



**Programa de las
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COMITÉ EJECUTIVO DEL FONDO MULTILATERAL
PARA LA APLICACIÓN DEL
PROTOCOLO DE MONTREAL

Nonagésima quinta reunión

Montreal, 4 - 8 de diciembre de 2024

Puntos 9 c) y d) del orden del día provisional¹

ENMIENDAS AL PROGRAMA DE TRABAJO DE LA ONUDI PARA 2024

¹ UNEP/OzL.Pro/ExCom/95/1

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

COMENTARIOS Y RECOMENDACIÓN DE LA SECRETARÍA DEL FONDO

1. La ONUDI solicita la aprobación del Comité Ejecutivo de USD 3.203.206 más los gastos de apoyo del organismo de USD 224.224 para sus enmiendas al programa de trabajo para 2024, indicadas en el cuadro 1. La presentación se adjunta al presente documento.

Cuadro 1: Enmiendas al programa de trabajo de la ONUDI para 2024

País	Actividad/proyecto	Cantidad solicitada (USD)	Monto recomendado (USD)
SECCIÓN A: ACTIVIDADES RECOMENDADAS PARA APROBACIÓN GENERAL			
A1: Renovación de proyectos de fortalecimiento institucional			
Armenia	Renovación de proyecto de fortalecimiento institucional (fase IX)	317.952	317.952
Egipto	Renovación de proyecto de fortalecimiento institucional (fase XV)	604.966	604.966
Jordania	Renovación de proyecto de fortalecimiento institucional (fase XIV)	390.373	390.373
Turquía	Renovación de proyecto de fortalecimiento institucional (fase XI)	688.896	688.896
Turkmenistán	Renovación de proyecto de fortalecimiento institucional (fase VII)	204.019	204.019
Subtotal para A1		2.206.206	2.206.206
Gastos de apoyo al organismo		154.434	154.434
Total para A1		2.360.640	2.360.640
A2: Preparación de proyectos para los planes de gestión de eliminación de los HCFC (PGEH)			
Dominica ^a	Preparación de un PGEH (etapa II)	10.000	10.000
Marruecos	Preparación de un PGEH (etapa III)	60.000	60.000
Túnez	Preparación de un PGEH (etapa III)	60.000	60.000
Subtotal para A2		130.000	130.000
Gastos de apoyo al organismo		9.100	9.100
Total para A2		139.100	139.100
A3: Preparación de proyectos para los planes de ejecución de Kigali para los HFC (KIP)			
Bahamas ^a	Preparación de un KIP (etapa I)	39.000	39.000
Omán ^a	Preparación de un KIP (etapa I)	30.000	30.000
Subtotal para A3		69.000	69.000
Gastos de apoyo al organismo		4.830	4.830
Total para A3		73.830	73.830
A4: Preparación de un inventario nacional de bancos de sustancias controladas usadas o no deseadas y un plan para la recolección, transporte y eliminación de dichas sustancias²			
Bangladesh	Preparación de un inventario nacional de bancos de sustancias controladas usadas o no deseadas y un plan	90.000	90.000
Congo (el)	Preparación de un inventario nacional de bancos de sustancias controladas usadas o no deseadas y un plan	90.000	90.000
Madagascar	Preparación de un inventario nacional de bancos de sustancias controladas usadas o no deseadas y un plan	90.000	90.000
Subtotal para A4		270.000	270.000
Gastos de apoyo al organismo		18.900	18.900
Total para A4		288.900	288.900
SECCIÓN B: ACTIVIDADES RECOMENDADAS PARA CONSIDERACIÓN INDIVIDUAL			
B1: Preparación de proyectos piloto de eficiencia energética en virtud de la decisión 94/60			

² Aquí se menciona como preparación de un inventario nacional de bancos de sustancias controladas usadas o no deseadas y un plan

País	Actividad/proyecto	Cantidad solicitada (USD)	Monto recomendado (USD)
Egipto	B1.1 Preparación de un proyecto para mejorar la eficiencia energética en el sector de fabricación de equipos de refrigeración y aire acondicionado en el contexto de la reducción de los HFC	210.000	*
Nigeria	B1.2 Preparación de un proyecto para mejorar la eficiencia energética en el sector de fabricación de equipos de refrigeración y aire acondicionado en el contexto de la reducción de los HFC	78.000	*
Túnez	B1.3 Preparación de un proyecto para mejorar la eficiencia energética en el sector de fabricación de equipos de refrigeración y aire acondicionado en el contexto de la reducción de los HFC	20.000	*
Turquía	B1.4 Preparación de un proyecto para mejorar la eficiencia energética en el sector de fabricación de equipos de refrigeración y aire acondicionado en el contexto de la reducción de los HFC	220.000	*
Subtotal para B1		528.000	*
Gastos de apoyo al organismo		36.960	*
Total para B1		564.960	*
Total para A1, A2, A3, A4 y B1		3.203.206	2.675.206
Gastos de apoyo al organismo para A1, A2, A3, A4, B1		224.224	187.264
Total general		3.427.430	2.862.470

^a PNUMA, como organismo de ejecución principal

* Recomendado para consideración individual

ACTIVIDADES RECOMENDADAS PARA APROBACIÓN GENERAL

A1: Renovación de proyectos de fortalecimiento institucional

Descripción del proyecto

2. La ONUDI presentó sendas solicitudes para la renovación de proyectos de fortalecimiento institucional en los países que se indican en la sección A1 del cuadro 1. Los proyectos se describen en el anexo I al presente documento.

Comentarios de la Secretaría

3. La Secretaría analizó las solicitudes de renovación de los cinco proyectos de fortalecimiento institucional presentados por la ONUDI en nombre de los respectivos gobiernos a la luz de las directrices³ y decisiones relevantes sobre criterios de admisibilidad y niveles de financiamiento. Las solicitudes se contrastaron con los planes de trabajo de trabajo originales de las etapas anteriores, los datos del programa de país y del Artículo 7, los últimos informes de ejecución de los planes de gestión de eliminación de los HCFC (PGEH), los informes sobre la marcha de las actividades presentados por el organismo interviniente y las correspondientes decisiones de las Reuniones de las Partes. Se tomó nota de que los países han presentado sus datos de programa de país para 2023 y los datos del Artículo 7, que han dado cumplimiento

³ Decisión 91/63: b) aprobar el formato revisado para los informes finales y las solicitudes de prórroga de la financiación de fortalecimiento institucional y los indicadores de desempeño correspondientes; y c) solicitar a los países que operan al amparo del Artículo 5, a través de los organismos bilaterales y de ejecución, que utilicen el formato revisado mencionado en el subpárrafo b) anterior para todas las solicitudes de renovación de fortalecimiento institucional a partir de la primera reunión del Comité Ejecutivo en 2023.

a los objetivos de control en virtud del Protocolo de Montreal y que han notificado un consumo anual de HCFC que no excede el máximo anual permitido indicado en sus Acuerdos con el Comité Ejecutivo en el marco de los PGEH. Además, todas las solicitudes incluyeron una evaluación de los indicadores de desempeño, el riesgo y la sostenibilidad del proyecto y el logro de los objetivos de fortalecimiento institucional, de conformidad con la decisión 91/63 b).

Recomendación de la Secretaría

4. La Secretaría recomienda la aprobación general de las solicitudes de renovación de proyectos de fortalecimiento institucional para Armenia, Egipto, Jordania, Turkmenistán y Turquía con el nivel de financiación indicado en la sección A1 del cuadro 1 de este documento. De estimarlo necesario, el Comité Ejecutivo podrá remitir a los respectivos Gobiernos las observaciones formuladas en el anexo II al presente documento.

A2: Preparación de proyectos de planes de gestión de eliminación de los HCFC

Descripción del proyecto

5. La ONUDI presentó solicitudes para la preparación de la etapa III del PGEH para dos países que operan al amparo del Artículo 5 como organismo de ejecución designado; y una solicitud para la preparación de la etapa II del PGEH, como organismo de ejecución cooperante, con el PNUMA como organismo de ejecución principal, como se indica en la sección A2 del cuadro 1.

6. El PNUMA, en su calidad de organismo de ejecución principal para Dominica, solicitó USD 20.000, más gastos de apoyo del organismo de USD 2.600, y proporcionó una descripción de las actividades requeridas para la preparación de la etapa II del PGEH y los costos correspondientes de cada actividad en sus enmiendas al programa de trabajo;⁴ también se incluyen las observaciones de la Secretaría.

7. La ONUDI, en calidad de organismo de ejecución designado, presentó una descripción de las actividades para apoyar las solicitudes de preparación de proyectos para la etapa III del PGEH para Marruecos y Túnez, que incluyen la justificación de la financiación solicitada para la preparación de proyectos; un informe sobre la marcha de las actividades relativo a la ejecución de la etapa II de los respectivos PGEH; y la lista de actividades que se llevarán a cabo durante la preparación de proyectos y los presupuestos correspondientes utilizando el formato para solicitudes de preparación de proyectos para los PGEH.

Comentarios de la Secretaría

8. En su examen de estas solicitudes, la Secretaría tuvo en cuenta las directrices para la financiación de la preparación de PGEH para países amparados en el Artículo 5 establecidas en la decisión 71/42, el progreso de la etapa II del PGEH, incluido el grado de ejecución de los tramos alcanzado en el momento de redactar el presente documento, y la decisión 84/46 e).⁵ La Secretaría tomó nota de que la financiación solicitada está en línea con la decisión 71/42 y que las solicitudes se ajustan a la decisión 82/45 que permite la presentación de solicitudes de preparación de proyectos para la etapa III dos años antes de la fecha de finalización de la etapa II del PGEH.

⁴ Documento UNEP/OzL.Pro/ExCom/95/36

⁵ La inclusión de la etapa III de los PGEH en los planes administrativos tan solo se permite para países que tuvieran aprobada la etapa II de los PGEH con objetivos de reducción inferiores a los objetivos de cumplimiento para 2025.

9. Además, la Secretaría tomó nota de que los tres países han presentado sus datos con arreglo al Artículo 7⁶ y del programa de país para 2023, que los países están cumpliendo con los objetivos de control en virtud del Protocolo de Montreal y que su consumo anual notificado de HCFC no excede el consumo anual máximo permitido indicado en sus Acuerdos con el Comité Ejecutivo en el marco de los PGEH.

10. La ONUDI confirmó que la etapa III de los PGEH para Marruecos y Túnez eliminará el 100 por ciento del nivel básico de HCFC en esos países para el 1 de enero de 2030.

Recomendaciones de la Secretaría

11. La Secretaría recomienda la aprobación general para la preparación de proyectos de la etapa II del plan de gestión de eliminación de los HCFC (PGEH) para Dominica y la preparación de proyectos para la etapa III del PGEH para Marruecos y Túnez, con el nivel de financiación que se indica en la sección A2 del cuadro 1.

A3: Preparación de proyectos para los planes de ejecución de Kigali para los HFC

Descripción del proyecto

12. La ONUDI presentó solicitudes para la preparación de la etapa I de los KIP para dos países como organismo cooperante con el PNUMA como organismo de ejecución principal para ambos, como se indica en la sección A3 del cuadro 1.

13. El PNUMA, en su calidad de organismo de ejecución principal para Bahamas y Omán, solicitó USD 251.000, más gastos de apoyo del organismo de USD 32.630, y proporcionó una descripción de las actividades requeridas para la preparación de los KIP para dichos países y los costos correspondientes de cada actividad en sus enmiendas al programa de trabajo de 2024;⁷ también se incluyen las observaciones de la Secretaría.

Recomendación de la Secretaría

14. La Secretaría recomienda la aprobación general de la preparación de proyectos para la etapa I de los planes de ejecución de Kigali para los HFC para Bahamas y Omán con los niveles de financiación indicados en la sección A3 del cuadro 1.

A4: Preparación de un inventario nacional de bancos de sustancias controladas usadas o no deseadas y un plan para la recolección, transporte y eliminación de dichas sustancias

Descripción del proyecto

15. La ONUDI presentó solicitudes para la preparación de un inventario nacional de bancos de sustancias controladas usadas o no deseadas y un plan para tres países como organismo de ejecución designado, como se indica en la sección A4 del cuadro 1.

Comentarios de la Secretaría

16. Al examinar estas solicitudes, la Secretaría tuvo en cuenta los criterios para la preparación de un inventario nacional de bancos de sustancias controladas usadas o no deseadas y un plan en la decisión 91/66;

⁶ La Secretaría confirmó que el Gobierno de Túnez ha presentado sus datos del Artículo 7 relativos a los HCFC para 2023, aunque a fecha de 15 de noviembre de 2024 no se habían publicado en el sitio web de la Secretaría del Ozono.

⁷ Documento UNEP/OzL.Pro/ExCom/95/36

las actividades propuestas para la preparación de proyectos y su conexión con los planes nacionales de eliminación/reducción (p. ej., PGEH o KIP) en los países. La Secretaría observó que cada solicitud de financiación es conforme a la decisión 91/66.

17. La ONUDI, en calidad de organismo de ejecución designado, proporcionó una descripción de las actividades necesarias para la preparación de un inventario nacional de bancos de sustancias controladas usadas o no deseadas y un plan para Bangladesh, Congo y Madagascar y los costos correspondientes para cada actividad, utilizando los formularios de presentación pertinentes para las propuestas de proyectos.

18. Las actividades relacionadas con las solicitudes de financiación para los tres países incluyeron la preparación del inventario nacional, el plan de acción y el informe final; la identificación de las partes interesadas y las consultas y talleres con las partes interesadas; investigación sobre las reglamentaciones y programas nacionales que apoyan la gestión racional de refrigerantes y otras sustancias controladas; la recopilación y análisis de datos sobre las cantidades de refrigerantes no utilizados o no deseados provenientes de los tipos y fuentes de equipos identificados en todos los sectores; y actividades relacionadas con la incorporación de la perspectiva de género. Además de esas actividades mencionadas, otras actividades de preparación incluyeron un estudio teórico inicial de los datos ya disponibles de las encuestas nacionales sobre el consumo de sustancias controladas, actividades de recuperación y reciclaje de los operadores de gestión de desechos, y de recogida, desmantelamiento y recuperación de los desechos de refrigerantes y otras sustancias de equipos que llegan al final de su vida útil, y un estudio nacional para recopilar datos específicos para cuantificar las existencias de SAO y HFC, teniendo en cuenta tanto el equipo en uso como en inventario (dos países); y una actualización de los datos de consumo de HFC en el sector de ensamblaje y servicio y mantenimiento y un estudio preliminar de viabilidad económica sobre las actividades de destrucción para las partes interesadas pertinentes de los sectores público y privado (un país).

Recomendación de la Secretaría

19. La Secretaría recomienda la aprobación general para la preparación de un inventario nacional de bancos de sustancias controladas usadas o no deseadas y un plan para la recolección, transporte y eliminación de dichas sustancias para Bangladesh, Congo y Madagascar con el nivel de financiación indicado en la sección A4 del cuadro 1.

SECCIÓN B: ACTIVIDADES RECOMENDADAS PARA CONSIDERACIÓN INDIVIDUAL

B1: Preparación de proyectos piloto de eficiencia energética en virtud de la decisión 94/60

20. La ONUDI presentó solicitudes de preparación de proyectos para mejorar la eficiencia energética en los sectores de refrigeración y aire acondicionado en el contexto de la reducción de HFC en cuatro países (Egipto, Nigeria, Túnez y Turquía), como organismo de ejecución designado, como se indica en la sección B1 del cuadro 1. Las presentaciones se llevaron a cabo conforme a la decisión 94/60.

B1.1 Preparación de un proyecto para mejorar la eficiencia energética en el sector de fabricación de equipos de refrigeración y aire acondicionado en el contexto de la reducción de los HFC para Egipto

Descripción del proyecto

21. El objetivo del proyecto preparatorio para Egipto es preparar un proyecto para ayudar a 18 fabricantes (aire acondicionado residencial y refrigeración doméstica) a mejorar la eficiencia energética de sus productos, al tiempo que se les asiste a reconvertir su capacidad de fabricación basada en HFC a un refrigerante de bajo potencial de calentamiento atmosférico, por un monto de USD 220.000, posteriormente revisado a USD 210.000 para 25 fabricantes.

22. El Gobierno de Egipto ha iniciado esfuerzos para transformar el sector de refrigeración y aire acondicionado hacia prácticas de refrigeración sostenibles mediante la elaboración de un Plan de Acción Nacional de Refrigeración y el desarrollo progresivo de normas de eficiencia energética mínima. El sector de refrigeración y aire acondicionado de Egipto incluye tanto la fabricación de equipos como las importaciones, además de un importante sector de servicio y mantenimiento. El proyecto, una vez ejecutado, apoyará la mejora de las competencias del sector manufacturero local para que puedan seguir compitiendo con los fabricantes internacionales y fomentará la capacidad de los fabricantes y técnicos para ampliar las normas de eficiencia energética mínima en el sector de refrigeración y aire acondicionado, y proporcionará asesoramiento a los consumidores sobre equipos de alta eficiencia energética y respetuosos con el medio ambiente.

23. Egipto cuenta con un sistema establecido de normas de eficiencia energética mínima y etiquetas para los equipos de aire acondicionado residenciales y los refrigeradores domésticos. Si bien se están elaborando normas de eficiencia energética mínima para el sector de equipos comerciales de refrigeración y aire acondicionado, la ONUDI explicó que para los equipos de aire acondicionado comerciales existe una norma, aunque no se trata de normas de eficiencia energética mínima completamente desarrolladas.

24. Las actividades de preparación de proyectos incluyeron la recopilación de datos de las empresas, la asistencia técnica para evaluar las necesidades de mejora de la eficiencia energética, la elaboración de políticas para proporcionar apoyo financiero para mejorar la eficiencia energética, el desarrollo de un modelo de negocio sostenible para el centro regional de excelencia en eficiencia energética en Egipto, talleres de evaluación de necesidades y creación de capacidad y desarrollo del proyecto.

Comentarios de la Secretaría

25. La Secretaría ha examinado la solicitud de financiación preparatoria y toma nota de que el proyecto que se preparará con esta financiación está en consonancia con los criterios de proyectos establecidos en la decisión 94/60 para mejorar la eficiencia energética durante la reconversión de HFC en la fabricación de equipos de aire acondicionado residencial y refrigeración doméstica, y que el Gobierno de Egipto ha notificado el consumo de HFC en la fabricación de equipos de refrigeración y aire acondicionado en los informes de ejecución del programa de país para los años de 2020 a 2023.

26. El proyecto de preparación propuesto tiene por objeto desarrollar un proyecto para apoyar a 18 empresas de fabricación de equipos de refrigeración y aire acondicionado para mejorar la eficiencia energética y reducir los HFC (decisión 94/60). Sin embargo, la mayoría de las actividades propuestas en el presupuesto presentado (por ejemplo, la elaboración de políticas para proporcionar apoyo financiero para mejorar la eficiencia energética, el desarrollo de un modelo de negocio sostenible para el centro de excelencia regional de eficiencia energética y talleres de creación de capacidad) no estaban relacionadas con la preparación de proyectos de inversión en el sector manufacturero y más bien se referían a esferas sectoriales e institucionales más amplias (no manufactureras); por lo tanto, la Secretaría pidió a la ONUDI que examinara y revisara el proyecto de preparación para incluir únicamente la formulación de los proyectos para la reducción de los HFC con un componente de eficiencia energética para estas empresas y que lo volviera a presentar a la Secretaría.

27. Teniendo en cuenta las observaciones de la Secretaría, la ONUDI presentó la solicitud revisada de preparación de proyectos para desarrollar proyectos para 25 fabricantes (11 fabricantes de aparatos de aire acondicionado residencial, 6 de refrigeradores domésticos y 8 de aire acondicionado comercial) para sustituir el uso de HFC por alternativas de bajo potencial de calentamiento atmosférico en sus procesos de fabricación y mejorar la eficiencia energética de sus productos, por un monto de USD 210.000 con una duración de 24 meses.

28. La solicitud de financiación preparatoria revisada incluyó la recopilación de datos (sobre la capacidad de fabricación, las líneas de fabricación, el consumo de HFC, los niveles de eficiencia energética y el uso de refrigerantes), el estudio de la viabilidad técnica (evaluación de los sistemas actuales y análisis del potencial de integración de tecnologías de alta eficiencia energética y refrigerantes de bajo potencial de calentamiento atmosférico para las empresas participantes), el desarrollo de una estrategia de financiación de eficiencia energética (desarrollo de opciones de financiación para la mejora de la eficiencia energética, incluyendo posibles asociaciones con instituciones financieras), la elaboración de planes comerciales para nuevas inversiones o la modernización de las líneas de fabricación existentes para incorporar tecnologías de alta eficiencia energética, la celebración de talleres de consulta con las empresas y la elaboración del documento del proyecto de inversión para la reducción de los HFC junto con la mejora de la eficiencia energética.

29. Cabe señalar que, aunque el país cuenta con normas de eficiencia energética mínima para refrigeradores domésticos y aparatos de aire acondicionado residencial, no hay normas de eficiencia energética mínima para equipos de aire acondicionado comerciales, lo cual es un requisito en el marco operacional sobre eficiencia energética en la reducción de los HFC. La ONUDI explicó que para el aire acondicionado comercial existe una norma que es una norma de eficiencia energética mínima simplificada y que se están elaborando las normas de eficiencia energética mínima para el sector de refrigeración y aire acondicionado comercial.

30. La financiación preparatoria solicitada abordará tanto la preparación de la reconversión de HFC como el componente de eficiencia energética, y por lo tanto la Secretaría utilizó como referencia para el análisis de costos la directriz de costos para la preparación de la etapa I de los KIP de la decisión 87/50, que incluye niveles de financiación específicos para la preparación de proyectos de inversión según el número de empresas y el tamaño del país. El nivel de fondos solicitados es congruente con el nivel de fondos recomendado para proyectos de inversión en sectores con 25 empresas identificadas, con fondos adicionales que ascienden a USD 60.000 para mejorar la eficiencia energética.

31. La Secretaría también tomó nota de que las actividades incluidas en la solicitud de financiación preparatoria revisada, tal como se describió anteriormente, son congruentes con las actividades requeridas para la preparación de proyectos de inversión e incluyen también el trabajo adicional requerido para formular el componente de eficiencia energética de conformidad con la decisión 94/60. La ONUDI confirmó que con esta financiación preparatoria se prepararían los proyectos de reconversión y de eficiencia energética para estas 25 empresas de fabricación, y que estos proyectos se incluirán en la etapa I del KIP para Egipto, que se espera presentar en la 96ª reunión.

Recomendación de la Secretaría

32. El Comité Ejecutivo podrá estimar oportuno aprobar la preparación de un proyecto para mejorar la eficiencia energética y reconvertir el uso de HFC a tecnología de bajo potencial de calentamiento atmosférico en 25 fabricantes de equipos de refrigeración y aire acondicionado en Egipto por un monto de USD 210.000, más gastos de apoyo del organismo de USD 14.700 para la ONUDI.

B1.2 Preparación de un proyecto para mejorar la eficiencia energética en el sector de fabricación de equipos de refrigeración y aire acondicionado en el contexto de la reducción de los HFC para Nigeria

Descripción del proyecto

33. El objetivo del proyecto preparatorio para Nigeria es desarrollar un proyecto para ayudar a cuatro empresas de fabricación (aire acondicionado residencial y refrigeración comercial) a mejorar la eficiencia energética de sus productos, al tiempo que se les asiste a reconvertir su capacidad de fabricación de HFC a

un refrigerante de bajo potencial de calentamiento atmosférico, por un monto de USD 200.000, posteriormente revisado a USD 78.000 para 16 empresas.

34. El proyecto preparatorio tiene por objeto sentar las bases para fortalecer la eficiencia energética en el sector de refrigeración y aire acondicionado de Nigeria, que es esencial para sentar las bases de intervenciones exitosas y sostenibles en materia de eficiencia energética en el sector de fabricación de equipos de refrigeración y aire acondicionado de Nigeria.

35. Las actividades de preparación de proyectos incluyeron la recopilación de datos de las empresas, la asistencia técnica para evaluar las necesidades de mejora de la eficiencia energética, la elaboración de políticas para proporcionar apoyo financiero para mejorar la eficiencia energética, el desarrollo de un modelo de negocio sostenible para el centro regional de excelencia en eficiencia energética en Nigeria, talleres de evaluación de necesidades y creación de capacidad y desarrollo del proyecto. El proyecto de preparación propuesto desarrollaría proyectos para mejorar la eficiencia energética del sector de fabricación de equipos de refrigeración y aire acondicionado y apoyar la adopción de normas de eficiencia energética mínima.

36. Se ha terminado el desarrollo de normas de eficiencia energética mínima para el sector de aire acondicionado residencial. Se están elaborando normas de eficiencia energética mínima para el sector de refrigeración doméstica. Se iniciará el desarrollo de normas de eficiencia energética mínima para el sector de refrigeración y aire acondicionado comercial.

Comentarios de la Secretaría

37. La Secretaría ha examinado la solicitud de financiación preparatoria y toma nota de que el proyecto que se preparará con esta financiación está en consonancia con los criterios de proyectos establecidos en la decisión 94/60 para mejorar la eficiencia energética en la reconversión de HFC en el sector de fabricación de equipos de refrigeración y aire acondicionado.

38. La Secretaría tomó nota de que Nigeria ha presentado la etapa I del KIP a la 95ª reunión, que incluye la reconversión de una empresa de fabricación de equipos de aire acondicionado residencial y la asistencia técnica para 15 empresas de equipos de refrigeración y aire acondicionado, que participan en la etapa I del KIP y están reduciendo gradualmente sus HFC.

39. La Secretaría tomó nota de que, en el caso de Nigeria, ya se han preparado y presentado los proyectos de reducción de HFC, y de que la información de nivel básico de referencia pertinente sobre las empresas ya se ha recopilado y evaluado durante la preparación del proyecto de reducción de HFC. Por lo tanto, la Secretaría recomendó revisar la solicitud considerando únicamente la asistencia financiera adicional necesaria para mejorar la eficiencia energética en estas empresas.

40. Conforme a las deliberaciones entre la ONUDI y la Secretaría, la ONUDI presentó un proyecto de preparación revisado que incluía asistencia a 16 empresas de fabricación de equipos de refrigeración y aire acondicionado (un fabricante de aparatos de aire acondicionado domésticos y 15 empresas de refrigeración doméstica y comercial (refrigeradores y cámaras frigoríficas)) para mejorar la eficiencia energética en la reducción de los HFC, con un costo de USD 78.000 y una duración de 24 meses.

41. La propuesta revisada incluyó actividades como la recopilación de datos (sobre capacidades de producción, líneas de producción, consumo de HFC, niveles de eficiencia energética y uso de refrigerantes), estudio de viabilidad técnica (evaluar los sistemas actuales y analizar el potencial de integración de tecnologías de alta eficiencia energética y refrigerantes de bajo potencial de calentamiento atmosférico para las empresas participantes), elaboración de estrategias de financiación de la eficiencia energética (desarrollo

de opciones de financiación para mejoras de la eficiencia energética, incluidas posibles asociaciones con instituciones financieras), elaboración de planes comerciales para nuevas inversiones o modernización de las líneas de producción existentes para incorporar tecnologías de alta eficiencia energética, celebración de talleres de consulta y elaboración de documentos de proyecto para la mejora de la eficiencia energética.

42. Cabe señalar que el país cuenta con normas de eficiencia energética mínima para los equipos de aire acondicionado residencial; las normas de eficiencia energética mínima para la refrigeración doméstica están en fase de desarrollo y todavía no para el aire acondicionado comercial, lo que es un requisito en el marco operativo sobre eficiencia energética en la reducción de los HFC.

43. La financiación preparatoria solicitada abordará el componente de eficiencia energética para las empresas que reducen los HFC en la etapa I del KIP, y la cantidad solicitada justifica el trabajo adicional sobre las mejoras de eficiencia energética. La Secretaría también observó que las actividades incluidas en las solicitudes de financiación preparatorias, descritas anteriormente, son congruentes con las actividades para formular el componente de eficiencia energética de conformidad con la decisión 94/60.

Recomendación de la Secretaría

44. El Comité Ejecutivo puede estimar oportuno aprobar la preparación de un proyecto para mejorar la eficiencia energética en 16 empresas de fabricación de equipos de refrigeración y aire acondicionado en el contexto de la reducción de HFC para Nigeria por un monto de USD 78.000, más gastos de apoyo del organismo de USD 5.460 para la ONUDI.

B1.3 Preparación de un proyecto para mejorar la eficiencia energética en el sector de fabricación de equipos de refrigeración y aire acondicionado en el contexto de la reducción de los HFC para Túnez

Descripción del proyecto

45. En la 94ª reunión, el Comité Ejecutivo aprobó un proyecto piloto para mantener y/o mejorar la eficiencia energética de las tecnologías y equipos de sustitución en el contexto de la reducción de los HFC (actividades ajenas a la inversión) para Túnez, por un monto de USD 170.000, más gastos de apoyo del organismo de USD 15.300, e invitó al Gobierno de Túnez a que, si así lo deseaba, presentara un proyecto piloto adicional para mejorar la eficiencia energética de los aparatos de aire acondicionado tipo split a base de HFC-32 y los dispensadores de agua fría a base de R-600a fabricados por las empresas que se estaban reconvirtiendo en la etapa I del plan de ejecución de Kigali para los HFC del país, en el entendido de que el proyecto piloto adicional se presentaría a más tardar en la 96ª reunión.⁸ Conforme a la decisión 94/57 b), se presenta este proyecto de preparación para la preparación del proyecto piloto adicional sobre eficiencia energética en ocho empresas que fabrican aparatos domésticos de aire acondicionado, dispensadores de agua fría, refrigeradores y congeladores.

46. El proyecto que se va a desarrollar ayudaría a ocho empresas, con los incentivos necesarios para producir equipos de refrigeración y aire acondicionado con niveles más altos de eficiencia energética. Los objetivos específicos de eficiencia energética para cada empresa se establecerán durante la fase preparatoria del proyecto. Las actividades de preparación de proyectos incluyen la recopilación de datos sobre el volumen de fabricación y los niveles básicos de eficiencia energética; apoyo técnico a ocho fabricantes para identificar mejoras en la eficiencia energética de sus productos actuales; análisis de los datos recibidos de los fabricantes y consultas individuales; y la elaboración del documento del proyecto.

47. La ONUDI pidió que se permitiera al país presentar el proyecto piloto adicional en la 97ª reunión en lugar de la 96ª reunión, como se especifica en la decisión 94/57 b).

⁸ Decisión 94/57

48. Se están desarrollando normas de eficiencia energética mínima para dispositivos de refrigeración y aire acondicionado pequeños y para grandes instalaciones, que entrarán en vigor el 1 de julio de 2026.

Comentarios de la Secretaría

49. La Secretaría ha examinado la solicitud de financiación preparatoria y toma nota de que el proyecto que se preparará con esta financiación está en consonancia con los criterios de proyectos establecidos en la decisión 94/60 para mejorar la eficiencia energética durante la reconversión de HFC a tecnología de bajo potencial de calentamiento atmosférico.

50. La decisión 94/57 requiere que el proyecto sea específicamente para mejorar la eficiencia energética de los aparatos de aire acondicionado tipo split que utilizan HFC-32 y los dispensadores de agua fría que utilizan R-600a fabricados por las empresas que se están reconvirtiendo en la etapa I del KIP. Sin embargo, la propuesta incluye ocho fabricantes de equipos de aire acondicionado domésticos, de los cuales cuatro empresas también fabrican refrigeradores y/o congeladores, además de fabricar aparatos de aire acondicionado domésticos. Durante las conversaciones con la Secretaría, la ONUDI pidió que se incluyera una empresa adicional de propiedad local que no formaba parte del KIP y que fabrica refrigeradores domésticos; esa empresa se había reconvertido en el marco del PGEH para eliminar su uso de HCFC-141b contenido en polioles premezclados y pasar a la tecnología de ciclopentano. La Secretaría observa también que una de las ocho empresas se estableció después de la fecha límite de la capacidad admisible para la reducción de los HFC.

51. La Secretaría ha tomado nota de que la ONUDI ha propuesto una suma global de USD 20.000 para todas las empresas y recomienda la aprobación de la financiación preparatoria en el entendimiento de que las cuestiones relativas a la admisibilidad de las empresas mencionadas en el párrafo 50 se considerarán en el momento de presentar sus proyectos. La Secretaría también tomó nota de que las actividades incluidas en las solicitudes de financiación preparatorias para nueve empresas, descritas anteriormente, son congruentes con las actividades requeridas para el trabajo adicional requerido para formular el componente de eficiencia energética de conformidad con la decisión 94/60.

Recomendación de la Secretaría

52. El Comité Ejecutivo podría decidir contemplar lo siguiente:

- a) Aprobar la solicitud para la preparación de un proyecto para mejorar la eficiencia energética en el sector de fabricación de equipos de refrigeración y aire acondicionado en el contexto de la reducción de los HFC en Túnez por un monto de USD 20.000, más gastos de apoyo del organismo de USD 1.400; y
- b) Permitir que el país presente el proyecto piloto adicional a la 97ª reunión en lugar de a la 96ª reunión, como se especifica en la decisión 94/57 b).

B1.4 Preparación de un proyecto para mejorar la eficiencia energética en el sector de fabricación de equipos de refrigeración y aire acondicionado en el contexto de la reducción de los HFC para Turquía

Descripción del proyecto

53. El objetivo del proyecto preparatorio para Turquía es desarrollar un proyecto destinado a mejorar la eficiencia energética en el sector de refrigeración y aire acondicionado de Turquía centrándose en incentivar tecnologías de alta eficiencia, mejorar el acceso al mercado de sistemas con alta eficiencia energética, proporcionar asistencia técnica a la población local para adoptar refrigerantes de bajo potencial de calentamiento atmosférico, ayudar a los fabricantes a mejorar los valores del índice de eficiencia

energética estacional (SEER) y el coeficiente de rendimiento (COP), promover la innovación, llevar a cabo análisis de mercado para identificar tendencias, obstáculos y oportunidades clave para las tecnologías con alta eficiencia energética y garantizar que el proyecto se ajuste a las demandas del mercado, por USD 250.000, posteriormente revisado a USD 220.000 para 29 empresas.

54. El proyecto de inversión se alinea con la estrategia nacional de Turquía, apoyando los compromisos para reducir las emisiones de gases de efecto invernadero, mejorar la eficiencia energética y la transición a una economía sostenible. Contribuye al Plan de Acción Nacional de Eficiencia Energética y a la Enmienda de Kigali. Para los fabricantes, el proyecto crea oportunidades para invertir en mejoras tecnológicas, adoptar refrigerantes de bajo potencial de calentamiento atmosférico y mejorar la competitividad.

55. Para las normas de eficiencia energética y el etiquetado, Turquía alinea sus normas de eficiencia energética con las directivas de la UE, utilizando normas internacionales (ISO y CEI) para la medición. Los sistemas de etiquetado siguen el Reglamento de Etiquetado Energético de la UE, que indica la eficiencia del producto.

56. Las actividades de preparación de proyectos incluyeron la elaboración de un programa de incentivos financieros, el diseño de un programa de colaboración con fabricantes y distribuidores locales, la capacitación técnica centrada en la mejora de las líneas de producción y la integración de tecnologías de alta eficiencia energética, la elaboración de una estrategia de expansión del mercado para mejorar el acceso y la asequibilidad de los sistemas de alta eficiencia energética en regiones desatendidas, y el diseño de un sistema robusto para rastrear y evaluar el impacto del proyecto en el consumo de energía, las emisiones de gases de efecto invernadero y la adopción de tecnologías con alta eficiencia energética.

Comentarios de la Secretaría

57. La Secretaría ha examinado la solicitud de financiación preparatoria y toma nota de que el proyecto que se preparará con esta financiación está en consonancia con los criterios de proyectos establecidos en la decisión 94/60 para mejorar la eficiencia energética en el sector de refrigeración y aire acondicionado. Además, la Secretaría tomó nota de que Turquía ha presentado la etapa I del KIP para el sector de servicio y mantenimiento para su consideración en la 95ª reunión; que la ONUDI y el país tienen la intención de presentar, durante la etapa I, proyectos de inversión, incluidos componentes de eficiencia energética, de conformidad con la decisión 94/60.

58. El proyecto propuesto menciona diversas actividades relacionadas con el fortalecimiento del sector para la eficiencia energética. Sin embargo, las actividades propuestas en el presupuesto presentado no estaban relacionadas con la preparación de proyectos de inversión para empresas manufactureras específicas, sino que se referían a esferas sectoriales e institucionales más amplias; por lo tanto, la Secretaría pidió a la ONUDI que proporcionara una estimación del número de empresas y sectores/aplicaciones específicos que se incluirían y la tecnología alternativa propuesta, y el presupuesto estimado para preparar los proyectos para la reducción de los HFC con el componente de eficiencia energética para estas empresas, y que se volviera a presentar a la Secretaría.

59. Conforme a las deliberaciones entre la ONUDI y la Secretaría, la ONUDI presentó un proyecto de preparación revisado que incluía asistencia a 29 empresas de fabricación de equipos de refrigeración y aire acondicionado (fabricantes de refrigeradores y aire acondicionado comerciales) para sustituir el uso de HFC por alternativas de bajo potencial de calentamiento atmosférico en sus procesos de fabricación y mejorar la eficiencia energética de sus productos, por un monto de USD 220.000 con una duración de 24 meses.

60. La solicitud de financiación preparatoria revisada incluyó la recopilación de datos (sobre la capacidad de fabricación, las líneas de fabricación, el consumo de HFC, los niveles de eficiencia energética y el uso de refrigerantes), el estudio de la viabilidad técnica (evaluación de los sistemas actuales y análisis

del potencial de integración de tecnologías de alta eficiencia energética y refrigerantes de bajo potencial de calentamiento atmosférico para las empresas participantes), el desarrollo de una estrategia de financiación de eficiencia energética (desarrollo de opciones de financiación para la mejora de la eficiencia energética, incluyendo posibles asociaciones con instituciones financieras), la elaboración de planes comerciales para nuevas inversiones o modernización de las líneas de fabricación existentes para incorporar tecnologías de alta eficiencia energética, la celebración de talleres de consulta con las empresas y la elaboración del documento del proyecto de inversión para la mejora de la eficiencia energética.

61. La financiación preparatoria solicitada abordará tanto la preparación de la reconversión de HFC como el componente de eficiencia energética, y por lo tanto la Secretaría utilizó como referencia para el análisis costos la directriz de costos para la preparación de la etapa I de los KIP de la decisión 87/50, que incluye niveles de financiación específicos para la preparación de proyectos de inversión según el número de empresas y el tamaño del país. El nivel de fondos solicitados es congruente con el nivel de fondos recomendado para proyectos de inversión en sectores con 29 empresas identificadas, con fondos adicionales que ascienden a USD 70.000 para mejorar la eficiencia energética.

62. La Secretaría también tomó nota de que las actividades incluidas en las solicitudes de financiación preparatoria, tal como se describió anteriormente, son congruentes con las actividades requeridas para la preparación de proyectos de inversión e incluyen también el trabajo adicional requerido para formular el componente de eficiencia energética de conformidad con la decisión 94/60. La ONUDI confirmó que con esta financiación preparatoria se prepararían tanto el proyecto de reconversión como el de eficiencia energética de estas 29 empresas de fabricación.

Recomendación de la Secretaría

63. El Comité Ejecutivo podrá estimar oportuno aprobar la preparación de un proyecto para mejorar la eficiencia energética y reconvertir el uso de HFC a tecnología de bajo potencial de calentamiento atmosférico para 29 empresas de fabricación de refrigeración y aire acondicionado en Turquía por un monto de USD 220.000, más gastos de apoyo del organismo de USD 15.400 para la ONUDI.

Annex I

INSTITUTIONAL STRENGTHENING PROJECT PROPOSALS¹

Armenia: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNIDO
Amounts previously approved for institutional strengthening (US \$):			
	Phase I:	Apr-09	127,723
	Phase II:	Dec-10	129,000
	Phase III:	Dec-12	128,184
	Phase IV:	Nov-14	127,225
	Phase V:	May-16	163,649
	Phase VI:	Dec-18	164,352
	Phase VII:	Dec-20	164,352
	Phase VIII:	Dec-22	226,806
	Total:		1,231,291
Amount requested for renewal (phase IX) (US \$):			317,952
Amount recommended for approval for phase IX (US \$):			317,952
Agency support costs (US \$):			22,257
Total cost of institutional strengthening phase IX to the Multilateral Fund (US \$):			340,209
Date of approval of country programme:			2009
Date of approval of HCFC phase-out management plan:			2010
Date of approval of Kigali HFC implementation plan:			2024
Baseline consumption of controlled substances (ODP tonnes/CO ₂ -eq tonnes):			
(a) Annex B, Group III (methyl chloroform) (average 1998-2000)			0.0
(b) Annex C, Group I (HCFCs) (average 2009-2010)			7.0
(c) Annex E (methyl bromide) (average 1995-1998)			0.0
(d) Annex F (HFCs) (average 2020-2022 plus 65% of HCFC baseline)			475,254
Latest reported ODS consumption (2023) (ODP tonnes) as per Article 7:			
(a) Annex B, Group III (methyl chloroform)			0.00
(b) Annex C, Group I (HCFCs)			2.32
(c) Annex E (methyl bromide)			0.00
Total:			2.32
(d) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7			664,716
Year of reported country programme implementation data:			2023
Amount approved for projects (as at May 2024) (US \$):			3,047,071
Amount disbursed (as at December 2023) (US \$):			2,185,510
ODS to be phased out (as at May 2024) (ODP tonnes):			3.5
ODS phased out (as at December 2023) (ODP tonnes):			2.2

1. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	707,170
(b) Institutional strengthening:	1,231,291
(c) Project preparation, technical assistance, training and other non-investment projects:	1,108,610
Total:	3,047,071
(d) HFC activities funded from additional voluntary contributions	150,000

¹ Data as at December 2023 are based on document UNEP/OzL.Pro/ExCom/95/18.

Progress report

2. Under phase VIII of the institutional strengthening (IS) project, the national ozone unit (NOU) under the Ministry of Environment of Armenia worked closely with stakeholders on project implementation matters. The Government continued to implement the well-established import and export licensing system for substances controlled under the Montreal Protocol. Together with other national agencies and stakeholders the NOU coordinated the monitoring and implementation of ODS phase-out programmes to assist the country to comply with its HCFC phase-out targets, and also prepared stage I of the Kigali HFC implementation plan (KIP) which was approved at the 94th meeting of the Executive Committee. The NOU also organized a series of awareness raising activities targeting customs officials, industry representatives, students and the public. Article 7 and country programme data were collected and reported to the Ozone and Fund Secretariats, respectively. Armenia actively participated in regional network and Montreal Protocol meetings. Furthermore, the NOU advanced the preparation of stage III of the HCFC phase-out management plan (HPMP).

Plan of action

3. During phase IX of the IS project, the NOU will continue to support the implementation of Armenia's strategies for the phase-out of ODS and phase-down of HFCs. The NOU's plans include strengthening the national capacity to enforce ODS and HFC legislation and regulations; training and capacity building of stakeholders; and awareness raising activities targeting key stakeholder. Priority will be given to the coordination of the import/export records with the member states of the Eurasian Economic Union; implementation of stage I of the KIP; and the submission of stage III of the HPMP. Planned activities will also include country programme and Article 7 data reporting; continued monitoring of the licensing system and allocation of import quotas; continued cooperation with custom authorities and industry associations; celebration of International Ozone Day; participation in regional network and Montreal Protocol meetings to exchange information, knowledge and experience. All activities will be organized in line with the Multilateral Fund gender mainstreaming policy.

Sustainability and risk assessment

4. The NOU is well established under the Ministry of Environment with clear roles and responsibilities and the national legislation in place ensures that the NOU can carry out its responsibilities. Continuous training of NOU staff can further help to strengthen the NOU and contribute to the sustainability of the results. Any potential risk can be mitigated by the continuity of NOU operations, regional collaboration to ensure that regional efforts remain aligned with Montreal Protocol goals, and the engagement of stakeholders to ensure that Montreal Protocol activities have national and regional support.

Egypt: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNIDO
Amounts previously approved for institutional strengthening (US \$):			
Phase I:	Jun-93		297,699
Phase II:	Nov-95		198,741
Phase III:	Mar-99		197,749
Phase IV:	Jul-01		187,919
Phase V:	Jul-03		245,446
Phase VI:	Mar-07		245,447
Phase VII:	Nov-08		245,447
Phase VIII:	Jul-10		245,447
Phase IX:	Jul-12		243,960
Phase X:	May-14		244,198

Summary of the project and country profile			
	Phase XI:	May-16	312,440
	Phase XII:	Jun-18	311,370
	Phase XIII:	Dec-20	312,440
	Phase XIV:	Dec-22	431,542
		Total:	3,719,844
Amount requested for renewal (phase XV) (US \$):			604,966
Amount recommended for approval for phase XV (US \$):			604,966
Agency support costs (US \$):			42,348
Total cost of institutional strengthening phase XV to the Multilateral Fund (US \$):			647,313
Date of approval of country programme:			1992
Date of approval of HCFC phase-out management plan:			2011
Date of approval of Kigali HFC implementation plan:			n/a
Baseline consumption of controlled substances (ODP tonnes/CO ₂ -eq tonnes):			
(a) Annex B, Group III (methyl chloroform) (average 1998-2000)			26.0
(b) Annex C, Group I (HCFCs) (average 2009-2010)			386.3
(c) Annex E (methyl bromide) (average 1995-1998)			238.1
(d) Annex F (HFCs) (average 2020-2022 plus 65% of HCFC baseline)			Not available
Latest reported ODS consumption (2023) (ODP tonnes) as per Article 7:			
(a) Annex B, Group III (methyl chloroform)			0.00
(b) Annex C, Group I (HCFCs)			236.65
(c) Annex E (methyl bromide)			0.00
		Total:	236.65
(d) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7			13,357,171
Year of reported country programme implementation data:			2023
Amount approved for projects (as at May 2024) (US \$):			85,786,279
Amount disbursed (as at December 2023) (US \$):			67,283,331
ODS to be phased out (as at May 2024) (ODP tonnes):			4669.9
ODS phased out (as at December 2023) (ODP tonnes):			4636.55

5. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	74,850,178
(b) Institutional strengthening:	3,719,844
(c) Project preparation, technical assistance, training and other non-investment projects:	7,216,257
	Total:
	85,786,279
(d) HFC activities funded from additional voluntary contributions	280,000

Progress report

6. Under phase XIV of the IS project, the Ozone Layer Protection Section (NOU) of the Egyptian Environmental Affairs Agency ensured the ratification of the Kigali Amendment on 22 August 2023. Activities of the NOU included: submission of Article 7 and country programme data reports for 2022 and 2023; strict monitoring of HCFC trade through the national ODS regulatory framework and allocation of quotas to ensure consumption is in compliance with the Montreal Protocol reduction targets; further strengthening the cooperation with the customs authorities; collaboration and sharing information with the industry associations and other stakeholder institutions; organizing regular meetings of the National Ozone Committee; completion of activities under stage II of the HPMP and preparation of stage I of the KIP; and public awareness activities including celebration of International Ozone Day. Furthermore, during the

reporting period an online application for issuing import and export approvals was developed and enhanced to effectively track and manage the import and export of controlled substances under the Montreal Protocol.

Plan of action

7. During phase XV, Egypt's priority will be to achieve the 2025 to 2027 HCFC reduction targets and freeze HFC consumption at baseline level. The NOU will undertake the following activities: oversight of the implementation of activities under stage II of the HPMP; submission and subsequent implementation of stage I of the KIP; country programme and Article 7 data reporting, including reporting in CO₂ eq.; monitoring of the licensing system and allocation of import quotas; cooperation with custom authorities and industry associations; public awareness activities including celebration of International Ozone Day; participation in regional network and Montreal Protocol meetings. The country is committed to implementing activities in line with the Multilateral Fund gender mainstreaming policy.

Sustainability and risk assessment

8. The NOUs are well established under the Egyptian Environmental Affairs Agency structure with clear roles and responsibilities and the legislation currently in place ensures that the NOU can conduct its responsibilities. Continuous training of NOU staff can further help to strengthen the capacities of the NOU team to further contribute to the sustainability of the results of Montreal Protocol activities. In addition, the knowledge and experience from the NOU of Egypt can be shared with other Article 5 countries in order to support regional and global sustainability efforts. In ensuring the sustainability, the NOU coordinates its activities with other government bodies and the private sector, including the organization of regular National Ozone Committee meetings. This coordination helps the NOU to undertake informed and coordinated decisions, thus avoiding any potential risks.

Jordan: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNIDO
Amounts previously approved for institutional strengthening (US \$):			
Phase I:	Jun-92		170,000
Phase II:	May-97		128,066
Phase III:	Jul-99		128,066
Phase IV:	Jul-01		128,066
Phase V:	Jul-03		158,383
Phase VI:	Jul-05		158,369
Phase VII:	Jul-07		158,383
Phase VIII:	Jul-09		118,788
Phase IX:	Dec-10		158,383
Phase X:	Dec-12		157,646
Phase XI:	Nov-14		157,646
Phase XII:	Dec-16		201,787
Phase XIII:	Dec-18		201,787
	Total:		2,025,371
Amount requested for renewal (phase XIV) (US \$):			390,373
Amount recommended for approval for phase XIV (US \$):			390,373
Agency support costs (US \$):			27,326
Total cost of institutional strengthening phase XIV to the Multilateral Fund (US \$):			417,699
Date of approval of country programme:			1993
Date of approval of HCFC phase-out management plan:			2011
Date of approval of Kigali HFC implementation plan:			2023
Baseline consumption of controlled substances (ODP tonnes/CO ₂ -eq tonnes):			

Summary of the project and country profile	
(a) Annex B, Group III (methyl chloroform) (average 1998-2000)	18.2
(b) Annex C, Group I (HCFCs) (average 2009-2010)	83.0
(c) Annex E, (methyl bromide) (average 1995-1998)	176.3
(d) Annex F (HFCs) (average 2020-2022 plus 65% of HCFC baseline)	2,808,101
Latest reported ODS consumption (2023) (ODP tonnes) as per Article 7:	
(a) Annex B, Group III (methyl chloroform)	0
(b) Annex C, Group I (HCFCs)	15.73
(c) Annex E, (methyl bromide)	0
Total:	15.73
(d) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7	1,671,435
Year of reported country programme implementation data:	2023
Amount approved for projects (as at May 2024) (US \$):	33,314,025
Amount disbursed (as at December 2023) (US \$):	26,517,798
ODS to be phased out (as at May 2024) (ODP tonnes):	2449.1
ODS phased out (as at December 2023) (ODP tonnes):	1954.43

9. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	27,395,605
(b) Institutional strengthening:	2,025,371
(c) Project preparation, technical assistance, training and other non-investment projects:	3,893,049
Total:	33,314,025
(d) HFC activities funded from additional voluntary contributions	0

10. Under phase XIII of the IS project, Jordan ratified the Kigali Amendment and issued regulations to control ODS, HFCs and their alternatives and also equipment containing HCFCs, HFCs and their alternatives. A ban on the import of HCFC-141b in bulk and contained in imported pre-blended polyols has been implemented since 1 January 2022 and HCFC-22 consumption in the servicing sector is being phased out. Activities undertaken included: issuance of and enforced HCFC quotas for 2019 to 2024; issuance of 1,000 licences for the import of HCFCs, HFCs and their alternatives and equipment containing ODS and HFC; submission of Article 7 data and country programme data for the years 2019 to 2023; hosting the Joint West Asia and Europe and Central Asia Network Meeting of Ozone Officers in September 2023; participation in Montreal Protocol meetings; meetings and workshops organized by the NOU with the private and public sectors to exchange information, experience and raise awareness on the implementation of the HPMP and the Kigali Amendment; and annual celebration of International Ozone Day.

Plan of action

11. During phase XIV of the IS project, Jordan will continue to prioritize the phase-out of HCFC from the policy and regulatory perspective as well as the investment activities. In addition, phase XIV will include an increased level of inter-ministerial coordination and liaison work as the country is planning to implement stage III of the HPMP and stage I of the KIP in parallel and has set ambitious targets for the reduction of controlled substances in the RAC servicing and manufacturing sectors. The NOU will meet regularly with the project management unit of the HPMP and KIP; continue to monitor and control the import and re-export of HCFCs and HFCs and their alternatives; collect and report Article 7 data and country programme data; participate in Montreal Protocol and regional network meetings; and carry out awareness activities including awareness on HFCs, zero- and low-GWP alternatives, and refrigerant safety measures.

Sustainability and risk assessment

12. The NOU is established under the Ministry of Environment with clear roles and responsibilities and the legislation that is already in place ensures that the NOU can conduct its responsibilities. Procedures to mitigate risks include continuously monitoring of the IS project and a monthly report on the progress of the project.

Türkiye: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNIDO
Amounts previously approved for institutional strengthening (US \$):			
	Phase I:	Oct-92	266,843
	Phase II:	Dec-00	221,886
	Phase III:	Dec-04	254,129
	Phase IV:	Jul-09	201,073
	Phase V:	Jul-11	272,811
	Phase VI:	Jul-13	274,222
	Phase VII:	May-15	276,742
	Phase VIII:	Nov-17	350,658
	Phase IX:	Dec-19	356,096
	Phase X:	Dec-22	491,412
		Total:	2,965,871
Amount requested for renewal phase XI (US \$):			688,896
Amount recommended for approval for phase XI (US \$):			688,896
Agency support costs (US \$):			48,223
Total cost of institutional strengthening phase XI to the Multilateral Fund (US \$):			737,119
Date of approval of country programme:			1992
Date of approval of HCFC phase-out management plan:			2012
Date of approval of Kigali HFC implementation plan:			n/a
Baseline consumption of controlled substances (ODP tonnes/CO ₂ -eq tonnes):			
(a) Annex B, Group III (methyl chloroform) (average 1998-2000)			37.4
(b) Annex C, Group I (HCFCs) (average 2009-2010)			551.5
(c) Annex E (methyl bromide) (average 1995-1998)			479.7
(d) Annex F (HFCs) (average 2020-2022 plus 65% of HCFC baseline)			37,117,410
Latest reported ODS consumption (2023) (ODP tonnes) as per Article 7:			
(a) Annex B, Group III (methyl chloroform)			0
(b) Annex C, Group I (HCFCs)			2.34
(c) Annex E (methyl bromide)			0
Total:			2.34
(d) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7			20,337,396
Year of reported country programme implementation data:			2023
Amount approved for projects (as at May 2024) (US \$):			58,662,866
Amount disbursed (as at December 2023) (US \$):			52,106,765
ODS to be phased out (as at May 2024) (ODP tonnes):			5117
ODS phased out (as at December 2023) (ODP tonnes):			5002.1

13. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	50,110,423
(b) Institutional strengthening:	2,965,871
(c) Project preparation, technical assistance, training and other non-investment projects:	5,586,572

Summary of activities	Funds approved (US \$)
Total:	58,662,866
(d) HFC activities funded from additional voluntary contributions	250,000

Progress report

14. Under phase X of the IS project for Türkiye, the NOU's capacity was increased by the recruitment of additional staff. Following the ratification of the Kigali Amendment the legislation on controlled substances was reviewed to include provisions of the Amendment and the HFC licensing and quota system was introduced, together with reporting and certification requirements. Import control measures for all controlled substances are in place and enforced and imports are consistent with the annual quotas issued by the NOU. The NOU submitted annual country programme and Article 7 data report after cross-checking data with the customs authorities; developed a database to monitor F-gases which will assist in the prevention of illegal trade (customs authorities, the NOU and trade authorities have access to the same centralized database); maintained regular contact and held meetings with national stakeholders, and relevant Ministries; coordinated project activities according to the action plan developed jointly with UNIDO including stage I of the HPMP, submission of the project for the preparation of an national inventory of waste controlled substances, and preparation of the funding request for stage I of the KIP; developed an action plan for awareness raising campaigns; celebrated International Ozone Day; and participated in regional and international Montreal Protocol meetings. In addition, the NOU complied with the MLF gender policy and integrated the policy into ongoing activities under the fourth tranche of stage I of the HPMP and the first tranche of stage I of the KIP.

Plan of action

15. Phase XI of the IS project will provide continued support for the NOU of Türkiye to coordinate Montreal Protocol activities. Activities planned include: collecting and reporting country programme and Article 7 data; monitoring of the licensing system and allocation of quotas to achieve full control over the imports of all HCFC, HFC and equipment containing them, and banned ODS; continue cooperation with custom authorities, the Ministry of Trade, RAC associations and industry representatives; continue to organize the training of customs officers and RAC technicians; supervise the completion of stage I of the HPMP and the implementation of stage I of the KIP; coordinate the development of a national inventory of ODS unwanted waste and a national plan to dispose of ODS waste; continue awareness activities including the celebration of International Ozone Day and activities targeting relevant stakeholders; and participation in regional network and Montreal Protocol meetings to increase the visibility of Türkiye in both the regional and international scene as well as take a leadership role in Montreal Protocol and Kigali Amendment related issues.

Sustainability and risk assessment

16. The NOU of Türkiye is fully staffed, and the roles and responsibilities of each team member are defined. The NOU and UNIDO continue to work cooperatively to ensure activities are implemented as per the annual action plan developed jointly by the NOU and UNIDO. Risks that could hinder the activities of the NOU and Türkiye's compliance with the Montreal Protocol would be any delays in updating and enforcement of legislation as well as illegal trade. The Government also identified the risks from the frequent turnover of personnel which could cause the loss of institutional knowledge and expertise and delayed decision-making processes, and also challenges related to financial support.

Turkmenistan: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNIDO
Amounts previously approved for institutional strengthening (US \$):			
	Phase I:	Jul-05	115,693
	Phase II:	Apr-08	108,058*
	Phase III:	Jul-10	77,000
	Phase V:	Dec-20	105,459
	Phase VI:	Jun-22	105,459
		Total:	511,669
Amount requested for renewal (phase VII) (US \$):			204,019
Amount recommended for approval for phase VII (US \$):			204,019
Agency support costs (US \$):			14,281
Total cost of institutional strengthening phase VII to the Multilateral Fund (US \$):			218,301
Date of approval of country programme:			n/a
Date of approval of HCFC phase-out management plan:			2010
Date of approval of Kigali HFC implementation plan:			2023
Baseline consumption of controlled substances (ODP tonnes/CO ₂ -eq tonnes):			
(a)	Annex A, Group I (CFCs) (average 1995-1997)		37.3
(b)	Annex A, Group II (halons) (average 1995-1997)		0.0
(c)	Annex B, Group II (carbon tetrachloride) (average 1998-2000)		0.0
(d)	Annex B, Group III (methyl chloroform) (average 1998-2000)		0.0
(e)	Annex C, Group I (HCFCs) (average 2009-2010)		6.8
(f)	Annex E (methyl bromide) (average 1995-1998)		3.6
(g)	Annex F (HFCs) (average 2020-2022 plus 65% of HCFC baseline)		597,121
Latest reported ODS consumption (2023) (ODP tonnes) as per Article 7:			
(a)	Annex A, Group I (CFCs)		0.00
(b)	Annex A, Group II (halons)		0.00
(c)	Annex B, Group II (carbon tetrachloride)		0.00
(d)	Annex B, Group III (methyl chloroform)		0.00
(e)	Annex C, Group I (HCFCs)		4.26
(f)	Annex E (methyl bromide)		0.00
	Total:		4.26
(d)	Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7		572,109
Year of reported country programme implementation data:			2023
Amount approved for projects (as at May 2024) (US \$):			2,741,663
Amount disbursed (as at December 2023) (US \$):			1,933,366
ODS to be phased out (as at May 2024) (ODP tonnes):			18.8
ODS phased out (as at December 2023) (ODP tonnes):			5.2

* Includes US \$16,058 approved for UNIDO at the 54th meeting to form part of the IS project on a one-off basis to enable enforcement in the refrigeration sector.

17. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	1,309,236
(b) Institutional strengthening:	511,669
(c) Project preparation, technical assistance, training and other non-investment projects:	920,757
Total:	2,741,663
(d) HFC activities funded from additional voluntary contributions	150,000

Progress report

18. Under phase VI of the IS project the NOU of Turkmenistan, under the Ministry of Environment Protection, worked closely with government and industry stakeholders. The Government of Turkmenistan has a well-established import and export licensing system for substances controlled under the Montreal Protocol. Phase VI of the IS project strengthened cooperation between the NOU, Customs and enforcement officials to better target illegal imports. The NOU successfully coordinated with other national agencies and stakeholders to manage and monitor implementation of stage II of the HPMP, and to prepare the funding request for stage I of the KIP. The NOU organized several training events for customs officers and refrigeration technicians, meetings with public and private sector stakeholders, and increased awareness among students by organizing lectures, and essay and painting competitions. Turkmenistan participated in national, regional network and international meetings on ozone-related issues. The Multilateral Fund gender mainstreaming policy was incorporated in most of the meetings, public awareness and training activities.

Plan of action

19. During phase VII of the IS project, the NOU will continue to coordinate all activities required for the implementation of Turkmenistan's strategies to phase out ODS and phase down HFCs under the Montreal Protocol. The NOU aims to strengthen national capacity, enforce legislation and regulations on controlled substances, training and capacity building of stakeholders and various targeted awareness raising activities. Priority will be given to the coordination of the completion of stage II of the HPMP and implementation of stage I of the KIP. Other activities will include country programme and Article 7 data reporting; monitoring of the licensing system and allocation of import quotas; cooperation with custom authorities and industry associations; awareness activities including celebration of International Ozone Day; participation in regional network and international Montreal Protocol meetings to exchange information, knowledge and experience that will foster the implementation of national policies and strategies for the protection of the ozone layer. Phase VII of the IS project will promote the relevance of gender equality for development and the guiding principle that both women and men must have equal opportunities to access, participate in, and benefit from project activities. Efforts will be made to include female stakeholders in IS project activities.

Sustainability and risk assessment

20. Turkmenistan has ratified the Vienna Convention, the Montreal Protocol and all its Amendments and the Law of Turkmenistan "On the Protection of the Ozone Layer" is in force and periodically updated. Annual reports are provided to the Ozone Secretariat and the Multilateral Fund on the consumption of controlled substances and the inventory of HFC banks was included in the preparation of the Fourth National Communication to the UN Framework Convention on Climate Change. Furthermore, the Kigali Amendment and its implementation are described in the current Nationally Determined Contribution (NDC) on the implementation of the Paris Climate Agreement (approved in May 2022). Thus politically, the IS project is considered as low risk. The financial risk is low due to the support from the Multilateral Fund, as are the strategic risks because of the full support of the Ministry of Environmental Protection of Turkmenistan and the Ministry of Foreign Affairs for the implementation of the Montreal Protocol and its Kigali Amendment.

Anexo II

OPINIONES PRELIMINARES EXPRESADAS POR EL COMITÉ EJECUTIVO SOBRE LA RENOVACIÓN DE PROYECTOS DE FORTALECIMIENTO INSTITUCIONAL PRESENTADOS A LA 95ª REUNIÓN

Armenia

1. El Comité Ejecutivo examinó el informe presentado con la solicitud para la renovación del proyecto de fortalecimiento institucional para Armenia (fase IX) y tomó nota con beneplácito de que Armenia notificó datos del Artículo 7 y del programa de país para 2022 y 2023 a las Secretarías del Ozono y del Fondo, respectivamente, que indican que el país cumple con el calendario de eliminación gradual del Protocolo de Montreal. Además, el Comité observó que Armenia había estado aplicando el sistema de supervisión del consumo de sustancias controladas, había organizado reuniones periódicas con las aduanas y otras instituciones gubernamentales, había coordinado actividades con todas las partes interesadas involucradas y había organizado numerosas actividades de sensibilización, incluida la celebración del Día Mundial del Ozono. El Comité reconoció los esfuerzos del Gobierno de Armenia y, por lo tanto, confía en que, en los próximos tres años, el Gobierno de Armenia presentará la etapa III del plan de gestión de eliminación de los HCFC y continuará la ejecución de las actividades, incluida la etapa I del plan de ejecución de Kigali para los HFC, para mantener el cumplimiento de las medidas de control del Protocolo de Montreal.

Egipto

2. El Comité Ejecutivo examinó el informe presentado con la solicitud para la renovación del proyecto de fortalecimiento institucional para Egipto (fase XV) y tomó nota con beneplácito de que Egipto había notificado datos del Artículo 7 y del programa de país para 2022 y 2023 a las Secretarías del Ozono y del Fondo, respectivamente, que indican que el país cumple con el calendario de eliminación gradual del Protocolo de Montreal y que el consumo de HCFC no excede el consumo anual máximo permitido indicado en el Acuerdo con el Comité Ejecutivo. El Comité tomó nota con beneplácito de la ratificación de la Enmienda de Kigali el 22 de agosto de 2023. El Comité observó además que Egipto había estado aplicando un sistema de supervisión del consumo de sustancias controladas, había organizado reuniones del Comité Directivo, había coordinado actividades con las partes interesadas y había organizado actividades de sensibilización, incluida la celebración del Día Internacional de Preservación de la Capa de Ozono, todos los años. Por lo tanto, el Comité confía en que, en los próximos tres años, el Gobierno de Egipto continuará ejecutando actividades en el marco de la etapa II del plan de gestión de eliminación de los HCFC y preparará y presentará la etapa I del plan de ejecución de Kigali para los HFC para permitir que el país cumpla con el Protocolo de Montreal.

Jordania

3. El Comité Ejecutivo examinó el informe presentado con la solicitud para la renovación del proyecto de fortalecimiento institucional para Jordania (fase XIV) y tomó nota con beneplácito de que Jordania notificó datos del Artículo 7 y del programa de país para 2022 y 2023 a las Secretarías del Ozono y del Fondo, respectivamente, que indican que el país cumple con el calendario de eliminación gradual del Protocolo de Montreal. El Comité tomó nota de que, a pesar de los cambios administrativos en la Dependencia Nacional del Ozono, el país pudo mantener sus actividades y cumplir con el Protocolo de Montreal. Además, el Comité observó que Jordania había tomado medidas para eliminar el consumo de HCFC, incluida una estricta supervisión del comercio de HCFC mediante el marco reglamentario nacional de las SAO y la asignación de cupos, así como mediante el desarrollo de la base de datos electrónica nacional para mejorar la supervisión y el control de las importaciones y reducir las discrepancias en la presentación de informes. El Comité reconoció la estrecha cooperación entre la Dependencia Nacional del

Ozono y las autoridades aduaneras para seguir mejorando la eficacia de las reglamentaciones sobre las SAO y asegurar la aplicación de las políticas emitidas por el Gobierno de Jordania, incluida la prohibición de la importación de HCFC-141b puro y HCFC-141b contenido en polioles premezclados importados a partir del 1 de enero de 2022. El Comité felicitó a Jordania por la ratificación de la Enmienda de Kigali y el inicio de las actividades de reducción de los HFC, incluidas las actividades para ejecutar la etapa I del plan de ejecución de Kigali para los HFC. Por lo tanto, el Comité confía en que, durante los próximos tres años, el Gobierno de Jordania continuará ejecutando actividades en el marco del plan de gestión de eliminación de los HCFC y la etapa I del plan de ejecución de Kigali para los HFC para permitir que el país cumpla con las próximas medidas de control del Protocolo de Montreal.

Turquía

4. El Comité Ejecutivo examinó el informe presentado con la solicitud para la renovación del proyecto de fortalecimiento institucional para Turquía (fase X) y tomó nota con beneplácito de que Turquía notificó datos del Artículo 7 y del programa de país para 2022 y 2023 a las Secretarías del Ozono y del Fondo, respectivamente, que indican que el país cumple con el calendario de eliminación gradual del Protocolo de Montreal. Además, el Comité observó que Turquía había tomado medidas para eliminar el consumo de HCFC, incluida la aplicación de una estricta supervisión del comercio de HCFC mediante el marco reglamentario nacional de las SAO y la asignación de cupos, así como mediante una mejora adicional de la base de datos electrónica nacional para mejorar la supervisión y el control de las importaciones y reducir las discrepancias en la presentación de informes. El Comité reconoce la cooperación entre la Dependencia Nacional del Ozono y las autoridades aduaneras para seguir mejorando la eficacia de las reglamentaciones relativas a las SAO y asegurar la aplicación de las políticas emitidas por el Comité Nacional del Ozono. Por lo tanto, el Comité confía en que, en los próximos tres años, el Gobierno de Turquía continuará ejecutando actividades en el marco de la etapa I del plan de gestión de eliminación de los HCFC y comenzará la ejecución de la etapa I del plan de ejecución de Kigali para los HFC para permitir que el país cumpla con el Protocolo de Montreal.

Turkmenistán

5. El Comité Ejecutivo examinó el informe presentado con la solicitud para la renovación del proyecto de fortalecimiento institucional para Turkmenistán (fase VII) y tomó nota con beneplácito de que Turkmenistán notificó datos del Artículo 7 y del programa de país para 2022 y 2023 a las Secretarías del Ozono y del Fondo, respectivamente, que indican que el país cumple con el calendario de eliminación gradual del Protocolo de Montreal. El Comité tomó nota también de que Turkmenistán había tomado medidas para eliminar el consumo de HCFC, incluida la aplicación de una estricta supervisión del comercio de HCFC mediante el marco reglamentario nacional de las SAO y la asignación de cupos. Además, el Comité tomó nota de que Turkmenistán había notificado datos de HFC y había emitido cupos para los HFC e iniciado la ejecución de la etapa I del plan de ejecución de Kigali para los HFC que garantizaba la congelación del consumo de HFC en el nivel básico de referencia. El Comité reconoció la estrecha cooperación entre la Dependencia Nacional del Ozono y las partes interesadas, incluidas las autoridades aduaneras y representantes del sector. Por lo tanto, el Comité confía en que, durante los próximos tres años, el Gobierno de Turkmenistán continuará ejecutando actividades en el marco de la etapa II del plan de gestión de eliminación de los HCFC y la etapa I del plan de ejecución de Kigali para los HFC para permitir que el país cumpla con las medidas de control del Protocolo de Montreal.



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO WORK PROGRAMME

Presented to the 95th Meeting of the Executive Committee of the Multilateral Fund

Introduction

The UNIDO Work Programme (WP) for the consideration of the 95th Meeting of the Executive Committee (ExCom) of the Multilateral Fund (MLF) has been prepared following the Government requests as well as based on ongoing and planned activities. The Work Programme will support the implementation of UNIDO's three year Rolling Business Plan 2024-2026.

The 95th UNIDO WP is addressing preparatory assistance and institutional strengthening requests.

Preparatory assistance is submitted for the 95th Executive Committee Meeting consideration for Dominica, Morocco and Tunisia to enable the countries to overview and update data necessary for the launch and implementation of HPMP Stage II and Stage III.

UNIDO is submitting preparatory assistance for HFC phase-down plans for Bahamas and Oman to assist the countries with the implementation of the next phases of the Kigali Amendment to the Montreal Protocol.

Based on decision 91/66, funding is requested for preparation of inventory of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances for Bangladesh, Republic of Congo and Madagascar.

Preparatory assistance funding for developing energy efficiency pilot projects is requested for Egypt, Nigeria, Tunisia and Türkiye.

Institutional strengthening extension request is submitted based on the country request for Armenia, Egypt, Jordan, Turkmenistan and Türkiye.

The UNIDO Work Programme for the consideration of the 95th ExCom Meeting comprises the following sections:

- **Section 1:** Consolidated list of activities foreseen for the above requests by project types and country; and
- **Section 2:** Project concepts indicating details and funding requirements.

Funding is requested as follows:

- Preparatory assistance funding for HPMP Stage II for Dominica and HPMP Stage III for Morocco and Tunisia amounting to US\$ 139,100 (including US\$ 9,100 representing 7.0 % agency support costs);
- Preparatory assistance funding for HFC phase-down plan in Bahamas and Oman amounting to US\$ 73,830 (including US\$ 4,830 representing 7.0% agency support costs);

- Preparatory assistance for preparation of national inventory of banks of waste controlled substances and development of a national plan for management of these substances in Bangladesh, Republic of Congo and Madagascar amounting to US\$ 288,900 (including US\$ 18,900 representing 7.0% agency support costs);
- Preparatory assistance funding for developing energy efficiency pilot projects in Egypt, Nigeria, Tunisia and Türkiye amounting to US\$ 564,960 (including US\$ 36,960 representing 7.0 % agency support costs); and
- Institutional strengthening project for Armenia, Egypt, Jordan, Turkmenistan and Türkiye amounting to US\$ 2,360,640 (including US\$ 154,434 representing 7.0 % agency support costs).

Total: US\$ 3,472,430 (including 224,224 agency support cost).

SECTION 1

Country	HCFC Status	Type	Substance	Sector and Sub-Sector	Title of Project	Total amount USD	A.S.C.	Total (incl ASC) USD	A.S.C. %	P.D.
Preparatory Assistance for HPMP										
Dominica ¹	LVC	PRP	HCFC	Overarching	Preparation of Stage II HPMP	10,000	700	10,700	7%	24
Morocco	Non-LVC	PRP	HCFC	Overarching	Preparation of Stage III HPMP	60,000	4,200	64,200	7%	24
Tunisia	Non-LVC	PRP	HCFC	Overarching	Preparation of Stage III HPMP	60,000	4,200	64,200	7%	24
SUBTOTAL						130,000	9,100	139,100		
Preparatory Assistance for HFC Phase-Down Plans										
Bahamas ²	LVC	PRP	HFC	SEV	Preparation of HFC phase-down plan	39,000	2,730	41,730	7%	24
Oman ³	Non-LVC	PRP	HFC	SEV	Preparation of HFC phase-down plan	30,000	2,100	32,100	7%	24
SUBTOTAL						69,000	4,830	73,830		
Preparation of national inventory of banks of waste controlled substances and development of a national plan for management of these substances										
Bangladesh	Non-LVC	PRP	SEV	DES	Preparation of national inventory of banks of waste controlled substances and development of a national plan for management of these substances	90,000	6,300	96,300	7%	24
Congo	LVC	PRP	SEV	DES	Preparation of national inventory of banks of waste controlled substances and development of a national plan for management of these substances	90,000	90,000	6,300	96,300	24
Madagascar	LVC	PRP	SEV	DES	Preparation of national inventory of banks of waste controlled substances and development of a national plan for management of these substances	90,000	6,300	96,300	7%	24
SUBTOTAL						270,000	18,900	288,900		

¹ Project Concept is included in UNEP Work Programme.

² Project Concept is included in UNEP Work Programme.

³ Project Concept is included in UNEP Work Programme.

Country	HCFC Status	Type	Substance	Sector and Sub-Sector	Title of Project	Total amount USD	A.S.C.	Total (incl ASC) USD	A.S.C. %	P.D.
Institutional Strengthening										
Armenia	LVC	INS	All	SEV	Institutional strengthening	317,952	22,257	340,209	7%	36
Egypt	Non-LVC	INS	All	SEV	Institutional strengthening	604,966	42,348	647,314	7%	36
Jordan	Non-LVC	INS	All	SEV	Institutional strengthening	390,373	27,326	417,699	7%	36
Turkmenistan	LVC	INS	All	SEV	Institutional strengthening	204,019	14,281	218,300	7%	36
Türkiye	Non-LVC	INS	All	SEV	Institutional strengthening	688,896	48,223	737,119	7%	36
SUBTOTAL						2,206,206	154,434	2,360,640		
Funding for preparation of energy efficiency pilot projects under decision 94/60										
Egypt	Non-LVC	PRP	HFC	EEF	Preparation of energy efficiency pilot project	210,000	14,700	224,700	7%	24
Nigeria	Non-LVC	PRP	HFC	EEF	Preparation of energy efficiency pilot project	78,000	5,460	83,460	7%	24
Tunisia	Non-LVC	PRP	HFC	EEF	Preparation of energy efficiency pilot project	20,000	1,400	21,400	7%	8
Türkiye	Non-LVC	PRP	HFC	EEF	Preparation of energy efficiency pilot project	220,000	15,400	235,400	7%	24
SUBTOTAL						528,000	36,960	564,960		
GRAND TOTAL						3,203,206	224,224	3,472,430		

SECTION 2

PROJECT CONCEPT – MOROCCO

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL HPMP PROJECT PREPARATION REQUEST FORM HCFC phase-out management plan (Overarching strategy)

Part I: Project information

Project title:	Project preparation for HPMP stage III	
Country:	Morocco	
Lead implementing agency:	UNIDO	
Implementation period:	December 2024 – June 2026	
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNIDO	Overarching	60,000

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

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government specifying roles of respective agencies (where more than one IA is involved)	☒	☐
2. Written confirmation – balances from previous PRP funding approved for stage I HPMP had been returned / will be returned (decision 71/42(i))	☐	☒
Specify meeting at which PRP funding balance had been returned/will be returned	Fund balances from PRP approved for HPMP Stage II were returned at the 93rd	

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

1. Montreal Protocol compliance target to be met in ☐ stage II / ☒ stage III of the HPMP			
Phase-out commitment (%)	100	Year of commitment	2030
☒ Servicing only		☐ Manufacturing only	☐ Servicing and manufacturing
2. Brief background on previous stage of the HPMP (i.e., when the HPMP was approved; a description of the progress in implementation of the previous stage of the HPMP to demonstrate that substantial progress had been made.)			
The 88th meeting of the Executive Committee held in November 2021 approved stage II of the HPMP for Morocco for the period 2021 to 2025 to reduce HCFC consumption by 67.5% of the country's baseline, in the amount of US \$754,032, plus agency support costs of US \$52,782 for UNIDO. Morocco is committed to deduct 8.64 ODP tonnes of HCFCs under stage II. In the chapter of capacity building, progress has been made in the establishment of a licensing system for HCFC-22-based equipment, as the NOU has initiated the necessary procedures in the ministry in this respect. The licensing system for equipment is expected to be implemented from first half of 2025. Also, there is progress in the elaboration of a code of practice for the RAC servicing sector. A local expert and an international expert have been recruited to advice on the design of this code and three meetings have been held in 2023 and 2024 between			

the NOU, the national standardization authority IMANOR, the national office for professional training, OFPPT, and the national RAC association, AMPF, to discuss and agree on the content of the code. A first draft of the code has already been produced and is waiting for approval by the relevant entities. In parallel, a local expert and an international expert have been recruited for the elaboration of training modules on good servicing practices, which will be linked to the code of practice and the resulting certification system. The first draft of the modules has been already produced and it is planned to be validated by the stakeholders in the second half of 2024. Progress has also been achieved in the organization of awareness raising activities. The HPMP has supported the World Refrigeration Day in 2023 and 2024, including presentations by local experts and debates on the following topics: the future training modules for good servicing practices, the future recovery, recycling and reclamation (RRR) system, the HFC consumption in the country and the presence of women in the refrigeration servicing sector. In total, around 480 professionals have participated in these events, 10% of which have been women.

In the assistance to the RAC servicing sector, progress has been made on the establishment of a certification system. In June 2022, a workshop was conducted to gather relevant entities like the NOU, IMANOR, OFPPT, AMPF, the Moroccan Agency for Energy Efficiency, AMEE, and representatives of the private sector. The workshop counted also on the participation of three international experts in this domain, one of them being a female expert. A total number of 25 people attended the event, 30% of which were women. The workshop has been considered as the starting point for the introduction of such a system in Morocco, particularly for the elaboration of the corresponding code of practice and the design of the necessary institutional and legal framework. Since then, three work meetings and regular contact have been held on this topic between the NOU and the relevant entities, with the support of a local expert and an international expert.

Actions have also been initiated for the provision of tools and equipment to 6 training centers. A first set of tools and equipment has been delivered in December 2023 for all these centers. The items included in this first set are vacuum pumps, digital gauges, electronic scales, leak detectors, digital manifolds, recovery and recycling units, flaring tools, brazing sets, among others. In parallel, a bidding process has been carried out for the provision of refrigeration and air conditioning training units, refrigerant identifiers and contamination check kits for the same training centers. The training units has been delivered during Q2 2024. The refrigerant identifiers have not been delivered yet because of the current lack of supply; the contamination check kits will not be delivered as the production has been discontinued. In line with the provision of equipment, train-the-trainer sessions have been delivered for a total of 59 RAC trainers, 10% of which were women, in four different training centers located in Casablanca, Meknès, Kenitra and Marrakech.

Progress has also been achieved in the conduction of the preliminary study for the introduction of a recovery, recycling and reclamation (RRR) system. A local expert has been recruited to conduct a consultation among relevant actors of the RAC servicing sector, to assess the use of HCFCs in the Moroccan market, per sector and considering the geographical distribution as well. Other aspects, like the price of these substances, the availability of recovery and recycling units among technicians and the identification of potential entities that could be in charge of collecting, recycling and reclaiming refrigerants, are included in the study. So far, a work plan has been elaborated and the local expert has conducted several meetings with different stakeholders for consultation. A first draft of the study was finalized in November 2023. The final version is expected to be finalized in Q3 2024. Also, a study tour has been conducted in November 2023 to visit a RRR facility in Helsinki, Finland. A representative of the NOU and the local expert in charge of the study have participated in the study tour, which included a meeting with representatives of the Finish ministry of environment and a visit to a destruction facility. The results of the mission have been incorporated in the first draft of the study.

Finally, progress has also been achieved in the conversion of the sandwich panels manufacturer, Métaux Profilage Isolation (MPI). The company and UNIDO signed a contract for the implementation of the conversion and MPI has already selected the provider of the technology. The corresponding equipment is expected to be delivered by the provider in Q1 2025.

Project coordination has been executed for the activities above described and those related to the investment component. An international consultant has been recruited in this respect. Also, a verification report has been conducted by a local independent expert for the years 2021 and 2022.

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

Activity	Description	Implementing
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		agency
Legal/regulatory framework	Licensing system for HCFC-22-based equipment. The NOU has launched the official process in the ministry to apply the licensing system from first half 2025.	UNIDO
Legal/regulatory framework	Code of practice for RAC service sector. Recruitment of a local and an international expert. Three meetings with the relevant entities held. First draft of code of practice produced.	UNIDO
Legal/regulatory framework	Establishment of a certification system. 1 workshop and three meetings with the relevant entities held. First draft of code of practice produced. First draft of the training modules produced.	UNIDO
Others, specify.	Training for 15 customs officers. Discussions are in progress between the NOU and customs to define the trainers, the content and the trainees. The training is expected to be performed in Q4 2024.	UNIDO
Refrigeration servicing sector	Support to the World Refrigeration Day event in 2023 and in 2024. Implemented.	UNIDO
Refrigeration servicing sector	Training for 59 trainers in the domain of RAC. Trainings delivered.	UNIDO
Refrigeration servicing sector	Provision of tools and equipment for 6 training centers. 1st set of tools and equipment delivered in December 2023. 2nd set delivered in June 2024.	UNIDO
Refrigeration servicing sector	Preliminary study for a RRR system. Expert recruited and relevant consultations undertaken. First draft produced in November 2023. Study tour to Finland on the RRR system in November 2023.	UNIDO
Refrigeration servicing sector	Survey on the fisheries sector. Initial consultations to the Moroccan association of refrigeration performed.	UNIDO
Refrigeration servicing sector	Awareness raising event on the topic "Women in the refrigeration sector". Implemented in July 2024.	UNIDO
Refrigeration servicing sector	Training for technicians on good practices. Initial consultations to the Moroccan association of refrigeration performed.	UNIDO
Refrigeration servicing sector	Certification of trainers. The trainers to be certified have been already identified. The agency to perform the training and evaluation of trainees already identified.	UNIDO
Refrigeration servicing sector	Establishing a reclamation center and provision recovery machines. No progress to be reported.	UNIDO
Refrigeration servicing sector	Workshop for the fisheries sector. No progress to be reported.	UNIDO
Manufacturing-Foam PU	Conversion of the company MPI. The beneficiary has signed a contract with UNIDO to manage the conversion. The company has already selected a technology provider. Equipment is expected to be delivered in Q1 2025.	UNIDO
Manufacturing-Foam PU	Technical assistance to three companies. No progress to be reported.	UNIDO
Others, specify.	Project monitoring, coordination and reporting. Overall project coordination + Verification report for the years 2021 and 2022.	UNIDO

4. Overview of current HCFC consumption in metric tonnes by substance (last three years)				
Substance	Sector	2021	2022	2023
HCFC-22	RAC servicing	320.41	360.72	314.55
TOTAL	RAC servicing	320.41	360.72	314.55
HCFC-141b in imported pre-blended polyols	Manufacturing-Foam PU	104.30	104.30	0.00

5. Based on the consumption data given above, please provide a description of the sector/sub-sector that use HCFCs in the country, including a short analysis and explanation of the consumption trends (i.e., increasing or decreasing)		
Among HCFCs, only HCFC-22 is imported in bulk, as the import of HCFC-141b is banned since January 2015. As it can be seen in the table above, Morocco has experienced a fluctuating trend in HCFC consumption in the period 2021-2023. In 2021 the consumption was still recovering from the impact of COVID-19 pandemic. In 2022, there was an increase in consumption within the maximum allowable limit. In 2023, a new decrease in consumption is registered, as a result of applying the corresponding reduction schedule. According to the last survey undertaken in 2021 for the preparation of HPMP stage II, HCFC-22 is consumed in three sectors: residential and commercial refrigeration and AC, which constitutes around 60% of the consumption, fisheries sector consuming 35%, and industrial processes consuming around 5%. The actual consumption needs to be re-verified, because the fisheries sector is a heavy consumer of refrigerants and its share in the total consumption could be higher. The main use is in the production of ice and the preservation of seafood. The sector employs more than 450,000 people, more than a third of whom are in artisanal fishing. The sector includes freezing plants, cold rooms, fish processing, ice making units, refrigeration units in fishing vessels, and refrigerated transport units. The equipment is not always modern and efficient, which results in losses of refrigerants in this sector. Finally, HCFC-141b contained in pre-blended polyols has been steadily imported until 2022, when the conversion of MPI and three other small manufacturers was launched.		
6. Description of information that needs to be gathered and updated. Explain why this has not been undertaken during preparation for the previous stage of the HPMP.		
Information needed	Description	Agency
Updated sectoral consumption information	Assessment of sectoral distribution of HCFC consumption through consultation with relevant stakeholders.	UNIDO
Analysis of the types of equipment using HCFCs	Assessment of the types of equipment still using HCFCs through consultation with relevant stakeholders.	UNIDO
Others, specify.	Assessment of needs of relevant stakeholders.	UNIDO
7. Activities to be undertaken for project preparation and funding		
Activity	Indicative funding (US \$)	Agency
Assessment of sectoral distribution of HCFC consumption.	US \$10,000	UNIDO
Assessment of the types of equipment still using HCFCs.	US \$10,000	UNIDO
Assessment of needs of relevant stakeholders.	US \$10,000	UNIDO
Drafting of the HPMP stage III proposal.	US \$20,000	UNIDO
Workshop to validate the proposal by stakeholders.	US \$10,000	UNIDO
TOTAL	US \$60,000	
8. How will activities related to implementation of the Kigali Amendment to phase down HFCs be considered during project preparation for stage III of the HPMP?		
The implementation of the HPMP stage III and the KIP will be simultaneous. Activities for the phase-out of HCFC consumption will be designed to be harmonized with the phase-down of HFC consumption to the extent possible, by identifying opportunities for complementary efforts and avoiding duplication. The fact that the HPMP stage III and the KIP stage I will coincide in time represents a challenge in implementation (from the point of view of planning and coordination of activities, as well as human, logistic and financial resources, among other factors), but also an opportunity for the country to adopt a cost-effective strategy that addresses the reduction of both groups of substances in a holistic manner.		

Morocco will adopt a mix of parallel and integrated implementation of the HPMP and the KIP. The advantage of parallel implementation is that it enables more specialized and focused individual activities, whereas integrated activities offer cost savings and an opportunity to avoid duplication of efforts.

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

The preparation of the HPMP stage III in Morocco will apply, according to merit and competence, a gender-balance approach in all the relevant activities, in line with the operational policy on gender mainstreaming for Multilateral-Fund-supported projects. In particular, the assessment of needs among stakeholders will dedicate a chapter on the specific needs of women in the relevant sectors. Also, the recruitment process for experts involved in implementing various activities will be designed to ensure that women with competence and merit have equal opportunities for selection. Finally, the activities to be included in the final proposal for the HPMP stage III in Morocco will apply the gender-balance approach to the extent possible. It will be the case, for example, of activities related to training and awareness raising, which will seek gender parity among the participants, and some of these events will focus on the specific topic of women in the RAC servicing sector.

PROJECT CONCEPT – TUNISIA

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL**

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
HPMP PROJECT PREPARATION REQUEST FORM
HCFC phase-out management plan (Overarching strategy)**

Part I: Project information

Project title:	Project preparation for HPMP stage III	
Country:	Tunisia	
Lead implementing agency:	UNIDO	
Implementation period:	December 2024 – June 2026	
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNIDO	Overarching	60,000

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

Part II: Prerequisites for submission

Item	Yes	No
3. Official endorsement letter from Government specifying roles of respective agencies (where more than one IA is involved)	☒	☐
4. Written confirmation – balances from previous PRP funding approved for stage I HPMP had been returned / will be returned (decision 71/42(i))	☐	☒
Specify meeting at which PRP funding balance had been returned/will be returned	Preparatory funding for HPMP Stage II was returned at the 86th and 87th meeting	

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

10. Montreal Protocol compliance target to be met in ☐ stage II / ☐ stage III of the HPMP			
Phase-out commitment (%)	100	Year of commitment	2030
☒ Servicing only		☐ Manufacturing only	☐ Servicing and manufacturing
11. Brief background on previous stage of the HPMP (i.e., when the HPMP was approved; a description of the progress in implementation of the previous stage of the HPMP to demonstrate that substantial progress had been made.)			
Stage II of Tunisia HPMP was approved at the 84th Meeting of the Executive Committee. The country committed to reduce 67.5% of its baseline up to a total consumption of 12.88 ODPt. Therefore, under HPMP stage II, Tunisia commits to phase out 16.87 ODPt. The total agreed funding for HPMP stage II is US \$ 1,564,946 plus support costs of US \$ 121,546. UNIDO and UNEP are the lead and co-implementing agency, respectively. Tunisia has progressed in the implementation of the first and second tranches. Under the capacity building chapter, the government of Tunisia has developed several regulations affecting the use of HCFCs in the RAC sector, in particular:			

- A decree to provide a legal framework to the National Ozone Committee (NOC), responsible for setting the import quotas of ODS and HFCs which are regulated by the Montreal Protocol.
- A decree to establish a certification system for companies and personnel of the RAC servicing sector.
- A decree to establish an HCFC recovery, recycling and reclaiming (RRR) system.
- A decree for the ban on the sales, distribution and installation of equipment and materials containing HCFCs.

These regulations are currently under the approval process within the Tunisian government. They are expected to be approved before the end of 2024, except for the decree on the RRR system, which needs to be revised considering the results of a new report on this topic, which will be conducted under the second tranche of HPMP stage II. On the other hand, the ban on the imports of HCFC-141b contained in pre-blended polyols will be implemented once the conversion at the company Le Panneau is duly finalized. So far, three workshops have been organized to inform stakeholders on the content of all these upcoming regulations.

The capacity building component has also included the assistance for customs through the provision of a train-the-trainers' session for 13 customs training officers in May 2021, and four other sessions in April 2024 for additional 83 officers. Among the trainees, there have been 6 female officers. The training included practical sessions on the use of refrigerant identifiers.

The support provided to the servicing sector has firstly consisted of four certification sessions delivered between February and May 2023, and three additional certification sessions delivered between May and June 2024. In total, 105 trainers (16 women among them) have participated in these sessions and 76 of them have received the corresponding certification. Secondly, between 2020 and 2024, 386 technicians have received training on the good practices for managing and handling refrigerants, and almost 100 trainers (17 women among them) have been trained on good practices and on codes and standards applied to the RAC sector. In line with this, a guide has been elaborated by an international expert in January 2023 on the topic of codes and standards for the RAC sector in Tunisia.

Besides, twelve identifiers were procured in November 2020 for the Tunisian Association of Refrigeration and Air-conditioning (ATRC, as per the acronym in French language) and five training centers, and tools and equipment have been provided the training center of Sfax. Currently, tools and equipment for additional five training centers is under procurement process and delivery is expected to be completed in Q3 2024.

A business model for the establishment of an RRR system in Tunisia has been developed by a national expert in June 2022. The resulting model proposed the setting and running of an RRR system, based on the two reclamation centers under the management of the National Agency for Waste Management (ANGED, as per the acronym in French language) and a strict regulation that would require stakeholders to recover and reclaim refrigerants. In parallel, a decree for the official establishment of the RRR system has been drafted by a female legal expert at the end of 2022. However, the business model and, consequently, the decree, must be revised as it has been confirmed that the ANGED does not have the necessary capacity to manage the RRR centre.

Regarding the awareness raising activities, on the occasion of the World Refrigeration Day in 2021, 2022 2023 and 2024, brochures and roll-ups were designed and printed for distribution

among participants, to better inform on the progress made under the HPMP stage II and on the need to continue working for achieving Tunisia's commitments under the Montreal Protocol.

The activities in the manufacturing sector have been focused on the phase-out of HCFC-141b contained in the pre-blended polyols used by two foam producers: Les Grands Ateliers du Nord (GAN) and Le Panneau. The conversion at GAN has consisted in the replacement of this substance by the use of cyclopentane as foaming agent and a premixing unit to make the blend with polyols at GAN's facility. In total, 52.5 metric tonnes of HCFC-141b have been phased-out. GAN is currently fully running on the cyclopentane technology for the production of refrigerators. In the original proposal, the conversion at Le Panneau was supposed to replace the use of HCFC-141b pre-blended polyols by the n-pentane technology. However, the company requested a change in the alternative technology from n-pentane to HFO-1233zd, which was approved by the Executive Committee at the 88th Meeting, in December 2021. In total, 14.5 metric tonnes of HCFC-141b are to be phased-out. The conversion of the production line has been accomplished, but the project has experienced an important delay in its finalization due to the very limited availability of HFO-1233zd in the market. The project is then expected to be completed during the second half of 2024, with the testing of the new foaming agent.

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

Activity	Description	Implementing agency
Legal/regulatory framework	Ban on the import of HCFC-141b contained in pre-blended polyols. To be implemented once the investment project for the PU foam manufacturing sector is completed.	UNEP
Legal/regulatory framework	Regulations related to the management of HCFCs including the establishment of the NOC, the certification of RAC personnel, the RRR system and the ban on the sales, distribution and installation of HCFC-based equipment. In progress, expected to be approved in 2024. Regulation on the RRR system to be revised.	UNEP
Legal/regulatory framework	Three workshops have been organized to inform stakeholders on the upcoming regulation.	UNEP
Others, specify.	Training to 96 customs officers, already implemented.	UNEP
Refrigeration servicing sector	Certification sessions for 105 RAC trainers, already implemented.	UNIDO
Refrigeration servicing sector	Purchase of 12 identifiers for the ATRC and five training centers. Implemented.	UNIDO
Refrigeration servicing sector	Elaboration of a guide on codes and standards for the RAC sector, and training on codes and standards to 97 RAC trainers, already implemented.	UNIDO
Refrigeration servicing sector	Training on good practices for the managing and handling of refrigerants to 97 RAC trainers. Implemented.	UNIDO
Refrigeration servicing sector	Training on good servicing practices for 386 technicians. Implemented.	UNEP
Refrigeration servicing sector	Provision of tools and equipment for six training center. Implemented in one training center (Sfax). To be implemented in five additional center in Q3 2024.	UNIDO
Refrigeration servicing sector	Elaboration of a business model for the establishment of an RRR system and the corresponding legal text. First versions finalized. Revised versions to be finalized by	UNIDO

	December 2024.			
Refrigeration servicing sector	Support to the World Refrigeration Day in 2021, 2022, 2023 and 2024. Implemented.	UNIDO		
Refrigeration servicing sector	Elaboration of a code of conduct for technicians, and update of training materials. To be implemented.	UNEP		
Refrigeration servicing sector	Training for 200 RAC technicians on codes and standards. To be implemented.	UNIDO		
Refrigeration servicing sector	Training for 200 RAC technicians on good practices. To be implemented.	UNIDO		
Refrigeration servicing sector	Training and certification sessions for 200 RAC technicians. To be implemented.	UNIDO		
Refrigeration servicing sector	Three workshops to raise public awareness on the official certification system. To be implemented.	UNIDO		
Refrigeration servicing sector	Provision of spare parts for one training centre specialized in ammonia-based refrigeration. In progress.	UNIDO		
Refrigeration servicing sector	Procurement of equipment for the upgrade of two reclamation centres. To be implemented.	UNIDO		
Manufacturing-Foam PU	Conversion of the PU foam manufacturer GAN. Implemented.	UNIDO		
Manufacturing-Foam PU	Conversion of the PU foam manufacturer Le Panneau. Conversion completed; final verification still pending.	UNIDO		
13. Overview of current HCFC consumption in metric tonnes by substance (last three years)				
Substance	Sector	2021	2022	2023
HCFC-22	RAC servicing	376.175	375.398	325.164
TOTAL	RAC servicing	376.175	375.398	325.164
HCFC-141b in imported pre-blended polyols	Manufacturing-Foam PU	14.50	14.50	14.50
14. Based on the consumption data given above, please provide a description of the sector/sub-sector that use HCFCs in the country, including a short analysis and explanation of the consumption trends (i.e., increasing or decreasing)				
As it can be noticed from the consumption data, there has been a decreasing trend in the consumption of HCFCs in bulk within the period 2021-2023 in Tunisia, as a result of the HCFC reduction strategy applied by the government. The consumption of HCFC-141b contained in the pre-blended polyols has been steady as only Le Panneau is importing this material for production and the conversion has not been fully completed. In the domestic sector, the refrigeration appliances have completely replaced HFC-134a by R-600a. Since 2018, all new fridges manufactured or imported in Tunisia work with R-600a. For the air-conditioning units, the local air-conditioning manufacturers have completely replaced the use of HCFC-22 by R-410A and this substance should be replaced by HFC-32 according to the recently approved Kigali Implementation Plan (KIP). So, HCFC-22, is used only in the RAC servicing sector for the maintenance service on AC domestic splits units, cold rooms, commercial refrigeration, etc. In the commercial sector, HCFC-22, R-404A and HFC-134a are currently used for refrigeration purposes, although it is expected that natural refrigerants will increase their presence significantly in the coming decades. The air-conditioning systems are currently based on R-410A and HCFC-22, but HFC-32 is expected to become predominant by 2045. The industrial refrigeration sector is mainly based on HCFC-22 and R-404A, followed by R-717 and HFC-134a. In this case, the introduction and development of R-448A and R-449A-based systems would be more important than other alternatives until 2045. The use of HFO-				

1234ze and natural gases could surpass the use of R-717.

For the manufacturing of rigid foam, the complete phase-out of HCFC-141b is planned by the end of 2024, when the last company is converted to an HFO solution. Pentane is expected to be the main blowing agent in the coming decades. The use of HFOs may not be sustainable, considering that it represents a high cost for companies, it is very limited in the international market, and its impact on the environment is still to be assessed, as it is not stable in the atmosphere and can decompose into trifluoroacetic acid.

Finally, it should be noted that Tunisia has recorded in recent years a gradual decrease in the import and consumption of HCFC substances (HCFC-22), which is due to the gradual replacement of HCFCs by HFC-type alternatives and, in some cases, by R-290 (commercial refrigeration), together with the corresponding training on good practices for RAC trainers and technicians.

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

Information needed	Description	Agency
Updated sectoral consumption information	Assessment of sectoral distribution of HCFC consumption through consultation with relevant stakeholders.	UNIDO
Analysis of the types of equipment using HCFCs	Assessment of the types of equipment still using HCFCs through consultation with relevant stakeholders.	UNIDO
Others, specify.	Assessment of needs of relevant stakeholders.	UNIDO

16. Activities to be undertaken for project preparation and funding

Activity	Indicative funding (US \$)	Agency
Assessment of sectoral distribution of HCFC consumption.	US \$10,000	UNIDO
Assessment of the types of equipment still using HCFCs.	US \$10,000	UNIDO
Assessment of needs of relevant stakeholders.	US \$10,000	UNIDO
Drafting of the HPMP stage III proposal.	US \$20,000	UNIDO
Workshop to validate the proposal by stakeholders.	US \$10,000	UNIDO
TOTAL	US \$60,000	

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

The implementation of the HPMP stage III and the KIP will be simultaneous. Activities for the phase-out of HCFC consumption will be designed to be harmonized with the phase-down of HFC consumption to the extent possible, by identifying opportunities for complementary efforts and avoiding duplication.

The fact that the HPMP stage III and the KIP stage I will coincide in time represents a challenge in implementation (from the point of view of planning and coordination of activities, as well as human, logistic and financial resources, among other factors), but also an opportunity for the country to adopt a cost-effective strategy that addresses the reduction of both groups of substances in a holistic manner.

Tunisia will adopt a mix of parallel and integrated implementation of the HPMP and the KIP.

The advantage of parallel implementation is that it enables more specialized and focused individual activities, whereas integrated activities offer cost savings and an opportunity to avoid duplication of efforts.

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

The preparation of the HPMP stage III in Tunisia will apply a gender-balance approach in all the relevant activities, in line with the operational policy on gender mainstreaming for Multilateral-Fund-supported projects. In particular, the assessment of needs among stakeholders will dedicate a chapter on the specific needs of women in the relevant sectors. Also, the experts recruited for the implementation of the different activities will be always evaluated and selected on a gender-balance basis. Finally, the activities to be included in the final proposal for the HPMP stage III in Tunisia will apply the gender-balance approach to the extent possible. It will be the case, for example, of activities related to training and awareness raising, which will seek gender parity among the participants, and some of these events will focus on the specific topic of women in the RAC servicing sector.

PROJECT CONCEPT – BANGLADESH

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES OF BANKS OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A PLAN FOR THE COLLECTION, TRANSPORT AND DISPOSAL OF SUCH SUBSTANCES, INCLUDING CONSIDERATION OF RECYCLING, RECLAMATION AND COST-EFFECTIVE DESTRUCTION

Part I: Project information

Project title:		PREPARATION OF NATIONAL INVENTORIES OF BANKS OF USED OR UNWANTED CONTROLLED SUBSTANCES	
Country:		Bangladesh	
Lead implementing agency:		UNIDO	
Cooperating agency:		(select)	Department of Environment (DoE)
Meeting where request is being submitted		95 th	
Implementation period		1 January 2025 – 31 December 2026	
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify):			
Funding requested:			
Agency		Funding requested (US \$)*	
UNIDO		90,000	

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

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☐	☒
If NO , please provide explanation: According to decision 93/26, agencies are allowed to request in 2024 funding for preparation of ODS inventories even in cases where such projects had not been included in the agencies' business plans.		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

19. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
I. Background According to the Executive Committee (ExCom) Decision 91/66, Multilateral Fund (MLF) will provide additional fundings to Article 5 countries for an inventory of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances contained in document UNEP/OzL.Pro/ExCom/91/66; UNEP/OzL.Pro/ExCom/91/72. Thereafter banks refer to the cumulative quantity of substances stored within operational equipment, chemical reserves, foams, and other products that have not yet been released into the atmosphere. There have been no recycling, recovery or reclamation activities in the country and this ODS survey would

complement the guide on recycling and recovery, which it to be developed as a part of Stage II activities. Given that, it is crucial to undertake preparatory activities for ODS banks.

There is an inter-ministerial decree on “Regulating the Production, Import, Marketing, Export, Transit, re-Export, Transport, Use and Holding of Substances which Deplete the Ozone Layer (ODS), Hydrofluorocarbons (HFCs) and Alternatives.” This, however, does not provide the country with any legal framework on used or unwanted ODS bank.

II. Methodology

The preparation of the inventory of used or unwanted ODS bank will be planned by desk research to be undertaken by taking stock of existing information and identifying prioritized data collection exercises. This will help develop a tentative list of public and private stakeholders which likely have a certain amount of used or unwanted ODS than a threshold amount determined together with the National Ozone Office (NOU) based on the total consumption of the country. The NOU’s Country Programme (CP) data in the previous years give an estimated amount of unused ODS. The methodology would also include data collection on equipment using controlled substances (data on number of units and share of refrigerants in each type using production figures, sales figures, etc.) for an identified time frame, including estimating the amounts of controlled substances installed in the existing systems. This may need to be validated in the field with information from service shops such as the number of equipment serviced, whether the refrigerants are recovered, recycled, or when contaminated, collected. When this data is collected, there needs to be an understanding of the calculation process that will be used to determine the quantity of controlled substances contained in the equipment inventory (i.e., determine average initial charge/system, recharge amounts, what is left in the equipment during time of servicing, age of equipment, average leakage rates). Further information on the methodology development would be dragged during the research phase.

III. Project Objectives

This project aims at making an inventory of unused or unwanted quantities of refrigerants and developing a national action plan including priorities for sound refrigerant management: identification of key stakeholders, establishment of a working group to assess unused or unwanted refrigerant, RAC equipment at the end of its life cycle, and emissions of unused or unwanted to the atmosphere; training on good practices for refrigerant management; and identification of priorities for improving future refrigerant management.

The national stakeholders would include the activities provided in the table. Where relevant, this project will carry out the project activities in consultation with the government units responsible for Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and the Stockholm Convention on Persistent Organic Pollutants.

The activities proposed under this project aim to lay the foundation for the future formulation of a comprehensive refrigerant management plan. Service workshops, owners of RAC equipment installation, the RAC association, importers, non-governmental organizations, and others will need to share the same vision and collectively contribute to the identification of priorities for refrigerant management. The timeline for development of the quality infrastructure and a national plan for refrigerant waste management depends on the available financial resources. In particular, the consultation on the Basel Convention will be given as a priority in case that export for destruction is identified as the most cost-effective disposal option.

IV. Budget

The country did not benefit of the preparation of national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling and cost-effective destruction funding window offered by MLF. For that reason, the government has decided to take this opportunity to address the ODS bank inventories preparation, herewith submitting a proposal for activities to facilitate an inventory of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances contained in document. Based on the decision of the Executive Committee 91/66 in UNEP/OzL.Pro/ExCom/91/72, the funding for the preparation of national inventories of banks of waste-controlled substances and national action plan (US \$) is US\$ 90,000.00, understanding the country’s HCFC baseline is 72.65 ODP tonnes.

The proposed amount would be divided into the activities below.

20. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Data on HFC consumption in	1) Desk research on domestic regulations and	UNIDO

manufacturing/servicing sector	programme supporting sound management of refrigerant and other controlled substance including Identification of key stakeholders (government and private sector (i.e., waste management operators, collection centres, or waste aggregators, appliance retailers, refrigeration associations, recycling centres (once established), service centres) 2) Update on HFC consumption in assembling/servicing sectors; 3) Workshop with relevant stakeholders on the acquired desk research information.	
HFC sectoral consumption information	4) Establishment of a methodology of the inventory/action plan, linked to other HCFC phase down activities, endorsed by NOU;	UNIDO
Analysis of types of equipmentt using HFCs	5) Study on quantities of unused or unwanted refrigerants from the identified types and sources of equipment, this is to be used for further identification of national priorities for sound refrigerant management; 6) Coordinating and sharing the vision among the governmental stakeholders by establishing a working group, if relevant, as a subgroup of the National Ozone Committee, to assess unused or unwanted refrigerant, RAC equipment at the end of life cycle, and refrigerant emissions to the atmosphere	UNIDO
Others, specify.	7) Drafting the inventory of unused or unwanted quantities of refrigerants and a national action plan including a preliminary economic feasibility study on destruction activities for relevant private/public sector stakeholders. In case business plan is needed – to include plan of its development into a national plan	UNIDO

21. Funding for the activities described in 2 above

Activity	Indicative funding (US \$)	Agency
1) Desk research study on domestic regulations and programme supporting sound management of refrigerant and other controlled substance including Identification of key stakeholders (government and private sector (i.e., waste management operators, collection centres, or waste aggregators, appliance retailers, refrigeration associations, recycling centres (once established), service centres)	15,000 (to be delegated to the NOU)	UNIDO
2) Update on HCFC and HFC consumption in assembling/servicing sectors referring to previous inventories for HPMPs	10,000 (to be delegated to the NOU)	UNIDO
3) Workshop with relevant stakeholders on the acquired desk research information	6,000 (to be delegated to the NOU)	UNIDO
4) Establishment of a methodology of the	6,000	UNIDO

inventory/action plan, linked to other HCFC phase down activities, endorsed by NOU		
5) Study on quantities of unused or unwanted refrigerants (ODS and HFCs) from the identified types and sources of equipment, this is to be used for further identification of national priorities for sound refrigerant management;	25,000 (to be delegated to the NOU)	UNIDO
6) Coordinating and sharing the vision among the governmental stakeholders by establishing a working group, if relevant, as a subgroup of the National Ozone Committee, to assess unused or unwanted refrigerant, RAC equipment at the end of life cycle, and refrigerant emissions to the atmosphere	8,000 (to be delegated to the NOU)	UNIDO
7) Drafting the inventory report of unused or unwanted quantities of refrigerants and a national action plan including a preliminary economic feasibility study on destruction activities for relevant private/public sector stakeholders. In case business plan is needed – to include plan of its development into a national plan	20,000	UNIDO
TOTAL	90,000	
22. How will the Multilateral Fund gender policy be considered during project preparation?		
Female engineers and technicians will be encouraged to participate in organized workshops. When possible, female consultants would be encouraged to work on the data survey and organize workshops.		

PROJECT CONCEPT – CONGO

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES OF BANKS OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A PLAN FOR THE COLLECTION, TRANSPORT AND DISPOSAL OF SUCH SUBSTANCES, INCLUDING CONSIDERATION OF RECYCLING, RECLAMATION AND COST-EFFECTIVE DESTRUCTION

Part I: Project information

Project title:	Preparation of an inventory of banks of used or unwanted controlled substances and a plan for the collection, transport, and disposal of such substances
Country:	Congo
Lead implementing agency:	UNIDO
Meeting where request is being submitted	95 th meeting of the Executive Committee
Implementation period	January 2025 – December 2026
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): 24	
Funding requested:	
Agency	Funding requested (US \$)
UNIDO	90,000

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☐	☒
If NO , please provide explanation: According to decision 93/26, agencies are allowed to request in 2024 funding for preparation of ODS inventories even in cases where such projects had not been included in the agencies' business plans.		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
The project will include the preparation of a comprehensive national inventory of banks of used or unwanted controlled substances (ODS and HFCs), and the development of a plan for the collection, transport and disposal of such substances. The approach will follow the guidelines contained in document UNEP/OzL.Pro/ExCom/91/66, using the equipment-based or chemical consumption methodology for data collection and analysis to estimate current and future banks of controlled substances. This will involve an initial desk review, detailed field surveys, data collection from various sectors and consultations with key stakeholders to ensure accurate and comprehensive data collection for the preparation of the inventory. The inventory aims to provide a clear understanding of the quantities and locations of these used or unwanted substances, as well as

their potential for recovery, recycling and reclamation. In addition to the inventory, the project will develop a national action plan outlining strategies for the effective collection, transport and disposal of used or unwanted ODS and HFCs. This plan will consider various options for environmentally sound management, including local recycling, reclamation and destruction technologies, as well as the possibility of exporting these substances for destruction. The plan will also address the regulatory and policy framework needed to support these activities. The project will link with ongoing national activities, such as the HPMP and KIP, and leverage existing programmes in the refrigeration servicing sector by integrating them into the broader national strategy. By building on these existing efforts, the project aims to create a coherent and comprehensive approach to the management of ODS and HFC banks that will serve as a basis for future initiatives.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Data collection	An initial desk study of already available data from national surveys on consumption of controlled substances undertaken in the preparation of the HPMP, KIP, ODS alternatives survey, equipment importers, recovery and recycling activities from waste management operators, and on the collection, dismantling and recovery of the waste refrigerants and other substances from end-of-life equipment will be prepared. A review of the relevant policies and regulations related to recovery, recycling and reclamation and management of wastes will also be conducted to identify those that would be needed to support the environmentally sound management of these wastes. A national survey will then be conducted to collect specific data to quantify the stock of ODS and HFCs, taking into account both equipment in use and in bank. The national survey will be carried based on the methodologies outlined UNEP/OzL.Pro/ExCom/91/6 and other guidelines, such as the equipment based approach or the chemical consumption approach, based on the results of the initial desk study. The survey will involve collecting information from stakeholders such as importers, distributors, service companies, RAC association and end-users.	UNIDO
Analysis of data collected	The data collected will be analysed based on the methodology selected to estimate the quantities of unwanted ODS and HFCs in different sectors. The analysis will consider the types and quantities of substances, their distribution across sectors, their location and the potential for recovery and reclamation.	UNIDO
Preparation of inventory report/national plan	Based on the analysed data, a national inventory of ODS and HFC banks will be prepared. The national inventory will provide a detailed account of the types and quantities of substances, their locations and their current status (in use, stockpiled or awaiting	UNIDO

	disposal). The inventory will serve as a basis for the development of a comprehensive plan for the collection, transport and disposal of unwanted controlled substances. The plan will outline strategies for the recycling, reclamation and cost-effective destruction of ODS and HFCs. The plan will also include recommendations for policy measures, infrastructure requirements and potential funding mechanisms. The final report, consisting of the national inventory and plan, will also consider lessons learned and recommendations for future projects. The final report will be submitted to the Multilateral Fund for the Implementation of the Montreal Protocol.	
Stakeholder consultation	Key stakeholders will be engaged throughout the project to ensure their input and buy-in. This will include workshops and meetings with government agencies, industry representatives, the RAC association and other relevant parties. Stakeholder consultations will help define the objective, refine methodologies, validate data and ensure that the proposed action plan is practical and widely supported.	UNIDO
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Data collection	\$35,000	UNIDO
Analysis of data collected	\$15,000	UNIDO
Preparation of inventory report/national plan	\$25,000	UNIDO
Stakeholder consultation	\$15,000	UNIDO
TOTAL	\$90,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
The NOU has recognized the importance of gender equality, women's empowerment and women's participation in the implementation of international and national programmes. During the implementation of the HPMP and the KIP, efforts have been made to mainstream gender and collect gender disaggregated data where relevant. These efforts will be continued and deepened during the implementation of this project. The project will for example ensure that gender considerations are integrated throughout its implementation. This includes ensuring balanced gender representation in stakeholder consultations, promoting gender equality in the project team, and considering the different impacts of substance disposal practices on men and women. Additionally, gender-disaggregated data will be collected and analyzed to ensure that the project benefits all genders equitably.		

PROJECT CONCEPT – MADAGASCAR

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

FUNDING REQUEST FOR THE PREPARATION OF NATIONAL INVENTORIES OF BANKS OF USED OR UNWANTED CONTROLLED SUBSTANCES AND A PLAN FOR THE COLLECTION, TRANSPORT AND DISPOSAL OF SUCH SUBSTANCES, INCLUDING CONSIDERATION OF RECYCLING, RECLAMATION AND COST-EFFECTIVE DESTRUCTION

Part I: Project information

Project title:	Preparation of an inventory of banks of used or unwanted controlled substances and a plan for the collection, transport, and disposal of such substances
Country:	Madagascar
Lead implementing agency:	UNIDO
Meeting where request is being submitted	95 th meeting of the Executive Committee
Implementation period	January 2025 – December 2026
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): 24	
Funding requested:	
Agency	Funding requested (US \$)
UNIDO	90,000

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating roles of respective agencies (where more than one IA is involved), and that the national inventory/action plan will be completed within 24 months from the date of project approval	☒	☐
Project included in the bilateral/IA business plan?	☐	☒
If NO , please provide explanation: According to decision 93/26, agencies are allowed to request in 2024 funding for preparation of ODS inventories even in cases where such projects had not been included in the agencies' business plans.		

A. Information required for PRP funding request for the national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction

1. Brief overview of the the concept, methodology and approach to be taken for the preparation of the national inventory and / or action plan and how it is linked to other activities in the country (i.e., national plans like the KIP), in particular those activities in the refrigeration servicing sector such as recovery, recycling, and reclamation programmes
The project will include the preparation of a comprehensive national inventory of banks of used or unwanted controlled ODS, and the development of a plan for the collection, transport and disposal of such substances. The approach will follow the guidelines contained in document UNEP/OzL.Pro/ExCom/91/66, using the equipment-based or chemical consumption methodology for data collection and analysis to estimate current and future banks of controlled substances. This will involve an initial desk review, detailed field surveys, data collection from various sectors and consultations with key stakeholders to ensure accurate and comprehensive data collection for the preparation of the inventory. The inventory aims to provide a clear understanding of the quantities and

locations of these used or unwanted substances, as well as their potential for recovery, recycling and reclamation. In addition to the inventory, the project will develop a national action plan outlining strategies for the effective collection, transport and disposal of used or unwanted ODS. This plan will consider various options for environmentally sound management, including local recycling, reclamation and destruction technologies, as well as the possibility of exporting these substances for destruction. The plan will also address the regulatory and policy framework needed to support these activities. The project will link with ongoing national activities, such as the HPMP, and leverage existing programmes in the refrigeration servicing sector by integrating them into the broader national strategy. By building on these existing efforts, the project aims to create a coherent and comprehensive approach to the management of ODS banks that will serve as a basis for future initiatives.

2. Description of activities that will be implemented during the preparation of the national inventories/action plans of banks for used and/or unwanted controlled substances and an indication of the estimated costs for the activities described broken down per agency

Activity	Description	Agency
Data collection	An initial desk study of already available data from national surveys on consumption of controlled substances undertaken in the preparation of the HPMP, ODS alternatives survey, equipment importers, recovery and recycling activities from waste management operators, and on the collection, dismantling and recovery of the waste refrigerants and other substances from end-of-life equipment will be prepared. A review of the relevant policies and regulations related to recovery, recycling and reclamation and management of wastes will also be conducted to identify those that would be needed to support the environmentally sound management of these wastes. A national survey will then be conducted to collect specific data to quantify the stock of ODS, taking into account both equipment in use and in bank. The national survey will be carried using methodologies outlined UNEP/OzL.Pro/ExCom/91/6 and other guidelines, such as the equipment based approach or the chemical consumption approach, depending on the results of the initial desk study. The survey will involve collecting information from stakeholders such as importers, distributors, service companies, RAC association and end-users.	UNIDO
Analysis of data collected	The data collected will be analysed based on the methodology selected to estimate the quantities of unwanted ODS in different sectors. The analysis will consider the types and quantities of substances, their distribution across sectors, their location and the potential for recovery and reclamation.	UNIDO
Preparation of inventory report/national plan	Based on the analysed data, a national inventory of ODS banks will be prepared. The national inventory will provide a detailed account of the types and quantities of substances, their locations and their current status (in use, stockpiled or awaiting disposal). The inventory will serve as a basis for the	UNIDO

	development of a comprehensive plan for the collection, transport and disposal of unwanted controlled substances. The plan will outline strategies for the recycling, reclamation and cost-effective destruction of ODS. The plan will also include recommendations for policy measures, infrastructure requirements and potential funding mechanisms. The final report, consisting of the national inventory and plan, will also consider lessons learned and recommendations for future projects. The final report will be submitted to the Multilateral Fund for the Implementation of the Montreal Protocol.	
Stakeholder consultation	Key stakeholders will be engaged throughout the project to ensure their input and buy-in. This will include workshops and meetings with government agencies, industry representatives, the RAC association and other relevant parties. Stakeholder consultations will help define the objective, refine methodologies, validate data and ensure that the proposed action plan is practical and widely supported.	UNIDO
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Data collection	\$40,000	UNIDO
Analysis of data collected	\$15,000	UNIDO
Preparation of inventory report/national plan	\$20,000	UNIDO
Stakeholder consultation	\$15,000	UNIDO
TOTAL	\$90,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
The NOU has recognised the importance of gender equality, women's empowerment and women's participation in the implementation of international and national programmes. During the implementation of the HPMP, efforts have been made to mainstream gender and collect gender disaggregated data where relevant. These efforts will be continued and deepened during the implementation of this project. The project will for example ensure that gender considerations are integrated throughout its implementation. This includes ensuring balanced gender representation in stakeholder consultations, promoting gender equality in the project team, and considering the different impacts of substance disposal practices on men and women. Additionally, gender-disaggregated data will be collected and analyzed to ensure that the project benefits all genders equitably.		

PROJECT CONCEPT – EGYPT

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
ENERGY EFFICIENCY EXCOM DECISION 94/60 (EE) PROJECT PREPARATION (PRP)**

KIP (INV - REF)
KIP (INV - A/C)

Part I: Project information

Project title:	Preparatory assistance for the Energy Efficiency Project in the Refrigeration and Air-Conditioning Sector	
Country:	Egypt	
Lead implementing agency:	UNIDO	
Implementation period for stage RPR EE:	24 months	
Duration of PRP implementation (i.e., time (in months) from the approval of PRP to submission of the project proposal (please specify): 12 months		
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNIDO	INV - Others	210,000.00 USD

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

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating the specifying roles of respective agencies (where more than one IA is involved)	☒	☐

A. Information required for PRP funding request for investment projects/sector plans as part of Energy Efficiency Funding Window

1. Agency:	UNIDO
2. Sector:	Refrigeration, Air-Conditioning
3. HFC consumption in item #2 reported under country programme data?	☒ Yes, please specify reported amount and year: 2023 ☐ No
4. Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	☐ Yes, please provide support letter ☐ No ☒ N/A
5. If the project preparation is requested in advance of the KIP, did the Government provide a written commitment that the consumption associated with these investment projects, once approved, will be deducted from the country's starting point, once established?	☐ Yes ☐ No ☒ N/A
6. Please explain briefly how the investment project would relate to the overarching strategy for the country, and when the final KIP will be submitted (decision 87/50(e))	The project will significantly contribute to the energy efficiency improvement in air-conditioning and refrigeration manufacturing and service sectors in Egypt and the region.
7. Background information	
Egypt's booming Refrigeration and Air Conditioning (RAC) sector is expected to triple in size over the next 25 years. The Egyptian government has already begun national efforts to transform this industry towards sustainable cooling practices through the development of a National Cooling Action Plan and progressive development of minimum energy performance standards (MEPS). The RAC sector in Egypt includes both manufacturing and import sector; in addition to a large servicing sector. It is imperative that the local manufacturing sector is upskilled in order to be able to compete with international manufacturers as the Government is moving towards stricter MEPS. In addition, it is important to build local capacity for expanding MEPS for the commercial sectors, ensuring technicians are capable of providing expert advice for	

consumer related to the choice of energy efficient equipment, and raise consumer awareness towards energy efficient environmentally friendly technology as the market undergoes refrigerant technology conversion.

As of October 2024, a total of 39 manufacturers across Residential RAC, Domestic Refrigeration, Commercial Air Conditioning, and Domestic and Commercial Refrigeration sectors have expressed interest in participating. A brief overview of each company is provided below. Additionally, other medium-sized domestic refrigerator manufacturers in Egypt, who already apply MEPS labels to their equipment, will have their eligibility assessed during the preparatory activities:

A. Residential AC: Egypt's Residential AC sector includes 11 key companies, each contributing unique strengths and capacities to the industry:

1. **Fresh:** Founded in 1995, Fresh is a leading home appliance company based in Badr City with a dedicated residential AC factory established in 2006. The company's two production lines use HFC-410A and R-32 refrigerants. Fresh is fully Egyptian-owned, employs around 12,000 people, and previously received funding from the Multilateral Fund for converting to HCFC technologies. This backing underscores Fresh's readiness to support future sector developments.
 2. **Miraco:** Established in 1981 as a joint venture, Miraco offers a broad range of home appliance products, including residential air conditioning. The company operates in 6th of October City with three AC production lines, currently using HFC-410A with a planned transition to R-32 by year's end. With 37% foreign ownership, Miraco has previously received funding for Montreal Protocol compliance, supporting the transition to sustainable refrigerants.
 3. **Elaraby Group:** A longstanding name in Egyptian home appliances, Elaraby was founded in the 1960s and began AC production in 2004. The company has a factory in Quesna City with two production lines using HFC-410A and R-32. Fully Egyptian-owned, Elaraby has previously been funded for the Montreal Protocol, positioning it as a capable partner in sustainable residential AC initiatives.
 4. **Power:** Established in 1996 as a private company, Power operates from 10th of Ramadan City, producing residential air conditioners on one production line that uses HFC-410A and R-32 refrigerants. Fully Egyptian-owned, Power is well-prepared to expand its role in the residential AC sector.
 5. **Unionaire:** Founded in the 1990s, Unionaire produces a comprehensive range of home appliance products, including residential ACs. The company operates a factory with two production lines that use R-410A and R-32 refrigerants. Unionaire is fully Egyptian-owned, though it has not received prior funding for conversion technologies, and is prepared to support sector initiatives.
 6. **Kiriazzi Group:** A prominent manufacturer in Egypt's home appliance sector for over 35 years, Kiriazzi produces air conditioners, refrigerators, and other appliances. In 2017, Kiriazzi introduced its first AC unit, using R-410A, and is planning a shift to R-32. With over 10,000 employees, Kiriazzi prioritizes sustainable practices and is ready to participate in future sector projects.
 7. **Free Air for Industry:** Founded in 2016, Free Air produces residential AC units and components, operating from 10th of Ramadan City. With manufacturing lines for sheet metal, plastic parts, and heat exchangers, the company's AC production line uses HFC-410A and plans to switch to R-32. Fully Egyptian-owned, Free Air employs over 350 people.
 8. **Teriak Group:** Founded in 1975, Teriak Group has a diverse manufacturing portfolio, including automotive parts and HVAC products. Located in 6th of October City, Teriak produces AURA brand residential AC units, with outputs ranging from 12K to 36K BTU/h, currently using R-410A and planning a transition to R-32. With a workforce of 685, Teriak is positioned as a regional HVAC industry leader.
- A. **Raya Holding for Financial Investment:** Operating since 1999, Raya is a subsidiary of Raya Holding and later acquired full ownership of its factory in the 3rd industrial zone of 6th of October City. The facility produces various AC products using R-410A, with a shift to R-32 underway. Raya's industry experience and manufacturing resources make it fully capable of supporting the sector's transformation.
- B. **Tiba Manzalawi Group:** With over 45 years of expertise, Tiba Manzalawi is a leading provider of AC systems and water solutions across Egypt, Africa, and the Middle East. The company has invested in R&D and production in the Tenth of Ramadan City industrial area, currently using R-410A in its residential AC production, with plans to adopt R-32. Tiba's regional footprint and production capacity position it strongly for sector contributions.

- C. **Haier:** Founded in 1984, Haier has grown into a global leader in home appliances. To meet the growing demand for air conditioners in Egypt and the region, Haier established local production with one line using R-410A, enhancing supply chain efficiency and product availability for Egyptian consumers. This local presence gives Haier a competitive advantage in the Middle East and Africa.

B. Domestic Refrigeration: Egypt's Domestic Refrigeration sector comprises 7 prominent companies specializing in the production of refrigerators and freezers:

1. **Elaraby Group:** Began domestic refrigerator production in Egypt in 1985 and operates a factory in Quesna City with three production lines. Elaraby uses HFC-134a as the main refrigerant and is fully Egyptian-owned. The company previously received funding under the Montreal Protocol for converting from HCFC technologies.
2. **Electrostar (The Star Group):** This company has a dedicated domestic refrigerator plant along with two freezer plants, totaling four production lines. Electrostar utilizes HFC-134a as its primary refrigerant. It is fully Egyptian-owned and was previously funded for HCFC conversion through the Montreal Protocol.
3. **Alaska:** Founded in 1978, Alaska manufactures domestic refrigerators, chest freezers, and upright freezers across three plants with four production lines. The company uses HFC-134a refrigerant and is fully Egyptian-owned. Alaska has also been funded under the Montreal Protocol for HCFC technology conversion.
4. **Unionaire:** Established in the 1990s, Unionaire produces a wide range of appliances, including domestic refrigerators. With two factories and four production lines, the company uses HFC-134a and is fully Egyptian-owned. While not previously funded for HCFC conversion, Unionaire is prepared to participate in future projects.
5. **Tredco:** Founded in 1998, Tredco specializes in manufacturing domestic refrigerators, chest freezers, and upright freezers with four production lines. Using HFC-134a refrigerant, Tredco is fully Egyptian-owned and has previously received funding for HCFC conversion under the Montreal Protocol.
6. **Fresh:** Entering the domestic refrigerator market in 2012, Fresh has expanded significantly, now operating six production lines across two buildings. The company uses HFC-134a and is undergoing operational realignment to incorporate pentane technology. Fully Egyptian-owned, Fresh has prior funding for HCFC technology conversion through the Montreal Protocol.
7. **Kiriazzi Group:** With over 35 years of experience, Kiriazzi is a leader in manufacturing a wide range of home appliances, including refrigerators. The company uses HFC-134a and employs over 10,000 people. Fully Egyptian-owned, Kiriazzi also benefited from Montreal Protocol funding for HCFC technology conversion.

C. Commercial Air Conditioning: Egypt's Commercial Air Conditioning (Com. AC) sector is composed of 8 leading companies: 1. DCM, 2. Egat, 3. Volta, 4. Misr for Engineering, 5. Tiba, 6. Miraco, 7. Unionaire, and 8. Power. Each of these companies provides diverse solutions to meet the country's demand for commercial cooling systems, forming the backbone of the industry.

D. Commercial Refrigeration: Egypt's Commercial Refrigeration (Com. Ref.) sector is composed of 9 leading companies: 1. Everest, 2. Iceberg, 3. Egyptian Gulf, 4. Makka, 5. Ratomag, 6. Dric, 7. Mog, 8. Reftruck, and 9. Cairo Foam. These companies play a vital role in meeting the demand for commercial refrigeration solutions across the country, establishing a strong foundation for the industry.

E. Domestic and Commercial Refrigeration: Egypt's Domestic and Commercial Refrigeration (Dom/Com. Ref.) sector is composed of 4 key companies: 1. Trust, 2. Akwarj, 3. Mas Electric, and 4. Top Maker. These companies serve both domestic and commercial markets, supporting the country's demand for versatile refrigeration solutions and strengthening the industry's foundation.

For commercial refrigeration there is no standard, that is why those companies will not be included into the assessment.

Current Status of MEPS in Egypt

- **Residential Air Conditioners:** MEPS and labels for RAC are fully established but lack detailed monitoring, reporting and verification system. Notably, these standards incorporate the Seasonal Energy Efficiency Ratio (SEER), a more comprehensive metric that considers real-world operating conditions. However, the current MEPS do not consider the heating energy consumption.
- **Domestic Refrigerators:** MEPS and labels for domestic refrigeration equipment are fully established but lacks a detailed monitoring reporting and verification system.
- **Commercial Air Conditioners:** this equipment is currently not controlled by MEPS; however the building energy code requires some minimum energy requirements. The building energy code is not mandatory and has not been updated recently. In addition, the EOS has drafted a MEPS for commercial Air conditioning equipment, but this work is constrained due to the lack of national or third-party air conditioning test facilities in Egypt.
- **Commercial Refrigerators:** this equipment is not controlled by any MEPS; however, EOS is working on its development. The main constrain to this is the lack of the commercial RAC testing laboratory. This equipment is not controlled by any MEPS; however EOS is working on its development. The main constraint to this is the lack of a national or a third-party testing refrigeration equipment facility in Egypt.

Challenges and Opportunities

While Egypt has made commendable progress, challenges remain:

- **Technical Barriers:** Implementing MEPS for commercial air conditioning and commercial refrigeration equipment is lacking, and adequately enforcing MEPS for all equipment requires robust MRV infrastructure. Challenges include limited technical expertise, and OEM restrictions on appliance modifications.
- **Awareness and Compliance:** Raising awareness among manufacturers, importers, technicians and consumers about the benefits of energy-efficient appliances and ensuring compliance with MEPS is crucial.
- **Financial Constraints:** Access to funding is essential for capacity building, data collection, and consumer awareness.

However, these challenges also present opportunities:

- **Energy Savings and Emission Reduction:** Improving residential sector MEPS and implementing and enforcing MEPS for commercial sectors can lead to substantial energy savings and greenhouse gas emission reductions; especially with an effective MRV mechanism.
- **Economic Benefits:** Promoting energy-efficient appliances can stimulate local manufacturing, create jobs, and reduce the cost of electricity for consumers.
- **Climate Leadership:** Egypt can demonstrate its commitment to climate action by taking the lead in energy efficiency in the region.

Project Objectives

This preparatory project aims to lay the groundwork for strengthening energy efficiency in Egypt's RAHP sector by:

1. **Capacity Building:** Provide comprehensive training to key stakeholders, including government officials, industry representatives, and technicians, on energy efficient technologies in the commercial sectors and MEPS implementation, enforcement, and monitoring.
2. **Data Collection and Verification:** Gather and verify data on the current market landscape, energy consumption patterns, and existing appliance stock to inform policy development and future interventions.
3. **Project Document Development:** Prepare a comprehensive project document outlining a detailed roadmap for enhancing energy efficiency in the sector, including technical assistance, financial mechanisms, and policy recommendations while phasing down HFCs.

Expected Outcome

The primary outcome of this project is to deliver a comprehensive and evidence-based **project document** that serves as a blueprint for synergistic activities in implementing energy efficiency projects while phasing down HFCs to

achieve the highest energy efficiency levels in Egypt's RACHP manufacturing sector. This document will be instrumental in securing additional funding and guiding the implementation of comprehensive energy efficiency measures, ultimately leading to the following:

- **Clear Roadmap for Energy Efficiency:** The project document will provide a detailed action plan, encompassing technical assistance, financial mechanisms, and policy recommendations tailored to the specific needs and challenges of the Egyptian RAC sector.
- **Enhanced Manufacturing Practices:** By implementing the highest energy efficiency standards, the RAC manufacturing sector in Egypt will experience a significant transformation, producing appliances with superior energy performance so that the government can progressively advance current MEPS and for domestic appliances and to develop MEPS for commercial air conditioning and refrigeration appliances.
- **Reduced Energy Consumption and Emissions:** The widespread adoption of energy-efficient RAC equipment will result in substantial energy savings at both the household and commercial buildings; yielding significant national levels energy savings. This in turn will contribute to reduced greenhouse gas emissions and a more sustainable energy landscape.
- **Strengthened Local Capacity:** The project activities, particularly the workshops, will empower national policymakers, private sector entities, and other stakeholders with the knowledge and skills necessary to drive energy efficiency improvements in the RAC sector.
- **Investment Attraction:** The well-structured project document, backed by robust collected data and analysis, will serve as a compelling tool for attracting additional funding from investors, enabling the scale-up of energy efficiency initiatives in Egypt.
- **Potential for Regional Impact:** Egypt's leadership in energy efficiency conversion through this project will create a path for regional impact through supporting neighbouring countries and exporting higher performance equipment by elaborating of the possible regional center of excellency for the energy efficiency in Egypt.

Key Deliverables

In addition to the Project Document, the following key deliverables will contribute to achieving the project's overarching outcome:

- **Comprehensive Survey Data:** Detailed information on the energy efficiency levels of RAC products manufactured in Egypt, providing a baseline for future improvements and calculating investment needed.
- **Technical Analysis and Gap Assessment:** Expert analysis of the survey data and identification of key gaps in technology, financing, and policy to guide the formulation of targeted interventions.
- **Capacity Building and Knowledge Transfer:** Successful completion of workshops, empowering stakeholders to actively contribute to the advancement of energy efficiency in the sector.

Project Activities

- **Training Workshops:** Conduct targeted training sessions on MEPS compliance by the manufacturing sector of Egypt for relevant private and public sector stakeholders.
- **Data Collection and Analysis:** Collect and analyse data on the current market, potential beneficiaries, energy consumption patterns, and appliance stock to identify key challenges and opportunities.
- **Stakeholder Consultations:** Engage with industry representatives, government officials, and other relevant stakeholders to gather input and ensure broad support for the project document.
- **Project Document Development:** Prepare a comprehensive project document that outlines a clear roadmap for achieving energy efficiency goals in the sector.

Budget and Timeline

A detailed budget is outlined in the table below. The project duration is estimated to be 24 months.

Conclusion

This preparatory project is essential for building the foundation for successful and sustainable energy efficiency interventions in Egypt's refrigeration, air-conditioning, and heat pump manufacturing sector. By investing in capacity building, data collection and manufacturers and possibly building an energy efficiency centre of excellence in Egypt, we can pave the way for significant energy savings, reduced emissions, and a more sustainable future for Egypt.

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

Activity	Indicative funding (US \$)	Bilateral/implementing agency
Survey, Data Collection: Collect data on production capacities, production lines, HFC consumption, energy efficiency levels, and refrigerant use for participating companies to lay the foundation for feasibility studies and guide investment strategies.	\$15,000	UNIDO
Technical Feasibility Studies: Assess current systems and evaluate potential for integrating energy-efficient technologies and low-GWP refrigerants for participating companies.	\$55,000	UNIDO
Energy Efficiency Financing Strategy : Develop financing options for energy efficiency upgrades, including potential partnerships with financial institutions.	\$20,000	UNIDO
Preparation of Business Plans: Assist companies in developing business plans for new investments or retrofitting existing production lines to incorporate energy-efficient technologies.	\$24,000	UNIDO
Two Consultation Workshops with Stakeholders and Steering Committee Setup: Organize two workshops with 70 participants, including representatives from 39 companies in the commercial AC and refrigeration sectors in Egypt, with up to 30% female participants. Industry experts and government officials will finalize strategies, and a Steering Committee will be established for project oversight.	\$12,000	UNIDO
Drafting of Investment Project Document for HFC phase down: Prepare a comprehensive investment project document to phase down HFCs	\$40,000	UNIDO
Drafting of Energy Efficiency Project Document: Prepare a comprehensive investment project document for energy efficiency improvements.	\$44,000	UNIDO
TOTAL	\$210,000	

PROJECT CONCEPT – NIGERIA

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL**

ENERGY EFFICIENCY EXCOM DECISION 94/60 (EE) PROJECT PREPARATION (PRP)
KIP (INV - REF)
KIP (INV - A/C)

Part I: Project information

Project title:	Preparatory assistance for the Energy Efficiency Project in the Refrigeration and Air-Conditioning Sector	
Country:	Nigeria	
Lead implementing agency:	UNIDO	
Implementation period for stage RPR EE:	24 months	
Duration of PRP implementation (i.e., time (in months) from the approval of PRP to submission of the project proposal (please specify): 24 months		
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNIDO	INV - Others	78,000.00 USD

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

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating the specifying roles of respective agencies (where more than one IA is involved)	☒	☐

A. Information required for PRP funding request for investment projects/sector plans as part of Energy Efficiency Funding Window

9. Agency:	UNIDO
10. Sector:	Refrigeration, Air-Conditioning
11. HFC consumption in item #2 reported under country programme data?	☒ Yes , please specify reported amount and year: 2023 ☐ No
12. Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	☐ Yes , please provide support letter ☐ No ☒ N/A
13. If the project preparation is requested in advance of the KIP, did the Government provide a written commitment that the consumption associated with these investment projects, once approved, will be deducted from the country's starting point, once established?	☐ Yes ☐ No ☒ N/A
14. Please explain briefly how the investment project would relate to the overarching strategy for the country, and when the final KIP will be submitted (decision 87/50(e))	The project will significantly contribute to the energy efficiency improvement in air-conditioning and refrigeration manufacturing sector
15. Background information	
Nigeria faces a dual challenge: meeting the growing energy demands of its population while mitigating the environmental impact of energy consumption. The refrigeration and air-conditioning (RAC) sector, driven by a rising middle class and a tropical climate, is a significant contributor to energy use. Inefficient appliances in this sector not only strain the national grid but also contribute to greenhouse gas emissions. Recognizing this, the Nigerian government has taken proactive steps to promote energy efficiency. The National Energy Policy (NEP) and the National Renewable Energy and Energy Efficiency Policy (NREEEP) provide a strong	

framework for these efforts. In the bid to address climate change issues and fulfill its obligations under the UNFCCC, Nigeria has developed its Nationally Determined Contributions (NDC). A key component of this framework is the establishment of Minimum Energy Performance Standards (MEPS). MEPS set a baseline level of energy efficiency for appliances, ensuring that only products meeting these standards can be manufactured, imported, or sold in the country. In Nigeria, 16 companies have expressed interest in joining the current energy efficiency funding opportunity in line with ExCom decision 94/61. Among these, four leading companies stand out for their active engagement and prior experience:

- **Sanden Intercool (Nigeria) Ltd:** Established in 1990, Sanden Intercool is a prominent brand in plug-in commercial refrigeration equipment, producing open coolers, wine coolers, freezer cabinets, and water coolers. The company is 90% owned by Thailand and 10% by Nigeria, with discussions around potentially adjusting the ownership percentage for Nigeria. In 2019, their HCFC-22 consumption was 10.8 MT.
- **Somotex Nigeria Ltd:** Founded in 1997 and based in Lagos, Somotex is 100% Indian-owned, yet markets all products within Nigeria. Their assembly lines, which include units for refrigerators, freezers, air conditioners, and more, produce over 1,800 units daily, with a manufacturing capacity of 270 air-conditioning sets per day. Somotex had an annual HCFC-22 consumption of 51.8 MT between 2019 and 2021.
- **HPZ Limited:** Incorporated in 2000 with fully local ownership, HPZ manufactures domestic air conditioners exclusively for the Nigerian market. The plant in Lagos produces AC units using R-410a refrigerant, with models ranging from 1-ton to 2-ton split units. Their average annual consumption of R-410a between 2021 and 2023 was 37.34 MT.
- **Sacral Industries Ltd:** Operating under the KENSTAR brand and two additional OEM brands, Sacral Industries is engaged in both air conditioning and refrigeration systems. Located in Lagos, the company is 100% Indian-owned, with all products marketed within Nigeria. Sacral participated in the HPMP Stage III project and has a manufacturing plant on Apapa Oshodi Express Way.

Current Status of MEPS in Nigeria

- **Air Conditioners (ACs):** The technical development of MEPS for ACs is complete, and the standards are awaiting final approval. Notably, these standards incorporate the Seasonal Energy Efficiency Ratio (SEER), a more comprehensive metric that considers real-world operating conditions.
- **Refrigerators:** The process of developing MEPS for refrigerators is yet to commence. This presents a critical gap, as refrigerators account for a substantial portion of household energy consumption. However, a procedure for the MEPS has been rolled out and there are discussions on how to kickstart the process.
- **Labelling:** ECOWAS energy efficiency labelling has been adopted, providing consumers with clear information about the energy performance of appliances. This labelling scheme will be rolled out for ACs upon approval of the MEPS.

Challenges and Opportunities

While Nigeria has made commendable progress, challenges remain:

- **Technical Barriers:** Implementing and enforcing MEPS requires robust testing and verification infrastructure. Challenges include outdated equipment, limited technical expertise, and OEM restrictions on appliance modifications.
- **Awareness and Compliance:** Raising awareness among manufacturers, importers, and consumers about the benefits of energy-efficient appliances and ensuring compliance with MEPS is crucial.
- **Financial Constraints:** Access to funding is essential for capacity building, data collection, and the establishment of a national energy efficiency center.

However, these challenges also present opportunities:

- **Energy Savings and Emission Reduction:** Implementing and enforcing MEPS can lead to substantial energy savings and greenhouse gas emission reductions.
- **Economic Benefits:** Promoting energy-efficient appliances can stimulate local manufacturing, create jobs, and reduce the cost of electricity for consumers.
- **Climate Leadership:** Nigeria can demonstrate its commitment to climate action by taking the lead in energy efficiency in the region.

Project Objectives

This preparatory project aims to lay the groundwork for strengthening energy efficiency in Nigeria's refrigeration and air-conditioning sector by:

4. **Capacity Building:** Provide comprehensive training to key stakeholders, including government officials, industry representatives, and technicians, on MEPS implementation, enforcement, and monitoring.
5. **Data Collection and Verification:** Gather and verify data on the current market landscape, energy consumption patterns, and existing appliance stock to inform policy development and future interventions.
6. **Project Document Development:** Prepare a comprehensive project document outlining a detailed roadmap for enhancing energy efficiency in the sector, including technical assistance, financial mechanisms, and policy recommendations.

Expected Outcome

The primary outcome of this project is to deliver a comprehensive and evidence-based **Project Document** that serves as a blueprint for achieving the highest energy efficiency levels in Nigeria's refrigeration and air-conditioning (RAC) manufacturing sector. This document will be instrumental in securing additional funding and guiding the implementation of comprehensive energy efficiency measures, ultimately leading to the following:

- **Clear Roadmap for Energy Efficiency:** The project document will provide a detailed action plan, encompassing technical assistance, financial mechanisms, and policy recommendations tailored to the specific needs and challenges of the Nigerian RAC sector.
- **Enhanced Manufacturing Practices:** By implementing the highest energy efficiency standards, the RAC manufacturing sector in Nigeria will experience a significant transformation, producing appliances with superior energy performance.
- **Reduced Energy Consumption and Emissions:** The widespread adoption of energy-efficient RAC equipment will result in substantial energy savings at both the household and national levels, contributing to reduced greenhouse gas emissions and a more sustainable energy landscape.
- **Strengthened Local Capacity:** The project activities, particularly the workshops and training sessions, will empower national policymakers, private sector entities, and other stakeholders with the knowledge and skills necessary to drive energy efficiency improvements in the RAC sector.
- **Investment Attraction:** The well-structured project document, backed by robust data and analysis, will serve as a compelling tool for attracting additional funding from donors and investors, enabling the scale-up of energy efficiency initiatives in Nigeria.
- **Potential for Regional Impact:** The exploration of a national or regional energy efficiency hub could position Nigeria as a leader in promoting energy efficiency practices across the region.
- **Setting up the working group** to review Nigerian Cooling Action Plan: Discoveries from the KIP baseline data development could help to further strengthen the Nigerian Cooling Plan.

Key Deliverables

In addition to the Project Document, the following key deliverables will contribute to achieving the project's overarching outcome:

- **Comprehensive Survey Data:** Detailed information on the energy efficiency levels of RAC products manufactured in Nigeria, providing a baseline for future improvements.
- **Technical Analysis and Gap Assessment:** Expert analysis of the survey data and identification of key gaps in technology, financing, and policy to guide the formulation of targeted interventions.
- **Capacity Building and Knowledge Transfer:** Successful completion of workshops and training sessions, empowering stakeholders to actively contribute to the advancement of energy efficiency in the sector.

Project Activities

- **Training Workshops:** Conduct targeted training sessions on MEPS compliance by the manufacturing sector of Nigeria for relevant private and public sector stakeholders.
- **Data Collection and Analysis:** Collect and analyse data on the current market, potential beneficiaries, energy consumption patterns, and appliance stock to identify key challenges and opportunities.
- **Stakeholder Consultations:** Engage with industry representatives, government officials, and other relevant stakeholders to gather input and ensure broad support for the project document.

- **Project Document Development:** Prepare a comprehensive project document that outlines a clear roadmap for achieving energy efficiency goals in the sector.

Budget and Timeline

A detailed budget is outlined in the table below. The project duration is estimated to be 12 months.

Conclusion

This preparatory project is essential for building the foundation for successful and sustainable energy efficiency interventions in Nigeria's refrigeration and air-conditioning manufacturing sector. By investing in capacity building, data collection and manufacturers and possibly building an energy efficiency training hub in Nigeria, we can pave the way for significant energy savings, reduced emissions, and a more sustainable future for Nigeria.

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

Activity	Indicative funding (US \$)	Bilateral/implementing Agency
Survey, Data Collection: Collect data on production capacities, production lines, energy efficiency levels, and refrigerant use for participating companies to guide the feasibility study and inform investment strategy.	\$14,000	UNIDO
Technical Feasibility Studies: Conduct feasibility studies to assess the potential for integrating energy-efficient technologies and low-GWP refrigerants for the 16 participating companies based on the data collected.	\$18,000	UNIDO
Energy Efficiency Financing Strategy : Develop financing options for energy efficiency upgrades, including partnerships with financial institutions to facilitate investment in sustainable technologies.	\$10,000	UNIDO
Preparation of Business Plans: Assist in developing business plans for new investments or retrofitting existing production lines to incorporate energy-efficient technologies.	\$10,000	UNIDO
Consultation Workshops with Stakeholders and Steering Committee Establishment: Conduct two consultation workshops with approximately 60 participants, including 16 representatives from the commercial AC and refrigeration sectors, industry experts, and officials from relevant ministries. Up to 30% female participation. Establish a Steering Committee with representatives from companies and government for project oversight.	\$6,000	UNIDO
Drafting of Energy Efficiency Project Document: Prepare a comprehensive project document for proposed energy efficiency improvements.	\$20,000	UNIDO
TOTAL	\$78,000	

PROJECT CONCEPT – TUNISIA

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL**

**FUNDING REQUEST FOR THE PREPARATION OF ENERGY EFFICIENCY PILOT
PROJECT UNDER DECISION 94/60**

Part I: Project information

Project title:	Preparatory assistance for the Energy Efficiency Project in the Refrigeration and Air-Conditioning Sector (decision 94/57)	
Country:	Tunisia	
Lead implementing agency:	UNIDO	
Implementation period for stage RPR EE:	8 months	
Duration of PRP implementation (i.e., time (in months) from the approval of PRP to submission of the project proposal (please specify): 8 months		
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNIDO	INV - Others	20,000.00 USD

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

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating the specifying roles of respective agencies (where more than one IA is involved)	☒	☐

A. Information required for PRP funding request for investment projects/sector plans as part of Energy Efficiency Funding Window

17. Agency:	UNIDO
18. Sector:	Refrigeration, Air-Conditioning
19. HFC consumption in item #2 reported under country programme data?	☒ Yes , please specify reported amount and year: 109,541 MT of R-410A; 3,1 MT of HFC-134a, and 1 MT of R-404A, in 2023. ☐ No
20. Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	☐ Yes , please provide support letter ☐ No ☒ N/A
21. If the project preparation is requested in advance of the KIP, did the Government provide a written commitment that the consumption associated with these investment projects, once approved, will be deducted from the country's starting point, once established?	☐ Yes ☐ No ☒ N/A
22. Please explain briefly how the investment project would relate to the overarching strategy for the country, and when the final KIP will be submitted (decision 87/50(e))	The project will significantly contribute to the energy efficiency improvement in the refrigeration and air-conditioning manufacturing in Tunisia.
23. Background information	

Under the project for the preparation of the HFC phase-down strategy, or Kigali implementation plan (KIP), Tunisia, in collaboration with UNIDO, elaborated a report on the consumption of energy for the provision of refrigeration and air-conditioning (RAC) services in the domestic, commercial, industrial and transport sectors. The results of this report showed that the RAC sector represents a substantial part of electricity consumption in the country.

Based on the findings of the report, the government of Tunisia submitted a proposal for a pilot project on energy efficiency in the RAC servicing sector, which was approved at the 94th meeting of the Executive Committee. Decision 94/57 (b) invites the Government of Tunisia to submit an additional pilot project to enhance the energy efficiency of the HFC-32-based split air-conditioning units and R-600a-based cold-water dispensers manufactured by the manufacturing enterprises that were being converted in stage I of the country's Kigali HFC implementation plan, on the understanding that the additional pilot project be submitted no later than the 96th meeting.

The current proposal requests some additional funding for preparation of the additional pilot project on energy efficiency. Given that the submission deadline for the 96th meeting is 17th of February 2025 and the 95th meeting, at which will be decided about the approval of this preparatory funding, is taking place from 4 to 8 December 2024, a request to amend decision 94/57(b) is requested. The request for amendment is to allow the country to submit the additional pilot project to the 97th meeting instead. This would allow sufficient time for careful collection and processing of the necessary information from all the manufacturing enterprises involved in the KIP. At the same time, it will not lead to delays in the implementation of the conversion activities under the KIP.

Sector background

The project is addressed to the following enterprises:

Company	Start of production	Products manufactured	Substance used
SICAD COALA	1980	Domestique AC units	R-410A
		Cold-water dispensers	HFC-134a
SOCIÉTÉ NEW STAR	1997	Domestique AC units	R-410A
		Refrigerators & freezers	HC-600a
EL ATHIR	1995	Domestique AC units	R-410A
		Refrigerators	HC-600a
SOCIÉTÉ INDUSTRIELLE MÉGA	1999	Domestique AC units	R-410A
3 STARS ELECTRONICS	2019	Domestique AC units	R-410A
		Refrigerators	HC-600a
NOVATECH / WEST POINT	2004	Domestique AC units	R-410A
		Freezers	HFC-134a
STAR ONE	2015	Domestique AC units	R-410A
		Refrigerators & freezers	HC-600a
CONDOR TUNISIA	2023	Domestique AC units	R-410A

The companies produce air-conditioning units based on R-410A. Five of them also produce refrigerators and/or freezers, but in these cases the production lines are already converted to HC-600a. Only in the case of Novatech-West Point, HFC-134a has been used for the production of freezers, but for a very small amount (88 units) in 2022. Finally, one company, Sicad Coala, consumes relevant amounts of HFC-134a for the production of cold-water dispensers.

The eight enterprises are 100% locally owned and are financially sound. They produce for the local market

exclusively, except for Sicad Coala that exports part of its production.

The total average consumption of the Tunisian RAC manufacturing sector in the period 2020-2022 is provided in the following table (metric tonnes).

Substance	2020	2021	2022	Average
HCFC-22	0.20	0.21	-	0.14
HFC-134a	5.06	5.08	5.00	5.05
R-410A	100.93	102.66	89.05	97.55
HC-600a	2.35	4.55	2.94	3.28

In this period, the use of HCFC-22 has been made by one company that has fully converted to R-410A in 2022.

Energy consumption of the RAC sector in Tunisia

The energy consumed in Tunisia for refrigeration and air conditioning equipment and systems in 2022 was 5,431 GWh, which represents approximately 28% of the total national electricity consumption (19,516 GWh). Currently, domestic refrigeration and commercial air conditioning are the largest consumers of electricity.

On a business-as-usual scenario, there will be an increase of approximately 83% in electricity consumption by refrigeration and air-conditioning applications between 2022 and 2045 in Tunisia, reaching a consumption of almost 10 million kWh.

In the projection until 2045, the applications that will increase electricity consumption the most are industrial refrigeration due to the evolution of food industry, domestic air conditioning and domestic refrigeration due to the needs derived from global warming and comfort levels increasing among households.

The residential sector is clearly the most important electricity consumer (12.56% of the national electricity consumption) because of the number of households that use refrigeration and air-conditioning equipment: 3.6 million in 2022. This sector is followed by the small commercial sector, the tertiary sector (private offices, public administrations, etc.) and the food industry. Commercial air-conditioning, including the tertiary sector, is of particular importance, as it represents 8,52% of the national electricity consumption.

In the transport sector, the greatest energy consumption is caused by air-conditioning, which, with 120 million liters, currently represents 3.33% of the total national fuel consumption. Mobile refrigeration consumes barely 8.5 million liters, that is to say, 0.24% of the national total.

Regarding the analysis of greenhouse gas emissions from the sectors concerned, they are distributed equally between direct and indirect emissions. However, the expected development for the coming years until 2045 will be marked by a sharp increase in indirect emissions, this is, emissions linked to energy consumption, compared to direct emissions of greenhouse gases, which will lower.

The cause of this development is the replacement of refrigerants with high global warming potential (GWP) by low- or zero-GWP alternatives, as well as the application of good practices in the installation and maintenance of refrigeration and air conditioning systems, which will help minimize refrigerant leaks and emissions to the atmosphere. In the meantime, energy consumption will increase, while energy production sources would remain similar to the current sources.

The report recommends three main action lines to reduce energy consumption in the RAC sector of Tunisia, these are:

- The installations must be well sized and optimized to obtain the best performance.
- The purchase of highly energy efficient equipment must be promoted.
- The end-user must ensure that the operation of the equipment and RAC systems is efficient over time through a correct maintenance service.

Objectives of the pilot project on energy efficiency for the manufacturing sector

The main goal of the pilot project to maintain and/or enhance the energy efficiency of the RAC manufacturing sector in Tunisia would be strictly related to the second action line above-mentioned, as it targets the promotion of highly energy efficient equipment by the support to the local manufacturers of this equipment.

For this, the project aims at providing these enterprises with the necessary incentives to produce refrigeration and air-conditioning equipment attaining higher levels of energy efficiency. The specific energy efficiency targets for every enterprise will be established during the project's preparatory phase.

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

Activity	Indicative funding (US \$)	Bilateral/implementing agency
Survey work (National consultant) – collect data from RAC manufacturers on their production volume and corresponding energy efficiency levels.	8,000	UNIDO
Technical support to 8 residential RAC manufacturers on the energy efficiency enhancement on their current products and analysis of the data received from the manufacturers (International consultant) including webinar and individual consultations.	5,000	UNIDO
Drafting a project document (International consultant)	7,000	UNIDO
TOTAL	20,000	

PROJECT CONCEPT – TÜRKİYE

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
ENERGY EFFICIENCY EXCOM DECISION 94/60 (EE) PROJECT PREPARATION (PRP)**

KIP (INV - REF)
KIP (INV - A/C)

Part I: Project information

Project title:	Turkey Preparatory Assistance for Advancing Energy Efficiency Project in the Commercial Refrigeration and Commercial AC.	
Country:	Türkiye	
Lead implementing agency:	UNIDO	
Implementation period for stage RPR EE:	24 months	
Duration of PRP implementation (i.e., time (in months) from the approval of PRP to submission of the project proposal (please specify): 24 months		
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNIDO	INV - Others	220,000 USD

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

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating the specifying roles of respective agencies (where more than one IA is involved)	☒	☐

A. Information required for PRP funding request for investment projects/sector plans as part of Energy Efficiency Funding Window

1. Agency:	UNIDO
2. Sector:	Refrigeration, Air-Conditioning
3. HFC consumption in item #2 reported under country programme data?	☒ Yes , please specify reported amount and year: 2023 ☐ No
4. Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	☐ Yes , please provide support letter ☐ No ☒ N/A
5. If the project preparation is requested in advance of the KIP, did the Government provide a written commitment that the consumption associated with these investment projects, once approved, will be deducted from the country's starting point, once established?	☐ Yes ☐ No ☒ N/A

6. Please explain briefly how the investment project would relate to the overarching strategy for the country, and when the final KIP will be submitted (decision 87/50(e))	Turkey's commercial refrigeration and AC sectors face significant challenges in adopting energy-efficient, sustainable practices due to limited data access, technical barriers, high costs, and restricted financing. The project aims to lay the groundwork for converting these sectors to high energy efficiency, aligning with Türkiye's national strategy to reduce greenhouse gas emissions, enhance energy efficiency, and transition to a sustainable economy. Aligned with the National Energy Efficiency Action Plan and the Kigali Amendment, the project promotes high-efficiency technologies, expands market access, and reduces energy consumption in commercial refrigeration and commercial AC while phasing down high-GWP refrigerants. Expected outcomes include a comprehensive, sector-specific investment plan, improved data collection for informed decision-making, tailored investment-ready business plans, and advanced technical feasibility studies to assess the potential for implementing new technologies. Strengthened collaboration among stakeholders will ensure a unified approach to energy efficiency and sustainability across the sector.
7. Background information	

1-Background

Türkiye's energy demand has steadily increased due to population growth, urbanization, economic development, and changing climate patterns. In 2018, total energy consumption reached 103 million tons of oil equivalent (Mtoe), with a significant portion attributed to electricity use in residential and non-residential buildings. Air conditioning (AC) systems play a crucial role in maintaining comfort, especially during Türkiye's hot summers, but they also contribute heavily to energy consumption and greenhouse gas (GHG) emissions. Air conditioning has become more common in Türkiye's residential and commercial sectors. In 2018, the residential sector alone accounted for 21% of the country's total electricity consumption, while non-residential sectors, such as offices, hotels, and retail spaces, depend heavily on AC systems, with up to 100% of buildings equipped with at least one unit. However, many installed AC systems are outdated and inefficient, which leads to unnecessary energy consumption. The inefficiency of these systems—many of which have Energy Efficiency Ratios (EER) between 2.0 and 2.5, far below the best available technologies that can achieve EERs as high as 4.0 to 6.5—contributes to Türkiye's energy challenges. Outdated systems combined with rising cooling demands strain the national grid and increase GHG emissions.

- The air conditioning market in Türkiye has grown significantly due to economic development, urbanization, and climate conditions. Key highlights include:
- Residential Buildings: Approximately 10 million single-split AC units are installed, along with 300,000 multi-split systems. However, 85% of the residential floor area remains uncooled, offering significant potential for future installations.
- Non-Residential Buildings: Variable Refrigerant Flow (VRF) systems dominate in offices and hotels, with about 450,000 units installed. 20,000 chillers are used in healthcare facilities, while packaged systems such as rooftop units (about 15,000 units) are used in retail buildings.

- **Local Manufacturing:**

- **AC:** The air conditioning manufacturing sector in Turkey is diverse, with significant production across various product categories. Single split units lead in production with 1.4 million units, offering high efficiency (Seasonal Energy Efficiency Ratio, SEER 4.5) and ready for refrigerant conversion to R32 or R410A, with manufacturers like Arçelik, Vestel, Daikin, and Mitsubishi dominating this segment. Multisplit and VRV systems follow with 32,500 units, also showing high efficiency (SEER 4.5) and readiness for conversion (R401A/R32), produced primarily by Daikin and Mitsubishi. In the air handling unit (AHU) category, 16,000 units are produced with moderate efficiency (SEER 3.5), requiring conversion from refrigerants like R410A, R407C, and R404A. Local manufacturers such as Doğu, Form, and Üntes play a leading role in this segment. AC chillers, with 1,800 units produced, also demonstrate moderate efficiency (SEER 3.5) and need refrigerant upgrades (R407C, R134A, R404A). Key local players in the chiller market include İmas, İmbat, Eraco, Aytek, Termoproses, Erbay, Planer, and Güldem.
- **The commercial refrigeration:** The commercial refrigeration sector in Turkey includes a wide range of products and manufacturers. In 2023, **plug-in units** like glass door merchandisers (GDM) and bottle coolers led production with 300,000 units, averaging a capacity of 0.7 kW and a Coefficient of Performance, **COP of 2.5**. These units mostly use **environmentally friendly refrigerants** like R290 (90%) and R600a (10%) and are ready for conversion to more efficient solutions. Leading manufacturers in this segment include Uğur, Klimasan, and Simfer. **Condensing units** produced 22,500 units with a COP of 2.1, using R404A and R134a, but they require conversion and a shift towards sustainable solutions. **Centralized supermarket systems**, with 3,500 units produced, also have low efficiency (COP 2.1) and rely on R404A, needing similar upgrades. Key manufacturers in these segments include Cantas, Frigoblock, and Savaşlar. Prominent retail chains such as A101, BİM, and Migros depend on these systems to meet their refrigeration needs across extensive store networks.
- **The industrial refrigeration:** The industrial refrigeration sector in Turkey is primarily focused on the production of process chillers with varying capacities. In 2023, most production centered on smaller chillers with capacities under 100 kW, totaling 2,000 units, operating with a COP of 2.1 and using refrigerants like R134a (70%), R407C (20%), and R404A (10%). These chillers are ready for conversion to more efficient, sustainable solutions. Larger process chillers (100-1,000 kW) accounted for 400 units, requiring similar refrigerant and technology upgrades. A limited number of very large chillers (over 1 MW) were produced, featuring higher efficiency (COP 2.5) and utilizing natural refrigerants like R717 (ammonia) and R744 (CO2). Key manufacturers, including Erksasis, Frigomekanik, and GEA, are transitioning to sustainable refrigerants for their lower environmental impact. Major end users in Turkey, such as Unilever, Et Süt Kurumu, and Süttaş, rely on these systems for food preservation, making energy efficiency and refrigerant sustainability crucial.

- **Regulatory Framework for Energy Efficiency in Turkey (RACHP Equipment):**

- **Energy Efficiency Standards and Labelling**
Turkey aligns its energy efficiency standards with EU directives, using international standards (ISO and IEC) for measurement. Labelling systems follow the EU's Energy Labelling Regulation, indicating product efficiency.
- **Testing Facilities and Monitoring**
Accredited labs, mostly affiliated with universities and institutes, are responsible for testing and certifying energy efficiency in equipment. Monitoring is done through regular compliance checks.
- **Growth in Energy Efficiency (36 months)**
Turkey expects a gradual increase in energy efficiency standards for ACs and refrigeration, driven by EU harmonization and updated regulations.
- **Growth Through National Regulations**
The national regulations, aligned with EU norms, are expected to increase efficiency levels in RACHP equipment by around 10-15% over the next three years.
- **Other Activities**
The Ministry of Energy is in the final stage of implementing Minimum Energy Performance Standards (MEPS) for commercial refrigeration and commercial AC.

3. Challenges to Energy Efficiency in Turkey's Commercial Refrigeration and Commercial AC Sectors

- The conversion of Turkey's commercial refrigeration and AC sectors to higher energy efficiency faces several barriers. Limited data on the requirements for companies to transition complicates targeted planning and strategy development. Technical challenges, including a lack of information on integrating energy-efficient technologies and low-GWP refrigerants, make system upgrades more complex. High initial costs and restricted financing options hinder companies, especially smaller ones, from investing in energy-efficient upgrades. Additionally, limited support for business planning slows companies' ability to retrofit existing systems, and low stakeholder engagement impedes the alignment of strategies across the sector. Addressing these barriers is essential to achieving reduced energy consumption and supporting Turkey's climate goals.

3. Problem Statement

- The commercial refrigeration and commercial AC sectors in Turkey face significant challenges in transitioning to energy-efficient and environmentally sustainable practices. Limited access to crucial data on the specific requirements for companies to adopt energy-efficient technologies complicates strategic planning and targeted investment. Additionally, technical barriers, such as the lack of readily available information on integrating advanced energy-efficient technologies and low-GWP refrigerants, further hinder the conversion process. High upfront costs and restricted financing options make it difficult for many companies, particularly smaller enterprises, to afford necessary upgrades. Compounding these issues are limited resources for business planning and low stakeholder engagement, which together prevent a cohesive, sector-wide alignment on sustainable practices. Overcoming these barriers is essential to reduce energy consumption, align with Turkey's climate goals, and support a sustainable transformation in the commercial refrigeration and AC industries.

4. Objective

- The objective of this project is to prepare an investment plan that will support Turkey's commercial refrigeration and commercial AC sectors in transitioning to energy-efficient and environmentally sustainable technologies. This plan will guide the sectors in reducing energy consumption, lowering greenhouse gas emissions, and aligning with Turkey's climate goals, ultimately fostering a more sustainable and resilient industry.

5. Expected Outcomes

- Comprehensive Investment Plan: A sector-specific plan for Turkey's commercial refrigeration and commercial AC industries, outlining steps for transitioning to energy-efficient, sustainable technologies.
- Improved Data Collection: The Ministries of Energy and Environment will access accurate data on current production capacities, energy efficiency, and refrigerant usage, supporting informed decision-making.
- Investment-Ready Business Plans: Tailored plans will be developed for each company to secure funding for efficiency upgrades and foster adoption.
- Collaboration Among Stakeholders: Aligned strategies between manufacturers and policymakers will establish a unified approach to energy efficiency and sustainability.

6. Deliverables

- Comprehensive Investment Plan: A finalized investment plan outlining the pathway for Turkey's commercial refrigeration and AC sectors to adopt energy-efficient and sustainable technologies.
- Conduct Technical Feasibility Studies to assess current systems within the participating companies and evaluate opportunities for integrating energy-efficient technologies and low-GWP refrigerants. This will include a detailed analysis of each company's existing infrastructure, identifying areas for improvement and specific recommendations for upgrades.
- Individual Business Plans: Tailored business plans for each participating company, designed to facilitate funding acquisition for energy-efficient upgrades.
- Stakeholder Engagement Report: A report summarizing collaboration outcomes, including aligned investment strategies and policy recommendations, fostering coordinated efforts between manufacturers, policymakers, and other stakeholders.
- Final Project Report: A comprehensive report documenting project results, lessons learned, and progress toward Turkey's climate and sustainability objectives.

7. Participating Companies

- Turkey is home to a diverse range of domestic companies engaged in the production and innovation of commercial refrigeration and air conditioning systems, all owned by Turkish nationals and fully aware of the potential to convert to hydrocarbon refrigerants at their own cost.
- In the commercial AC sector, companies like Doğu, Form, and Üntes specialize in Air Handling Units (AHUs), enhancing indoor air quality through ventilation and temperature control. Companies such as İmas, İmbat, Eraco, Aytek, Termoproses, Erbay, Planer, and Güldem focus on AC chillers, essential for industrial cooling in various commercial settings. ACR contributes to AC automation, optimizing system efficiency and energy use.
- In commercial refrigeration, Turkey is home to leading companies like Uğur, Klimasan, and Simfer, who manufacture Glass Door Merchandisers (GDM), widely used in retail environments. The compressor pack sector, critical for large-scale refrigeration, includes companies such as Cantaş, Frigoblock, IBS, Cantek, Savaşlar, Ahmet Yar, and Çözüm. Atalian supports after-sales services, ensuring maintenance and efficiency in refrigeration operations. The cabinet manufacturing sector, covering display and storage units for commercial use, features prominent names like Çağlayan, Kaplanlar, Nurdil, Diktaş, Alaska, and İnanç. Collectively, these companies advance Turkey's role in energy-efficient commercial refrigeration and AC solutions.
- These 29 leading Turkish companies in commercial AC and refrigeration will play a pivotal role in advancing energy-efficient technologies, leading the shift to high energy efficiency and reducing environmental impacts. The Ministry of Environment will enable their active involvement by coordinating Survey, Data Collection, and Regulation Review on production, efficiency, and refrigerant use, guiding Technical Feasibility Studies to integrate energy-efficient technologies, and supporting Financing Strategies with financial partners. Through Stakeholder Workshops and a steering committee, the Ministry will help finalize strategies and develop an Investment Project Document to secure funding, fostering sustainable sector-wide advancements.

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

Activity	INDICATIVE FUNDING (US \$)	IMPLEMENTING AGENCY
Survey, Data Collection: Collect data on production capacities, production lines, HFC consumption, energy efficiency levels, and refrigerant use for participating companies to lay the foundation for feasibility studies and guide investment strategies.	\$15,000	UNIDO
Technical Feasibility Studies: Assess current systems and evaluate potential for integrating energy-efficient technologies and low-GWP refrigerants for participating companies.	\$65,000	UNIDO
Energy Efficiency Financing Strategy : Develop financing options for energy efficiency upgrades, including potential partnerships with financial institutions.	\$20,000	UNIDO
Preparation of Business Plans: Assist companies in developing business plans for new investments or retrofitting existing production lines to incorporate energy-efficient technologies.	\$24,000	UNIDO
Two Consultation Workshops with Stakeholders and Steering Committee Setup: Organize two workshops with 70 participants, including representatives from 39 companies in the commercial AC and refrigeration sectors in Egypt, with up to 30% female participants. Industry experts and government officials will finalize strategies, and a Steering Committee will be established for project oversight.	\$12,000	UNIDO

Drafting of Investment Project Document for HFC phase down: Prepare a comprehensive investment project document to phase down HFCs	\$40,000	UNIDO
Drafting of Energy Efficiency Project Document: Prepare a comprehensive investment project document for energy efficiency improvements.	\$44,000	UNIDO
	\$220,000	

Country: ARMENIA

Title: Institutional Strengthening for the implementation of Montreal Protocol in Armenia

Project Duration: 36 months (January 2025 – December 2027)

Project Budget: 317,952 (excl. 7% Agency Support Costs)

Implementing Agency: UNIDO

Coordinating Agency: National Ozone Unit (NOU)/Ministry of Environment

Project Summary

Institutional strengthening project, phase VIII, for Armenia has been implemented successfully. NOU under the Ministry of Environment protection has worked closely with Government and Industry on the project implementation matters. The Government of Armenia has a well-established import and export licensing system for substances controlled under the Montreal Protocol, successful coordinated with other national agencies and stakeholders in managing and monitoring implementation of ODS phase-out programmes which will assist country in complying with HCFCs phase-out targets and prepared the implementation of Kigali Amendment (stage I). NOU organized series of awareness raising activities, targeting various target audiences such as customs officials, industry representatives, students and the general public. Armenia participated in national, regional network and international meetings on ozone-related issues.

The next phase of institutional strengthening will continue support the National Ozone Unit for three additional years of operation. The IX phase will allow the National Ozone Unit to continue to plan, organize and coordinate all activities required for the implementation of Armenia's strategies in all areas related to the phase-out of ODS and phase-down of HFCs under the Montreal Protocol. The NOU is looking in strengthening national capacity, enforcement of ODS, HFCs legislations and regulations, training and capacity building of stakeholders and various targeted awareness raising activities. Priority will be given to the coordination of the import/export recording with the members of other EAEU countries, implementation of KIP Stage I and preparation and submission of HPMP Stage III. Planned activities will also focus on: timely CP and Article 7 data reporting; continued monitoring the licensing system and allocate import quotas; continue cooperation with custom authorities and industry associations. Public awareness activities will include celebration of international ozone day. Active participation in regional network and global Montreal Protocol meetings, exchanging information, knowledge and experience will continue to be a priority for Phase IX. Awareness raising activities among key stakeholders will continue to be organized at the same time ensuring that all activities are organized in line with the MLG Gender Mainstreaming Policy.

Country: EGYPT

Title: Institutional Strengthening for the implementation of Montreal Protocol in Egypt

Project Duration: 36 months (January 2025 – December 2027)

Project Budget: 604,966 (excl. 7% Agency Support Costs)

Implementing Agency: UNIDO

Coordinating Agency: National Ozone Unit (NOU)/ Egyptian Environmental Affairs Agency

Project Summary

Since the approval of the current phase, the Egyptian Environmental Affairs Agency / Ozone Layer Protection Section (NOU) ensured the successful ratification of the Kigali Amendment and Egypt became 152nd country to join other countries in the global efforts to reduce the HFCs consumption. Egypt submitted on time Article 7 and CP data reports for 2022 and 2023 and ensured consumption is within the Montreal Protocol reduction targets. The focus in the current phase was on: strict monitoring of HCFC trade through the national ODS regulatory framework and allocation of quotas, further strengthening the cooperation with the customs authorities ensuring sustained ODS phase-out, collaboration and sharing information with the industry associations and large spectrum of institutions, organizing regular meetings of the National Ozone Committee, finalization of activities under the HPMP Stage II and preparation of KIP Stage I; and public awareness activities including celebration of International Ozone Day.

During phase XV the NOU's priority will be for Egypt to achieve the 2025-2027 HCFC reduction target and freeze of the HFC consumption at baseline level. NOU will continue with overseeing the implementation of HPMP Stage II and plans to have the KIP Stage I submitted at the first meeting in 2025. Activities planned include: CP and Article 7 data reporting, including reporting in CO₂ eq.; continued monitoring the licensing system and allocate import quotas; continue implementing activities under the HPMP Stage II and KIP Stage I; continue cooperation with custom authorities and industry associations. Public awareness activities will include celebration of international ozone day and the country plans to participate in regional network and Montreal Protocol meetings. The country is dedicated to implementing the MLF Gender Mainstreaming Policy.

Country: JORDAN

Title: Institutional Strengthening for the implementation of Montreal Protocol in Jordan

Project Duration: 36 months (January 2025 – December 2027)

Project Budget: 390,373 (excl. 7% Agency Support Costs)

Implementing Agency: UNIDO

Coordinating Agency: National Ozone Unit (NOU)

Project Summary

The ISP phase XIV highlights is the successful ratified Kigali Amendment and issued the instructions to control ODS and HFCs and their alternatives and equipment contained HCFCs, HFCs and their alternatives, Jordan phased out HCFCs 141b and preblended polyol since 1/Jan /2022 and phased out 100 Mt HCFCs R22 in the service sector, Jordan submitted Article 7 data and CP data for 2019, 2020, 2021, 2022 and 2023, also submitted verification reports for 2019, 2020 and 2021. Jordan hosted Ozone networks for three regions in September 2023, NOU organised many meetings and workshops with the private and public sectors to exchange information, experience and raising awareness Jordan celebrated in 2019, 2020, 2021, 2022 and 2023 in international Ozone Day. NOU issued more than 1000 licence for importers to import HCFCs, HFCs and their alternatives and equipment containing ODS and HFC. Finally NOU issued quota system for 2019, 2020, 2021, 2022, 2023 and 2024.

The Fourteen phase of Jordan's institutional strengthening project (ISP) covering 2025 2026 and 2027 period will continue to prioritize HCFCs phase out from the policy and regulatory perspective as well as the investment side as it embarks on HPMP stage III while insuring that stag II commitments of reductions from the baseline are met. In addition, this period will require stepped inter-ministerial coordination and liaison work ,given the country wish to phase out HCFCs R22 partially in the service sector and phase down 10% from HFCs and 40% from the total base line (HCFCs plus HFCs), IS XIV will be fox and continue to monitor and control import and re-export HCFCs and HFCs and their alternatives, also to allow NOU to report Article 7 data and CP data on the time, also to allow NOU to participate in the M.P meetings such as open ended meeting, CoP and regional Ozone network meetings, the ISP will allow the NOU to continue to enhance its ability to assure compliance to the Montreal protocol for all controlled substances. Hence regular annual monitoring, public awareness, finally building awareness in the country on HFCs uses alternatives and their applications also about safety measures.

Country: TURKMENISTAN

Title: Institutional Strengthening for the implementation of Montreal Protocol in Turkmenistan

Project Duration: 36 months (January 2025 – December 2027)

Project Budget: 204,019 (excl. 7% Agency Support Costs)

Implementing Agency: UNIDO

Coordinating Agency: National Ozone Unit (NOU)/ Ministry of Environment Protection of Turkmenistan

Project Summary

Institutional strengthening project, phase VI, for Turkmenistan has been implemented successfully. NOU under the Ministry of Environment protection has worked closely with Government and Industry on the project implementation matters. The Government of Turkmenistan has a well-established import and export licensing system for substances controlled under the Montreal Protocol, successful coordinated with other national agencies and stakeholders in managing and monitoring implementation of ODS phase-out programmes which will assist country in complying with HCFCs phase-out targets and prepared the implementation of Kigali Amendment (stage I). NOU organized several trainings for customs officers and refrigeration technicians in good servicing practices, other various stakeholder's acknowledgment meetings, increased awareness among students by organizing lectures, essay and Children's painting competitions. Turkmenistan participated in national, regional network and international meetings on ozone-related issues.

The next phase of institutional strengthening will continue support the National Ozone Unit for three additional years of operation. The VII phase will allow the National Ozone Unit to continue to plan, organize and coordinate all activities required for the implementation of Turkmenistan's strategies in all areas related to the phase-out of ODS and phase-down of HFCs under the Montreal Protocol. The NOU is looking in strengthening national capacity, enforcement of ODS, HFCs legislations and regulations, training and capacity building of stakeholders and various targeted awareness raising activities. Priority will be given to the coordination of the finalization of the HCFCs management plan and on implementing appropriate activities to strengthen the control of the HCFCs and to achieve the country's reduction target of 67.5% by 2025 and successful implementation of KIP stage I. Also, the planned Activities will consist: CP and Article 7 data reporting; continued monitoring the licensing system and allocate import quotas; continue cooperation with custom authorities and industry associations. Public awareness activities will include celebration of international ozone day. The Government of Turkmenistan will continue to actively participate in regional network and global Montreal Protocol meetings, by exchanging information, knowledge and experience that will foster the implementation of national policies and strategies for the protection of the ozone layer. Phase VII of the IS project will promote awareness among key stakeholders about the relevance of gender equality for development and the guiding principle that both women and men must have equal opportunities to access, participate in, and benefit from the Project. Efforts will be made to allow female stakeholders to contribute to the project activity.

Country: TÜRKIYE

Title: Institutional Strengthening for the implementation of Montreal Protocol in Türkiye

Project Duration: 36 months (January 2025 – December 2027)

Project Budget: 688,896 (excl. 7% Agency Support Costs)

Implementing Agency: UNIDO

Coordinating Agency: National Ozone Unit (NOU)/ Ministry of Environment, Urbanization, and Climate Change (MoEUCC), Directorate of Climate Change

Project Summary

The NOU's capacity was increased by the recruitment of additional staff by the Ministry of Environment, Urbanization and Climate Change, Directorate of Climate Change.

Progress was achieved in reviewing the ODSs national legislation and introduction of HFC licensing and quota systems, reporting and certification requirements, as a step to ensure compliance with the HFCs phase-down targets.

Import control measures for all controlled substances are in place and enforced. Imports of controlled substances are consistent with the yearly quotas issued by the NOU. Joint activities between the NOU and the customs authorities are in place. CP data and Article 7 data reports were submitted in time and on a yearly basis. Regular cross-check of data with the customs authorities. Prevention of illegal trade is achieved and further enhanced through improvement of the electronic system, customs authorities, NOU and trade authorities having access to the same centralized database for HFCs. The NOU maintains regular contact and organize regular meetings with national stakeholders, relevant Ministries. The NOU implements project activities according to the action plan developed jointly by UNIDO and the NOU. Furthermore, funding requests for the preparation of the national inventories of unwanted waste was submitted within planned timeframe and approved. Funding request for stage I tranche I of the KIP was submitted to the 95th ExCom meeting within the planned timeframe.

The NOU promoted awareness raising and information exchange by developing an action plan for awareness raising campaigns, organized awareness meetings and drafted and distributing information material; Ozone Day was celebrated in September 2023 and full participation of the NOU in relevant meetings both regionally and internationally. In addition, the NOU complied with the MLF gender policy and integrated it into the ongoing activities under the fourth tranche of HPMP Stage I and first tranche of KIP stage I.

NOU has always been fully aware of the criticality and importance of the IS Project funding and planning in being able to achieve the advancements in the above-mentioned fields. Despite accomplishing achievements, Türkiye NOU still has to advance its contributions in these RAC strategic fields. Awareness raising, combating illegal trade, regional cooperation and participation, data collection and data reporting are the areas, which require further intervention for the next project period. Therefore, the extension of IS funding is of relevance for the functioning of NOU.

- New generation ozone and climate friendly alternatives to ODS and F-gases will be fully supported through the trainings, acknowledgement meetings and enforcement of legislation
- Strengthened monitoring of ODS and HFC trade, especially through the use of innovative, IT-based and context dependent approaches is aimed to combat the illegal trade of ODSs and HFCs
- Strengthened data collection and reporting of ODSs and HFCs.

The communication and networking possibilities as well as the awareness on the protection of the ozone layer among the concerned actors will be strengthened. The scale of this goal is not only crucial at national level but also international and local levels. Therefore, for the 2025-2027 period, increased visibility in both the regional and international scene as well as an underlined leader role in the Montreal Protocol and Kigali Amendment related issues is expected to be achieved.