2025–2029)

Purpose

1. This Agreement represents the understanding of the Government of Mongolia (“the Country”) and the Executive Committee with respect to the reduction of controlled use of Annex F substances set out in Appendix 1-A (“The Substances”) to a sustained level of 51,578 CO₂-equivalent (CO₂-eq) tonnes by 1 January 2029 in compliance with the Montreal Protocol schedule and the terms of this Agreement.
2. The Country agrees to meet the annual consumption limits of Annex F substances as set out in row 1.2 of Appendix 2-A (“The Targets, and Funding”) in this Agreement as well as in the Montreal Protocol reduction schedule for Annex F substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of Annex F substances that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for Annex F substances specified in Appendix 1-A, and in respect to any consumption of Annex F substances that exceeds the levels defined in row 4.1.3 (remaining consumption eligible for funding).
3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees, in principle, to provide the funding set out in row 3.1 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (“Funding Approval Schedule”).
4. The Country agrees to implement this Agreement in accordance with stage I of the Kigali HFC implementation plan (“the Plan”) as approved. In accordance with subparagraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of Annex F substances set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.

Conditions for funding release

5. The Executive Committee will only provide the Funding, in accordance with the Funding Approval Schedule, when the Country satisfies the following conditions at least 10 weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:
 - (a) That the Country has met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which there are no due country programme implementation reports at the date of the Executive Committee meeting at which the funding request is being presented are exempted;
 - (b) That the meeting of these Targets has been independently verified for all relevant years, unless the Executive Committee decided that such verification would not be required;
 - (c) That the Country had submitted a Tranche Implementation Report in accordance with Appendix 4-A (“Format of Tranche Implementation Reports and Plans”) covering each

previous calendar year; that it had achieved a significant level of implementation of activities initiated with previously approved tranches; and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent; and

- (d) That the Country has submitted a Tranche Implementation Plan in accordance with Appendix 4-A covering each calendar year until and including the year for which the Funding Approval Schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

Monitoring

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (“Monitoring Institutions and Roles”) will monitor and report on implementation of the activities in the previous Tranche Implementation Plans in accordance with their roles and responsibilities set out in the same appendix.

Flexibility in the reallocation of funds

7. The Executive Committee agrees that the Country may have the flexibility to reallocate part or all approved funds, according to the evolving circumstances, to achieve the smoothest reduction of consumption and phase-down of Annex F substances specified in Appendix 1-A, in accordance with the following considerations:

- (a) Reallocations categorized as major changes must be documented in advance, either in a Tranche Implementation Plan as foreseen in subparagraph 5(d) above, or as a revision to an existing Tranche Implementation Plan to be submitted 10 weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:
 - (i) Issues potentially concerning the rules and policies of the Multilateral Fund;
 - (ii) Changes that would modify any clause of this Agreement;
 - (iii) Changes in the annual levels of funding allocated to the individual bilateral or implementing agencies for the different tranches;
 - (iv) Provision of funding for activities not included in the current endorsed Tranche Implementation Plan, or removal of an activity in the Tranche Implementation Plan, with a cost greater than 30 per cent of the total cost of the last approved tranche;
 - (v) Changes in alternative technologies, on the understanding that any submission for such a request would identify the associated incremental costs, the potential impact on the climate, and any differences in CO₂-eq tonnes to be phased down if applicable, as well as confirm that the Country agrees that potential savings related to the change of technology would accordingly decrease the overall funding level under this Agreement;
- (b) Reallocations not categorized as major changes may be incorporated into the approved Tranche Implementation Plan, under implementation at the time, and reported to the Executive Committee in the subsequent Tranche Implementation Report;
- (c) Any enterprise included in the Plan that would be found to be ineligible under the policies of the Multilateral Fund (i.e., due to foreign ownership or establishment after the applicable

cut off date) would not receive financial assistance. This information would be reported as part of the Tranche Implementation Plan; and

- (d) Any remaining funds held by the bilateral or implementing agencies or the Country under the Plan will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

8. Specific attention will be paid to the execution of activities in the refrigeration servicing sector included in the Plan, in particular that the Country may use the flexibility available under this Agreement to address specific needs that might arise during project implementation.

Bilateral and implementing agencies

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNEP has agreed to be the lead implementing agency (the “Lead IA”) and UNIDO has agreed to be the cooperating implementing agency (the “Cooperating IA”) under the lead of the Lead IA in respect of the Country’s activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of the Lead IA and/or the Cooperating IA taking part in this Agreement.

10. The Lead IA will be responsible for ensuring coordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to the independent verification as per subparagraph 5(b). The Cooperating IA will support the Lead IA by implementing the Plan under the overall coordination of the Lead IA. The roles of the Lead IA and Cooperating IA are contained in Appendix 6-A and Appendix 6-B, respectively. The Executive Committee agrees, in principle, to provide the Lead IA and the Cooperating IA with the fees set out in rows 2.2 and 2.4 of Appendix 2-A.

Non-compliance with the Targets in the Agreement

11. Should the Country, for any reason, not meet the Targets for the elimination of Annex F substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A (“Reductions in Funding for Failure to Comply”) in respect of each CO₂-eq kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement and take related decisions. Once decisions are taken, the specific case of non-compliance with this Agreement will not be an impediment for the provision of funding for future tranches as per paragraph 5 above.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decisions that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee, and the Lead IA and the Cooperating IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA and the Cooperating IA with access to the information necessary to verify compliance with this Agreement.

Date of completion

14. The completion of the Plan and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption level has been specified in Appendix 2-A. Should at that time there still be activities that are outstanding, and which were foreseen in the last Tranche Implementation Plan and its subsequent revisions as per subparagraph 5(d) and paragraph 7, the completion of the Plan will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per subparagraphs 1(a), 1(b), and 1(d) of Appendix 4-A will continue until the time of the completion of the Plan unless otherwise specified by the Executive Committee.

Validity

15. All conditions set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

16. This Agreement may be modified or terminated only by mutual written agreement of the Country and the Executive Committee of the Multilateral Fund.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substances	Starting point for aggregate reductions in consumption (CO ₂ -eq tonnes)
HFCs	n/a
HFCs contained in imported pre-blended polyols	1,165

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars		2025	2026	2027	2028	2029	Total
1.1	Montreal Protocol reduction schedule of Annex F substances	%	freeze	freeze	freeze	freeze	10	n/a
		CO ₂ -eq tonnes	57,309	57,309	57,309	57,309	51,578	n/a
1.2	Maximum allowable total consumption of Annex F substances	Reduction in %	0.0	0.0	0.0	0.0	10.0	n/a
		CO ₂ -eq tonnes	57,309	57,309	57,309	57,309	51,578	n/a
2.1	Lead IA (UNEP) agreed funding (US \$)		62,500	0	54,000	0	0	116,500
2.2	Support costs for Lead IA (US \$)		8,125	0	7,020	0	0	15,145
2.3	Cooperating IA (UNIDO) agreed funding (US \$)		18,500	0	0	0	0	18,500
2.4	Support costs for Cooperating IA (US \$)		2,405	0	0	0	0	2,405
3.1	Total agreed funding (US \$)		81,000	0	54,000	0	0	135,000
3.2	Total support costs (US \$)		10,530	0	7,020	0	0	17,550
3.3	Total agreed costs (US \$)		91,530	0	61,020	0	0	152,550
4.1.1	Deduction of HFCs contained in imported pre-blended polyols under this Agreement (CO ₂ -eq tonnes)							0
4.1.2	Deduction of HFCs contained in imported pre-blended polyols from previously approved projects (CO ₂ -eq tonnes)							0
4.1.3	Remaining eligible consumption for HFCs contained in imported pre-blended polyols (CO ₂ -eq tonnes)							1,165

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval at the second meeting of the year specified in Appendix 2-A.

APPENDIX 4-A: FORMAT OF THE TRANCHE IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Tranche Implementation Report and Plans for each tranche request will consist of four parts:

- (a) A narrative report, with data provided by tranche, describing the progress achieved since the previous report, reflecting the situation of the Country in regard to phase-down of Annex F substances, how the different activities contribute to it, and how they relate to each other, including, where applicable, activities related to energy efficiency approved in the context of HFC phase-down pursuant to decision 91/65. The report should include the amount of Annex F substances consumption reduced as a direct result of the implementation of activities, by substance, the alternative technology used and the related phase in of alternatives, to allow the Secretariat to inform the Executive Committee on the resulting change in climate relevant emissions. The report should also include quantitative information on the activities implemented and further highlight the successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Tranche Implementation Plan(s), such as delays, use of flexibility for the reallocation of funds during implementation of a tranche as provided for in paragraph 7 of this Agreement, or other changes;
- (b) An independent verification report on the Plan's results and the consumption of Annex F substances, as per subparagraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification of consumption data must be provided with each tranche request, covering all relevant years for which a verification report has not yet been acknowledged by the Committee, as specified in subparagraph 5(a) of the Agreement;
- (c) A written description of the activities to be undertaken during the period covered by the requested tranche including quantitative information, highlighting implementation milestones, the time of completion and the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the Plan will be provided by calendar year. The description should include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall Plan that are foreseen. The description should also specify and explain in detail such changes to the overall Plan. This description of future activities can be submitted as a part of the same document as the narrative report under subparagraph 1(a) above; and
- (d) An Executive Summary of about five paragraphs, summarizing the information contained in subparagraphs 1(a) to 1(c) above.

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The National Ozone Authority (NOA), under the Ministry of Environment and Climate Change in the Government of Mongolia, is responsible for monitoring the progress of implementation of activities in the Plan.

2. Monitoring will be conducted during the implementation of the Plan to ensure efficient and effective implementation; overall project coordination; stakeholder engagement and coordination; smooth implementation of activities planned under various tranches; delivery of trainings and other expected outcomes; and facilitation of the HFC consumption verification undertaken by the Lead IA.

3. The Ministry of Environment and Climate Change in the Government of Mongolia will be responsible for the sustainability of consumption reduction targets achieved through the Agreement.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities, including at least the following:
 - (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's Plan;
 - (b) Assisting the Country in the preparation of the Tranche Implementation Reports and Plans as per Appendix 4-A;
 - (c) Providing independent verification to the Executive Committee that the Targets have been met and associated tranche activities have been completed as indicated in the Tranche Implementation Plan, consistent with Appendix 4-A;
 - (d) Ensuring that the experiences and progress are reflected in the updates to the overall Plan and in the future Tranche Implementation Plans, consistent with subparagraph 1(c) of Appendix 4-A;
 - (e) Fulfilling the reporting requirements of the Tranche Implementation Reports and Plans and of the overall Plan as specified in Appendix 4-A for submission to the Executive Committee including the activities implemented by the Cooperating IA;
 - (f) In the event that the last funding tranche is requested one or more years prior to the last year for which a consumption target had been established, annual Tranche Implementation Reports and, where applicable, verification reports on the current stage of the Plan should be submitted until all activities foreseen had been completed and HFC consumption targets had been met;
 - (g) Ensuring that appropriate independent technical experts carry out the technical reviews;
 - (h) Carrying out the required supervision missions;
 - (i) Ensuring the presence of an operating mechanism to allow for an effective and transparent implementation of the Tranche Implementation Plan and accurate data reporting;
 - (j) Coordinating the activities of the Cooperating IA and ensuring the appropriate sequence of activities;
 - (k) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country and the Cooperating IA, the allocation of the reductions to the different budget items and to the funding of the Lead IA and Cooperating IA;
 - (l) Ensuring that disbursements made to the Country are based on the use of the indicators;
 - (m) Providing assistance with the policy, management and technical support when required;

- (n) Reaching consensus with the Cooperating IA on any planning, coordination and reporting arrangements required to facilitate the implementation of the Plan; and
- (o) Timely releasing funds to the Country/participating enterprises for completing the activities related to the project.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent entity to carry out the verification of the Plan's results and of the consumption of Annex F substances mentioned in Appendix 1-A, as per subparagraph 5(b) of the Agreement and subparagraph 1(b) of Appendix 4-A.

APPENDIX 6-B: ROLE OF THE COOPERATING IMPLEMENTING AGENCIES

1. The Cooperating IA will be responsible for a range of activities. These activities are specified in the Plan, including at least the following:

- (a) Providing assistance for policy development when required;
- (b) Assisting the Country in the implementation and assessment of the activities funded by the Cooperating IA, and referring to the Lead IA to ensure a coordinated sequence of activities;
- (c) Providing reports to the Lead IA on these activities, for inclusion in the consolidated reports as per Appendix 4-A; and
- (d) Reaching consensus with the Lead IA on any planning, coordination and reporting arrangements required to facilitate the implementation of the Plan.

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY WITH THE TARGETS IN THE AGREEMENT

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US \$7.00 per CO₂-eq tonne of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the Target specified in row 1.2 of Appendix 2-A has not been met, and that applied that the maximum funding reduction would not exceed the funding level of the tranche being requested. Additional measures might be considered in cases where non-compliance extends for two consecutive years. Where the country has failed to comply with the Agreement due to illegal trade, the reduction in funding would not be applied if the illegally traded controlled substances are seized and subsequently confiscated, destroyed, exported, or returned to the country of origin.

Annex II

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

	HPMP – stage II		KIP – stage I		HPMP+KIP combined cost (US \$)
Category of activity	Activity	Cost (US \$)	Activity	Cost (US \$)	
Policy and regulations	- Strengthen the licensing and quota process and improve data reporting by developing an online licensing application and quota registration system for importers - Draft and enforce a ban on the import of HCFC-based equipment - Review relevant international safety standards for refrigerants and adopt, at minimum, a national standard for flammable refrigerants - Promote the use of low-GWP-based and energy efficient RAC equipment through fiscal incentives	45,000	- Demand side technical-economic feasibility study for the introduction of policy measures to curb the demand for high GWP-equipment, and a regulatory draft for restrictions on the import of selected equipment relying on HFC-134a - Study on commercial refrigeration, chillers, and industrial refrigeration as priority subsectors for reducing leakages - Strengthening of HFC quota system and development of SOPs, including exploring the introduction of a ban on the use of pure HFCs in PU foam manufacturing - Update of standards for safe the transport and storage of HFCs and alternatives	44,500	89,500
Customs and enforcement training	- Train 300 customs and enforcement officers and inspectors through on the ODS-related regulations, identification of refrigerants and HCFC-based equipment, use of refrigerant identifiers, data monitoring and reporting - Develop online training for officers in remote locations - Strengthen the training on risk profiling to strictly monitor imports of refrigerants - Participate in four regional border dialogue meetings to reduce illegal trade - Procure five refrigerant identifiers - Six capacity building workshops for importers and custom agents for better record keeping and reporting of imports	64,000			64,000
RAC technician training and certification	- Train 375 RAC technicians on good service practices - Update the training curriculum to include cold storages - Facilitate the approval of a national occupational standard and develop a competence-based TVET curriculum for the first two qualification levels - Integrate the good service practices component into the national RAC technician and recognition of prior learning (RPL) certification programmes, and expand the RPL to include commercial and industrial refrigeration sectors	118,000	- Train 70 trainers and technicians on leak management and alternatives to R-404A, HFC-134a and R-410A in specific sectors - International training of four trainers on highly specialized subsectors and alternatives (e.g. R-717 and R-744)	57,000	175,000

	HPMP – stage II		KIP – stage I		HPMP+KIP combined cost (US \$)
Category of activity	Activity	Cost (US \$)	Activity	Cost (US \$)	
	- Finalize a study on the participation of women in the RAC sector - Translate OzonAction mobile application for RAC technicians - Develop an online database to connect end users with certified technicians				
RAC technician equipment	- Provide technical assistance, tools and equipment to workshops that service HCFC-22-based industrial refrigeration systems to promote recovery and recycling of HCFCs - Identify and provide technical assistance to cold storage workshops - Provide tools/equipment to four TVET institutes - Provide specific training for technicians servicing larger industrial applications like cold storages	170,000			170,000
MAC sector capacity-building			- Consultations on MAC-related occupational standards and training programmes - Training on MAC servicing for 25 automotive mechanics in collaboration with TVET institutions and industry	8,000	8,000
Awareness-raising	- Four information briefs on the HPMP priorities and activities for selected sectors (building and construction, cold chains in meat processing and food storage, manufacturing including foam industry, and public procurement) - Four stakeholder consultations and two technical awareness workshops for the cold chain and food processing sectors, and foam end users - Implement general awareness activities including developing videos and locally adapted awareness materials and awareness raising workshops for consumers/end users on the commitment of the country to phase out HCFCs by 2030 and to encourage use of alternative technologies	37,000	- Three sector-based dialogues and awareness events in relevant to priority sectors (e.g., end users of commercial cold storage, condensing units, chillers and industrial refrigeration)	10,500	47,500
Coordination and monitoring	- Monitor activities, report progress, and work with stakeholders	106,000	- Incremental cost of additional work for KIP monitoring and reporting	15,000	121,000
Total		540,000		135,000	675,000
Percentage of total (%)		80		20	100