



**Programa de las
Naciones Unidas
para el Medio Ambiente**

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COMITÉ EJECUTIVO DEL FONDO MULTILATERAL
PARA LA APLICACIÓN DEL
PROTOCOLO DE MONTREAL
Nonagésima sexta reunión
Montreal, 26-30 de mayo de 2025
Puntos 9 c) y d) del orden del día provisional¹

PROGRAMA DE TRABAJO DEL PNUMA PARA 2025

¹ UNEP/OzL.Pro/ExCom/96/1

Los documentos previos al período de sesiones del Comité Ejecutivo del Fondo Multilateral para la Aplicación del Protocolo de Montreal no van en perjuicio de las decisiones que el Comité pudiera adoptar después de la emisión de los mismos.

OBSERVACIONES Y RECOMENDACIÓN DE LA SECRETARÍA DEL FONDO

1. El PNUMA solicita al Comité Ejecutivo la aprobación de USD 3.139.306, más unos gastos de apoyo de USD 272.852, para su programa de trabajo de 2025 que figura en el cuadro 1. La propuesta se adjunta al presente documento.

Cuadro 1: Programa de trabajo del PNUMA para 2025

País	Actividad/Proyecto	Monto solicitado (USD)	Monto recomendado (USD)
SECCIÓN A: ACTIVIDADES RECOMENDADAS PARA APROBACIÓN GENERAL			
A1: Renovación de proyectos de fortalecimiento institucional			
Angola	Renovación del proyecto de fortalecimiento institucional (fase VIII)	356.106	356.106
El Salvador	Renovación del proyecto de fortalecimiento institucional (fase VII)	180.000	180.000
Etiopía	Renovación del proyecto de fortalecimiento institucional (fase X)	180.000	180.000
Namibia	Renovación del proyecto de fortalecimiento institucional (fase XII)	180.000	180.000
Total para A1		896.106	896.106
A2: Asistencia técnica para actividades de apoyo (decisión 79/46)			
República Centroafricana	Actividades de apoyo para la reducción de HFC	150.000	150.000
Subtotal para A2		150.000	150.000
Gastos de apoyo		10.500	10.500
Total para A2		160.500	160.500
A3: Preparación de proyectos para los planes de gestión para la eliminación de HCFC (PGEH)			
Iraq	Preparación de un PGEH (etapa III)	60.000	60.000
Kuwait	Preparación de un PGEH (etapa III)	70.000	70.000
Subtotal para A3		130.000	130.000
Gastos de apoyo		16.900	16.900
Total para A3		146.900	146.900
A4: Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de planes para su acopio, transporte y eliminación²			
Barbados	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	80.000	80.000
Dominica	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	70.000	70.000
Etiopía	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	80.000	80.000
Georgia	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	80.000	80.000
Ghana	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	90.000	90.000
Iraq	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	100.000	100.000
Omán	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	90.000	90.000
Rwanda	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	80.000	80.000
Saint Kitts y Nevis	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	70.000	70.000

² En adelante, “inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan”.

País	Actividad/Proyecto	Monto solicitado (USD)	Monto recomendado (USD)
Suriname	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	80.000	80.000
República Unida de Tanzania (la)	Preparación de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan	80.000	80.000
Subtotal para A4		900.000	900.000
Gastos de apoyo		117.000	117.000
Total para A4		1.017.000	1.017.000
A5: Asistencia técnica para elaborar un informe de verificación sobre el consumo de HCFC			
Antigua y Barbuda	Informe de verificación para la etapa II del PGEH	30.000	30.000
Belice	Informe de verificación para la etapa II del PGEH	30.000	30.000
Bhután	Informe de verificación del PGEH	30.000	30.000
Burundi	Informe de verificación para la etapa II del PGEH	30.000	30.000
Congo (el)	Informe de verificación para la etapa II del PGEH	30.000	30.000
Santa Lucía	Informe de verificación para la etapa II del PGEH	30.000	30.000
Suriname	Informe de verificación para la etapa II del PGEH	30.000	30.000
Zimbabwe	Informe de verificación para la etapa II del PGEH	30.000	30.000
Subtotal para A5		240.000	240.000
Gastos de apoyo		31.200	31.200
Total para A5		271.200	271.200
SECCIÓN B: ACTIVIDADES RECOMENDADAS PARA CONSIDERACIÓN INDIVIDUAL			
B1: Asistencia extraordinaria adicional para el fortalecimiento institucional			
Maldivas	Asistencia extraordinaria adicional para el fortalecimiento institucional	30.000	*
Total para B1		30.000	*
B2: Asistencia técnica mundial			
Mundial	Articulación de encargados nacionales del ozono y autoridades nacionales en materia de eficiencia energética en apoyo de los objetivos de la Enmienda de Kigali (fase II)	793.200	*
Subtotal para B2		793.200	*
Gastos de apoyo		97.252	*
Total para B2		890.452	*
Total para A1, A2, A3, A4, A5, B1, B2		3.139.306	2.316.106
Gastos de apoyo para A1, A2, A3, A4, A5, B1, B2		272.852	175.600
Total general		3.412.158	2.491.706

* Recomendado para consideración individual

ACTIVIDADES RECOMENDADAS PARA APROBACIÓN GENERAL

A1: Renovación de proyectos de fortalecimiento institucional

Descripción del proyecto

2. El PNUMA presentó solicitudes de renovación de los proyectos de fortalecimiento institucional para los países enumerados en la sección A1 del cuadro 1. La descripción de estos proyectos figura en el Anexo I del presente documento.

Observaciones de la Secretaría

3. La Secretaría examinó las solicitudes de renovación de cuatro proyectos de fortalecimiento institucional conforme a las directrices³ y decisiones pertinentes sobre criterios de admisibilidad y niveles de financiamiento. Las solicitudes se cotejaron con los planes de trabajo originales de la fase anterior, los datos del programa de país y del artículo 7, el informe más reciente sobre la ejecución de los planes de gestión para la eliminación de HCFC (PGEH), el informe de avance del organismo y las decisiones pertinentes de las Reuniones de las Partes. Se constató que los cuatro países han presentado los datos del programa de país y del artículo 7 correspondientes a 2023, que cumplen los objetivos de control del Protocolo de Montreal y que su consumo anual de HCFC notificado no supera el límite máximo anual autorizado que se establece en sus acuerdos del PGEH con el Comité Ejecutivo. Asimismo, todas las solicitudes contenían una evaluación de los indicadores de desempeño, del riesgo del proyecto y de su sostenibilidad, así como de la consecución de los objetivos de fortalecimiento institucional, conforme a lo dispuesto en la decisión 91/63 b).

Recomendación de la Secretaría

4. La Secretaría recomienda la aprobación general de las solicitudes de renovación del fortalecimiento institucional para Angola, El Salvador, Etiopía y Namibia, con los niveles de financiamiento indicados en la sección A1 del cuadro 1 del presente documento. El Comité Ejecutivo puede estimar oportuno expresar a los Gobiernos mencionados las observaciones formuladas en el Anexo II del presente documento.

A2: Asistencia técnica para actividades de apoyo (decisión 79/46)

Antecedentes

5. Conforme a lo dispuesto en la decisión 79/46,⁴ el PNUMA presentó una solicitud de financiamiento destinado a actividades de apoyo para la reducción de HFC en un país,⁵ como se indica en la sección A2 del cuadro 1.

6. Las actividades de apoyo consisten en: revisar la legislación y la normativa nacional vigente sobre sustancias que agotan la capa de ozono (SAO) y equipos que utilizan dichas sustancias a fin de adoptar medidas de control sobre las licencias de importación y exportación de HFC en aplicación de la Enmienda de Kigali; ayudar a la oficina de aduanas a crear códigos arancelarios nacionales para distintos HFC e incorporarlos a los aranceles aduaneros con el fin de garantizar el seguimiento y registro adecuados de las importaciones/exportaciones o reexportaciones de HFC individuales; y ayudar a la oficina de aduanas a crear códigos armonizados nacionales específicos en cada país para facilitar dicho seguimiento y registro.

³ Decisión 91/63: b) aprobar el formato actualizado para informes finales y solicitudes de prórroga del financiamiento para fortalecimiento institucional y los respectivos indicadores de desempeño; y c) solicitar a los países del artículo 5, por mediación de los organismos bilaterales y de ejecución, que utilicen el formato actualizado a que se refiere el inciso b) anterior para todas las solicitudes de renovación de fortalecimiento institucional a partir de la primera reunión del Comité Ejecutivo en 2023.

⁴ El Comité Ejecutivo decidió, entre otras cosas, aprobar actividades de apoyo con el supuesto de que permitirán a los países ganar flexibilidad para realizar una serie de actividades encaminadas a cumplir con sus obligaciones iniciales en el marco de la Enmienda de Kigali; dichas actividades de apoyo podrían ser, entre otras: facilitar y favorecer la pronta ratificación de la Enmienda de Kigali; establecer medidas institucionales de apoyo; actualizar los sistemas de licencias; presentar datos sobre los HFC; y llevar a cabo actividades de demostración que no conlleven inversión.

⁵ La República Centroafricana aún no ha ratificado la Enmienda de Kigali.

Observaciones de la Secretaría

7. La Secretaría examinó la solicitud de actividades de apoyo y concluyó que cumplía los requisitos de la decisión 79/46, como se indica a continuación:

- a) El PNUMA presentó una carta de acuerdo del Gobierno de la República Centroafricana;
- b) La propuesta de proyecto incluía una descripción de las actividades de apoyo, las medidas institucionales, el desglose de costos y el calendario de ejecución; y
- c) La ejecución del proyecto durará 18 meses.

8. El financiamiento solicitado para la República Centroafricana guardaba conformidad con la decisión 79/46 c) y se calculó en función del nivel de referencia de HCFC del país.

9. La Secretaría constató que, debido a la inestabilidad administrativa y de la seguridad existente en el país entre 2013 y 2020, la República Centroafricana había sufrido demoras en la ejecución de las actividades del Protocolo de Montreal (incluida la presentación de los datos del programa de país y del artículo 7),⁶ en la ejecución del proyecto de fortalecimiento institucional y en el PGEH. El proyecto de fortalecimiento institucional (fase VI), aprobado para el período 2013-2014, se completó en 2022. La fase VII del proyecto de fortalecimiento institucional fue solicitada y aprobada en la 95ª reunión, y se constató⁷ que la Oficina Nacional del Ozono (ONO) había ejecutado varias actividades del Protocolo de Montreal en el marco de la fase VI del proyecto de fortalecimiento institucional, a pesar de las dificultades. Aunque el PGEH de la República Centroafricana se canceló en la 82ª reunión,⁸ y el PNUMA y la ONUDI ya han devuelto los fondos a la Secretaría del Fondo Multilateral,⁹ el país prepara actualmente la puesta en marcha de la Oficina Nacional del Ozono y está previsto que se presente una solicitud para la preparación de la etapa II del PGEH a fin de someterla a evaluación en la 97ª reunión del Comité Ejecutivo.

10. A la luz de la documentación presentada, la Secretaría constató que el país está negociando actualmente iniciar el proceso de ratificación con el objetivo de finalizarlo al término de diciembre de 2025 con la ayuda del proyecto de actividades de apoyo, siempre que la situación política y la estabilidad nacional lo permitan. En respuesta a una consulta, el PNUMA indicó que se están llevando a cabo gestiones encaminadas a crear un Comité Nacional de Dirección del Ozono para la aplicación del Protocolo de Montreal. El PNUMA tiene previsto enviar este año una misión al país para reforzar las actividades y seguirá supervisando el avance de los proyectos de fortalecimiento institucional y de las actividades de apoyo al objeto de garantizar la capacidad y la gestión responsable del país en la ejecución de los mismos.

Recomendación de la Secretaría

11. La Secretaría recomienda la aprobación general de la solicitud de actividades de apoyo para la reducción de HFC de la República Centroafricana, con el nivel de financiamiento indicado en la sección A2 del cuadro 1 anterior.

⁶ Los datos del programa de país y del artículo 7 correspondientes al período 2013-2023 se habían presentado en su totalidad antes de la 95ª reunión.

⁷ Anexo I del documento UNEP/OzL.Pro/ExCom/95/36

⁸ Anexo I del documento UNEP/OzL.Pro/ExCom/82/17

⁹ La ONUDI devolvió USD 105.999 más unos gastos de apoyo de USD 7.950 en la 84ª reunión, y el PNUMA devolvió USD 30.000 más unos gastos de apoyo de USD 3.900 en la 93ª reunión.

A3: Preparación de proyectos para los planes de gestión para la eliminación de HCFC (PGEH)

Descripción del proyecto

12. El PNUMA, en calidad de organismo de ejecución designado, presentó solicitudes para la preparación de una nueva etapa de los PGEH para dos países, como se indica en la sección A3 del cuadro 1.

13. El PNUMA facilitó una descripción de las actividades en apoyo de las solicitudes de preparación de proyectos para la etapa III de los PGEH de Iraq y Kuwait, que incluían: justificación del financiamiento solicitado para la preparación del proyecto; informe sobre los avances en la ejecución de las etapas anteriores de los respectivos PGEH; y la lista de actividades que se llevarán a cabo durante la preparación del proyecto junto con los presupuestos correspondientes, utilizando el formato de las solicitudes de preparación de proyectos para los PGEH.

Observaciones de la Secretaría

14. Al examinar las solicitudes, la Secretaría tuvo en cuenta las directrices de financiamiento para la preparación de los PGEH en los países del artículo 5 reflejadas en la decisión 71/42, los avances logrados en las etapas anteriores de los PGEH, incluido el estado de ejecución de los tramos a la fecha de elaboración del presente documento; y la decisión 84/46 e).¹⁰ La Secretaría constató que el financiamiento solicitado guarda conformidad con la decisión 71/42 y que ambas solicitudes se ajustan a la decisión 82/45, que permite presentar solicitudes de preparación de proyectos para la etapa siguiente del PGEH dos años antes de la fecha de finalización de la etapa anterior.

15. Asimismo, la Secretaría constató que los países han presentado los datos del artículo 7 y del programa de país correspondientes a 2023, que cumplen los objetivos de control establecidos en el Protocolo de Montreal, y que su consumo anual de HCFC notificado no supera el límite máximo anual autorizado que se establece en sus acuerdos del PGEH con el Comité Ejecutivo.

16. El PNUMA confirmó que la etapa III de los PGEH de Iraq y Kuwait eliminará completamente el nivel de referencia de HCFC para el 1 de enero de 2030.

Recomendaciones de la Secretaría

17. La Secretaría recomienda la aprobación general de la preparación de proyectos para la etapa III de los planes de gestión para la eliminación de HCFC de Iraq y Kuwait, con el nivel de financiamiento que se indica en la sección A3 del cuadro 1.

A4: Elaboración de un inventario nacional de bancos de sustancias controladas agotadas o de desecho y de un plan para su acopio, transporte y eliminación

Descripción del proyecto

18. El PNUMA, en calidad de organismo de ejecución designado, presentó solicitudes para la elaboración de inventarios nacionales de bancos de sustancias controladas agotadas o de desecho y de planes para 11 países, como se indica en la sección A4 del cuadro 1.

19. El PNUMA facilitó una descripción de las actividades necesarias para la elaboración de inventarios nacionales de bancos de sustancias controladas agotadas o de desecho y de planes para Barbados, Dominica,

¹⁰ Solo están autorizados a incluir la etapa III de los PGEH en el plan administrativo aquellos países que tienen aprobada una etapa II de los PGEH con unos objetivos de reducción inferiores a los objetivos de cumplimiento de 2025.

Etiopía, Georgia, Ghana, Iraq, Omán, Rwanda, Saint Kitts y Nevis, Suriname y República Unida de Tanzania, así como de los costos correspondientes de cada actividad, utilizando los formularios pertinentes para la presentación de propuestas de proyectos.

Observaciones de la Secretaría

20. Al examinar estas solicitudes, la Secretaría tuvo en cuenta los criterios para la elaboración de inventarios nacionales de bancos de sustancias controladas agotadas o de desecho y de un plan, contemplados en la decisión 91/66, así como las actividades propuestas para la preparación del proyecto y su vinculación con los planes nacionales de eliminación o reducción (es decir, los PGEH o los planes de aplicación de la Enmienda de Kigali relativa a los HFC (PAK)) en los países. La Secretaría constató que cada solicitud de financiamiento guarda conformidad con la decisión 91/66.

21. Las actividades contempladas en las solicitudes de financiamiento para los 11 países fueron: examen de los datos disponibles; elaboración del inventario nacional, del plan de acción y del informe final; consultas con las partes interesadas y validación; revisión y análisis de las normativas y políticas existentes, incluidas las de gestión de residuos; visitas a instalaciones para recopilar y verificar datos; estudios sobre SAO, HFC, equipos y contenedores, interlocutores nacionales, normativas y políticas; previsión de las cantidades de SAO y HFC agotados o de desecho que podrían precisar recuperación, regeneración, reciclaje o eliminación en el futuro; revisión de los centros de recuperación y reciclaje y de otros centros involucrados en la gestión de residuos; evaluación de la viabilidad y los costos de las opciones de eliminación existentes (reciclaje, regeneración, destrucción); evaluación de la viabilidad económica de los centros de regeneración y de las plantas de destrucción, y elaboración de un modelo financiero o de gestión para garantizar la sostenibilidad a largo plazo de las operaciones de recolección o eliminación; y actividades para la integración de la perspectiva de género. Además de estas actividades, se incluyeron actividades de supervisión y ejecución de proyectos para siete países; la identificación de laboratorios y de la capacidad de analizar la composición de SAO y HFC agotados o de desecho para seis países; y la creación de un registro de todas las entidades que poseen bancos existentes de SAO y HFC, y de un perfil general de empresas que pueden acumular bancos en el futuro para un país.

Recomendación de la Secretaría

22. La Secretaría recomienda la aprobación general para la elaboración de inventarios nacionales de bancos de sustancias controladas agotadas o de desecho y de planes para su acopio, transporte y eliminación para Barbados, Dominica, Etiopía, Georgia, Ghana, Iraq, Omán, Rwanda, Saint Kitts y Nevis, Suriname y República Unida de Tanzania, con el nivel de financiamiento que se indica en la sección A4 del cuadro 1.

A5: Asistencia técnica para elaborar un informe de verificación sobre el consumo de HCFC

Descripción del proyecto

23. Conforme a lo dispuesto en la decisión 61/46 c),¹¹ la Secretaría seleccionó una muestra de 12 países del artículo 5 considerados de bajo consumo (BVC) con el fin de verificar el cumplimiento de sus acuerdos del plan de gestión para la eliminación de HCFC (PGEH). Los países seleccionados figuran en el cuadro 5 del documento UNEP/OzL.Pro/ExCom/96/16, que contiene el resumen de las materias identificadas durante el estudio de los proyectos. El PNUMA, en calidad de organismo de ejecución principal, solicita

¹¹ Se solicitó a la Secretaría que, en la primera reunión de cada año, facilite una lista que represente el 20 por ciento de los países con un consumo de referencia de HCFC de hasta 360 toneladas métricas y con un PGEH aprobado, a fin de aprobar financiamiento para dichos países destinado a verificar el cumplimiento del acuerdo de PGEH de cada país correspondiente a ese año.

financiamiento para la verificación del PGEH de Bhután y de la etapa II del PGEH de Antigua y Barbuda, Belice, Burundi, el Congo, Santa Lucía, Suriname y Zimbabwe.

Observaciones de la Secretaría

24. La Secretaría constató que las solicitudes de financiamiento guardaban conformidad con los fondos aprobados para verificaciones similares en reuniones anteriores, y señaló que los informes de verificación deben presentarse al menos 10 semanas antes de la reunión pertinente del Comité Ejecutivo en la que se solicite el siguiente tramo de financiamiento para el PGEH.

Recomendación de la Secretaría

25. La Secretaría recomienda la aprobación general de la asistencia técnica para la elaboración de los informes de verificación del plan de gestión para la eliminación de HCFC (PGEH) de Bhután y de la etapa II de los PGEH de Antigua y Barbuda, Belice, Burundi, el Congo, Santa Lucía, Suriname y Zimbabwe, con el nivel de financiamiento que se indica en la sección A5 del cuadro 1, en el entendido de que los informes de verificación deben presentarse al menos 10 semanas antes de la reunión pertinente del Comité Ejecutivo en la que se soliciten los siguientes tramos de financiamiento para los PGEH.

SECCIÓN B: ACTIVIDADES RECOMENDADAS PARA CONSIDERACIÓN INDIVIDUAL

B1: Asistencia extraordinaria adicional para el fortalecimiento institucional

Descripción del proyecto

26. El PNUMA presentó una solicitud de asistencia extraordinaria adicional para el fortalecimiento institucional del país indicado en la sección B1 del cuadro 1. El 12 de diciembre de 2024, Maldivas sufrió un contratiempo inesperado debido a un devastador incendio. El incendio arrasó tres ministerios clave, entre ellos el Ministerio de Turismo y Medio Ambiente. Trágicamente, la Oficina Nacional del Ozono (ONO), que opera en el marco de este ministerio, perdió todas sus computadoras, equipos, mobiliario, documentación crítica y otros materiales a causa del incendio. Este incidente supuso un duro golpe para la capacidad operativa de la ONO, que vio seriamente afectada su capacidad para desempeñar sus funciones de manera eficaz. Actualmente se están elaborando planes para la construcción de un nuevo edificio de oficinas. En estos momentos, la ONO, junto con las demás oficinas gubernamentales afectadas, desempeña su actividad desde unas instalaciones temporales de la capital. Aunque el Gobierno ha asegurado que se asignará a la ONO una oficina permanente, la necesidad de apoyo inmediato sigue siendo esencial.

Observaciones de la Secretaría

27. La Secretaría reconoce el compromiso demostrado por el Gobierno de Maldivas en la aplicación del Protocolo de Montreal. La Secretaría hace constar que la fase actual del proyecto de fortalecimiento institucional se encontraba en curso en el momento de producirse el incendio. La Secretaría también constata que el financiamiento adicional solicitado permitirá sustituir en parte los equipos informáticos, el mobiliario básico y los consumibles para que la ONO pueda reanudar la actividad a plena capacidad operativa y adoptar medidas para proteger sus operaciones en el futuro. Aunque anteriormente se había concedido asistencia extraordinaria por un monto de USD 20.000, la Secretaría considera razonable que el monto solicitado sea más elevado debido al aumento de los precios de los bienes y servicios. El Gobierno de Maldivas cofinanciará la rehabilitación de la ONO financiando la construcción de una nueva oficina en otra ubicación.

Recomendación de la Secretaría

28. El Comité Ejecutivo puede estimar oportuno aprobar, con carácter excepcional teniendo en cuenta las circunstancias por las que atraviesa la ONO tras la destrucción del edificio en diciembre de 2024, la asistencia extraordinaria adicional para el fortalecimiento institucional de Maldivas por un monto de USD 30.000.

B2. Asistencia técnica mundial: Articulación de encargados nacionales del ozono y autoridades nacionales en materia de eficiencia energética en apoyo de los objetivos de la Enmienda de Kigali (fase II)

Descripción del proyecto

29. El PNUMA presentó una solicitud para la fase II del proyecto de asistencia técnica mundial destinado a la articulación de encargados nacionales del ozono y autoridades nacionales en materia de eficiencia energética en apoyo de los objetivos de la Enmienda de Kigali,¹² como se indica en la sección B2 del cuadro 1.

Informe final de la fase I del proyecto de articulación de asistencia técnica mundial

30. En la 91ª reunión, el Comité Ejecutivo aprobó el proyecto de articulación del PNUMA para el período 2023-2024 por un monto de USD 793.400, más unos gastos de apoyo de USD 97.274 (decisión 91/42). En la 95ª reunión, el Comité Ejecutivo examinó el informe sobre los avances logrados en la ejecución del proyecto como parte de la solicitud de presupuesto del Programa de Asistencia al Cumplimiento (PAC) del PNUMA para 2025. Posteriormente, el Comité, entre otras cosas, solicitó al PNUMA que presentara un informe final con las experiencias adquiridas de la fase I al presentar la segunda fase del proyecto en la primera reunión de 2025 (decisión 95/83 d)). En el marco de dicha decisión, el PNUMA presentó un informe final detallado sobre la fase I del proyecto de articulación, que se adjunta al presente documento y que la Secretaría resume a continuación.

Resultados de la fase I del proyecto de articulación

31. Entre 2023 y 2024, los equipos regionales del PAC del PNUMA organizaron ocho talleres de dos días que reunieron a las partes interesadas de países del artículo 5 (países en desarrollo) de las siguientes regiones: África anglófona, África francófona, Caribe, América Latina, Europa y Asia Central, Asia Meridional, Sudeste Asiático, Países Insulares del Pacífico y Asia Occidental. Por razones de eficiencia de costos, esos talleres se celebraron en paralelo con las reuniones de redes regionales del PNUMA. En total, los talleres permitieron a 422 participantes debatir y compartir estrategias para maximizar el impacto climático de la transición a nuevos refrigerantes y mejorar la eficiencia energética en el sector de la refrigeración y climatización.

32. Los talleres de articulación pusieron de relieve la importancia de los esfuerzos colaborativos para promover la eficiencia energética, la protección del ozono y las iniciativas climáticas en los países del artículo 5 y entre ellos. Las partes interesadas identificaron intervenciones cruciales para superar las dificultades en la transición a prácticas sostenibles en el sector de la refrigeración y climatización, como son la promoción de políticas ambientales integradas, la aplicación de normas de eficiencia energética, la recomendación de directrices de compras con criterios de eficiencia energética y el fortalecimiento de la cooperación entre las autoridades pertinentes.

33. Las principales experiencias adquiridas de la fase I del proyecto ponen de relieve la importancia de: fortalecer las alianzas interministeriales e intersectoriales; armonizar las normas mínimas de eficiencia

¹² En adelante, el “proyecto de articulación”.

energética (MEPS) y el etiquetado energético entre las distintas regiones para crear marcos de mercado cohesionados; invertir en tecnologías avanzadas y ofrecer orientación técnica; ampliar los programas de formación y fortalecimiento de capacidades; fomentar la colaboración interregional para promover soluciones de refrigeración sostenibles y energéticamente eficientes; realizar campañas de sensibilización pública para estimular la demanda de los consumidores; aplicar mecanismos de financiamiento innovadores y facilitar el acceso a fuentes internacionales de financiamiento; y establecer sistemas sólidos de seguimiento y verificación para garantizar la aplicación efectiva de los marcos normativos. A continuación se muestran las principales recomendaciones derivadas de los talleres de articulación de la fase I, que se sometieron a consideración al diseñar la fase II del proyecto:

- a) Se deben elaborar políticas completas que integren las MEPS, el etiquetado energético y estrategias climáticas, respaldadas por mecanismos de aplicación, sistemas de control basados en datos, y evaluaciones periódicas para garantizar la continuidad de los avances;
- b) Las iniciativas de capacitación se deben hacer extensivas a todas las partes interesadas, desde autoridades nacionales hasta técnicos, y centrarse en habilidades prácticas, la innovación técnica y la aplicación de políticas para abordar de forma integral las carencias de capacidades;
- c) Se deben aplicar modelos financieros innovadores, como las colaboraciones público-privadas y los sistemas de incentivos, para superar los obstáculos del financiamiento; los gobiernos deben centrarse en fortalecer su capacidad para formular propuestas atractivas de financiamiento.
- d) Se deben crear grupos de trabajo nacionales para coordinar las iniciativas de eficiencia energética involucrando a un amplio abanico de partes interesadas, como instituciones académicas, empresas líderes del sector y organizaciones de la sociedad civil.
- e) Las campañas centradas en el consumidor deben destacar los beneficios a largo plazo de las tecnologías energéticamente eficientes, como el ahorro de costos y las ventajas para el medio ambiente. Se deben diseñar estrategias para adaptar los mensajes al público local, con el fin de maximizar su impacto; y
- f) Se deben preparar y difundir casos de éxito específicos en cada región que destaquen los avances en eficiencia energética logrados con la transición a refrigerantes alternativos, citando impactos cuantificables, problemas solucionados durante la ejecución y modelos de colaboración replicables.

34. En las páginas 1 a 4 del informe se explican los resultados y conclusiones principales del proyecto; en la sección 4 del informe se presentan los principales logros, las dificultades encontradas, las experiencias adquiridas y las recomendaciones para abordar la eficiencia energética durante la reducción de HFC.

Fase II del proyecto de articulación de asistencia técnica mundial

35. Al aprobar la fase I del proyecto de articulación de asistencia técnica mundial, el Comité Ejecutivo especificó que el PNUMA podría considerar la puesta en marcha de una segunda fase que tuviera en cuenta los resultados de los talleres realizados en la primera fase del proyecto e incluyera un plan de acción para abordar las necesidades regionales identificadas durante la implementación de dicha fase, de acuerdo con los resultados del proyecto (decisión 91/42 b)). La solicitud presentada por el PNUMA para la fase II del proyecto de articulación de asistencia técnica mundial guarda conformidad con las decisiones 91/42 b), 93/91 e)¹³ y 95/83 d).

¹³ Para solicitar también al PNUMA que presentara un informe final detallando las experiencias adquiridas en la ejecución de la primera fase del proyecto de articulación de asistencia técnica mundial con encargados nacionales del ozono y autoridades nacionales en materia de eficiencia energética, en apoyo de los objetivos de la Enmienda de Kigali, al presentar la segunda fase del proyecto en la segunda reunión de 2024.

Actividades propuestas

36. Teniendo en cuenta la experiencia de la fase I, la fase II propone centrarse en involucrar más a las partes interesadas y en usar los recursos de conocimiento de forma más eficaz. A partir de los recursos existentes del PNUMA elaborados en el marco del PAC, se podrían crear o adaptar recursos específicos de información y conocimiento, tales como documentos de orientación, estudios de casos, y conjuntos de herramientas,¹⁴ a fin de proporcionar a los participantes de la fase II material práctico específico y listo para usar en cada región, que les ayude a aplicar de manera eficaz soluciones de refrigeración sostenibles y a elaborar planes de ejecución concretos.

37. La ejecución abarcaría las siguientes actividades durante un período de 30 meses a partir de la fecha de aprobación:

- a) Establecer el conocimiento de referencia con un análisis exhaustivo de las carencias regionales y sentar las bases para todos los componentes del proyecto, como la identificación de los recursos de información y conocimiento necesarios, con el apoyo de expertos técnicos (ejecutado en los primeros cinco meses);
- b) Desarrollar recursos de alta calidad y específicos para cada región como material de apoyo para las partes interesadas (autoridades nacionales, técnicos, instituciones financieras, etc.) en la implementación de proyectos de eficiencia energética en el marco de la reducción de HFC en diversas aplicaciones de refrigeración, climatización y bombas de calor, con el apoyo de expertos en la materia. Dichos recursos pueden incluir también estudios de casos que presenten implementaciones exitosas relacionadas con la eficiencia energética durante la reducción de HFC (ejecutado entre los meses 6 y 12); e
- c) Impartir talleres de articulación utilizando las herramientas desarrolladas como recursos de conocimiento e información, y difundir la información en distintas regiones para su implementación. Estos talleres se remodelarán para garantizar que las partes interesadas reciban una orientación estructurada sobre el nuevo material para estrechar el vínculo entre la adquisición de conocimientos y la implementación práctica (ejecutado entre los meses 13 y 30).

38. En el cuadro 2 a continuación se muestran las actividades y el presupuesto propuestos, como figuran en la documentación presentada por el PNUMA.

Cuadro 2: Actividades y presupuesto propuestos para la fase II del proyecto de articulación

Resultados previstos	Indicadores de desempeño	Concepto	Financiamiento (USD)
Componente 1: Preparación y evaluación (ejecutado entre los meses 1 y 5)			
- Conocimiento exhaustivo de las necesidades, carencias y obstáculos regionales. - Definición de marcos institucionales y mecanismos de coordinación para la colaboración intersectorial.	(i) Contratación de nueve expertos técnicos regionales. (ii) Elaboración de nueve informes de evaluación regionales con análisis de carencias y recomendaciones detallados.	Un experto por cada una de las nueve regiones para elaborar los informes de evaluación regionales, desarrollar los	135.000

¹⁴ Entre los recursos cabe señalar: directrices sobre integración de refrigerantes para incorporar los datos relativos a los refrigerantes en las MEPS y en los marcos de etiquetado energético; un conjunto de herramientas de vigilancia del mercado; herramientas de evaluación técnica para valorar el desempeño de los equipos de refrigeración y climatización; un conjunto de herramientas para la integración de políticas; estudios de casos específicos de cada región; y recursos dirigidos a los usuarios finales.

Resultados previstos	Indicadores de desempeño	Concepto	Financiamiento (USD)
- Documentación de buenas prácticas y estudios de casos de éxito. - Marco de trabajo basado en datos contrastados para diseñar talleres adaptados a las prioridades regionales.	(iii) Establecimiento de mecanismos de coordinación institucional en al menos el 70 por ciento de los países participantes.	marcos y metodologías de los talleres, y planificar e impartir los talleres de articulación.	
	(iv) Documentación de al menos tres estudios de casos de éxito por región que abarquen aspectos normativos, técnicos y financieros, elaborados y validados por expertos regionales, garantizando que estén en consonancia con las necesidades identificadas.	Software de encuestas, herramientas de análisis de datos y marcos analíticos.	1.200
Componente 2: Elaboración de recursos de conocimiento e información (ejecutado entre los meses 6 y 12)			
- Elaboración de herramientas y recursos específicos para abordar los desafíos regionales. - Creación de una plataforma en línea para el intercambio de conocimiento. - Adaptación y traducción del material para cada región a fin de mejorar su usabilidad. - Fortalecimiento de la capacidad de las partes interesadas para integrar mejoras en eficiencia energética con la transición a refrigerantes alternativos.	(i) Elaboración de hasta cinco conjuntos de herramientas completos evaluados por expertos y probados con las partes interesadas.	Creación de hasta cinco conjuntos de herramientas y recursos de información por parte de expertos en desarrollo de contenidos.	116.000
	(ii) Lanzamiento y puesta en marcha de una plataforma en línea al término del primer año.	Diseño gráfico, maquetación y producción de material.	10.000
	(iii) Al menos dos adaptaciones regionales personalizadas por cada conjunto de herramientas, basadas en las necesidades específicas de cada país.	Traducción del material a las lenguas regionales.	29.000
	(iv) Traducción a al menos tres idiomas para una mayor accesibilidad.	Desarrollo web para el centro de recursos en línea.	2.000
Componente 3: Talleres de articulación (ejecutado entre los meses 13 y 30)			
- Fortalecimiento de la capacidad técnica e institucional de las partes interesadas para ejecutar proyectos de eficiencia energética en el marco de los compromisos de la Enmienda de Kigali. - Mejora de la colaboración intersectorial para la adopción integrada de políticas y tecnologías. - Mejora de la alfabetización financiera y del acceso a mecanismos de financiamiento para iniciativas de refrigeración sostenible.	(i) Participación activa de al menos 250 partes interesadas en todas las redes regionales. (ii) Establecimiento o fortalecimiento de mecanismos formales de coordinación en al menos un país por región. (iii) Organización de al menos nueve talleres regionales con representación multisectorial.	Organización en paralelo de nueve talleres regionales de articulación, inmediatamente posteriores a las reuniones de redes regionales, con encargados nacionales del ozono y autoridades nacionales en materia de eficiencia energética de 147 países (en el caso de los encargados nacionales del ozono, solo se cubrirán los costos correspondientes a	350.000

Resultados previstos	Indicadores de desempeño	Concepto	Financiamiento (USD)
		los días adicionales de dietas diarias).	
		Apoyo a la participación de 10 organizaciones regionales de eficiencia energética	50.000
		20 técnicos expertos para apoyar los talleres	100.000
TOTAL			793.200

Observaciones de la Secretaría¹⁵

39. La Secretaría pidió aclaraciones al PNUMA sobre si la fase II del proyecto de articulación tiene en cuenta las experiencias adquiridas en los talleres de articulación anteriores; cuáles son los resultados previstos en lo que respecta a la institucionalización de la colaboración con las oficinas de energía de los países del artículo 5; y de qué manera este proyecto podría apoyar la decisión del Comité Ejecutivo de que el PNUMA proporcione asistencia técnica y normativa a los países de bajo consumo (BVC) a través de la ejecución del PAC.¹⁶ Asimismo, la Secretaría pidió información sobre el financiamiento solicitado y cómo se armonizó este con el presupuesto del PAC, en particular en lo relativo a las reuniones de redes de los encargados nacionales del ozono; y sobre los vínculos que podrían establecerse para apoyar o favorecer los proyectos de eficiencia energética financiados con cargo al Fondo Multilateral, especialmente en el marco de la decisión 89/6.

40. En cuanto a una mayor coordinación entre las Oficinas Nacionales del Ozono, las autoridades nacionales en materia de eficiencia energética y los distintos órganos de toma de decisiones, el PNUMA explicó que se destacó la importancia de este aspecto y que durante los talleres de articulación se elaboraron y debatieron distintos modelos. En la fase II, en el marco del componente 1, se identificarán los marcos institucionales, trabas estructurales, intervenciones específicas y apoyos necesarios para fortalecer los mecanismos de coordinación; estos aspectos se desarrollarán en los recursos de conocimiento e información del componente 2, como los conjuntos de herramientas para el diseño y aplicación de mecanismos nacionales de coordinación; y, en los talleres de articulación del componente 3, se prestará apoyo a los países en la elaboración de los planes de acción. El PNUMA explicó que las evaluaciones regionales realizadas en el componente 1 tendrán en cuenta los recursos e iniciativas existentes, como la Base de Datos de Electrodomésticos del Pacífico, que se evaluará con miras a ampliarla y replicarla en otros países.

41. En cuanto a los vínculos con la ejecución de proyectos de eficiencia energética financiados por el Fondo Multilateral conforme a lo dispuesto en la decisión 89/6, el PNUMA explicó que se promoverá la armonización de las MEPS y el etiquetado energético entre las regiones mediante la propuesta de unas “Directrices para la integración de refrigerantes”, que abarcará la inclusión de parámetros de calidad de los refrigerantes en las MEPS, así como un conjunto de herramientas para evaluar el desempeño de los sistemas de refrigeración y climatización, incluida la calidad del refrigerante. Asimismo, un “Conjunto de herramientas para la integración de políticas” apoyará la armonización de las MEPS y las normas de etiquetado energético entre las regiones a fin de promover la cohesión comercial y la adopción tecnológica.

42. El PNUMA explicó además que, durante algunos debates de la fase I, los laboratorios de ensayo para los equipos de refrigeración, climatización y bombas de calor se consideraron como una cuestión

¹⁵ Las observaciones de la Secretaría relativas al informe de la fase I del proyecto de articulación se han integrado con las relativas a la solicitud para la fase II del proyecto.

¹⁶ Decisión 93/95 d)

importante, y que los acuerdos de reconocimiento mutuo son un mecanismo rentable para facilitar la conformidad de las evaluaciones mediante laboratorios acreditados. En la fase II, el PNUMA prevé elaborar un “Conjunto de herramientas de vigilancia del mercado” con protocolos para las pruebas de productos y auditorías de mercado, y un “Conjunto de herramientas de evaluación técnica” que proporcionará directrices sobre protocolos de ensayo normalizados basados en normas internacionales.

43. En cuanto al apoyo a la capacitación de técnicos de mantenimiento, el PNUMA explicó que el proyecto utilizará como base la recientemente elaborada “Guía técnica integral sobre sostenibilidad de plantas de refrigeración y climatización” del PNUMA y ASHRAE¹⁷, que contiene listas de verificación listas para usar, código de buenas prácticas, y métricas de desempeño en ocho aspectos clave que se deben tener en cuenta para utilizar los equipos de refrigeración y climatización de manera sostenible, con secciones dedicadas al consumo eficiente de energía y a las competencias técnicas. En el conjunto de herramientas también se incluirán directrices adicionales relativas a la aplicación técnica de los programas de certificación y las políticas y medidas asociadas. El PNUMA también coopera con AREA (Asociación Europea de Instaladores de Aire Acondicionado, Refrigeración y Bombas de Calor) para desarrollar un módulo de capacitación sobre eficiencia energética dirigido a técnicos, como complemento al manual de capacitación conjunto PNUMA-AREA.

44. En cuanto a la contribución a las actividades nacionales de sensibilización y divulgación, el PNUMA explicó que, durante la fase I, se debatió la participación de grupos más amplios de partes interesadas, como minoristas, entidades del sector privado y usuarios finales, en la promoción de la eficiencia energética y se expusieron varios ejemplos. En la fase II se elaborará y difundirá material dirigido a diferentes partes interesadas que puedan influir en el diseño y la adquisición de equipos de refrigeración, climatización y bombas de calor, para su adopción a nivel nacional.

45. En cuanto a la incorporación de resultados de proyectos en curso relacionados con la eficiencia energética (por ejemplo, proyectos aprobados conforme a las decisiones 89/6, 91/65, 94/60 y otros proyectos no financiados por el Fondo Multilateral), el PNUMA explicó que la fase II del proyecto incluirá la evaluación sistemática de dichos proyectos para aprovechar las experiencias adquiridas en la elaboración de los recursos de conocimiento e información, así como en los talleres para compartir experiencias. El PNUMA colaborará asimismo con las organizaciones regionales de eficiencia energética existentes e impulsará la iniciativa “Unidos por la Eficiencia”.

46. El PNUMA también explicó que, durante la fase I, se identificó la necesidad de contar con datos adicionales sobre las estructuras institucionales existentes en los países y de realizar intervenciones específicas adaptadas a las particularidades de cada país. El apoyo técnico solicitado irá destinado a llevar a cabo dicho análisis, que se incluirá en el diseño de los talleres de articulación y de las herramientas de conocimiento.

47. En cuanto a la necesidad de elaborar material informativo y conjuntos de herramientas adicionales, el PNUMA explicó que dicho material representa el eslabón que conectará la ambición política con la aplicación práctica. Sin ellos, las partes interesadas de todos los niveles, desde autoridades nacionales hasta técnicos locales, carecen de la orientación técnica, los procedimientos normalizados y los parámetros de referencia necesarios para materializar el conocimiento compartido en medidas concretas. Desarrollar material informativo y conjuntos de herramientas específicos es fundamental por tres razones: ayuda a los países a evitar incoherencias en el diseño de estrategias y a superar las barreras; permite establecer un lenguaje común y un conocimiento compartido entre las principales partes interesadas; y facilita la recopilación de buenas prácticas y estudios de casos que permiten a los países superar los obstáculos más habituales, en especial los relativos a la ejecución de los PAK.

¹⁷ Sociedad Americana de Ingenieros en Calefacción, Refrigeración y Aire Acondicionado

48. En cuanto al uso de material existente sobre aspectos normativos y técnicos de los equipos de refrigeración, climatización y bombas de calor, el PNUMA explicó que los nuevos recursos sobre eficiencia energética de “Unidos por la Eficiencia”, “Energía Sostenible para Todos”, los centros regionales de eficiencia energética y otros organismos se utilizarán para elaborar el material del proyecto, y que el PNUMA y “Unidos por la Eficiencia” colaborarán en el diseño de los nuevos recursos que se incluirán en la fase II del proyecto. El PNUMA también explicó que, durante la ejecución de la fase I, los países destacaron la importancia de las alianzas con centros regionales de eficiencia energética, y que han colaborado estrechamente con “Unidos por la Eficiencia” compartiendo material de apoyo con los participantes. El PNUMA también mencionó que las organizaciones regionales de eficiencia energética también participan en los talleres de articulación.

49. A fin de establecer una clara distinción entre la fase I finalizada del proyecto de articulación y la fase II propuesta, se solicitó al PNUMA la elaboración de un documento comparativo que demostrara las diferencias y complementariedades entre ambas fases con respecto a los objetivos estratégicos, actividades, partes interesadas, recursos de conocimiento, coordinación institucional y demás parámetros. El PNUMA presentó el documento comparativo solicitado, que figura en el Anexo III del presente documento.

50. En cuanto al uso continuo de las herramientas de conocimiento por parte de las ONO y otras partes interesadas pertinentes, el PNUMA explicó que todas las herramientas se elaborarán en formatos digitales accesibles para la plataforma en línea, con funciones de actualización periódica y control de versiones para garantizar su vigencia. Asimismo, los talleres incluirán sesiones específicas sobre el uso de estos recursos una vez concluido el proyecto, a fin de garantizar un impacto sostenible y la integración con las actividades de reducción de HFC en curso. El PNUMA también indicó que ofrecerá breves sesiones de debate en línea sobre temas específicos durante los talleres.

51. Con respecto al financiamiento adicional aprobado para el PNUMA en la 93ª reunión para el trienio 2024-2026, destinado al apoyo técnico y normativo a los países de bajo de consumo (BVC) en la ejecución de los PAK, el PNUMA explicó que en la actualidad esos fondos no están específicamente relacionados con la eficiencia energética y, por lo tanto, no guardan relación directa con la fase II del proyecto.

Indicadores de desempeño

52. En cuanto a los indicadores de desempeño, el PNUMA explicó que se trata de un proyecto de fortalecimiento de capacidades, por lo que resulta difícil establecer un vínculo directo con las acciones posteriores de los países del artículo 5; no obstante, el proyecto identificó indicadores de nivel de actividad con plazos definidos, como se indica en el cuadro 2 anterior. La Secretaría señaló que, si bien los indicadores de nivel de actividad son importantes, también se requieren objetivos específicos de desempeño vinculados a los resultados de la promoción de la eficiencia energética en equipos de refrigeración y climatización, a fin de evaluar el impacto tangible de la ejecución del proyecto. El PNUMA convino en incluir indicadores de desempeño vinculado a resultados, agrupados en cuatro categorías, como se presenta en el cuadro 3.

Cuadro 3: Indicadores de desempeño vinculado a resultados, presentados por el PNUMA

Categoría de resultado	Indicadores de desempeño
1. Herramienta operativa de seguimiento	
Componente 1: Desarrollar e implementar una herramienta de supervisión para hacer un seguimiento permanente de la adopción y aplicación, por parte de los países, de políticas y medidas técnicas de eficiencia energética relacionadas con la Enmienda de Kigali.	i) Finalización de los informes de evaluación regionales. ii) Desarrollo de una herramienta de supervisión/seguimiento para evaluar los avances en ámbitos como: - MEPS y normas de eficiencia energética - Códigos de edificación y programas de calificación - Mecanismos financieros innovadores - Capacitación en eficiencia energética para el sector de la refrigeración - Programas de vigilancia del mercado - Campañas de sensibilización dirigidas al público y a usuarios finales, iniciadas durante y después del proyecto de articulación.
2. Intercambio de conocimientos obtenidos en proyectos de eficiencia energética del Fondo Multilateral (decisiones 89/6 y 91/65)	
- Componente 1: Recopilación y análisis de experiencias en proyectos. - Componente 2: Documentación de estudios de casos e historias de éxito. - Componente 3: Intercambio y debate de las experiencias adquiridas durante los talleres de articulación.	i) Documentación de las principales experiencias adquiridas en los proyectos 89/6 y 91/65. ii) Integración de los estudios de casos en el material de formación y el contenido de los talleres de articulación. iii) Sesiones con intercambio de experiencias en proyectos de eficiencia energética.
3. Desarrollo de mecanismos de coordinación	
- Componente 1: Definición de las estructuras de coordinación existentes. - Componente 2: Elaboración de directrices y plantillas de coordinación - Componente 3: Facilitación de la coordinación de las partes interesadas en los talleres de articulación.	i) Desarrollo de un conjunto de herramientas para establecer mecanismos nacionales de coordinación. ii) Puesta en marcha a nivel nacional de una serie de iniciativas conjuntas de coordinación entre los sectores del ozono y de la eficiencia energética.
4. Desarrollo de recursos para el fortalecimiento de capacidades	
- Componente 1: Evaluación de necesidades de fortalecimiento de capacidades a nivel regional. - Componente 2: Elaboración de material de capacitación. - Componente 3: Difusión y aplicación de recursos en los talleres de articulación.	i) Finalización de la evaluación de necesidades de capacidad (ámbitos normativo y técnico). ii) Desarrollo de herramientas de capacitación para los sectores normativo y de servicio técnico. iii) Capacitación de las partes interesadas con los recursos y herramientas del proyecto. iv) Integración de recursos y herramientas en los PAK.

Niveles de financiamiento para la fase II

53. El PNUMA explicó que los talleres propuestos seguirían impartándose en paralelo a las reuniones de redes regionales para optimizar costos, y que únicamente se solicitan los costos adicionales necesarios para la participación de las autoridades competentes en materia de energía y los expertos técnicos, ya que el PAC no puede asumirlos. El PNUMA presentó una propuesta del presupuesto actualizado, como se muestra en el cuadro 4 a continuación, que incorpora ligeros ajustes en la distribución del presupuesto, pero que mantiene el mismo nivel de financiamiento solicitado que la propuesta original.

Cuadro 4: Presupuesto actualizado para la fase II del proyecto de articulación

Concepto	Descripción	Monto (USD)
Componente 1: Preparación y evaluación		
Expertos técnicos regionales (eficiencia energética)	Un experto por región para apoyar los análisis y la elaboración de informes de evaluación regionales, el desarrollo de los marcos y metodologías de los talleres, y la planificación e impartición de los talleres de articulación*	157.000
Herramientas para la evaluación de necesidades	Software de encuestas, herramientas de análisis de datos y marcos analíticos	1.200
Informes de evaluación regionales	Análisis, recopilación y elaboración de informes de evaluación	0
Subtotal		158.200
Componente 2: Desarrollo de recursos de conocimiento e información		
Consultores/especialistas en la materia	Expertos en desarrollo de contenidos para un máximo de cinco categorías de herramientas y recursos de información**	139.000
Diseño y producción	Diseño gráfico, maquetación y producción de material	10.000
Traducción	Traducción del material a idiomas regionales	29.000
Desarrollo de una plataforma digital	Desarrollo web para el centro de recursos en línea	2.000
Subtotal		180.000
Componente 3: Talleres de articulación		
Viajes y dietas	Participantes entre encargados nacionales del ozono y autoridades nacionales en materia de eficiencia energética de 147 países (los encargados nacionales del ozono únicamente cubren los costos de los días adicionales)	350.000
	10 participantes de organizaciones regionales de eficiencia energética	35.000
	20 expertos técnicos	70.000
Locales y logística de los talleres	Nueve talleres regionales, incluidos el alquiler de locales, los equipos y los servicios de apoyo	0
Subtotal		455.000
Total general		793.200

* Financiamiento adicional para garantizar el apoyo durante todos los componentes del proyecto, especialmente tras la inclusión de nuevos indicadores de desempeño.

** Financiamiento adicional necesario para desarrollar herramientas y recursos de conocimiento integrales.

Recomendación de la Secretaría

54. El Comité Ejecutivo puede estimar oportuno:

- a) Tomar nota del informe final sobre la ejecución del proyecto de asistencia técnica mundial para la articulación de encargados nacionales del ozono y autoridades nacionales en materia energética en apoyo de los objetivos de la Enmienda de Kigali (fase I: 2023-2024), presentado por el PNUMA conforme al documento UNEP/OzL.Pro/ExCom/96/21;
- d) Aprobar el proyecto de asistencia técnica mundial para la articulación de encargados nacionales del ozono y autoridades nacionales en materia energética en apoyo de los objetivos de la Enmienda de Kigali (fase II: 2025-2027), por un monto de USD 793.200, más unos gastos de apoyo de USD 97.252 para el PNUMA, en el entendido de que:
 - i) El PNUMA presentará un informe intermedio sobre los avances en la ejecución del proyecto en la última reunión del Comité Ejecutivo de 2026, como parte del informe sobre los avances del Programa de Asistencia al Cumplimiento del PNUMA, y un informe final en la última reunión del Comité Ejecutivo de 2027; y

- ii) Cualquier saldo remanente de la segunda fase del proyecto se devolverá al Fondo Multilateral a más tardar en la segunda reunión del Comité Ejecutivo de 2028.

Annex I

INSTITUTIONAL STRENGTHENING PROJECT PROPOSALS¹

Angola: Renewal of institutional strengthening

Summary of the project and country profile	
Implementing agency:	UNEP
Amounts previously approved for institutional strengthening (US \$):	
Phase I: Nov-02 & Apr-04	241,030
Phase II: Nov-06	151,872
Phase III: Apr-11	134,400
Phase IV: Apr-13	134,400
Phase V: May-15	134,400
Phase VI: Nov-17	172,032
Phase VII: Dec-19	172,032
Total:	1,140,166
Amount requested for renewal (phase VIII) (US \$):	356,106
Amount recommended for approval for phase VIII (US \$):	356,106
Agency support costs (US \$):	0
Total cost of institutional strengthening phase VIII to the Multilateral Fund (US \$):	356,106
Date of approval of country programme:	2002
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)	0
(b) Annex C, Group I (HCFCs) (average 2009-2010)	16
(c) Annex E (methyl bromide) (average 1995-1998)	0
(d) Annex F (HFCs) (average 2020-2022 plus 65% of HCFC baseline)	3,878,000
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)	3.82
(c) Annex E (methyl bromide)	0.00
Total:	3.82
(d) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7	13,218,297
Year of reported country programme implementation data:	2023
Amount approved for projects (as at December 2024) (US \$):	3,789,726
Amount disbursed (as at December 2023) (US \$):	3,047,809
ODS to be phased out (as at December 2024) (ODP tonnes):	108.4
ODS phased out (as at December 2023) (ODP tonnes):	108.6

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

Summary of activities	Funds approved (US \$)
(a) Investment projects:	1,062,093
(b) Institutional strengthening:	1,140,166
(c) Project preparation, technical assistance, training and other non-investment projects:	1,587,467
Total:	3,789,726
(d) HFC activities funded from additional voluntary contributions	150,000

Progress report

¹ Los datos al mes de diciembre de 2023 se basan en el documento UNEP/OzL.Pro/ExCom/95/17.

2. During phase VII, Angola's NOU effectively implemented key activities supporting the HCFC phase-out and laying the groundwork for the HFC phase-down, in alignment with the country's obligations under the Montreal Protocol and Kigali Amendment. The NOU conducted extensive capacity-building sessions, training customs officers, RAC technicians, and enforcement officials on proper refrigerant handling, regulatory compliance, and illegal trade prevention, including the provision of refrigerant identifiers. Stakeholder engagement was reinforced through regular consultations with customs authorities, and public awareness was promoted via targeted outreach at major events like World Ozone Day, which featured roadshows, seminars, and educational materials. Gender inclusion was actively pursued by encouraging the participation of female technicians through collaboration with professional associations. Enhanced coordination between the NOU and relevant agencies strengthened data collection and reporting systems for controlled substances. Angola also shared experiences and learned best practices by participating in regional and international meetings.

Plan of action

3. Moving forward, Angola's NOU will implement a comprehensive plan to sustain progress in HCFC phase-out and HFC phase-down, focusing on policy enforcement, capacity-building, and stakeholder engagement. Key actions include strengthening the licensing and quota systems, expanding training programmes for customs officers, enforcement agencies, and RAC technicians, and promoting public awareness. The NOU will enhance compliance through tighter border controls and provision of refrigerant identifier, while also advancing energy efficiency projects. Improved data collection and reporting mechanisms will be established in collaboration with customs and importers. Angola will continue engaging in regional and international forums, exploring South-South cooperation with Portuguese-speaking countries, and promoting gender inclusivity by encouraging the participation of women in training and technical fields. These collective efforts will ensure continued compliance with Montreal Protocol obligations.

Sustainability and risk assessment

4. To ensure the long-term sustainability of these efforts, the country must address key risks, including regulatory and enforcement challenges that require strengthened institutional capacity and monitoring systems. Sustained capacity building is essential to mitigate knowledge loss due to staff turnover, while ongoing training for technicians, customs officials, and other stakeholders remains critical. The threat of illegal trade in ODS highlights the need for reinforced border controls, provision of refrigerant identifiers, and enhanced regional cooperation. Additionally, maintaining public awareness through continuous outreach remains vital. By proactively managing these risks, Angola seeks to secure compliance with Montreal Protocol obligations.

El Salvador: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNEP
Amounts previously approved for institutional strengthening (US \$):			
	Phase I:	May-97	75,597
	Phase II:	Dec-00	50,398
	Phase III:	Nov-02	57,980
	Phase IV:	Dec-04	60,000
	Phase V:	Jul-07 & Nov-08	60,000
	Phase VI:	Dec-22	120,000
		Total:	423,975*
Amount requested for renewal (phase VII) (US \$):			180,000
Amount recommended for approval for phase VII (US \$):			180,000
Agency support costs (US \$):			0

Summary of the project and country profile	
Total cost of institutional strengthening phase VII to the Multilateral Fund (US \$):	180,000
Date of approval of country programme:	1997
Date of approval of HCFC phase-out management plan:	2011
Date of approval of Kigali HFC implementation plan:	2024
Baseline consumption of controlled substances (ODP tonnes/CO ₂ -eq tonnes):	
(a) Annex A, Group I (CFCs) (average 1995-1997)	306.5
(b) Annex A, Group II (halons) (average 1995-1997)	0.7
(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)	11.7
(f) Annex E, (methyl bromide) (average 1995-1998)	1.4
(g) Annex F, (HFCs) (average 2020-2022 plus 65% of HCFC baseline)	922,362
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)	4.66
(f) Annex E, (methyl bromide)	0.00
Total:	4.66
(g) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7	1,122,854
Year of reported country programme implementation data:	2023
Amount approved for projects (as at December 2024) (US \$):	4,917,650
Amount disbursed (as at December 2023) (US \$):	4,059,652
ODS to be phased out (as at December 2024) (ODP tonnes):	399.2
ODS phased out (as at December 2023) (ODP tonnes):	373.1

*Excluding US \$245,000 approved for institutional strengthening project and incorporated into stage I of the HCFC phase-out management plan (HPMP) for El Salvador.

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

Summary of activities	Funds approved (US \$)
(a) Investment projects:	2,025,090
(b) Institutional strengthening:	423,975
(c) Project preparation, technical assistance, training and other non-investment projects:	2,468,584
Total:	4,917,650
(d) HFC activities funded from additional voluntary contributions	0

Progress report

6. The implementation of Montreal Protocol activities in El Salvador is continuing with significant progress. The Kigali Amendment to the Montreal Protocol was ratified, and the regulatory framework for HFC licensing and quotas was established through Executive Decree No. 10 (February 2024) and Ministerial Decree No. 14 (July 2024). Revision of import quotas and regulations for HCFCs, including the ban on HCFC-141b in polyols were implemented. All required reports under Article 7 of the Montreal Protocol and the country programme were submitted on time. However, HCFC consumption in 2021, 2022, and 2023 exceeded the maximum allowable levels established in the Agreement with the Executive Committee. The Government of El Salvador has taken steps to ensure that consumption returns to compliance in 2024. Ministerial Agreement No. 343 (December 2024) introduced stricter controls on the importation of refrigeration and air-conditioning (RAC) equipment containing controlled substances. Industry training and awareness-raising programmes were conducted, focusing on the transition to low-

GWP refrigerants. A national workshop on Good Refrigeration Practices was held in November 2024, engaging 203 participants (44 women). Collaboration with AS Aire (Salvadoran Air Conditioning and Refrigeration Association) was strengthened to improve workforce training and technical certification. Customs officers received specialized training on the identification and classification of controlled substances. Multiple outreach campaigns were conducted, including the World Ozone Day celebrations, with a focus on alternative refrigerants. Gender integration efforts included six dialogue sessions with women in the RAC sector, leading to the formulation of a Gender Inclusion Roadmap for future initiatives. Promotional materials, such as educational booklets and reusable bags, were distributed to reinforce awareness about ozone layer protection and climate change mitigation.

Plan of action

7. Phase VII of the IS project will build on previous successes and further strengthen El Salvador's institutional capacity, regulatory framework, and stakeholder engagement to meet its Montreal Protocol commitments. It will continue enforcing the ban on HCFC-based RAC equipment imports; continue issuing import licenses and quotas for all substances controlled under the Montreal Protocol; submit timely and accurate reports on HCFC and HFC consumption; ensure continuous verification and validation of import data through cross-checking with customs and importers; conduct specialized training workshops for customs officers, and enforcement authorities on the identification and handling of controlled substance, implement a joint inspection programme with customs authorities to prevent the illegal trade of controlled substances; develop and distribute educational materials targeting different stakeholder groups, including technicians, importers, and the general public; organize the World Ozone Day and the World Refrigeration Day to highlight advancements in ozone protection and climate-friendly cooling technologies; conduct workshops and consultations to ensure gender mainstreaming in all project activities, and promote the active role of women in technical fields, particularly in refrigeration and air conditioning.

Sustainability and risk assessment

8. The sustainability of El Salvador's IS project is upheld through a comprehensive approach that combines regulatory frameworks, institutional capacity development, inter-agency collaboration, and public-private partnerships. The NOU, operating under the Ministry of Environment and Natural Resources (MARN), is a well-established entity that continuously enhances its human resource capabilities. Furthermore, ongoing training programmes for customs officers, technicians, and industry stakeholders play a crucial role in preserving and expanding technical expertise. Additionally, the integration of gender policies across all project activities—through the implementation of the Gender Inclusion Roadmap—fosters a more inclusive and sustainable workforce within the RAC sector. Regarding the existing risks associated with the project's implementation, the primary risk identified is political changes and institutional restructuring. A key mitigation strategy is to raise awareness among new authorities about the project's significance for both the country and the protection of the ozone layer. Additionally, fostering long-term institutional memory through standardized procedures and comprehensive documentation is essential. It is equally important maintaining a close coordination to ensure timely fund allocations and to establish contingency plans to address potential financial constraints or changes in government.

Ethiopia: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNEP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Oct-96	68,365
Phase II:	Nov-99	45,539
Phase III:	Apr-03 & Dec-03	52,432
Phase IV:	Nov-06	60,000
Phase V:	Nov-09 & Apr-10	60,000
Phase VI:	Nov-14	60,000
Phase VII:	Dec-16	85,000
Phase VIII:	Dec-20	85,000
Phase IX:	Jun-22	85,000
	Total:	601,336
Amount requested for renewal (phase X) (US \$):		180,000
Amount recommended for approval for phase X (US \$):		180,000
Agency support costs (US \$):		0
Total cost of institutional strengthening phase X to the Multilateral Fund (US \$):		180,000
Date of approval of country programme:		1996
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)		0.5
(b) Annex C, Group I (HCFCs) (average 2009-2010)		5.5
(c) Annex E (methyl bromide) (average 1995-1998)		15.6
(d) Annex F, (HFCs) (average 2020-2022 plus 65% of HCFC baseline)		347,035
Latest reported ODS consumption (2024) (ODP tonnes) as per Article 7:		
(a) Annex B, Group III (methyl chloroform)		0.00
(b) Annex C, Group I (HCFCs)		1.02
(c) Annex E (methyl bromide)		0.00
	Total:	1.02
(d) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7		45,035
Year of reported country programme implementation data:		2023
Amount approved for projects (as at December 2024) (US \$):		1,913,097
Amount disbursed (as at December 2023) (US \$):		1,452,320
ODS to be phased out (as at December 2024) (ODP tonnes):		30.7
ODS phased out (as at December 2023) (ODP tonnes):		12.3

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

Summary of activities	Funds approved (US \$)
(a) Investment projects:	212,688
(b) Institutional strengthening:	601,336
(c) Project preparation, technical assistance, training and other non-investment projects:	1,099,073
	Total:
	1,913,097
(d) HFC activities funded from additional voluntary contributions	95,000

Progress report

10. Ethiopia continues to successfully implement its obligations under the Montreal Protocol, advancing efforts to phase out ozone-depleting substances (ODS) through sustained regulatory, institutional, and stakeholder-driven actions. Phase IX of the IS project was implemented effectively, with

all indicators fully achieved. The NOU, housed within the Ethiopian Environmental Protection Authority (EEPA), led the coordination of a wide range of activities including the development of a draft amendment to Proclamation 716/2011 to incorporate Kigali Amendment provisions, the operationalization of a national licensing and quota system for HCFCs and HFCs, and periodic quota allocations to registered importers. Over 200 customs and law enforcement officers were trained on ODS control measures, and identifiers were procured and distributed to key border points to strengthen enforcement. Public awareness was enhanced through targeted campaigns via electronic and traditional media, and over 240 staff members of the EPA were sensitized on low-GWP alternatives. Ethiopia also commemorated World Ozone Day in 2023 and 2024 through national media outreach and public discussions. National and inter-agency coordination was reinforced through annual meetings of the National Ozone Steering Committee and active collaboration with customs, trade, education, and standards institutions. The NOU ensured regular submission of Article 7 and country programme data, supported training on Harmonized System code classification, and engaged stakeholders on gender mainstreaming. Ethiopia actively participated in regional and global Montreal Protocol meetings and successfully submitted funding requests for second tranche of stage II of the HPMP, the preparation of national inventories of banks of unwanted substances, and the Kigali HFC implementation plan. These collective efforts reflect Ethiopia's strong institutional commitment and continued compliance with the Montreal Protocol.

Plan of action

11. For phase X of the IS project, the NOU will continue to lead efforts to ensure full compliance with the Montreal Protocol and its amendments, with a focus on phasing out HCFCs by 2030. The plan of action emphasizes capacity building through comprehensive training for refrigeration technicians, customs officers, and enforcement agencies; strengthening of the policy and regulatory framework by maintaining licensing and quota systems and finalizing MEPS; and enhancing data monitoring and reporting systems to ensure timely submission of Article 7 and country programme data. Public awareness will be expanded through targeted campaigns, annual World Ozone Day celebrations, and increased stakeholder engagement. The NOU will also foster regional and international cooperation by actively participating in Montreal Protocol meetings and collaborating with other countries to exchange best practices and improve enforcement mechanisms.

Sustainability and risk assessment

12. To ensure the long-term sustainability of Montreal Protocol projects in Ethiopia, a comprehensive monitoring, evaluation, and enforcement framework has been put in place. The EEPA, in collaboration with the NOU, oversees project implementation, ensuring compliance with phase-out and phase-down targets for ODS and HFCs. There are sustainability measures in place including: institutional strengthening where the NOU continues to build the capacity of key stakeholders, including customs officers, environmental inspectors, and refrigeration technicians, to ensure sustained enforcement of regulations; policy and regulatory framework – integration of Montreal Protocol commitments into national policies and regulations, such as the licensing and quota system, ensures long-term compliance; public awareness and education – continuous sensitization campaigns, stakeholder engagement, and technical training promote the adoption of low-GWP and energy-efficient technologies; stakeholder collaboration – strengthened inter-agency coordination between the Ministry of Trade, Customs Commission, and industry associations ensures effective enforcement of import controls and best practices in the RAC sector; dedicated monitoring personnel – two employees of the EEPA are specifically assigned to monitor project activities, track implementation progress, and report on any challenges that may affect the continuity and effectiveness of the project. As part of the risk management regular monitoring, enforcement actions, and stakeholder training are in place help ensure adherence to licensing and quota systems. The NOU has also taken measures to strengthen border controls through improved data tracking, and procurement of identifiers in efforts to mitigate risks associated with smuggling and unregulated imports. capacity-building initiatives have remained at the forefront of activities implemented and have included refresher training and technical

workshops to ensure continued expertise in implementing Montreal Protocol commitments. By implementing these sustainability measures and risk management strategies, Ethiopia ensures the continued success of aligning with international commitments under the Montreal Protocol and Kigali Amendment.

Namibia: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNEP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Nov-95	69,794
Phase II:	Jul-00	46,530
Phase III:	Dec-03	53,530
Phase IV:	Nov-05	60,000
Phase V:	Nov-07	60,000
Phase VI:	Nov-09	46,500.00
Phase VII:	Apr-12	60,000
Phase VIII:	Nov-14	60,000
Phase IX:	Jul-17	65,000.00
Phase X:	Dec-19	85,000
Phase XI:	Nov-21	85,000
Total:		691,354
Amount requested for renewal (phase XII) (US \$):		180,000
Amount recommended for approval for phase XII (US \$):		180,000
Agency support costs (US \$):		0
Total cost of institutional strengthening phase XII to the Multilateral Fund (US \$):		180,000
Date of approval of country programme:		1995
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)		0.0
(b) Annex C, Group I (HCFCs) (average 2009-2010)		8.4
(c) Annex E, (methyl bromide) (average 1995-1998)		0.8
(d) Annex F (HFCs) (average 2020-2022 plus 65% of HCFC baseline)		774,924
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)		0.26
(c) Annex E (methyl bromide)		0.00
Total:		0.26
(d) Annex F (HFCs) (CO ₂ -eq tonnes) as per Article 7		730,358
Year of reported country programme implementation data:		2023
Amount approved for projects (as at December 2024) (US \$):		2,999,829
Amount disbursed (as at December 2023) (US \$):		2,360,260
ODS to be phased out (as at December 2024) (ODP tonnes):		25.6
ODS phased out (as at December 2023) (ODP tonnes):		20.3

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

Summary of activities	Funds approved (US \$)
(a) Investment projects:	1,193,425
(b) Institutional strengthening:	691,354
(c) Project preparation, technical assistance, training and other non-investment projects:	1,115,050
Total:	2,999,829
(d) HFC activities funded from additional voluntary contributions	150,000

Progress report

14. During the reporting period, Namibia's NOU successfully implemented Montreal Protocol activities under the IS project, ensuring continued national compliance with the Protocol and its amendments. Key achievements included the enforcement of updated ODS and HFC regulations, enhanced cooperation with customs to curb illegal trade, and comprehensive capacity-building programmes that trained over 60 customs officers and numerous RAC technicians in the safe handling of low-GWP alternatives. Public awareness was boosted through media campaigns and the celebration of World Ozone Day 2024. The NOU also participated in regional and international meetings to share best practices, maintained active monitoring systems such as iPIC, and seized illegal ODS consignments. Additionally, strong efforts were made to mainstream gender, including the training of 12 female RAC technicians and the establishment of a Women's RAC Association to support inclusive participation in the sector.

Plan of action

15. Namibia's NOU will continue to implement the IS project to ensure national compliance with the Montreal Protocol and its amendments. The next phase of implementation focuses on strengthening technical capacity through targeted training for RAC technicians, customs officers, and policymakers, with an emphasis on gender inclusion. Regulatory enforcement will be enhanced through active monitoring of the licensing and quota system, deployment of refrigerant identifiers at border posts, and improved data reporting. Public awareness will be promoted via mass media campaigns, stakeholder workshops, and distribution of educational materials to encourage adoption of low-GWP, energy-efficient alternatives. Additionally, the NOU will strengthen regional and international cooperation by participating in relevant network and global meetings to support knowledge exchange and alignment with evolving global standards.

Sustainability and risk assessment

16. Namibia's NOU will ensure sustainability through continued support from the Ministry of Industrialization and Trade, which will provide infrastructure, budgetary integration, and logistical resources. To manage risks, the NOU will mainstream Montreal Protocol activities into national policies, strengthen staff retention and training, and enhance enforcement through improved customs collaboration and refrigerant detection tools. Institutional support will be safeguarded by embedding Montreal Protocol activities into national frameworks and maintaining high-level engagement. The NOU will also address illegal trade through regional cooperation and stricter monitoring, while bridging workforce gaps with expanded training and awareness efforts.

Anexo II

CONSIDERACIONES PRELIMINARES DEL COMITÉ EJECUTIVO RELATIVAS A LA RENOVACIÓN DE LOS PROYECTOS DE FORTALECIMIENTO INSTITUCIONAL PRESENTADOS EN LA 96ª REUNIÓN

Angola

1. El Comité Ejecutivo examinó el informe presentado con la solicitud de renovación del proyecto de fortalecimiento institucional para Angola y observó con satisfacción que Angola ha remitido los datos del programa de país de 2023 a la Secretaría del Fondo y los datos del artículo 7 del Protocolo de Montreal a la Secretaría del Ozono, que indican el cumplimiento con lo previsto en el Protocolo de Montreal. El Comité tomó nota del esfuerzo del Gobierno de Angola por mantener una cooperación eficaz con los interlocutores nacionales y realizar actividades de sensibilización, incluidas las celebradas en el marco del Día Mundial del Ozono. Asimismo, el Comité destacó la participación activa del país en las reuniones de las redes regionales y en las del Protocolo de Montreal. El Comité Ejecutivo confía en que la próxima fase ayudará a Angola a cumplir con sus obligaciones en virtud del Protocolo de Montreal y a garantizar la integración de la perspectiva de género en la ejecución de las actividades del Protocolo de Montreal.

El Salvador

2. El Comité Ejecutivo examinó el informe presentado con la solicitud de renovación del proyecto de fortalecimiento institucional para El Salvador. El Comité tomó nota del compromiso continuo de El Salvador con la aplicación del Protocolo de Montreal, incluidas las iniciativas proactivas de sensibilización pública, la colaboración con las principales partes interesadas y la coordinación con las autoridades nacionales y aduaneras. El Comité también constató logros importantes, como el establecimiento del sistema de concesión de licencias y cuotas para los HFC, el fortalecimiento de las capacidades aduaneras gracias a la capacitación especializada y la promoción activa de buenas prácticas de refrigeración en sus talleres nacionales. El Comité destacó asimismo la integración de la perspectiva de género, incluida la elaboración de la “Hoja de ruta para la inclusión de género” y la organización de sesiones de diálogo específicas con mujeres del sector de la refrigeración y climatización. El Comité también tomó nota de que El Salvador, pese a haberse encontrado con dificultades relacionadas con la precisión de los datos y la coordinación con las aduanas, que le habían llevado a superar el consumo máximo al que se había comprometido en el marco del Protocolo de Montreal, evidenció una clara voluntad de aplicar medidas correctivas. El Comité también reconoció los esfuerzos continuos de El Salvador para intensificar su participación en reuniones regionales e internacionales y su disposición a participar en la cooperación Sur-Sur cuando surja la oportunidad.

Etiopía

3. El Comité Ejecutivo examinó el informe presentado con la solicitud de renovación del proyecto de fortalecimiento institucional para Etiopía y observó con satisfacción que Etiopía ha remitido los datos del programa de país de 2023 y 2024 a la Secretaría del Fondo y los datos del artículo 7 del Protocolo de Montreal a la Secretaría del Ozono, que indican el cumplimiento con lo previsto en el Protocolo de Montreal. El Comité constató que Etiopía ha seguido aplicando los sistemas de concesión de licencias y cuotas para la importación y exportación de HCFC; ha impartido capacitación a técnicos de refrigeración y funcionarios de aduanas; y ha organizado actividades de sensibilización pública. El Comité Ejecutivo confía, por tanto, en que el Gobierno de Etiopía siga ejecutando actividades que le permitan cumplir con sus obligaciones en el marco del Protocolo de Montreal.

Namibia

4. El Comité Ejecutivo examinó el informe presentado con la solicitud de renovación del proyecto de fortalecimiento institucional para Namibia y observó con satisfacción que el país ha cumplido con sus obligaciones de presentación de datos y con los requisitos de eliminación y reducción del Protocolo de Montreal. El Comité tomó nota del esfuerzo del Gobierno de Namibia por mantener una cooperación eficaz con los interlocutores nacionales y realizar actividades de sensibilización, incluidas las celebradas en el marco del Día Mundial del Ozono. Asimismo, el Comité Ejecutivo destacó la participación activa del país en las reuniones de las redes regionales y en las del Protocolo de Montreal. El Comité Ejecutivo confía en que la próxima fase ayudará a Namibia a cumplir con sus obligaciones en virtud del Protocolo de Montreal y a garantizar la integración de la perspectiva de género en la ejecución de las actividades del Protocolo de Montreal.

Annex III

COMPARATIVE ANALYSIS: GLOBAL TECHNICAL ASSISTANCE TWINNING PROJECT PHASE I VERSUS PHASE II (As submitted by UNEP)

Category	Phase I (2023-2024)	Phase II (Proposed 2025-2027)
1. Vision	- Created a collaborative platform connecting different stakeholders to advance Kigali Amendment objectives - Facilitated knowledge exchange through regional workshops, enabling countries to share successful strategies and learn from peers' experiences. - Discussed regional cooperation to harmonize standards and coordinate sustainable cooling initiatives. But challenges remained in operationalizing insights and knowledge due to: - Lack of tailored information resources - Limited access to structured technical guidance - Need for standardized knowledge tools applicable at national and regional levels.	- Increase stakeholder involvement and optimize resource use by developing and disseminating comprehensive, practical information tools to support sustainable cooling solutions. - Equip stakeholders with ready-to-use resources that will be integrated into refined twinning workshops, ensuring discussions lead to concrete implementation strategies. - Strengthen national and regional capacities through workshops that foster policy harmonization and accelerate Kigali Amendment-aligned transitions across participating countries. - Develop high-quality, region-specific materials that empower policymakers, technicians, and financial stakeholders, bridging knowledge gaps and catalyzing informed decision-making. - Document and share case studies demonstrating the integration of refrigerant transitions with energy efficiency improvements, laying the foundation for future workshops.
2. Strategic objectives	- Foster collaboration between NOOs, NEPPs, and FMFPs - Enhance communication and coordination among stakeholders - Share success stories and experiences - Facilitate better coordination between NOOs and government stakeholders - Raise awareness about available funding mechanisms	- Strengthen institutional capacity through facilitating and initiating national coordination mechanisms - Develop and disseminate comprehensive knowledge tools and resources - Bridge the gap between policy planning and implementation - Institutionalize cross-sectoral collaboration for long-term sustainability and facilitate structured frameworks for the ongoing implementation of the Kigali Amendment objectives

Category	Phase I (2023-2024)	Phase II (Proposed 2025-2027)
3. Key activities	- Organized two-day twinning workshops - Facilitated knowledge exchange on policy frameworks - Introducing stakeholders to financial mechanisms - Shared best practices across regions - Explored strategies to maximize the climate benefits of refrigerant transitions - Provided a platform for networking between NOOs and NEEPs	- Conduct systematic regional gap analysis with dedicated regional technical experts - Develop up to five comprehensive toolkits (e.g., Policy Integration, Market Surveillance, Technical Assessment) - Create National Coordination Mechanisms Toolkit with governance structures and memorandum of understanding (MOU) templates - Map institutional frameworks. - Facilitate and initiate the formation of permanent national coordination bodies - Following the development of toolkits and resources, regional twinning Workshops will be organized across the nine networks to introduce key knowledge tools, provide hands-on training, facilitate National Coordination Mechanisms formation, and foster regional cooperation
4. Stakeholder engagement	- Engaged NOOs, NEEPs, and FMFPs - Uneven FMFP participation across regions - Mixed levels of prior interaction between stakeholders - Many participants from the same countries had never met before the workshops	- Focus primarily on NOOs and NEEPs (most engaged stakeholder groups) - More strategic approach to stakeholder selection based on phase I findings - Inclusion of regional technical experts throughout the project lifecycle - Targeted engagement with regional energy efficiency organizations - Emphasis on building formal institutional linkages beyond individual participation
5. Knowledge resources and tools	- Limited standardized existing tools identified - Primary focus on awareness raising and knowledge sharing - Information shared during workshops but few standardized resources and/ or documented - Identified need for region-specific and language-appropriate materials	Development of comprehensive toolkits such as: - National Coordination Mechanisms Toolkit - Refrigerant Integration Guidelines - Market Surveillance Toolkit - Technical Assessment Toolkit - Policy Integration Toolkit - End-User Awareness resources - Customized resources in multi-languages - Leveraging existing knowledge resources
6. Institutional coordination	Identified fragmentation of responsibilities among ministries as a barrier	Systematic assessment of existing coordination mechanisms

Category	Phase I (2023-2024)	Phase II (Proposed 2025-2027)
	- Highlighted successful models like Niger's approach of including energy efficiency authorities in ozone committees - Limited formal mechanisms to sustain coordination beyond workshops	- Development of a dedicated "National Coordination Mechanisms Toolkit" with templates for MOUs between agencies - Governance structures and operational guidelines for cross-sectoral bodies - Formalization of inter-ministerial committees - Clear role definitions for different stakeholders
7. Technical focus areas	- General awareness of energy efficiency and refrigerant transition - Limited specific guidance on technical implementation - Introduction to concepts like MEPS and energy labelling - Identified the need for technician training on energy efficiency	- Specific focus on integrating refrigerant type, quantity, and GWP into MEPS - Detailed protocols for product testing and market audits - Standardized testing protocols based on global standards - Integration of energy efficiency competencies into technician certification - Clear guidelines for market surveillance and compliance verification - Templates for documenting evaluation results and simplifying reporting
8. Regional customization	- Limited regionally tailored approaches - Identified unique regional challenges	- Systematic regional gap analysis to identify specific needs - Customization of the knowledge tools to regional contexts - Translation into relevant regional languages - Development of region-specific case studies - Consideration of unique constraints like testing facility availability
9. Implementation structure	- Single-component approach primarily focused on workshops - Limited pre-workshop needs assessment	- A total implementation timeframe of 30 months, along with systematic follow-up and impact assessment. - Three-component structure: - Preparation & Assessment (5 months) - Knowledge Development (7 months) - Workshops (18 months)
10. Market surveillance	- Identified enforcement challenges for MEPS and labeling - Limited practical guidance on implementation	- Comprehensive "Market Surveillance Toolkit" - Verification guidelines for assessing energy performance - Enforcement frameworks with penalties and consumer protection - Protocols for product testing and market audits - Focus on residential applications (room ACs, household refrigerators)

Category	Phase I (2023-2024)	Phase II (Proposed 2025-2027)
11. Resource allocation	- Resources primarily directed toward workshop organization, logistics and participation - Limited investment in knowledge tool development	- To ensure a more effective and sustainable approach, the project emphasizes a balanced allocation of resources through: - A strategic distribution of regional experts, knowledge resources, and workshops, fostering stronger local engagement and ownership, and the resources will be made across core components of the project, including assessment, tool development, and capacity-building workshops, to maximize impact and ensure coherence throughout the implementation process; and - A particular focus will be placed on engaging and supporting regional technical experts across the entire project lifecycle, recognizing their vital role in tailoring solutions to local contexts.
12. Performance measurement	- Limited structured performance framework - Focus on workshop completion and participation	Comprehensive performance indicators across all components with specific measurable targets and sustainability dimensions.
13. Linkage with other related energy efficiency projects and initiatives	- Limited explicit connection to other energy efficiency projects - Some references to KIPs and HCFC phase-out management plans (HPMPs)	- Systematic mapping of ongoing energy efficiency projects (Decisions 89/6, 91/65, 94/60) - Leveraging lessons from these projects in knowledge resources - Using workshops for experience sharing from energy efficiency projects - Collaboration with existing regional energy efficiency organizations - Strengthened partnership with UNEP's U4E initiative
14. Sustainability approach	- Limited formal mechanisms for continuing collaboration - Primarily focused on workshop activities	- Facilitate and initiate national coordination mechanisms - South-South cooperation networks - Formalized strategic partnerships with an online platform for ongoing resource access



**AMENDMENT TO
UNEP'S WORK PROGRAMME
2025**

**Presented to the
96th Meeting of the Executive Committee
of the Multilateral Fund for the Implementation
of the Montreal Protocol**

March 2025

United Nations Environment Programme

A. INTRODUCTION

1. UNEP's Work Programme 2024 was approved at the 95th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol.

2. This document, as submitted for consideration to the 96th Meeting of the Executive Committee, represents an Amendment to that Work Programme.

B. SUMMARY OF THE WORK PROGRAMME AMENDMENT FOR 2025

3. Consistent with the Business Plan 2025-2027, this Amendment comprises funding requests for

- Support for the implementation of Institutional Strengthening projects in **4** countries.
- Support in preparation of HCFC phase-out Management Plans (Stage 3) in **2** countries.
- Support in preparation of national inventories of banks of waste-controlled substances and national action plan in **11** countries
- Support in preparation of Verification reports in **8** countries.
- Support for Enabling Activities for Kigali Amendment in **1** country.
- Support for Additional emergency assistance for institutional strengthening in **1** country.
- Support for the implementation of **1** global project.

4. Details of the Work Programme Amendment and the total requested funding by project groups are presented in Table 1.

5. Summary of the Work Programme Amendment is presented in Table 2.

Table 1. Funding requests for annual tranches for ISP renewals and individual projects to be considered at the 96th Meeting of the Executive Committee

Country	Project title	Amount, US\$	PSC, US\$	Total requested amount, US\$
INSTITUTIONAL STRENGTHENING PROJECT RENEWALS (ISRs)				
Angola	Extension of the institutional strengthening project (phase VIII)	356,106	0	356,106
El Salvador	Extension of the institutional strengthening project (phase VII)	180,000	0	180,000
Ethiopia	Extension of the institutional strengthening project (phase X)	180,000	0	180,000
Namibia	Extension of the institutional strengthening project (phase XII)	180,000	0	180,000
Sub-total for Institutional Strengthening Projects		896,106	0	896,106
PREPARATION OF HCFC PHASE-OUT MANAGEMENT PLANS (STAGE 3)				
Iraq	Preparation of HCFC Phase-out Management Plan (HPMP) Stage III - the lead agency	60,000	7,800	67,800
Kuwait	Preparation of HCFC Phase-out Management Plan (HPMP) Stage III - the lead agency	70,000	9,100	79,100
Sub-total for Preparation of HCFC phase-out Management Plans (Stage 3)		130,000	16,900	146,900
PREPARATION OF NATIONAL INVENTORIES OF BANKS OF WASTE-CONTROLLED SUBSTANCES AND NATIONAL ACTION PLAN				
Barbados	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Dominica	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	70,000	9,100	79,100
Ethiopia	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Georgia	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Ghana	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	90,000	11,700	101,700

Iraq	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	100,000	13,000	113,000
Oman	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	90,000	11,700	101,700
Rwanda	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Sant Kitts and Nevis	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	70,000	9,100	79,100
Suriname	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Tanzania	Preparation of national inventories of banks of waste-controlled substances and national action plan – the lead agency	80,000	10,400	90,400
Sub-total for Preparation of national inventories of banks of waste-controlled substances and national action plan		900,000	117,000	1,017,000
TECHNICAL ASSISTANCE TO PREPARE A VERIFICATION REPORT ON HCFC CONSUMPTION				
Antigua and Barbuda	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Belize	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Bhutan	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Burundi	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Congo (the)	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Saint Lucia	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Suriname	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Zimbabwe	Verification report for stage II of the HCFC phase-out management plan	30,000	3,900	33,900
Sub-total for Preparation of Verification reports		240,000	31,200	271,200
ENABLING ACTIVITIES FOR KIGALI AMENDMENT				
Central African Republic	Enabling activities for Kigali Amendment	150,000	10,500	160,500
Sub-total for Preparation of Enabling Activities		150,000	10,500	160,500
ADDITIONAL EMERGENCY ASSISTANCE FOR INSTITUTIONAL STRENGTHENING				
Maldives	Additional emergency assistance for institutional strengthening	30,000	0	30,000
Sub-total for Additional emergency assistance for institutional strengthening		30,000	0	30,000
GLOBAL PROJECT SUBMISSION				
Global	Twinning of Ozone Officers and National Energy Efficiency Policymakers to Support Kigali Amendment Objectives (Phase II)	793,200	97,252	890,452
Sub-total for the global project submission		793,200	97,252	890,452

 Table 2. Summary of items submitted for consideration by the 96th Executive Committee meeting by group

Type of projects	Value in US\$	Project support costs in US\$	Total in US\$
Sub-total for Institutional Strengthening Projects	896,106	0	896,106
Sub-total for Preparation of HCFC phase-out Management Plans (Stage 3)	130,000	16,900	146,900
Sub-total for Preparation of national inventories of banks of waste-controlled substances and national action plan	900,000	117,000	1,017,000
Sub-total for Preparation of Verification reports	240,000	31,200	271,200

Sub-total for Enabling Activities	150,000	10,500	160,500
Sub-total for Additional emergency assistance for institutional strengthening	30,000	0	30,000
Sub-total for the individual global project submission	793,200	97,252	890,452
Grand Total	3,139,306	272,852	3,412,158

C. PROJECT CONCEPTS for items to be submitted by UNEP

Title:	<i>Requests for institutional strengthening renewals for (4 countries) (Angola, El Salvador, Ethiopia and Namibia)</i>		
Background:	Renewals of institutional strengthening projects (ISP) for the above-listed twenty countries are being requested in line with relevant decisions and guidelines of the Executive Committee. These projects have been included in the UNEP's 2025-2027 Business Plan.		
Objectives:	To assist the Governments of these Article 5 countries in building and strengthening their capacity for the implementation of the Montreal Protocol and its Amendments.		
Activities and description:	Individual documents for these projects – the terminal reports and the action plans - have been submitted to the Multilateral Fund Secretariat separately.		
Time Frame:	36 months		
Per country cost:	Country	US\$	
	Angola	356,106	
	El Salvador	180,000	
	Ethiopia	180,000	
	Namibia	180,000	
	Total	896,106 (USD)	

*Note: No project support costs are requested for institutional strengthening projects.

Enabling Activities for Kigali Amendment
As per Executive Committee decision 79/46

Date

Mach, 2025

Services Performed For:

Country: Central African Republic

Local Executing Authority: Ministère de l'Environnement et du Développement Durable (MEDD)



Funding Request for Enabling Activities for Kigali Amendment in Central African Republic

Background

The Government of Central African Republic has decided to take steps to address HFCs, herewith submitting a proposal for activities to facilitate ratification of the Kigali amendment and related development of a licensing system, as well as capacity building related activities for adopting alternatives to HFCs.

The country is in the process of negotiations to initiate the ratification process and their goal is to finalize ratification by December 2025, with the support of the Enabling Activities project and provided that political conditions and national stability allow.

Based on the decision of the Executive Committee 79/46, Central African Republic is proposing Enabling Activities for HFC Phase-down for the funding amount of US\$ 150,000 with UNEP as a sole implementing agency.

Institutional Arrangements for Implementation of Enabling Activities

Implementation of the enabling activities will be accomplished using the existing national infrastructure and institutional setting already established for ODS phase-out activities. Institutional arrangement in Central African Republic is such that management of ozone depleting substances and some climate change related projects are executed by the same office, which will facilitate the streamlining of activities.

The proposed project components will be implemented through the NOU, which is operating under the Ministère de l'Environnement et du Développement Durable (MEDD). The head of NOU is directly reporting to the Deputy Minister. Other relevant stakeholders will be involved in the discussion on the Kigali amendment ratification process through the already established National Ozone Committee, which has representatives from: Ministry of Environment, Ministry of Trade, Customs and Taxation Authority, Importers of refrigeration and air-conditioning equipment, Refrigeration servicing entities, Association for Refrigeration and Air-conditioning Technicians; and other government agencies. Several targeted meetings will be organized with the private sectors including hotel and restaurants, servicing sectors and Vocational Training Centres which are regularly involved to provide training in the refrigeration sector and with the Customs Services Department for assisting in development of licensing and quota system for HFCs.

Components Proposed for Enabling Activities

Proposed Component 1:	Facilitation of Ratification of the Kigali Amendment
Objective	To achieve a broader understanding of the Kigali amendment provisions and to prepare legislative bases for its implementation
Target Group:	High-level decision makers, relevant governmental institutions, private companies and servicing technicians in the sectors that are using HFCs
Description of activities	1. Analysis of existing Ozone and Climate Policy and Legislation and drafting the amendments in the existing legislation to extend the control measures to HFCs following the ratification of the Kigali amendment (HFC phase-down schedule, licensing requirements, HFC reporting requirements). 2. Stakeholder consultations to facilitate the ratification process at the national level: Organization of four consultative meetings with stake holders. 3. Translation of the Kigali amendment into national language 4. Drafting the Law on ratification of the Kigali amendment with the justification document, as required by the national legislative process 5. Production of information sheets on the Kigali amendment 6. Finalizing the package on the ratification of Kigali amendment and advancing the ratification process. The ultimate target of this component is ratification of the Kigali amendment. The ratification process itself is done outside of the mandate of the NOU, and the NOU doesn't have direct influence on the timing of the process. For that reason, the NOU will consider this component finalized when all necessary documents and legal changes (Law on ratification of the Kigali amendment and updated existing ODS legislation) are ready and the process of adoption is advanced.
Outputs	a) Draft document for analyzed/revised existing Ozone and Climate Policy and Legislation in place. b) At least 3 stakeholder consultative meetings during the legislation drafting process. c) Official National language Kigali amendment translated document in place. d) Ratification documents to national legislation prepared and submitted e) Awareness materials on HFC phase down produced f) Final package on the ratification of Kigali amendment in place.

Proposed Component 2:	Capacity-Building & Training on Alternatives
Objective	To understand the training needs in the servicing sector that would allow for HFC phase-down
Target Group:	Private companies and servicing technicians in the sectors that are using HFCs including Technical Training Institutes in RAC sectors
Description of activities	1. Undertaking the training needs assessment for the servicing sector and preparing an assessment report that will be used for further planning of the activities related to use of HFCs and low-GWP alternatives. For these activities, hiring a national and international consultant with good understanding of the issues will be needed and for that, consultative meetings, elaboration of terms of reference and interviews with the technicians should be done. 2. Conduct sensitization meetings for technicians on safe handling of HFCs and its alternatives. It is important to keep on updating technicians with new technologies and refrigerants gases into the market.
Outputs	a) Training Needs for RAC sector identified b) At least 4 sensitization meetings on identification and safe handling of HFCs and its Alternatives conducted.

Proposed Component 3:	Article 4B Licensing and Reporting
Objective	To develop a required regulatory package for HFC import/export licensing system
Target Group:	National Customs Service and importers/exporters of HFCs and HFC containing equipment
Description of activities	1. Revise the existing National Ozone Depleting Substances Legislation (and ODS based equipment) and drafting the ODS alternative regulation to allow import/export licensing control measures for HFCs for the implementation of the Kigali Amendment (HFC phase-down schedule, licensing requirements, HFC reporting requirements). 2. Assisting Customs Office in developing national custom codes for different HFCs and include them into the Customs Tariff in order to ensure proper monitoring and recording of imports/exports or re-export of individual HFCs. Assist the Customs Department to develop country-specific national HS Codes for HFCs to facilitate proper monitoring and recording of imports/exports of individual HFCs/alternatives
Outputs	a) National ODS regulation revised, b) Country-specific national HS Codes for HFCs developed

Proposed Budget

Proposed cost in (USD) without PSC	
<i>Component 1: Facilitation of ratification of the Kigali amendment</i>	<i>70,000</i>
1. Analysis of existing legislation and drafting amendments (2 national consultants x 6 months x US\$ 2,000.00)	24,000
2. Stakeholder consultations to facilitate the ratification process at the national level: Organization of four consultative meetings with stake holders.	10,000
3. Translation of the Kigali amendment into national language (1 national consultant x 2 months x US\$ 1,000.00)	2,000
4. Drafting the law on ratification of the Kigali amendment with the justification document, as required by the national legislative process (2 national consultants x 5.5 months x US\$ 2,000.00)	22,000
5. Production of information sheets on the Kigali amendment to facilitate consultations and speed up the ratification (translation of the Ozone Secretariat's briefing notes on ratification and 10 OzonAction factsheets into national language and printing 50 copies of each of the translated documents)	10,000
6. Preparing the package on the ratification of Kigali amendment (miscellaneous expenses – printing, copying, editing etc.)	2,000
<i>Component 2: Capacity-building & training on alternatives</i>	<i>50,000</i>
1. Undertaking the training needs assessment for the servicing sector and preparing an assessment report: Organization of several meetings with main refrigeration Associations and visits of several refrigeration workshops and refrigeration institutes; organization of a workshop on low emission alternatives.	20,000
2. Conduct sensitization meetings for technicians on safe handling of HFCs and its alternatives. It is important to keep on updating technicians with new technologies and refrigerants gases into the market.	30,000
<i>Component 3: Article 4B licensing and reporting</i>	<i>30,000</i>
1. Review of the national licensing system of and a proposal for how to include HFCs (1 national consultant x 3 months x US\$ 2,000.00)	6,000
2. Assisting the General Directorate of Customs and Indirect Laws in establishing national custom codes for HFCs: Organization of four workshops of 25 participants each and production awareness materials.	24,000
Total in (USD) without PSC	150,000

Implementation Plan

The project will be implemented between July 2025 – December 2026 (18 months)

Activity	Responsible Entity	Target Group	Start Date (Month/Yr .)	Date Of Completion (Month/Year)	Budget (US\$)	Milestones	Expected Outputs
Component 1: Facilitate the Ratification of the Kigali Amendment							
Analysis of existing legislation and drafting amendments	NOU	RAC, Govt. Ministries, General Directorate of Customs	August 2025	December 2025	24,000	Report on analyzed legislations	Provision of the document on analyzed legislations and draft amendments
Stakeholder consultations to facilitate the ratification process at the national level: Organization of four consultative meetings with stake holders.	NOU	RAC, Govt. Ministries, Customs Office	August 2025	December 2025	10,000	Meeting minutes	At least 4 stakeholder consultative meetings
Translation of the Kigali amendment into national language	NOU	RAC, Govt. Ministries, General Directorate of Customs	August 2025	November 2025	2,000	Reports	Provisions of the Kigali Amendment and relevant information on HFC phase down translated into the national language.
Drafting the law on ratification of the Kigali amendment with the justification document, as required by the national legislative process	NOU	Legislative Assembly	August 2025	November 2025	22,000	Reports	Ratification documents to the Legislative Assembly prepared and submitted
Production of information sheets on the Kigali amendment to facilitate consultations and speed up the ratification	NOU	RAC, Govt. Ministries, General Directorate of Customs	August 2025	December 2025	10,000	Awareness materials	Awareness materials on HFC phase down produced
Preparing the package on the ratification of Kigali amendment	NOU	RAC, Govt. Ministries, General Directorate of Customs	August 2025	December 2025	2,000	Final package on ratification of the Kigali amendment	Final package of ratification of the Kigali amendment submitted.

Activity	Responsible Entity	Target Group	Start Date (Month/Yr .)	Date Of Completion (Month/Year)	Budget (US\$)	Milestones	Expected Outputs
Component 2: Capacity Building and Awareness on HFCS and Alternatives Management							
Undertaking the training needs assessment for the servicing sector and preparing an assessment report: Organization of several meetings with main refrigeration Associations and visits of several refrigeration workshops and refrigeration institutes; organization of a workshop on low emission alternatives	NOU	RAC Sector	January 2026	December 2026	20,000	Training needs Reports	Training Needs for RAC sector identified
Conduct sensitization meetings for technicians on safe handling of HFCs and its alternatives.	NOU	RAC Sector	January 2026	December 2026	30,000	Meeting Reports	Workshop on low emission alternatives conducted
Component 3: Article 4B Licensing System and Reporting							
Revise the existing National Ozone Depleting Substances legislation (and ODS based equipment) and drafting the ODS alternative regulation to allow import/export licensing control measures for HFCs	NOU	RAC sector, Enforcement Agencies, Importers	August 2025	June 2026	6,000	Review Reports	National ODS regulation revised, Country-specific national HS Codes for HFCs developed
Assisting the General Directorate of Customs and Indirect Laws in establishing national custom codes for HFCs: Organization of four workshops of 25 participants each and production awareness materials.	NOU	General Directorate of Customs	January 2026	July 2026	24,000	Reports	Country-specific national HS Codes for HFCs developed

Statement by the Government and Implementing Agency

The Government of Central African Republic and UNEP confirmed that the proposed enabling activities will not delay the implementation of HCFC phase-out activities in the country. HPMP stage 2 preparation request is planned to be submitted for consideration of ExCom-97

**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:	Stage 3 - HCFC Phase-out Management Plan (preparation)	
Country:	Republic of Iraq	
Lead implementing agency:	UNEP	
Implementation period:	July 2025- December 2026	
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNEP	Overarching	60,000 + PSC

*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 II HPMP had been returned / will be returned (Decision 71/42(i))	☒	☐
Specify meeting at which PRP funding balance had been returned/will be returned	Stage II PRP funding balance was returned to the MLFS.	

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			
Please provide a brief background on the previous stage of the HPMP, when it was approved, a brief description of the progress in implementation of the previous stage of the HPMP to demonstrate that substantial progress had been made.			
The Executive Committee approved at its 87th meeting in (28 June – 2 July) 2021 a request submitted by UNEP as the LA has for Stage II of the HPMP for the Iraq for the period from 2021 to 2025 to reduce HCFC consumption by 69 per cent of the country's baseline, in the amount of US \$3,026,100, consisting of US \$1,840,000, plus agency support costs of US \$212,400 for UNEP, and US \$910,000, plus agency support costs of US \$63,700 for UNIDO. The ExCom-87 also approved the first tranche of stage II of the HPMP for Iraq, and the corresponding tranche implementation plan, in the amount of US \$400,421, consisting of US \$335,000, plus agency support costs of US \$38,671 for UNEP, and US \$25,000, plus agency support costs of US \$1,750 for UNIDO. During the first tranche, the regulatory and institutional frameworks on ODS management have been assessed to identify areas for update and development in cooperation with the legal department of the Ministry of Environment and key stakeholders, and the E-Licensing has been enhanced through the implementation of several updates. Capacity building for customs officers, enforcement officers, and inspectors has been continuously conducted, with a focus on newly recruited personnel, to enhance enforcement capacities. The certification scheme for RAC technicians has been updated to include good practices and information on available alternatives for high ambient temperatures, and two workshops have been organized to promote the national certification program for RAC technicians, with additional workshops planned for the second tranche of Stage II. Additionally,			

A technical training and awareness program was organized for large end-users, building owners, consultants, and technical decision-makers at the governmental level, focusing on low-GWP alternatives to HCFCs across various applications.

A series of technical training sessions, including practical demonstrations of best practices, were conducted nationwide for RAC technicians in collaboration with the Ministry of Social Affairs. These sessions resulted in the training and certification of 450 RAC technicians.

For the investment component, UNIDO with the assistance of the NOU planned to recruit local consultants to commence the operation of the 3 reclaim centers established in Iraq including the development of a business model. Local consultants are also recruited to start the technical activities to assist large end-users of AC in the electrical industry to investigate technology candidates and their impact on their products, production and market.

UNEP submitted a verification report, prepared in 2024, for the period 2020-2023, confirming that the Government of Iraq continues to implement its licensing and quota system for HCFC imports and exports. The report also confirmed that the total consumption of HCFCs for 2020-2023 was consistent with the figures reported under Article 7 of the Montreal Protocol. The verification concluded that Iraq is in compliance with the maximum allowable consumption levels established in its Agreement with the Executive Committee. The reported HCFC consumption during 2020-2023 remained stable at 66.39 ODP T.

The request for the second and third tranches of HPMP Stage II was submitted to the ExCom-95 meeting in December 2024. Since UNIDO has not yet completed Stage I of the HPMP and the projects IRQ/REF/57/INV/07 and IRQ/PHA/58/INV/09, the ExCom-95 decided, on an exceptional basis and with the understanding that no further extensions would be approved, to extend the completion dates for the projects implemented by UNIDO until 31 December 2025.

Additionally, the ExCom-95 approved only the second tranche of the HPMP for Iraq, along with the corresponding 2024-2026 tranche implementation plan, in the amount of US \$585,000, plus agency support costs of US \$67,529 for UNEP, on the condition that no further funding would be considered for UNIDO until the conditions established in decision 87/40(c) had been fulfilled.

From January 2025 to June 2026, planned activities under the second tranche will focus on strengthening policy and regulatory enforcement, enhancing technical training and certification, and ensuring effective project implementation and monitoring. To bolster enforcement, continuous training for customs officers and specialized seminars for key authorities will be conducted, complemented by a national awareness program promoting certification. Technical skills will be advanced through curriculum updates addressing zero ODP/low GWP refrigerants, expansion of certification programs for RAC technicians, and specialized training for large end-users and government decision-makers on HCFC alternatives. A comprehensive training program on good servicing practices, including low-GWP alternatives, will also be implemented across all governorates. Finally, project implementation and monitoring will be maintained for all investment and non-investment components of the program. These efforts aim to support the continued phase-out of HCFCs and promote the adoption of low-GWP alternatives.

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

Activity	Description	Implementing agency
Legal/regulatory framework	See above	UNEP
Refrigeration servicing sector	See above	UNEP
Reclamation centers	See above	UNIDO

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

Substance	Sector	2021	2022	2023
HCFC-22	Manufacturing-AC	64	64	64
HCFC-22	RAC servicing	1141	1134	1134
HCFC-22	Total	1,205	1,198	1,198

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)

Iraq does not produce any HCFCs and has imported only HCFC-22 over the past three years. In 2023, Iraq imported 1,207 MT (66.39 ODPT) of HCFC-22, while the actual consumption was 1,198 MT (65.89 ODPT). The slight difference between imports and consumption is attributed to some importers stockpiling small quantities. The volume of HCFC-22 imports remained constant at 1,207 MT from 2021 to 2023, as Iraq has implemented a licensing and quota system for HCFC imports to ensure compliance with allowable consumption limits.

HCFC-22 is primarily used in the RAC servicing sector, as well as in the manufacturing, assembly, and installation sectors for RAC equipment. The continued demand expected for servicing the aging population of residential and commercial air-conditioning equipment will be met by enhanced enforcement of the good practices and refrigerants management including the RRR scheme in addition to the diminishing consumption of the manufacturing sector due their voluntary conversion to available non ODS alternatives. The only manufacturing enterprise consuming R-22 is planning to convert in 2025 to any available HFC-based technology noting the current lack of feasible low-GWP alternatives suitable for high-ambient temperature countries. Hence, the NOU plans to cover the manufacturing sector through future KIP which is expected during the coming year after finalizing the ratification process.

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

Information needed	Description	Agency
Updated data on HCFC consumption in manufacturing/servicing sector	Conduct surveys to collect information on the HCFC quantities currently consumed by sector.	UNEP
Updated sectoral consumption information	Update the inventory of HCFC-based equipment especially air conditioners and commercial HCFC-based equipment.	UNEP
Others, specify. Stakeholders consultations	Identify and discuss with the relevant stakeholders, possible ways of reducing the current consumption of HCFCs in the country. Taking into account the limitations with alternatives suitable for Iraq.	UNEP
Others, specify. Market profile of HCFC and alternatives-based equipment	Determine the market profile of HCFC-based equipment and equipment depending on the alternatives especially low GWP technologies which are ozone friendly and incorporate results of the survey into the HPMP stage 3.	UNEP
New information on ODS regulations	Analysis of the current regulatory and institutional frame work including the enforcement mechanism and capacity.	UNEP
Project preparation for an additional reclamation center	The project will assess the location and equipment needed to establish an additional reclamation center and laboratory for quality assurance and control of reclaimed refrigerants.	UNEP

7. Activities to be undertaken for project preparation and funding

Activity	Indicative funding (US \$)	Agency
Project preparation for an additional reclamation center with a laboratory set up for quality assurance and control of reclaimed refrigerants.	8,000	UNEP
Updated data on HCFC in consuming sectors; and inventory of HCFC based equipment	25,000	UNEP
Identify the market profile of HCFC-based equipment and equipment depending on the alternatives especially low GWP technologies	10,000	UNEP
Stakeholders consultations and development of HPMP Stage III project document	17,000	UNEP
TOTAL	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 overarching strategy for Iraq is to implement an integrated plan for reducing HCFC in the manufacturing and servicing sectors by promoting and adopting energy-efficiency alternative technologies to achieve climate benefits. It will include the operationalization of the R&R&R scheme and the enforcement of the RAC certification scheme for enhanced management of refrigerants. The strategy will focus on updating the existing policies, strengthening their implementation, and developing the capacity of refrigeration experts and practitioners to support the adoption of appropriate ozone and climate friendly alternative technologies. The Government of Iraq is committed, to the extent possible, to phasing out remaining HCFC consumption while increasing the use of low-GWP alternatives.

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

In line with ExCom decision 92/40 and ExCom document 92/51, the Fund Secretariat's operational gender mainstreaming policy and selected performance indicators described in Annex XXII of ExCom 92 report will be incorporated into the preparation of the stage III prep.

**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:	Stage 3 - HCFC Phase-out Management Plan (preparation)	
Country:	State of Kuwait	
Lead implementing agency:	UNEP	
Implementation period:	July 2025-December 2026	
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNEP	Overarching	70,000 + PSC

*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 II HPMP had been returned / will be returned (Decision 71/42(i))	☒	☐
Specify meeting at which PRP funding balance had been returned/will be returned	Stage II PRP funding balance was returned to the MLFS.	

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			
Please provide a brief background on the previous stage of the HPMP, when it was approved, a brief description of the progress in implementation of the previous stage of the HPMP to demonstrate that substantial progress had been made.			
Stage II of the HPMP for Kuwait was approved at the ExCom-88th meeting in (15– 19) November 2021 to meet the 67.5 per cent reduction from the baseline by 2025, at a total cost of US \$2,816,612, consisting of US \$1,952,800, plus agency support costs of US \$224,808 for UNEP, and US \$597,200, plus agency support costs of US \$41,804 for UNIDO. Stage II consists of three tranches that cover policy and legislation, customs training, training and certification of RAC servicing technicians, promotion of alternative technologies, development of standards and SOPs, public awareness through media campaigns, conferences, workshops, stakeholders consultation, publications, information dissemination and providing technical assistance and monitoring of the proceedings. Also, the ExCom-88 approved the first tranche of Stage II of the HPMP for Kuwait, and the corresponding tranche implementation plan, in the amount of US \$1,015,140, consisting of US \$670,840, plus agency support costs of US \$77,228 for UNEP, and US \$249,600, plus agency support costs of US \$17,472 for UNIDO. For policy and enforcement, the national ODS Legislation has been updated by adopting the 2022 HS code and enhancing the process for licensing and controlling ODSs, and enforcement has been strengthened through the organization of awareness campaign for government authorities and relevant stakeholders.			

The capacities of customs and enforcement trainers and officers have been enhanced in combating illegal trade and the safe handling of hazardous refrigerants by training 8 trainers and building the capacities of more than 500 customs officers on the Montreal Protocol and HCFC control, including risk profiling.

The training curriculum for RAC technician, training syllabus of vocational education and training institutes has been updated to include newly long-term ODS alternatives and related safety and technical aspects.

The certification of RAC technicians is now mandatory and will be implemented as soon as all the frameworks are finalized including the adoption of the Recognition of Prior Learning (RPL). The assessors will be trained to implement the assessment scheme including the adoption of the RPL. Relative to certification of technicians, a comprehensive database for various servicing workshops was developed and established containing the details of the workshops. The NOU worked with the Ministry of Municipalities in implementing the issuance of business permits to the registered workshops.

Additionally, and to build the capacities of RAC servicing sector, the capacities of 25 trainers have been enhanced and 237 technicians have been trained on best practices and technical aspects.

The initial mapping of schools and centers to receive the necessary tools and equipment align with the new training curriculum has been finalized, and required equipment/ tools number have been discussed as to meet the actual needs. The selected training centers will also be established as training centers of RAC technicians on the operation, maintenance of RR and R. This will be implemented during the stage 3 implementation. The reclamation center has been established and currently in operation at the United Factory for Compressors and Refrigerants (UFCR). The development of guidelines for reclamation facilities and business model has been initially discussed with concerned stakeholders. The feasibility study report on the final disposal of unwanted refrigerants was finalized and recommendations being considered by the respective authorities for adoption to enhance the life cycle management of refrigerants.

Technical assistance in cooperation with KISR has been provided to big end-users to support the efforts in assessing leaks and proposing required improvements to reduce leak rates to acceptable levels and promote better practices and improved the management of refrigerants on-site. The NOU also coordinated with KISR to conduct the research on safety and performance of low GWP technologies. Multiple meetings have been held resulting to the process of signing of the MOU in November 2024. Various awareness-raising have been conducted to different associations, consultative and roundtable meetings, and celebrations of International Ozone Day and World Refrigeration Day.

The Executive Committee approved at its 95th meeting in (4– 8) December 2024 the Second Tranche of the HPMP Stage II for Kuwait and the corresponding tranche implementation plan in the amount of US \$1,437,974, consisting of US \$1,013,560, plus agency support costs of US \$116,682 for UNEP, and US \$287,600, plus agency support costs of US \$20,132 for UNIDO.

Under the second tranche, between January 2025 and June 2026, planned activities will focus on strengthening regulations and enforcement, enhancing technical skills, promoting alternative technologies, and developing national standards related to ozone-depleting substances. Key initiatives include ongoing awareness campaigns for government and stakeholders, improvements to the e-licensing and monitoring system, and the development of an e-registration system for servicing workshops. Customs and enforcement officer training will continue, with a focus on risk profiling and support beyond customs checkpoints. Technician training and certification will be expanded through updated syllabi, teacher and assessor training, provision of equipment, and a Recognition of Prior Learning (RPL) campaign. Efforts to promote alternative technologies will include information dissemination, technical assistance to end-users, and public awareness campaigns. National standards for ODS sectors will be updated to align with international standards, and project management, monitoring, and verification will continue through the Project Management Unit (PMU).

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

Activity	Description	Implementing agency
Legal/regulatory framework	See above	UNEP
Refrigeration servicing sector	See above	UNEP
National Recovery, Recycling and Reclaim Centers	See above	UNIDO

4. Overview of current HCFC consumption in metric tonnes by substance (last three years)				
Substance	Sector	2021	2022	2023
HCFC-22	RAC servicing	3,146.80	2800.85	2,672
HCFC-123	RAC servicing	3.59	0.00	3.46
HCFC-141b	Manufacturing-Foam PU	360.00	241.20	0.00
HCFC-142b	Manufacturing-Foam XPS	180.00	0.00	0.00
HCFC-141b	Pre-blended polyols	235.00	190.00	180.00
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)				
In the servicing sector, the demand for HCFC-22 from 2021 to 2023 has decreased due to the operation of reclamation centers in Kuwait, while the demand for HCFC-123 has been almost negligible. The demand for HCFC-141b dropped from 360 mt in 2021 to zero in 2023 due to the conversion of two large PU foam manufacturers. Similarly, in the XPS manufacturing sector, it is clear that the demand for HCFC-142b has fallen to zero in the past two years. While the use of HCFC 141b in Pre-blended polyols has slightly decreased over the past three years.				
6. Description of information that needs to be gathered and updated. Explain why this has not been undertaken during preparation for the previous stage of the HPMP.				
Information needed	Description			Agency
Updated data on HCFC consumption in manufacturing/servicing sector	Conduct surveys to collect information on the HCFC quantities currently consumed by sector.			UNEP
Updated sectoral consumption information	Update the inventory of HCFC-based equipment especially air conditioners and commercial HCFC-based equipment.			UNEP
Others, specify. Stakeholders consultations	Identify and discuss with the relevant stakeholders, possible ways of reducing the current consumption of HCFCs in the country. Taking into account the limitations with alternatives suitable for Kuwait.			UNEP
Others, specify. Market profile of HCFC and alternatives-based equipment	Determine the market profile of HCFC-based equipment and equipment depending on the alternatives especially low GWP technologies which are ozone friendly and incorporate results of the survey into the HPMP stage 3.			UNEP
New information on ODS regulations	Analysis of the current regulatory and institutional frame work including the enforcement mechanism and capacity.			UNEP
Project preparation for an additional reclamation center	The project will assess the requirements to establish an additional reclamation center and laboratory for quality assurance and control of reclaimed refrigerants.			UNEP
7. Activities to be undertaken for project preparation and funding				
Activity	Indicative funding (US \$)			Agency
Project preparation for an additional reclamation center with a laboratory set up for quality assurance and control of reclaimed refrigerants	10,000			UNEP
Updated data on HCFC in consuming sectors; and inventory of HCFC based equipment	25,000			UNEP
Identify the market profile of HCFC-based equipment and equipment depending on the alternatives especially low GWP technologies	15,000			UNEP

Stakeholders consultations and development of HPMP Stage III project document	20,000	UNEP
TOTAL	70,000	
8. How will activities related to implementation of the Kigali Amendment to phase down HFCs be considered during project preparation for stage III of the HPMP?		
The overarching strategy for Kuwait is to implement an integrated plan for HCFC reductions in the manufacturing and servicing sectors through promotion and adoption of energy efficiency alternative technologies to achieve climate benefits and operationalization of the R&R&R scheme and enforcement of the RAC certification scheme for enhanced management of refrigerants. The strategy will focus on updating existing policies, strengthening their implementation, and developing the capacity of refrigeration experts and practitioners to support the adoption of appropriate ozone and climate friendly alternative technologies; these activities, under preparation for HPMP Stage III, will complement those being developed for the KIP, as the country, having ratified the Kigali Amendment, is expected to request KIP PRP soon. The Government of The State of Kuwait is committed, to the extent possible, to phase out remaining HCFC consumption while increasing use of low GWP alternatives.		
9. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom decision 92/40 and ExCom document 92/51, the Fund Secretariat's operational gender mainstreaming policy and selected performance indicators described in Annex XXII of ExCom 92 report will be incorporated into the preparation of the stage III prep.		

**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 a national inventory of banks of waste-controlled substances and the development of a national plan for the management of these substances for Barbados	
Country:	Barbados	
Lead implementing agency:	UNEP	
Cooperating agency (1):	(select)	Click or tap here to enter text.
Cooperating agency (2):	(select)	Click or tap here to enter text.
Cooperating agency (3):	(select)	Click or tap here to enter text.
Meeting where request is being submitted	96 th Meeting	
Implementation period	July 2025- June 2027	
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 Months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	80,000	
(select)	Click or tap here to enter text.	
(select)	Click or tap here to enter text.	
(select)	Click or tap here to enter text.	

*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: The NOU received an approval from the Government at later stage and the NOU was not able to request the inclusion of the request into UNEP's Business Plan at the time of its preparation.		

- 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 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

Proper end-of-life management of Ozone Depleting Substances (ODS) and Hydrofluorocarbons (HFCs) is not a compliance issue under the Montreal Protocol on Substances that Deplete the Ozone Layer. Therefore, the Multilateral Fund for the implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer's (MLF) scope with respect to managing ODS and HFC banks and their disposal has been limited. To date, the parties to the Montreal Protocol have agreed to only fund pilot projects specifically for the environmentally sound management of ODS banks.

Though not a compliance issue, developing countries have consistently raised the subject of the relevance of end-of-life management to sustaining compliance obligations and the impact that failure to address this complex matter has on the work of ODS and HFC Management at the national level. Developing countries, including Barbados require adequate financial support to be provided through the Montreal Protocol framework to adequately address the issues of recovery, transport, storage, and destruction of ODS and HFC stockpiles in a comprehensive and sustainable manner.

Following the entry into force of the Kigali Amendment to the Montreal Protocol on January 1, 2019 and subsequent decisions taken by the 91st meeting of the Executive Committee of the MLF for the implementation of the Montreal Protocol (ExCom91), grant funding was made accessible to Barbados to prepare a national inventory of banks of used or unwanted controlled substances and a plan for collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost effectiveness destruction.

The Government of Barbados through the Montreal Protocol on Substances that Deplete the Ozone Layer has been effectively regulating the consumption of Ozone Depleting Substances (ODS) since becoming a party to the Protocol in October 1992. To date, the Customs Act 2021 and the regulations under the Miscellaneous Controls Act Cap 329 are the umbrella legislations that established the Licensing system (LS) to control the import and export of all ODS and HFCs and have provided the basis for the hydrochlorofluorocarbon (HCFC) and HFC Quota systems.

The detailed procedures related to the Licensing system for ODS are promulgated in the Customs (List of Prohibited and Restricted Imports and Exports) Order, 2009. This piece of legislation specifies that all Montreal Protocol controlled substances with a phase-out date earlier than January 1, 2010 such as halons,

carbon tetrachloride (CTC), methyl chloroform, hydrobromofluorocarbons and bromochloromethane are banned from import and export. The subsequent 2010 amendment to the Order added Chlorofluorocarbons (CFCs) to the list of prohibited imports and exports and added HCFCs to the Restricted Imports and Exports schedules, which resulted in a requirement for a licence to trade in HCFCs. Further, an amendment to the 2010 Order in 2020, resulted in the addition of the eighteen (18) HFCs controlled under the Montreal Protocol and any mixture or derivatives thereof (i.e. HFC Blends) to the Restricted Import and Export schedules of the legislation. Consequently, a licence to import and export HFCs is also required by law before these items can be traded.

In Barbados, banks of used and unwanted controlled substances may have accumulated, and it may be possible that some of the chemicals from these banks may be escaping into the atmosphere. Any emissions that may be occurring are damaging the ozone layer and contributing to global warming. Banks of controlled substances are not regulated under the Montreal Protocol and the government continues to grapple with the issue of how to manage the challenge of recovery, storage, transportation, and disposal (i.e. recycling, reclaiming, destruction) of used or unwanted controlled substances in a constrained fiscal environment. Through the ODS and HFC Management Programme (i.e. National Ozone Unit) an effort was made to develop a management plan for Halons (i.e. Halon Management Plan 2004). In more recent years successive plans such as the Refrigerant Management Plan and the Hydrochlorofluorocarbon (HCFC) Phase out Management Plan (HPMP) only focused on encouraging the use of best practices with respect to handling, transportation and storage of refrigerants, which are the Montreal Protocol controlled substances or primary concern in Barbados currently. To this end, a guide on good practices in Refrigeration and Air Conditioning (RAC) was developed with MLF support and in-kind contributions from the MENB. However, the scope of work could not be expanded to include conducting an inventory and developing a national plan to address banks of used or unwanted controlled Montreal Protocol substances in a comprehensive way due to funding limitations.

This project aims to establish an inventory of banks of used or unwanted controlled substances in Barbados, and a plan for the collection, storage, transport and disposal of such substances, including consideration of recycling, reclamation, and cost-effective destruction. It will quantify the mitigation potential in line with Executive Committee (ExCom) Decision 91/66, including the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, new and/or existing legislation, protocols and/or policies that may need to be developed and/or updated respectively as well as associated costs to implement collection, storage, transport and disposal (i.e. recycling, reclamation and destruction) of used or unwanted ODS and HFCs.

The inventory of banks of used and unwanted controlled substances and the action plan will cover ODS such as Halons, CFCs, HCFCs and global warming HFCs. The inventory of existing banks and the resultant plan is expected to augment the Halon Management Plan (2004), the Barbados National Cooling Strategy for the RAC sector (2022), the HPMP (Stage I) (2013-2020) and (Stage II) (2022-2030) and the impending Kigali HFC Implementation plan (KIP) to reduce emissions through good management practices, recovery, recycling, reclamation (RRR) and proper destruction via Montreal protocol approved methods as appropriate within the country context. This project will include but not be limited to the identification of the types of chemicals that may comprise existing banks, investigation into inter alia the location of existing banks, analysis of whether adequate facilities exist to accommodate the consolidated storage of seized and contaminated waste chemicals including blends that may be stored at various government and private facilities, recommendations for needed administrative, legislative/policy and financial mechanisms to address collection, transport, storage and disposal (including recovery, recycling, reclamation and destruction).

The outcomes of this project are expected to enhance national efforts to sustain compliance with treaty obligations and to further support the transition to the use of ozone friendly, low global warming potential (GWP) and energy efficient alternatives and related technologies in the relevant sectors in a cost effective and comprehensive manner.

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
Others, specify. ODS and HFC Sectoral Consumption Information	Data collection and stakeholder analysis: i) Determine data collection methodology and approach. ii) Perform a desk study on available data on ODS and HFC banks of used and unwanted controlled substances, equipment and containers relevant institutions and stakeholders, and existing regulations and policies. iii) Conduct surveys and site visits of facilities to collect and verify data and assess the condition of stockpiles. iv) Create an electronic database /inventory of banks of used or unwanted controlled substances that includes the geo-position of each bank based on data collected from on-site	UNEP

	audits/surveys and any other appropriate method. v) Create a registry for all entities that have existing banks of ODS and HFCs and a general profile of companies that may accumulate banks in the future. vi) Identify data gaps related to banks of used and unwanted controlled substances that need to be addressed in relation to inter alia relevant institutions and stakeholders, testing, record keeping, protocols, policies and regulations, storage, local and international transport for reclamation and destruction as appropriate etc.	
New information on ODS regulations	Analysis of institutional, policy and regulatory frameworks: i) Conduct a stakeholder analysis including roles and responsibilities, stakeholders e.g. RAC service centres, waste brokers, enforcement agencies, relevant Multilateral Environmental Agreement (MEA) Focal points etc. involved in waste management. ii) Analyse existing policy and regulatory frameworks, including waste management policies, hazardous waste management policies, recycling management plans, and outputs of relevant projects focused on related matters such as the GEF Islands 10279. iii) Propose recommended policies and regulations needed for supporting the collection, transport, storage and disposal (including recovery, recycling, reclamation and destruction) of used or unwanted ODS and HFCs for Barbados	UNEP
Others, specify. National Action Plan	i) Conduct stakeholder consultations presenting the draft inventory and action plan to obtain stakeholders' input, support, and validation. ii) Preparation of National Action Plan that: a. includes technical and economic analysis to compare available	UNEP

	options for handling and final disposal of unwanted controlled substances. b. Presents business/financing model options to ensure the long-term sustainability of collection, transport, storage and disposal (including recovery, recycling, reclamation and destruction) operations of used or unwanted ODS and HFCs for Barbados and proposing the best option. c. Details actions for collection, transport, storage, setting up the required disposal infrastructure (including recovery, recycling, reclamation and destruction) as well as shipping off island for destruction. d. Forecasts the amounts of used or unwanted ODS/HFC which might require RRR or disposal in the future and the estimated associated cost, to evaluate the economic viability of a reclamation and destruction plant. e. Analyses the costs and climate and ozone benefits associated with the leakage prevention, recovery, recycling, reclamation and disposal of refrigerants. f. Estimates the cost to establish a destruction facility that may be best suited for Barbados to address current and anticipated stockpiles. g. Analyses the potential for substance recycling and reclamation for reuse and perform the cost-benefit. h. Describes the existing capacity to analyse the composition of used or unwanted ODS / HFCs and make recommendations in relation to upgrading capacity. i. Proposes a recommended national protocol inclusive of supporting national mechanisms	
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	for the effective collection, transport, storage and disposal (including recovery, recycling, reclamation and destruction) of used or unwanted ODS and HFCs for Barbados j. Recommends one or more locations to facilitate the national storage of spent refrigerants and other hazardous chemicals as appropriate in order of feasibility rank and estimate the personnel, costs (facility costs, administration, monitoring etc.) associated with each. k. proposes policy and legislative actions required to be taken to implement activities identified in the plan to address collection, transport, storage and disposal (including recovery, recycling, reclamation and destruction) of used or unwanted ODS and HFCs for Barbados. l. Assesses the feasibility and provides cost estimates for disposal options (recycling, reclaiming, destruction) put forward in the document, based on expected amounts to be treated identified in the plan or projected amounts based on consumption records. iii) Finalisation of the action plan for the sound handling of unwanted Montreal Protocol controlled substances including collection, transport, and disposal of such substances and considering stakeholder comments.	
Others, specify. Project Management, Monitoring, and Reporting	Project management, monitoring, progress reporting, final report, and evaluation: i) Managing and monitoring project activities. ii) Establishing a national expert team as needed. iii) Reporting and evaluating project progress.	UNEP

	iv) Preparing initial and final reports considering stakeholder comments. v) Project progress is properly monitored and evaluated, including gender considerations.	
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
ODS and HFC sectoral consumption information	28,650.00	UNEP
New information on ODS regulations	10,000.00	UNEP
National Action Plan	20,000.00	UNEP
Project Management, Monitoring, and Reporting	21,350.00	UNEP
TOTAL	80,000.00	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
The Fund Secretariat's operational gender mainstreaming policy will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances, and the plan for the collection, transport, and disposal of such substances. The NOU will seek to encourage women to apply for consultations under the project; data on gender will be collected; images of women will be incorporated or used in any promotional material.		

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 Inventory of Banks of Used of Unwanted Controlled Substances and National Plan		
Country:	Dominica		
Lead implementing agency:	UNEP		
Cooperating agency (1):	(select)	Click or tap here to enter text.	
Cooperating agency (2):	(select)	Click or tap here to enter text.	
Cooperating agency (3):	(select)	Click or tap here to enter text.	
Meeting where request is being submitted	ExCom-96		
Implementation period	July 2025 – June 2027		
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 months			
Funding requested:			
Agency	Funding requested (US \$)*		
UNEP	70,000		
(select)	Click or tap here to enter text.		
(select)	Click or tap here to enter text.		
(select)	Click or tap here to enter text.		

*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:		

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
	Dominica has been successful in the implementation of the Montreal Protocol and the phase out of consumption of HCFCs since becoming Party to the Montreal Protocol in 1993. It has regulated this through the Montreal Protocol (Substances that Deplete the Ozone Layer) Act, No. 14 of 2006 and the Montreal Protocol (Substances that Deplete the Ozone Layer) Regulations Statutory Order No. 43 of 2019. Though Dominica has not yet ratified the Kigali Amendment, which has added the global warming hydrofluorocarbons (HFCs) to the list of controlled substances under control, the country has been collecting and reporting HFCs as part of its Country Programme (CP) and Article 7 (A7) Data.

As a result of the consumption of these controlled substances, large banks of used or unwanted controlled substances have accumulated globally and in Dominica. Emissions from these banks are continuously being released to the atmosphere. These emissions are damaging the ozone layer and contributing to global warming. Banks of controlled substances are not regulated under the Montreal Protocol nor by Dominica's national regulations. Collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries and Dominica.

The project seeks to establish an inventory of banks of used or unwanted controlled substances in Dominica and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction. It will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies and stakeholder consultation. The final report and action plan will propose actions, new legislation and policies to enhance the collection and disposal of unwanted ODS/HFCs. The methodology or approach can be inspired by the Climate and Ozone Protection Alliance (COPA).

The inventory of used and unwanted controlled substances and action plan will cover ODS like HCFCs and global warming HFCs and thus contribute to the objectives of the HPMP and future KIP to reduce emissions through good practices, containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. This includes seized chemicals stored at customs warehouse, waste and containment chemicals, blends and residues from recycling and reclaim processes.

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	Determine the data collection methodology and approach along with the NOU and stakeholders. Undertake a Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. Identify laboratories able to analyse the composition of used or unwanted ODS and HFCs, and the need for upgrading such laboratories. Identify data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. Conduct further data collection, on-site visits and surveys as needed.	UNEP
Stakeholder Analysis	Conduct a stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste collectors and traders	UNEP
Analysis of data collected	Analyse the data collected, including but not limited to: the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management; existing policy and regulatory frameworks, including waste management policies; forecast the amounts of used or unwanted ODS/HFCs which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant; assess the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated; analyse the potential environmental benefits for the ozone layer and the climate; analyse the potential for substance recycling and reclamation for re-use; analyse existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	UNEP
Preparation of inventory	Preparation of the Inventory report or National Plan:	UNEP

report/national plan	develop a database or inventory of banks of used or unwanted controlled substances; prepare initial action plan for collection, transport, storage and setting up the required disposal infrastructure; Develop a business or financing model to ensure long-term sustainability of collection or disposal operations; Conduct stakeholder consultations to present the draft National Plan to obtain stakeholder input and validation; Draft recommended regulations and policies supporting the collection and disposal of used or unwanted ODS and HFCs and sustainable financing; Finalization and endorsement of the National Plan considering stakeholder contributions.	
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data Collection	\$23,000	UNEP
Activity 2: Stakeholder Analysis	\$15,000	UNEP
Activity 3: Analysis of data collected	\$12,000	UNEP
Activity 4: Preparation of inventory report/National plan	\$20,000	UNEP
Click or tap here to enter text.		(select)
TOTAL	70,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom Decision 92/40 and Document 92/51 the MLF's Gender Mainstreaming Policy and Performance Indicators will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances and National Plan. In the project's implementation, females will be encouraged to apply for available positions and the NOU will use female imagery in promotional material related to the project. Female imagery will be used as much as possible, in documentation produced during the preparation phase.		

**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 inventory of banks of used or unwanted controlled substances	
Country:	Ethiopia	
Lead implementing agency:	UNEP	
Cooperating agency (1):		
Meeting where request is being submitted	ExCom 96	
Implementation period	July 2025 – June 2027	
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 Months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	80,000 plus PSC	

*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:		

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 Federal Democratic Republic of Ethiopia is a party to the Montreal Protocol on Substances that deplete the ozone layer and has successfully been implementing the Protocol through the control of production and consumption of Ozone Depleting Substances. The Kigali Amendment aimed at phasing down the use of Hydrofluorocarbons (HFCs) due to their high global warming potential. The adoption of the Montreal Protocol and the Kigali Amendment which promote the use of climate friendly alternatives has resulted in the refrigeration and air conditioning sector transitioning to zero ozone depletion potential and low global warming potential technologies consistent with the provisions of the Kigali Amendment to the Montreal Protocol climate. This has ultimately led to the accumulation of banks of used or unwanted controlled

substances in Ethiopia due to the lack of proper ODS/HFC recovery, recycling, reclamation, destruction facilities and therefore the controlled substances are continuously being released to the atmosphere from these banks. The emissions from the banks are detrimental to the ozone layer, contribute to global warming and are also taken away or undoing the efforts that have been done in ozone protection and climate change mitigation. Banks of controlled substances are not regulated under the Montreal Protocol. Furthermore, collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries.

Concept: The national inventory aims to establish a comprehensive database of used or unwanted controlled substances, including their sources, quantities, and current storage or disposal status. The project also aims to establish an inventory of banks of used or unwanted controlled substances in Ethiopia, and a plan for the collection, transport, and disposal of such substances, including consideration of recycling, reclamation, and cost-effective destruction. The inventory helps identify gaps, challenges, and opportunities for better management of these substances to prevent diversion, misuse, and environmental harm. The inventory results are important in terms of determining priority areas for management of banks of controlled substances and setting up appropriate policy measures. They will assist in enabling the country in making an informed decision on the best cost effective way of handling the banks of used and unwanted controlled substances. Furthermore, the survey will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, review or amending of legislation and policies to enhance the collection and disposal of used or unwanted ODS / HFCs

The methodology / approach might be informed by that recommended by the Climate and Ozone Protection Alliance (COPA). **Stakeholder mapping and engagement:** Identify and involve key stakeholders from government agencies, healthcare sector, law enforcement, and the pharmaceutical industry.

Data collection and analysis: Establish data collection mechanisms to gather information on the sources, quantities, storage, and disposal of used/unwanted controlled substances.

Inventory development: Compile the collected data into a centralized database, ensuring data integrity and security.

Gap analysis: Assess the current processes, infrastructure, and regulatory framework to identify areas for improvement.

Action plan formulation: Based on the inventory findings, develop a comprehensive action plan with specific goals, activities, responsibilities, and timelines

Align with national plans and strategies: Ensure the national inventory and action plan are integrated with broader national initiatives, such as the Kigali Implementation Plan (KIP) for the refrigeration servicing sector.

Focus on the refrigeration servicing sector: Examine the recovery, recycling, and reclamation programs for refrigerants, as they may involve the handling of controlled substances.

Promote cross-sectoral coordination: Foster collaboration between the agencies responsible for controlled substances management, environmental protection, and the refrigeration servicing sector.

The inventory of banks of used and unwanted controlled substances and action plan will cover ozone-depleting substances like HCFCs and global warming HFCs and thus contribute to the objectives of the

HPMP and the KIP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. The UNIDO investment component of the HPMP II aims to establish refrigerant recovery, recycling and reclaim infrastructures in Ethiopia. By conducting the national inventory of banks of used or unwanted controlled substances it will assist informing how the infrastructure should be placed according to the heat spots of the banks of the controlled substances. The inventory data sources will include seized chemicals stored at customs warehouses, waste and contaminated chemicals / blends, and residues from recycling and reclaim processes and end-of-life appliances.

In preparation for transportation, there is possibility of collaborating with the Stockholm convention within Ethiopian Environment Protection Authority (EPA), to utilize the temporary storage site to store and package the collected substances. This centralised storage mechanism will facilitate for efficient transportation.

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
Activity 1: Data collection and stakeholder analysis	• Agreeing with project team on data collection methodology and approach. • Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and review of existing regulations and policies. • Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste traders. • Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. • Conducting further data collection, on-site visits and surveys as needed.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	• Analysing the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. • Analysing existing policy and regulatory frameworks, including waste management policies. • Forecasting the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation and destruction plant respectively. • Assessing the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated.	UNEP

	- Analysing the potential environmental benefits for the ozone layer and the climate. - Analysing the potential for substance recycling and reclamation for re-use. - Analysing existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	- Setting up database / inventory of banks of used or unwanted controlled substances, with distinction of amounts for recycling, reclamation, and destruction. - Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. - Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. - Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. - Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. - Finalization of the action plan considering stakeholder comments.	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	- Managing and monitoring project activities. - Establishing national expert team. - Reporting and evaluating project progress. - Preparing initial and final report considering stakeholder comments. - Project progress properly monitored and evaluated, including gender mainstreaming dimension	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	35000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	15000	UNEP
Activity 3: Inventory of banks and preparation of action plan	15000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	15000	UNEP
TOTAL	80000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		

The Multilateral Fund (MLF) Gender Policy will be integrated into the preparation of the project to ensure gender equality and inclusive participation. Stakeholder engagement activities will promote the involvement of both men and women, ensuring equal opportunities in consultations and decision-making processes. Capacity-building activity will incorporate a gender-sensitive approach, encouraging women's participation in technical and leadership roles related to ODS management. Additionally, gender-disaggregated data will be collected to analyze the roles of men and women in handling and disposing of ODS, identifying potential gaps and challenges. Policy recommendations will be designed to support gender equality by enhancing women's access to leadership opportunities, and safe working environments. Monitoring and evaluation frameworks will include gender-specific indicators to assess the impact of project activities on gender inclusivity and make necessary adjustments.

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

Part I: Project information

Project title:	Preparation of national inventory of banks of used or unwanted controlled substances
Country:	Georgia
Implementing agency:	UNEP
Meeting where request is being submitted	ExCom 96
Implementation period	24 months
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): July 2025 – June 2027	
Funding requested:	
Agency	Funding requested (US \$)*
UNEP	80,000 plus PSC

*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:		

A. Information required for the funding request to prepare a national inventory 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 Montreal Protocol has been effectively regulating the production and consumption of ozone-depleting substances (ODS) since 1989. The Kigali Amendment added the global warming hydrofluorocarbons (HFCs) to the list of controlled substances. Large banks of used and unwanted controlled substances have accumulated globally, which are continuously being released to the atmosphere from these banks. These emissions are damaging the ozone layer and contributing to global warming. Banks of controlled substances are not regulated under the Montreal Protocol. Collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries. The project aims to establish an inventory of banks of used or unwanted controlled substances in Georgia, and a plan for the collection, transport, and disposal of such substances, including consideration of recycling, reclamation, and cost-effective destruction. It will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, new legislation and policies to enhance the collection and disposal of used or unwanted ODS / HFCs.

The methodology / approach might be inspired by that recommended by the Climate and Ozone Protection Alliance (COPA).

The inventory of banks of used and unwanted controlled substances and action plan will cover ozone-depleting substances like HCFCs and global warming HFCs and thus contribute to the objectives of the HPMP and the future KIP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. This includes seized chemicals stored at customs warehouses, waste and contaminated chemicals / blends, and residues from recycling and reclaim processes.

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
Activity 1: Data collection and stakeholder analysis	Agreeing with project team on data collection methodology and approach Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste traders. Identifying laboratories able to analyse the composition of used or unwanted ODS / HFCs, and the need for upgrading such laboratories. Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders. Conducting further data collection, on-site visits and surveys as needed.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	Analysing the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. Analysing existing policy and regulatory frameworks, including waste management policies. Forecasting the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant. Assessing the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated. Analysing the potential environmental benefits for the ozone layer and the climate. Analysing the potential for substance recycling and reclamation for re-use.	UNEP

	Analysing existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	Setting up database / inventory of banks of used or unwanted controlled substances. Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. Finalization of the action plan considering stakeholder comments.	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	Managing and monitoring project activities. Establishing national expert team. Reporting and evaluating project progress. Preparing initial and final report considering stakeholder comments. Project progress properly monitored and evaluated, including gender mainstreaming dimension	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	24,000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	20,000	UNEP
Activity 3: Inventory of banks and preparation of action plan	20,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	16,000	UNEP
TOTAL	80,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom decision 92/40 and ExCom document 92/51, the Fund Secretariat's operational gender mainstreaming policy and selected performance indicators described in Annex XXII of ExCom 92 report will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances, and the plan for the collection, transport, and disposal of such substances.		

**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 inventory of banks of used or unwanted controlled substances	
Country:	Ghana	
Lead implementing agency:	UNEP	
Cooperating agency (1):		
Meeting where request is being submitted	ExCom 96	
Implementation period	July 2025 – June 2027	
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 Months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	90,000 plus PSC	

*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: The Government of Ghana had initially requested this project to be submitted to the last Executive Committee meeting of 2024. However, due to the late timing of the request, UNEP was unable to proceed with the submission within that cycle. As a result, and in agreement with the government, the project is now being submitted in 2025. The NOU received an approval from the Government for new submission date e.g. ExCom-96 at later stage and the NOU was not able to request the inclusion of the request into UNEP's Business Plan at the time of its preparation.		

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
Background: Cooling is an indispensable service in Ghana's development. The country's RAC sector which offers cooling services has grown steadily in the last years propelled by nationwide electricity coverage, rapid urbanization, population growth, expanding middle class and rising incomes. This has also increased the sector's contribution to the national GHG emissions from both direct and indirect sources and with a resultant end of life of equipment increasing without the appropriate management options.

Ghana is a party to the Montreal Protocol on Substances that deplete the ozone layer, all its subsequent amendments and in particular the Kigali amendment to the Montreal Protocol and has successfully been implementing the Protocol through the control of production and consumption of Ozone Depleting Substances and initiated controls for HFCs under the Kigali Amendments due to their high global warming potentials. The Montreal Protocol and the Kigali Amendment eventually, are promoting the use of climate friendly alternatives in the refrigeration and air conditioning sectors transitioning to zero ozone depletion potential and low global warming potential technologies.

In Ghana, the implementation of MEPS and the phase out scenarios under the protocol has ultimately resulted in the accumulation of banks of used or unwanted controlled substances and equipment and resulted in some minimal collection and dismantling of old appliances particularly refrigerators. This however, has not been adequate as there are a lot more of these end-of-life equipment's in the country that are not collected and numbers unknown. With only a potential infrastructure for the management of refrigerants and foams which is still not on stream and currently no trained dismantling facilities, this creates a big challenge for the complete management of banks in the country. Therefore, the lack of proper ODS/HFC recovery, recycling, reclamation, destruction facilities with the resultant continuous release of controlled substances to the atmosphere from these banks is a major challenge. Banks of controlled substances are not regulated under the Montreal Protocol. Furthermore, collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries including Ghana.

Concept:

Ghana intends to undertake a national inventory of ODS/HFC banks with the aims to establish a comprehensive database of used and /or unwanted controlled substances, including their sources, quantities, and current storage or disposal status. The project also aims to build on an existing inventory of banks of used or unwanted controlled substances in Ghana, and a plan for the collection, transport, and disposal of such substances, including consideration of recycling, reclamation, and support on going cost-effective destruction. This project seeks to gather data and develop an inventory on stored waste RAC equipment and ODS, HFC and HC substances in collection centres throughout the country and will help identify gaps, challenges, and opportunities for better management of these substances to prevent diversion, misuse, and environmental harm. The inventory results are important in terms of determining priority areas for management of banks of controlled substances and setting up or enhancing appropriate policy measures to address them. They will assist in enabling Ghana to make informed decisions on the best cost-effective way of handling the banks of used and unwanted controlled substances. Furthermore, the survey will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, review or amending of legislation and policies where possible to enhance the collection and disposal of used or unwanted ODS / HFCs and their equipment.

Scope and Methodology:

The methodology / approach is informed by that recommended by the Climate and Ozone Protection Alliance (COPA) and GIZ. This includes an overview of the quantity of waste cooling equipment and ODS, HFC and HC substances stored in country and waste management companies and their capacity, policies/regulations and analysis of management option such as destruction and reclamation/recycling facilities to support end of life of RAC equipment's and refrigerants.

Stakeholder mapping:

National Ozone Unit (NOU), of the Environment Protection Authority (EPA) will lead the project implementation in collaboration with all relevant stakeholders such as refrigeration associations, importers, dismantlers, private sector, ministries, academia attorney general's office, professional bodies etc. This will also be in coordination with the National Committee on Ozone Depleting Substances (NACODS) as an advisory body for the NOU/EPA on all aspects related to ODS/HFCs.

Data collection and analysis:

Establish data collection mechanisms to gather information on the sources, quantities, storage, and disposal of used/unwanted controlled substances.

Inventory development:

Compile the collected data into a centralized database, ensuring data integrity and security whilst ensuring the sustainability of the database.

Gap analysis:

Assess the current processes, infrastructure, and regulatory framework to identify new approached and existing areas for improvement.

Action plan:

Based on the inventory findings, develop a comprehensive action plan with specific goals, activities, responsibilities, and timelines for implementation.

Align with national plans and strategies:

Ensure the national inventory and action plan are integrated with broader national initiatives, such as the National cooling Plans and the Kigali Implementation Plan (KIP) for the refrigeration servicing sector.

Focus on the refrigeration servicing sector:

Examine and propose modalities for the establishment and use of the recovery, recycling, and reclamation programs/facilities for refrigerants for the cooling sector.

Cross-sectoral coordination:

Collaborate with agencies responsible for controlled substances management, environmental protection, and the refrigeration servicing sector. The inventory of banks of used and unwanted controlled substances and action plan will cover ozone-depleting substances and global warming refrigerants and thus contribute to the objectives of the HPMP and the KIP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. Ghana under HPMP II aims to establish two refrigerant recovery, recycling and reclaim centres in the south and middle sectors of Ghana where appliances and refrigerant dominates. By conducting the national inventory of banks of controlled substances, this will provide important information on infrastructure siting as the inventory data sources will include seized chemicals from retailers of mislabelled or adulterated chemicals.

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
Activity 1: Data collection and stakeholder analysis	- Determine approach on data collection methodology. - Desk study review on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and review of existing regulations and policies. - Conduct stakeholder analysis with responsibilities and roles including new stakeholders e.g. dismantlers, retailers and private sector - Identify data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. - Conduct further data collection, on-site visits and surveys as needed across the country.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	- Analyse the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. - Analyse existing policy and regulatory frameworks, including waste management	UNEP

	policies. • Project the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation and destruction plant respectively or suitable for planned and existing facilities. • Assess the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated. • Analyse the potential environmental benefits for the ozone layer and the climate. • Analyse the potential for substance recycling and reclamation for re-use. • Analyse existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	• Set up database / inventory of banks of used or unwanted controlled substances, with distinction of amounts for recycling, reclamation, and destruction. • Prepare initial action plan for collection, transport, storage and setting up the required disposal infrastructure. • Elaborate on business / financing model to ensure long-term sustainability of collection / disposal operations. • Conduct stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. • Draft a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. • Finalize action plan for the considering of stakeholders and Steering committee	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	• Manage and monitor project activities. • Establishing national expert team. • Report and evaluate project progress. • Prepare initial and final report considering stakeholder comments. • Project progress properly monitored and evaluated, • Include gender mainstreaming considerations in the overall project	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	40,000	UNEP
Activity 2: Analysis of institutional, policy and	15,000	UNEP

regulatory frameworks		
Activity 3: Inventory of banks and preparation of action plan	20,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	15,000	UNEP
TOTAL	90,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
The Multilateral Fund (MLF) Gender Policy will be integrated into the preparation of the project to ensure gender equality and inclusive participation. Stakeholder engagement activities will promote the involvement of both men and women, ensuring equal opportunities in consultations and decision-making processes. Capacity-building activity will incorporate a gender-sensitive approach, encouraging women's participation in technical and leadership roles related to ODS management. Additionally, gender-disaggregated data will be collected to analyze the roles of men and women in handling and disposing of ODS, identifying potential gaps and challenges. Policy recommendations will be designed to support gender equality by enhancing women's access to leadership opportunities, and safe working environments. Monitoring and evaluation frameworks will include gender-specific indicators to assess the impact of project activities on gender inclusivity and make necessary adjustments.		

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

Part I: Project information

Project title:	Preparation of national inventory of banks of used or unwanted controlled substances
Country:	Iraq
Implementing agency:	UNEP
Meeting where request is being submitted	ExCom-96
Implementation period	24 months
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): June 2025 – May 2027	
Funding requested:	
Agency	Funding requested (US \$)*
UNEP	100,000 plus PSC

*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:		

A. Information required for the funding request to prepare a national inventory 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
Since 1989, the Montreal Protocol has successfully regulated ozone-depleting substances (ODS). The Kigali Amendment expanded this to include hydrofluorocarbons (HFCs). Consequently, significant quantities of used and unwanted ODS and HFCs have accumulated worldwide, leading to ongoing atmospheric emissions that harm both the ozone layer and contribute to global warming. Currently, these stockpiles, known as "banks," are not regulated under the Montreal Protocol. Developing countries face substantial challenges in managing the collection, recovery, and disposal (recycling, reclamation, or destruction) of these substances. This project will create an inventory of used and unwanted ODS and HFC banks in Iraq, and develop a plan for their collection, transportation, and disposal, focusing on cost-effective recycling, reclamation, and destruction methods. The project will assess the emissions mitigation potential, in accordance with Executive Committee (ExCom) Decision 91/66, through analysis of existing legislation, policies, and stakeholder consultations. The final report and action plan will propose concrete actions and new legislation or policies to improve the collection and disposal of used and unwanted ODS and HFCs. The project's methodology may draw inspiration from recommendations provided by the Climate and Ozone Protection Alliance (COPA).

The inventory and action plan will target ODSs including HCFCs, to support Iraq's HCFCs Phase-out Management Plan (HPMP). This will be achieved by reducing emissions through improved containment, recovery, recycling, and reclamation (RRR), and environmentally sound disposal. The inventory will include seized chemicals at customs warehouses, contaminated waste chemicals and blends, and residues from recycling and reclamation. The action plan will detail strategies for the collection, transportation, storage, and disposal of used and unwanted controlled substances. It will also outline policies and regulations defining the roles and responsibilities of manufacturers and distributors, including any existing RRR programs.

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
Activity 1: Data collection and stakeholder analysis	- Defining data collection methodology and approach with the project team. - Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. - Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste traders. - Identifying laboratories able to analyse the composition of used or unwanted ODS / HFCs, and the need for upgrading such laboratories. - Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. - Conducting further data collection, on-site visits and surveys as needed.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	- Analysing the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. - Analysing existing policy and regulatory frameworks, including waste management policies. - Forecasting the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant. - Assessing the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated. - Analysing the potential environmental benefits for the ozone layer and the climate. - Analysing the potential for substance recycling and reclamation for re-use.	UNEP

	-Analysing existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	- Setting up database / inventory of banks of used or unwanted controlled substances. - Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. - Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. - Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. - Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. - Finalization of the action plan considering stakeholder comments.	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	-Managing and monitoring project activities. Establishing national expert team. - Reporting and evaluating project progress. - Preparing initial and final report considering stakeholder comments. - Project progress properly monitored and evaluated, including gender mainstreaming dimension	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	30,000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	20,000	UNEP
Activity 3: Inventory of banks and preparation of action plan	25,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	25,000	UNEP
TOTAL	100,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom decision 92/40 and ExCom document 92/51, the Fund Secretariat's operational gender mainstreaming policy and selected performance indicators described in Annex XXII of ExCom 92 report will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances, and the plan for the collection, transport, and disposal of such substances.		

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

Part I: Project information

Project title:	Preparation of national inventory of banks of used or unwanted controlled substances
Country:	Oman
Implementing agency:	UNEP
Meeting where request is being submitted	ExCom-96
Implementation period	24 months
Duration of implementation (i.e., time (in months)) from the approval of PRP to submission of the national inventory and action plan (please specify): June 2025 – May 2027	
Funding requested:	
Agency	Funding requested (US \$)*
UNEP	90,000 plus PSC

*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: The NOU received an approval from the Government at later stage and the NOU was not able to request the inclusion of the request into UNEP's Business Plan at the time of its preparation.		

A. Information required for the funding request to prepare a national inventory 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 Since 1989, the Montreal Protocol has played a crucial role in regulating the production and consumption of ozone-depleting substances (ODS). With the Kigali Amendment, the protocol was further expanded to include hydrofluorocarbons (HFCs). As a result, large quantities of used and unwanted controlled substances have accumulated globally, with ongoing emissions being released into the atmosphere. These emissions not only damage the ozone layer but also intensify global warming. Unfortunately, banks of controlled substances are not currently regulated under the Montreal Protocol. For developing countries, managing the collection, recovery, and disposal (recycling, reclaim, and destruction) of used or unwanted controlled substances remains a significant challenge. The project aims to establish an inventory of banks of used or unwanted controlled substances in Oman, along with a plan for their collection, transport, and disposal, including consideration of recycling, reclamation, and cost-effective destruction. The project will quantify the mitigation potential in line with ExCom Decision 91/66, including an analysis of existing legislation and policies, as well as stakeholder consultations. The final report and action plan will propose actions, new legislation and policies to enhance the collection and disposal of used or unwanted ODS / HFCs.
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The methodology / approach might be inspired by that recommended by the Climate and Ozone Protection Alliance (COPA).

The inventory of banks of used and unwanted controlled substances and the action plan will cover ozone-depleting substances such as HCFCs, thereby contributing to the objectives of the HPMP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR), and environmentally sound disposal. This will encompass seized chemicals stored at customs warehouses, waste and contaminated chemicals / blends, and residues from recycling and reclaim processes. The national action plans include approaches for the collection, transport, storage, and disposal of used or unwanted controlled substances. Additionally, it would also contain a description of the policies and regulations describing the roles and obligations of manufacturers and distributors, including any recovery, recycling, and reclamation programmes.

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
Activity 1: Data collection and stakeholder analysis	- Defining data collection methodology and approach with the project team. - Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. - Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste traders. - Identifying laboratories able to analyse the composition of used or unwanted ODS / HFCs, and the need for upgrading such laboratories. - Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. - Conducting further data collection, on-site visits and surveys as needed.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	- Analysing the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. - Analysing existing policy and regulatory frameworks, including waste management policies. - Forecasting the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant. - Assessing the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated.	UNEP

	- Analysing the potential environmental benefits for the ozone layer and the climate. - Analysing the potential for substance recycling and reclamation for re-use. - Analysing existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	- Setting up database / inventory of banks of used or unwanted controlled substances. - Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. - Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. - Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. - Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. - Finalization of the action plan considering stakeholder comments.	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	- Managing and monitoring project activities. Establishing national expert team. - Reporting and evaluating project progress. - Preparing initial and final report considering stakeholder comments. - Project progress properly monitored and evaluated, including gender mainstreaming dimension	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	25,000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	15,000	UNEP
Activity 3: Inventory of banks and preparation of action plan	25,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	25,000	UNEP
TOTAL	90,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom decision 92/40 and ExCom document 92/51, the Fund Secretariat's operational gender mainstreaming policy and selected performance indicators described in Annex XXII of ExCom 92 report will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances, and the plan for the collection, transport, and disposal of such substances.		

**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 inventory of banks of used or unwanted controlled substances	
Country:	Rwanda	
Lead implementing agency:	UNEP	
Cooperating agency (1):		
Meeting where request is being submitted	ExCom 96	
Implementation period	July 2025 – June 2027	
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 Months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	80,000 plus PSC	

*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:		

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
Context and Background: Rwanda is a committed party to the Montreal Protocol and its Kigali Amendment, which aims to phase down the use of Hydrofluorocarbons (HFCs) due to their high Global Warming Potential (GWP). This alignment with international agreements forms a key part of Rwanda's strategy to protect the ozone layer and mitigate climate change. As part of its climate action efforts, Rwanda has been transitioning to climate-friendly alternatives in refrigeration and air conditioning, ensuring the adoption of technologies that are both ozone- and climate-friendly. Rwanda is also making strides in improving energy efficiency in cooling technologies. The ongoing

development of electrical and electronic equipment regulation including Minimum Energy Performance Standards (MEPS) is expected to enforce energy efficiency, encourage the use of low-GWP refrigerants, and help meet Rwanda's national climate goals and energy savings targets. In addition, the country is actively engaged with the African Centre of Excellence for Sustainable Cooling and Cold-chain (ACES), which aims to advance sustainable cooling solutions across the continent.

Despite these advancements, Rwanda faces challenges related to the growing accumulation of refrigerants and end-of-life equipment. There is limited infrastructure for managing refrigerants and foam-blowing agents, and no specialized recovery, recycling, or reclamation facilities are in operation. While some progress has been made in dismantling old appliances, much of the equipment remains uncollected and improperly managed. The lack of adequate recovery and disposal facilities continues to result in the uncontrolled release of harmful substances into the atmosphere, with refrigerant banks largely unregulated under the Montreal Protocol. To address this issue, there is a need for a national inventory of refrigerant banks and the development of an action plan to manage these substances effectively.

Concept:

Rwanda intends to undertake a national inventory of ODS/HFC banks with the aims to establish a comprehensive database of used or unwanted controlled substances, including their sources, quantities, and current storage or disposal status. The project also aims to establish an inventory of banks of used or unwanted controlled substances in Rwanda, and a plan for the collection, transport, and disposal of such substances, including consideration of recycling, reclamation, and cost-effective destruction. The inventory helps identify gaps, challenges, and opportunities for better management of these substances to prevent diversion, misuse, and environmental harm. The inventory results are important in terms of determining priority areas for management of banks of controlled substances and setting up appropriate policy measures. They will assist in enabling the country in making an informed decision on the best cost-effective way of handling the banks of used and unwanted controlled substances. Furthermore, the survey will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, review or amending of legislation and policies to enhance the collection and disposal of used or unwanted ODS / HFCs.

Methodology

The methodology / approach might be informed by that recommended by the Climate and Ozone Protection Alliance (COPA).

Stakeholder mapping and engagement: National Ozone Unit (NOU), of the Environment Management Authority (REMA) will lead the project implementation in collaboration with all relevant stakeholders such as refrigeration associations, importers, private sector, ministries, academia, government agencies, healthcare sector, law enforcement, and the pharmaceutical industry.

Data collection and analysis: Establish data collection mechanisms to gather information on the sources, quantities, storage, and disposal of used/unwanted controlled substances.

Inventory development: Compile the collected data into a centralized database, ensuring data

integrity and security.

Gap analysis: Assess the current processes, infrastructure, and regulatory framework to identify areas for improvement.

Action plan formulation: Based on the inventory findings, develop a comprehensive action plan for disposal of waste controlled substances with specific goals, activities, responsibilities, and timelines

Align with national plans and strategies: Ensure the national inventory and action plan are integrated with broader national initiatives, such as the Kigali Implementation Plan (KIP) for the refrigeration servicing sector.

Focus on the refrigeration servicing sector: Examine the recovery, recycling, and reclamation programs for refrigerants, as they may involve the handling of controlled substances.

Promote cross-sectoral coordination: Foster collaboration between the agencies responsible for controlled substances management, waste management, environmental protection, and the refrigeration servicing sector.

The inventory of banks of used and unwanted controlled substances and action plan will cover ozone-depleting substances like HCFCs and global warming HFCs and thus contribute to the objectives of the HPMP and the KIP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. The UNIDO investment component of the HPMP II and KIP aims to establish refrigerant recovery, recycling and establish reclaiming centre and infrastructures in Rwanda. By conducting the national inventory of banks of used or unwanted controlled substances it will assist informing how the infrastructure should be placed according to the heat spots of the banks of the controlled substances. The inventory data sources will include seized chemicals stored at customs warehouses, waste and contaminated chemicals / blends, and residues from recycling and reclaim processes and end-of-life appliances. By conducting the national inventory of banks of controlled substances, this will provide important information on infrastructure siting as the inventory data sources will include seized chemicals from retailers of mislabelled or adulterated chemicals.

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
Activity 1: Data collection and stakeholder analysis	• Agreeing with project team on data collection methodology and approach. • Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and review of existing regulations and policies. • Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste traders.	UNEP

	• Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. • Conducting further data collection, on-site visits and surveys as needed.	
Activity 2: Analysis of institutional, policy and regulatory frameworks	• Analyse the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. • Analyse existing policy and regulatory frameworks, including waste management policies. • Project the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation and destruction plant respectively or suitable for planned and existing facilities. • Assess the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated. • Analyse the potential environmental benefits for the ozone layer and the climate. • Analyse the potential for substance recycling and reclamation for re-use. • Analyse existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	UNEP
Activity 3: Inventory of banks and preparation of action plan	• Setting up database / inventory of banks of used or unwanted controlled substances, with distinction of amounts for recycling, reclamation, and destruction. • Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. • Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. • Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation.	UNEP

	• Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. • Finalization of the action plan considering stakeholder comments.	
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	• Manage and monitor project activities. • Establishing national expert team. • Report and evaluate project progress. • Prepare initial and final report considering stakeholder comments. • Project progress properly monitored and evaluated, • Include gender mainstreaming considerations in the overall project	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	35,000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	15,000	UNEP
Activity 3: Inventory of banks and preparation of action plan	15,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	15,000	UNEP
TOTAL	80,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
The Multilateral Fund (MLF) Gender Policy will be integrated into the preparation of the project to ensure gender equality and inclusive participation. Stakeholder engagement activities will promote the involvement of both men and women, ensuring equal opportunities in consultations, training programs, and decision-making processes. Capacity-building activity will incorporate a gender-sensitive approach, encouraging women's participation in technical and leadership roles related to ODS management. Additionally, gender-disaggregated data will be collected to analyze the roles of men and women in handling and disposing of ODS, identifying potential gaps and challenges. Policy recommendations will be designed in support of gender equality by enhancing women's access to training, leadership opportunities, and safe working environments.		

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 Inventory of Banks of Used or Unwanted Controlled Substances and National Plan
Country:	Saint Kitts and Nevis
Lead implementing agency:	UNEP
Meeting where request is being submitted	ExCom-96
Implementation period	July 2025 – June 2027
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 months
Funding requested:	
Agency	Funding requested (US \$)*
UNEP	70,000 plus PSC

*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: NA		

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 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
Saint Kitts and Nevis has been successful in the implementation of the Montreal Protocol and the phase out of consumption of HCFCs since becoming Party to the Montreal Protocol in 1994. It has regulated this through “Substances that Deplete the Ozone Layer (Control) Regulations S. 63- SRO 6/2004” (The ODS regulations), a subsidiary legislation under the umbrella of the National Conservation and Environment Protection Act. Though Saint Kitts and Nevis has not yet ratified the Kigali Amendment, which has added the global warming hydrofluorocarbons (HFCs) to the list of controlled substances under control, the Country has been collecting and reporting HFC data as part of its Country Programme (CP) and Article 7 (A7) Data. As a result of the consumption of these controlled substances, large banks of used or unwanted controlled substances have accumulated globally and in Saint Kitts and Nevis. Emissions from these banks are continuously being released to the atmosphere. These emissions are damaging the ozone layer and contributing to global warming. Banks of controlled substances are not regulated under the Montreal Protocol nor by Saint Kitts and Nevis’ national regulations. Collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries and Saint Kitts and Nevis.

The project seeks to establish an inventory of banks of used or unwanted controlled substances in Saint Kitts and Nevis and a plan for the collection, transportation and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction. It will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies and stakeholder consultation. The final report and action plan will propose actions, new legislation and policies to enhance the collection and disposal of unwanted ODS/HFCs. The methodology or approach can be inspired by the recommended by the Climate and Ozone Protection Alliance (COPA).

The inventory of used and unwanted controlled substances and action plan will cover ODS like HCFCs and global warming HFCs and thus contribute to the objectives of the HPMP and future KIP to reduce emissions through good practices, containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. This includes seized chemicals stored at customs warehouse, waste and containment chemicals, blends and residues from recycling and reclaim processes.

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	Determine the data collection methodology and approach along with the NOU and stakeholders. Undertake a Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. Identify laboratories able to analyse the composition of used or unwanted ODS and HFCs, and the need for upgrading such laboratories. Identify data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. Conduct further data collection, on-site visits and surveys as needed.	UNEP
Stakeholder Analysis	Conduct a stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste collectors and traders	UNEP
Analysis of data collected	Analyse the data collected, including but not limited to: the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management; existing policy and regulatory frameworks, including waste management policies; forecast the amounts of used or unwanted ODS/HFCs which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant; assess the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated; analyse the potential environmental benefits for the ozone layer and the climate; analyse the potential for substance recycling and reclamation for re-use; analyse existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	UNEP
Preparation of inventory report/national plan	Preparation of the Inventory report or National Plan: develop a database or inventory of banks of used or unwanted controlled substances; prepare initial action plan for collection, transport, storage and setting up the required disposal infrastructure; Develop a business or financing model to ensure long-term sustainability of collection or disposal operations; Conduct stakeholder consultations to present the draft	UNEP

	National Plan to obtain stakeholder input and validation; Draft recommended regulations and policies supporting the collection and disposal of used or unwanted ODS and HFCs and sustainable financing; Finalization and endorsement of the National Plan considering stakeholder contributions.	
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data Collection	\$23,000	UNEP
Activity 2: Stakeholder Analysis	\$15,000	UNEP
Activity 3: Analysis of data collected	\$12,000	UNEP
Activity 4: Preparation of inventory report/National plan	\$20,000	UNEP
TOTAL	70,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom Decision 92/40 and Document 92/51 the MLF's Gender Mainstreaming Policy and Performance Indicators will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances and National Plan. In the project's implementation, females will be encouraged to apply for available positions and the NOU will use female imagery in promotional material related to the project. Female imagery will be used as much as possible, in documentation produced during the preparation phase.		

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 Inventory of Banks of Used of Unwanted Controlled Substances and National Plan
Country:	Suriname
Lead implementing agency:	UNEP
Meeting where request is being submitted	ExCom-96
Implementation period	July 2025 – June 2027
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 months
Funding requested:	
Agency	Funding requested (US \$)*
UNEP	80,000

*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:		

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
Suriname has been successful in the implementation of the Montreal Protocol and the phase out of consumption of HCFCs since becoming Party to the Montreal Protocol in 1997. It has regulated this through the Merchandise Trade Act.58 and State Decree “Negative List no. 18 of 2003, amended by the Council of Ministers in February 2006. Though Suriname has not yet ratified the Kigali Amendment, which has added the global warming hydrofluorocarbons (HFCs) to the list of controlled substances under control, the Country has been collecting and reporting HFC data as part of its Country Programme (CP) and Article 7 (A7) Data. As a result of the consumption of these controlled substances, large banks of used or unwanted controlled substances have accumulated globally and in Suriname. Emissions from these banks are continuously being released to the atmosphere. These emissions are damaging the ozone layer and contributing to global warming. Banks of controlled substances are not regulated under the Montreal Protocol nor by Suriname’s national regulations. Collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries and Suriname. The project seeks to establish an inventory of banks of used or unwanted controlled substances in Suriname and a

plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction. It will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies and stakeholder consultation. The final report and action plan will propose actions, new legislation and policies to enhance the collection and disposal of unwanted ODS/HFCs. The methodology or approach can be inspired by the recommended by the Climate and Ozone Protection Alliance (COPA).

The inventory of used and unwanted controlled substances and action plan will cover ODS like HCFC and global warming HFCs and thus contribute to the objectives of the HPMP and future KIP to reduce emissions through good practices, containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. This includes seized chemicals stored at customs warehouse, waste and containment chemicals, blends and residues from recycling and reclaim processes.

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	Determine the data collection methodology and approach along with the NOU and stakeholders. Undertake a Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and existing regulations and policies. Identify laboratories able to analyse the composition of used or unwanted ODS and HFCs, and the need for upgrading such laboratories. Identify data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. Conduct further data collection, on-site visits and surveys as needed.	UNEP
Stakeholder Analysis	Conduct a stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste collectors and traders	UNEP
Analysis of data collected	Analyse the data collected, including but not limited to: the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management; existing policy and regulatory frameworks, including waste management policies; forecast the amounts of used or unwanted ODS/HFCs which might require RRR or disposal in future, to evaluate the economic viability of a reclamation respectively destruction plant; assess the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated; analyse the potential environmental benefits for the ozone layer and the climate; analyse the potential for substance recycling and reclamation for re-use; analyse existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	UNEP
Preparation of inventory report/national plan	Preparation of the Inventory report or National Plan: develop a database or inventory of banks of used or unwanted controlled substances; prepare initial action plan for collection, transport, storage and setting up the required disposal infrastructure; Develop a business or financing model to ensure long-term sustainability of collection or disposal operations; Conduct stakeholder consultations to present the draft National Plan to obtain stakeholder input and	UNEP

	validation; Draft recommended regulations and policies supporting the collection and disposal of used or unwanted ODS and HFCs and sustainable financing; Finalization and endorsement of the National Plan considering stakeholder contributions.	
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data Collection	\$25,000	UNEP
Activity 2: Stakeholder Analysis	\$15,000	UNEP
Activity 3: Analysis of data collected	\$20,000	UNEP
Activity 4: Preparation of inventory report/National plan	\$20,000	UNEP
TOTAL	80,000	
4. How will the Multilateral Fund gender policy be considered during project preparation?		
In line with ExCom Decision 92/40 and Document 92/51 the MLF's Gender Mainstreaming Policy and Performance Indicators will be incorporated into the preparation of the inventory of banks of used or unwanted controlled substances and National Plan. In the project's implementation, females will be encouraged to apply for available positions and the NOU will use female imagery in promotional material related to the project. Female imager will be used as much as possible, in documentation produced during the preparation phase.		

**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 inventory of banks of used or unwanted controlled substances	
Country:	The United Republic of Tanzania	
Lead implementing agency:	UNEP	
Cooperating agency (1):		
Meeting where request is being submitted	ExCom 96	
Implementation period	July 2025 – June 2027	
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 Months		
Funding requested:		
Agency	Funding requested (US \$)*	
UNEP	80,000 plus PSC	

*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: The project is being submitted in line with ExCom decision 93/26(b) which allows, on an exceptional basis, bilateral and implementing agencies to submit the project during 2024 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 United Republic of Tanzania is a party to the Montreal Protocol on Substances that deplete the ozone layer and has successfully been implementing the Protocol through the control of production and consumption of Ozone Depleting Substances. The Kigali Amendment aimed at phasing down the use of Hydrofluorocarbons (HFCs) due to their high global warming potential. The adoption of the Montreal Protocol and the Kigali Amendment which promote the use of climate friendly alternatives has resulted in the refrigeration and air conditioning sector transitioning to zero ozone depletion potential and low global warming potential technologies consistent with the provisions of the Kigali Amendment to the Montreal

Protocol. This has ultimately led to the accumulation of banks of used or unwanted controlled substances in Tanzania due to the lack of proper ODS/HFC recovery, recycling, reclamation, destruction facilities and therefore the controlled substances are continuously being released to the atmosphere from these banks. The emissions from the banks are detrimental to the ozone layer, contribute to global warming and are also taken away or undoing the efforts that have been done in ozone protection and climate change mitigation. Banks of controlled substances are not regulated under the Montreal Protocol. Furthermore, collection, recovery and disposal (recycling, reclaim, destruction) of used or unwanted controlled substances represent a challenge for developing countries.

Concept: The national inventory aims to establish a comprehensive database of used or unwanted controlled substances, including their sources, quantities, and current storage or disposal status. The project also aims to establish an inventory of banks of used or unwanted controlled substances in Tanzania, and a plan for the collection, transport, and disposal of such substances, including consideration of recycling, reclamation, and cost-effective destruction. The inventory helps identify gaps, challenges, and opportunities for better management of these substances to prevent diversion, misuse, and environmental harm. The inventory results are important in terms of determining priority areas for management of banks of controlled substances and setting up appropriate policy measures. They will assist in enabling the country in making an informed decision on the best cost effective way of handling the banks of used and unwanted controlled substances. Furthermore, the survey will quantify the mitigation potential in line with ExCom Decision 91/66, include the analysis of existing legislation and policies, and stakeholder consultations. The final report and action plan will propose actions, review or amending of legislation and policies to enhance the collection and disposal of used or unwanted ODS / HFCs

The methodology / approach might be informed by that recommended by the Climate and Ozone Protection Alliance (COPA). Stakeholder mapping and engagement: Identify and involve key stakeholders from government agencies, healthcare sector, law enforcement, and the pharmaceutical industry.

Data collection and analysis: Establish data collection mechanisms to gather information on the sources, quantities, storage, and disposal of used/unwanted controlled substances.

Inventory development: Compile the collected data into a centralized database, ensuring data integrity and security.

Gap analysis: Assess the current processes, infrastructure, and regulatory framework to identify areas for improvement.

Action plan formulation: Based on the inventory findings, develop a comprehensive action plan for safe disposal of waste controlled substances with specific goals, activities, responsibilities, and timelines

Align with national plans and strategies: Ensure the national inventory and action plan are integrated with broader national initiatives, such as the Kigali Implementation Plan (KIP) for the refrigeration servicing sector.

Focus on the refrigeration servicing sector: Examine the recovery, recycling, and reclamation programs for refrigerants, as they may involve the handling of controlled substances.

Promote cross-sectoral coordination: Foster collaboration between the agencies responsible for controlled substances management, waste management, environmental protection, and the refrigeration servicing

sector.

The inventory of banks of used and unwanted controlled substances and action plan will cover ozone-depleting substances like HCFCs and global warming HFCs and thus contribute to the objectives of the HPMP and the KIP to reduce emissions through good practices / containment, recovery, recycling and reclaim (RRR) and environmentally sound disposal. The UNIDO investment component of the HPMP II aims to establish refrigerant recovery, recycling and reclaim infrastructures in Tanzania. By conducting the national inventory of banks of used or unwanted controlled substances it will assist informing how the infrastructure should be placed according to the heat spots of the banks of the controlled substances. The inventory data sources will include seized chemicals stored at customs warehouses, waste and contaminated chemicals / blends, and residues from recycling and reclaim processes and end-of-life appliances.

In preparation for transportation, there is possibility of collaborating with Coordination Unit of Disposal of PCB oils contained in transformers and disposal of capacitors containing PCB Project under the Stockholm convention, to utilize the temporary storage site (under construction) to store and package the collected substances. This centralised storage mechanism will facilitate for efficient transportation.

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
Activity 1: Data collection and stakeholder analysis	• Agreeing with project team on data collection methodology and approach. • Desk study on available data on banks of used and unwanted controlled substances, relevant institutions and stakeholders, and review of existing regulations and policies. • Conducting stakeholder analysis with responsibilities and roles including new stakeholders e.g. e-waste dealers. • Identifying data gaps related to banks of used and unwanted controlled substances, relevant institutions and stakeholders, policies and regulations, including transport / export for disposal. • Conducting further data collection, on-site visits and surveys as needed.	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	• Analysing the role of Government bodies, NGOs, stakeholders, recovery and recycling centres and other institutions involved in waste management. • Analysing existing policy and regulatory frameworks, including waste management policies. • Forecasting the amounts of used or unwanted ODS/HFC which might require RRR or disposal in future, to evaluate the economic viability of a reclamation and destruction plant respectively.	UNEP

	- Assessing the feasibility and costs of existing disposal options (recycling, reclaim, destruction), based on expected amounts to be treated. - Analysing the potential environmental benefits for the ozone layer and the climate. - Analysing the potential for substance recycling and reclamation for re-use. - Analysing existing disposal options for ODS/HFCs including export and local reclamation and/or destruction.	
Activity 3: Inventory of banks and preparation of action plan	- Setting up database / inventory of banks of used or unwanted controlled substances, with distinction of amounts for recycling, reclamation, and destruction. - Preparing initial action plan for collection, transport, storage and setting up the required disposal infrastructure. - Elaborating a business / financing model to ensure long-term sustainability of collection / disposal operations. - Conducting stakeholder consultations presenting the draft inventory and action plan to obtain stakeholder input, support, and validation. - Drafting a set of recommended regulations and policies supporting the collection / disposal of used or unwanted ODS / HFCs, and sustainable financing. - Finalization of the action plan considering stakeholder comments.	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	- Managing and monitoring project activities. - Establishing national expert team. - Reporting and evaluating project progress. - Preparing initial and final report considering stakeholder comments. - Project progress properly monitored and evaluated, including gender mainstreaming dimension	UNEP
3. Funding for the activities described in 2 above		
Activity	Indicative funding (US \$)	Agency
Activity 1: Data collection and stakeholder analysis	35,000	UNEP
Activity 2: Analysis of institutional, policy and regulatory frameworks	15,000	UNEP
Activity 3: Inventory of banks and preparation of action plan	15,000	UNEP
Activity 4: Project management, monitoring, progress reporting, final report, and evaluation	15,000	UNEP
TOTAL	80,000	

4. How will the Multilateral Fund gender policy be considered during project preparation?
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The Multilateral Fund (MLF) Gender Policy will be integrated into the preparation of the project to ensure gender equality and inclusive participation. Stakeholder engagement activities will promote the involvement of both men and women, ensuring equal opportunities in consultations, training programs, and decision-making processes. Capacity-building activity will incorporate a gender-sensitive approach, encouraging women's participation in technical and leadership roles related to ODS management. Additionally, gender-disaggregated data will be collected to analyze the roles of men and women in handling and disposing of ODS, identifying potential gaps and challenges. Policy recommendations will be designed in support of gender equality by enhancing women's access to training, leadership opportunities, and safe working environments.
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PROJECT PROPOSAL

1. DETAIL OF PROJECT PROPOSAL

- 1.1 **Project title:** Additional Emergency Assistance for Institutional Strengthening
- 1.2 **Country:** Maldives
- 1.3 **National implementing agency/project management unit:** Ministry of Tourism and Environment
- 1.4 **Lead Implementing Agency:** UNEP

2. BACKGROUND AND INTRODUCTION

The Republic of Maldives is an original signatory to the Montreal Protocol since 1988 and has ratified all Amendments including the Kigali Amendment. As an Article 5 country, Maldives successfully completed its HCFC Phaseout Management Plan (HPMP). Maldives was the first Article 5 Party to phase-out the consumption of HCFCs, 10 years ahead of the schedule.

On 12th December 2024, Maldives faced an unforeseen setback when a devastating fire incident occurred. The fire engulfed three key government ministries, including the Ministry of Tourism and Environment. Tragically, the National Ozone Unit (NOU), which operates under this ministry, lost all its computers, equipment, fixtures, critical documentation, and other materials in the blaze. The incident dealt a significant blow to the NOU's operational capacity, disrupting its ability to perform its functions effectively.

Planning for the construction of a new office building is ongoing. Currently, the National Ozone Unit, along with the other affected government offices, is operating from a temporary facility in the capital city. While the government has assured that a permanent office space will be allocated to the NOU, the immediate need for support remains essential.

Maldives remains steadfast in its commitment to fulfilling its obligations under the Montreal Protocol. To continue playing a leadership role in ozone layer protection and climate action, it is essential to rebuild the operational foundation of the National Ozone Unit.

3. OBJECTIVES AND OUTPUTS

Objective: To assist the National Ozone Unit in fully restoring its normal operational capacity. This request for emergency assistance is designed to support the National Ozone Unit (NOU) in fully restoring its operational capacity following the devastating fire incident in December 2024. The fire resulted in the total loss of computers, equipment, fixtures, critical electronic and paper documentation essential to the NOU's daily functions.

Currently, NOU is operating from a temporary office space provided by the government with limited IT and communication tools, this solution is not sufficient to restore the unit to its full capacity. To ensure the NOU's short and long-term effectiveness, additional support is required to restore its IT infrastructure and for its final relocation to a permanent office space.

In order to effectively recover and strengthen its resilience to future disasters, NOU requires comprehensive assistance to replace lost assets and implement measures to safeguard its operations going forward.

Key Project Outputs

1. Procurement of equipment and materials for the day-to-day functioning of the NOU:
 - The fire destroyed all equipment and materials needed for the smooth operation of the NOU. This emergency assistance will partially fund the replacement of essential equipment, such as IT equipment, basic office furniture and consumables.
 - The Government of Maldives will cofinance the rehabilitation of the NOU by financing the building of a new office in a new location. The building will host the Ministry of Tourism and Environment, and the NOU within it, the development planning is ongoing and construction is expected to begin by Q3 2025.

- Further contribution has been discussed in the context of south-south cooperation as the Government of China through its Foreign Environmental Cooperation Center of the Ministry of Ecology and Environment (FECO/MEE) has expressed the willingness to support the Maldivian Ministry of Tourism and Environment by providing technical support in the planning of the Air Conditioning system (chiller, VRFs or else that will be selected following the advancement of the building planning) and insulation systems, and by providing materials for the purpose of installation in the new building once the construction work will start. UNEP will facilitate and coordinate further discussions on the possible cooperation between the two countries.

4. PROJECT ACTIVITIES AND TARGETS

- **Activities:** Purchase of IT equipment, basic office furniture and consumables.
 - Purchasing urgent items required for the temporary space (4 desktop computers, 2 laptops, 4 computer screens, 1 office projector, 2 printers, consumable and stationery), and purchasing the required office equipment and furniture for the permanent space once this is completed.

BUDGET TABLE

Activity	Activities	Outputs	Unit cost (US \$)	Total requested from MLF (US\$)	Government Contribution (US \$)
Activity Area 1: Support for National Ozone Unit	1.1: Purchase of basic IT equipment for short term return to acceptable level of operation	4 desktop computers	\$1,500	\$6,000	
		2 laptops + deck	\$2,000	\$4,000	
		4 computer screens	\$500	\$2,000	
		1 office projector	\$1,500	\$1,500	
		2 office printers	\$1,500	\$3,000	
		Stationery and consumable		\$3,500	
		Sub-total		\$20,000	
	1.2: Purchase of furniture for permanent NOU relocation once building construction is completed	Desks, chairs, lighting, etc.		\$10,000	\$20,000
Grand Total				\$30,000	\$20,000

ACTIVITY TIMELINE

The activities are expected to be completed by June 2027

Activity	Sub-Activity Description	2025	2026				2027	
		Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity Area 1: Support for National Ozone Unit	1.1: Purchase of basic IT equipment for short term return to acceptable level of operation							
	1.2: Purchase of furniture for permanent NOU relocation once building construction is completed							

ANNEX – photos





**TWINNING OF
OZONE OFFICERS AND NATIONAL ENERGY EFFICIENCY
POLICYMAKERS TO SUPPORT KIGALI AMENDMENT
OBJECTIVES (PHASE I)**

FINAL REPORT

Submitted by
United Nations Environment Programme
to the 96th meeting of the Executive Committee
of the Multilateral Fund

28 March 2025

CONTENTS

Executive summary	1
1. Introduction	5
2. Implementation methodology.....	6
3. Twinning workshops insights and analysis	9
Anglophone Africa	9
Caribbean	11
Europe and Central Asia and West Asia	14
Francophone Africa.....	17
Latin America and Central America	21
Pacific Island Countries.....	24
South Asia	28
Southeast Asia	32
4. Shared lessons learned, achievements and recommendations.....	36
5. Data analysis and visual insights.....	39
5. Future Directions - Phase II.....	43
6. Annex	44

EXECUTIVE SUMMARY

Through Decision 91/42, the Executive Committee of the Multilateral Fund approved the project "Twinning of ozone officers and national energy-efficiency policymakers to support Kigali Amendment objectives (Phase I: 2023–2024)" (GLO/SEV/91/TAS/365) for UNEP implementation. The decision also indicated that on the basis of the results of the project, UNEP could consider the development of a second phase that would take into account the outcomes of the workshops conducted in the first phase of the project and include an action plan to address any regional needs identified through the implementation of that first phase. Decision 93/91 requested UNEP to submit a final report detailing lessons learned from the implementation of the first phase when submitting the second phase of the project. This report summarizes the results and lessons learned during Phase I.

This technical assistance project made significant progress in strengthening the capacity of the participants to support the Kigali Amendment objectives and improve energy efficiency and thereby address climate change. Between 2023 and 2024, UNEP's regional Compliance Assistance Programme (CAP) teams organized eight two-day workshops that brought together the concerned stakeholder groups from Article 5 countries (developing countries) from the following regions: Anglophone Africa, Francophone Africa, Caribbean, Latin America, Europe & Central Asia, South Asia, Southeast Asia, Pacific Island Countries, and West Asia. These workshops, which were held back-to-back with UNEP's Regional Network meetings for cost-efficiency reasons, collectively enabled 422 participants to discuss and share strategies to maximize the positive climate impact of transitioning to new refrigerants and improve energy efficiency in the refrigeration and air conditioning (RAC) sector.¹

The Twinning workshops highlighted the importance of collaborative efforts to advance energy efficiency and ozone protection initiatives in and between the different Article 5 countries. Stakeholders identified crucial strategies to overcome challenges in transitioning to sustainable RAC practices, including advocating for integrated environmental policies, implementing energy efficiency standards, recommending energy-efficient procurement guidelines, and strengthening cooperation among relevant authorities.

This report covers the Twinning workshops' key insights, recommendations, and outcomes, emphasizing the promotion of energy efficiency and ozone protection, with a focus on RAC systems.

This project achieved key outcomes and provided valuable lessons across several key areas, as demonstrated by the experiences and successes of different regional networks:

- ***The workshops successfully fostered stronger collaboration among National Ozone Officers (NOOs), National Energy Efficiency Policymakers (NEEPs), and Financial Mechanism Focal Points (FMFPs).*** Participants emphasized the importance of interagency collaboration and stakeholder engagement in advancing clean cooling objectives, creating a platform for ongoing dialogue and cooperation across sectors. For example, Nigeria and Niger demonstrated effective models of institutional integration through inter-institutional technical committees for cooling, which streamlined policy development and reduced redundancies. Similarly, the Caribbean

¹ The workshop reports are available on the OzonAction Meeting Portal at <https://www.ozonactionmeetings.org>. See Annex.

Network highlighted the need for stronger coordination between NOOs and NEEPs to align national and regional policies, showcasing how collaboration can drive progress in sustainable cooling.

Lesson Learned: Strengthening partnerships across ministries and sectors is essential for advancing clean cooling objectives and ensuring cohesive policy implementation.

- ***The project facilitated the alignment of national energy efficiency policies with the goals of the Kigali Amendment.*** Participants explored the strategic advantages of integrating Minimum Energy Performance Standards (MEPS), energy labeling, and National Cooling Action Plans (NCAPs) into broader climate strategies, ensuring a cohesive approach to sustainable cooling. For instance, the Pacific Islands Network recommended harmonizing standards across South Pacific and Northern Pacific countries to facilitate smoother trade and improve compliance. Barbados showcased its successful implementation of MEPS, aligning energy efficiency with Kigali Amendment goals, while Mexico highlighted its NOM-ENER standards as a strong regulatory framework supporting energy efficiency and emissions reductions.

Lesson Learned: Harmonizing MEPS and energy labeling across regions can create consistent market frameworks, encouraging the adoption of energy-efficient products and reducing trade barriers.

- ***The workshops highlighted technological advancements in the RAC sector and provided concrete technical guidance on optimizing RAC systems for both ozone and energy benefits.*** For example, Southeast Asia showcased advanced approaches where Singapore's mandatory technician training programs for water-cooled chillers and Thailand's studies on high-efficiency mobile air conditioning systems exemplify how targeted initiatives can promote sustainable practices. In Latin America, participants explored how "transitioning to high-efficiency cooling systems could double the climate mitigation benefits of the HFC phase-down. The Africa Francophone workshop highlighted innovative solutions from Cameroon and Sierra Leone, including solar refrigeration and natural building materials.

Lesson Learned: Investing in advanced technologies and providing technical guidance can significantly enhance energy efficiency and climate mitigation efforts.

- ***The project emphasized the importance of capacity building, providing participants with available resources to strengthen national energy efficiency capacities.*** The success stories presented inspired confidence and provided actionable insights for advancing clean cooling objectives. For instance, Brazil's Procel program was highlighted for its large-scale technician certification initiatives, and Tonga's collaborative workshops for RAC technicians were cited as a replicable model for hands-on training. These initiatives equipped stakeholders with the skills needed to implement and maintain energy-efficient systems.

Lesson Learned: The shortage of skilled technicians and trained personnel in the RAC sector highlights the need for expanded training programs and capacity-building initiatives to ensure the effective deployment and maintenance of energy-efficient systems.

- ***The workshops facilitated cross-regional collaboration, enabling participants to share best practices, harmonize standards, and coordinate initiatives.*** This regional synergy amplified efforts to achieve sustainable cooling solutions and meet international climate commitments, fostering a unified approach to energy efficiency and refrigerant transition. For example, the Europe & Central Asia/West Asia Network joint workshop in Amman, Jordan, emphasized the integration of energy efficiency into national cooling policies, while the Southeast Asia Network workshop in Guangzhou, China, highlighted the importance of harmonizing standards across ASEAN countries.

Lesson Learned: Cross-regional collaboration amplifies efforts to achieve sustainable cooling solutions and fosters a unified approach to energy efficiency and refrigerant transition.

- ***The project emphasized the importance of raising public awareness about the benefits of energy-efficient technologies.*** Participants recognized the need for targeted consumer education campaigns to drive demand for sustainable cooling solutions and ensure widespread adoption of energy-efficient practices. For example, Samoa's outreach campaigns targeting consumers and retailers were highlighted as successful models for improving compliance and market transformation, while Thailand's star rating program for air conditioners demonstrated how consumer awareness can drive demand for efficient products.

Lesson Learned: Public awareness campaigns are essential to drive consumer demand for sustainable cooling solutions and ensure widespread adoption of energy-efficient practices.

- ***The workshops introduced participants to a range of international financing opportunities, including the Multilateral Fund and the Green Climate Fund.*** Innovative financial models, such as public-private partnerships and incentive schemes, were identified as key strategies for scaling adoption and ensuring the affordability of energy-efficient technologies. For instance, Colombia's tax incentives for energy-efficient appliances and the Caribbean Network's exploration of "Cooling-as-a-Service" models showcased how innovative financing can reduce barriers to adoption.

Lesson Learned: Innovative financing mechanisms and access to international funding sources are essential to overcome cost barriers and scale energy efficiency projects.

- ***The project highlighted the importance of robust monitoring and compliance systems to ensure the effective enforcement of policy frameworks.*** Participants recognized the need for data-driven approaches to track progress, identify gaps, and refine strategies for achieving sustainable cooling goals. For example, Fiji's integration of international energy efficiency standards into national policies demonstrated measurable reductions in electricity consumption and greenhouse gas emissions, while Singapore's regular inspections of physical and online marketplaces ensured compliance with MEPS and labeling requirements.

Lesson Learned: Robust monitoring and compliance systems are critical to ensure the effective enforcement of policy frameworks and achieve sustainable cooling goals.

These key outcomes and lessons learned demonstrate the Twinning Project's success in fostering collaboration, enhancing policy integration, and building capacity to support the transition to energy-efficient, low-Global Warming Potential (GWP) refrigerants in alignment with the Kigali Amendment

Report structure

This final report provides a comprehensive overview of the project. It is structured to first introduce the framework and objectives of the Twinning Project, followed by a detailed explanation of the implementation methodology used across all networks. The core of the report presents overall network-specific insights and analyses from each of the eight regional workshops, highlighting their unique contexts, challenges, and achievements. These regional analyses are followed by common and shared findings, challenges, and recommendations that emerged across all networks.

The report then provides data analysis with visual insights on participation demographics, workshop evaluations, and gender analysis. Finally, the report concludes with the appendices providing network-specific completion reports, as supporting documents, for the eight workshops organized.

Acknowledgments

Gratitude is extended to all contributors to the success of the Twinning project:

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- The host countries for their hospitality and logistical support in regional workshops.
- Multilateral Fund Secretariat for its strategic vision and contributions to the meetings.
- United for Efficiency (U4E) for their technical expertise and capacity-building resources.
- The other Implementing Agencies, bilateral agencies, and regional energy efficiency organizations for their presentations and insights during the Twinning workshops.
- Technical experts and presenters for their contributions to knowledge sharing.

1. INTRODUCTION

Overview

The Executive Committee of the Montreal Protocol's Multilateral Fund approved the global technical assistance project entitled "Twinning of Ozone Officers and National Energy Efficiency Policymakers to Support Kigali Amendment Objectives" (subsequently referred to as "Twinning Project") – the first phase of which was to be implemented in 2023–2024. The main goal of this project is to enhance the climate benefits of transitioning to new refrigerants by simultaneously improving the energy efficiency of the cooling sector through better coordination of policies and programmes at national and regional levels. NOOs manage the implementation of the Montreal Protocol at the country level. The project aims to assist NOOs to further (i) align their national Montreal Protocol compliance programs with the 2019 Kigali Amendment and (ii) include energy efficiency considerations in the refrigeration and air conditioning sector.

This initiative is part of the approved work plan for the 2023 Compliance Assistance Programme (CAP) and supports UNEP's 2021–2023 CAP Strategy. It also indirectly supports implementation of national projects, notably HCFC Phase out Management Plans (HPMPs) and Kigali HFC Implementation Plans (KIPs). Under the CAP, the Regional Networks of National Ozone Officers promotes the exchange of information, experience, and know-how between Article 5 countries. This Twinning Project was linked to the Regional Networks and involved engaging one NEEP and optionally one FMFP per country to collaborate or "twin" with the NOOs. This participation seeks to encourage energy efficiency in the Montreal Protocol implementation.

Twinning workshops

UNEP organized eight Twinning Workshops during 2023 and 2024, for NOOs, NEEPs, and FMFPs from the Regional Network countries. These workshops were arranged to run back-to-back with Regional Network meetings held for NOOs, thereby reducing the additional time commitment and travel costs for the NOOs. Participation was voluntary, offering a platform for officials and partners to interact and learn from each other.

The workshop forums created an opportunity for the NOOs and their NEEP and FMFP counterparts to interact, exchange experiences, share knowledge, coordinate policies, and identify potential joint activities to advance the ozone-energy efficiency-climate agenda. It also enabled networks to be established among people in similar roles in other countries and with regional and international partners.

It further established a framework for future engagement by UNEP and/or other organizations in specific countries and regions, informed by the identified needs.

Twinning project objectives and sustainability

Interaction between these key stakeholders sought to encourage cooperation at the national level between these stakeholder groups and enable individual governments to integrate energy efficiency more rapidly into their ongoing Montreal Protocol, energy policy, and climate policy processes. To achieve this, twinning activities aimed to:

- Share success stories and experiences from various countries and agencies.
- Enhance communication and coordination among stakeholders and ongoing projects.
- Facilitate better coordination between NOOs and other government stakeholders.
- Enhanced understanding among NOOs and NEEPs of available funding mechanisms and increased knowledge of innovative financing approaches
- Support the development of national policies and planning for energy efficiency in the cooling sector.

2. IMPLEMENTATION METHODOLOGY

Project initial preparation

To ensure effective implementation of the Twinning Project, a structured approach was adopted across all regional CAP teams and supported by the Global CAP team, encompassing the following key elements.

At the project's inception, a comprehensive implementation plan was developed and agreed upon, outlining roles and responsibilities for achieving the project's results and outputs. The Global CAP team provided overarching strategic direction and comprehensive guidance materials during the Twinning Project's inception phase. To build implementation capacity, the Global CAP Team conducted orientation sessions with regional teams, providing detailed briefings on project objectives, training on using the "Twinning Project Resources Toolbox", and guidance on engaging appropriate regional consultants. Additionally, they engaged key international stakeholders securing high-level support and technical resources that enhanced the project's credibility and effectiveness across all participating regions. Simultaneously, the Regional CAP teams took the lead in organizing and executing workshops precisely tailored to their specific regional contexts, strategically engaging local and regional stakeholders, and identifying region-specific priorities and challenges.

Following consultations with regional teams, a strategic adjustment was made regarding technical expertise deployment. Rather than hiring a single global consultant, the project engaged specialized regional consultants with extensive energy efficiency experience to support each CAP team in their respective regions. This approach offered multiple significant advantages at no additional costs:

- It strengthened and leveraged existing local capacity, engaging experts already familiar with regional institutions, policy frameworks, and stakeholder networks. Regional consultants brought a contextual understanding of specific challenges, whether addressing high energy costs and fossil fuel dependence in Caribbean nations, developing approaches to harmonize standards across geographically dispersed Pacific Islands, or navigating complex institutional frameworks in African regions where responsibilities were often fragmented across multiple ministries.
- Regional consultants facilitated more effective communication by understanding local languages, cultural contexts, and regional priorities. This was particularly valuable in regions like Francophone Africa, where participants specifically highlighted the need for French-language resources and region-specific materials.
- The approach supported long-term capacity building within regions, creating a network of trained experts who could continue supporting energy efficiency initiatives beyond the project timeline. This built sustainable regional expertise rather than temporary external support that would end with the project.

- Regional consultants offered greater cost-efficiency due to lower travel requirements and existing knowledge of regional structures, eliminating lengthy onboarding processes a global consultant would have required to understand diverse regional contexts.

This plan and approach served as the foundation for all subsequent activities.

Resource allocation and the Twinning project resources toolbox

Based on the agreed implementation plan, project resources were identified and allocated to ensure sufficient support for each activity. A key output of this process was the development by the Global CAP team of a collection of different project resources. It was designed to support the Regional CAP teams in effectively managing every phase of the project—before, during, and after each workshop. This Toolbox offered a tailored framework for each region, including:

- Step-by-step instructions for structuring agendas, templates for participant registration and feedback, and other practical tools to facilitate smooth workshop operations.
- Training resources on key themes such as energy efficiency, low-GWP refrigerants, and policy integration, aligned with the goals of the Kigali Amendment and the Montreal Protocol.
- Detailed checklists to assist teams in managing the logistics of organizing workshops, as well as templates for tracking progress and measuring success.

The project was built upon defined goals and objectives, and carefully structured to ensure efficient delivery, this framework was shared with regional teams, whose feedback was crucial in shaping the final project implementation plan. By providing these tailored and practical resources, UNEP ensured that workshop teams were well-equipped to address regional challenges and opportunities.

Preparation and organization of the Twinning workshops

Twining workshops were organized by the respective regional CAP teams and conducted for each of the ten regional networks. Preparation for this workshop included the following activities:

- Identification of workshop participants: Criteria were established for nominating NEEPs and FMFPs. These criteria helped countries select and nominate participants for the workshop. Each country was requested to nominate a NEEP (mandatory) and a FMFP (optional). For the NEEP, the criteria include position, expertise, and knowledge, focusing on their familiarity with national energy policies and programs. Similarly, for the FMFP, the criteria include position, expertise, and knowledge related to financing strategies and policies. Both nominees should demonstrate engagement and commitment to actively participate in the workshop and contribute to discussions and activities both prior to and after the workshop.
- Development of the needs assessment survey: As part of the Twinning project toolbox, a comprehensive needs assessment questionnaire was developed and shared with participants to identify key topics, information needs, and knowledge gaps related to energy efficiency and low-GWP refrigerants. These inputs were intended to shape the workshop agenda and priorities.
- Logistics of travel and accommodation: Extensive logistical arrangements were required to secure attendance of more than 422 participants in different Twinning workshops. These were managed by the UNEP OzonAction CAP staff with local logistical support provided by the host country.

Twinning workshops organization phases

The organization of each Twinning workshop consisted of three phases: Pre-workshop, Workshop, and Post-workshop. An overview of the tasks and activities for each phase is described below.

Pre-twinning workshop phase

This was the planning and final preparation phase for the workshop not including the workshop logistics. Final planning and preparation commenced with the appointment of a workshop facilitator / energy expert to assist with the agenda structure, workshop planning, and facilitation of discussions. The “Twinning Workshop Toolkit” provided the backbone for the final planning of the workshop and made it possible to provide a meaningful twinning experience to participants. Activities included:

- Distribution of the needs assessment survey to NOOs, NEEPs, and FMFPs to gather their input and identify priority topics for inclusion in the workshop.
- Workplan and checklist. The checklist that was available in the toolbox provided a useful guide for the final preparation activities. The work plan focused on the critical activities necessary to offer an engaging workshop to participants from diverse backgrounds and countries at various stages of implementation.
- The Twinning workshops agendas were normally drafted drawing heavily on the needs assessment survey specifically to gather their input and identify priority topics for inclusion in the workshop. The results of this survey directly informed the workshop agenda development, and so this needs-based approach to agenda development ensured that the workshops were responsive to participant priorities and tailored to address the specific challenges faced by stakeholders in different regions. Afterward, the agendas were finalized with confirmation of all the speakers and time allocations and grouping of activities shaped by the needs assessment.
- Technical experts from partner international and regional organizations were identified and engaged as speakers/trainers. Their willingness to contribute to the workshop was remarkable and testimony to the goodwill for this initiative and their passion for the subject matter.
- Case studies were identified from the network countries and participants were invited to prepare and present these to the forum. Case studies were required to highlight any collaboration between NOOs and NEEPs.
- Workgroup materials were prepared to facilitate active engagement.
- An initial list of existing tools and capacity-building/information materials was identified to supplement the material already available in the toolkit. The intention was that these materials would facilitate effective knowledge sharing and capacity building during the workshop, as required.

During the workshop

The workshop's structure was designed to create a dynamic and engaging learning environment and knowledge-sharing platform. The agenda included a variety of sessions incorporating input provided by external experts, experiences shared by participants from within the group, interactive workgroup sessions, and networking opportunities. Both workshop days offered diverse activities that included:

- The **workshop opening and closing** were delivered by the Government of the host country, with participation by high-level dignitaries and UNEP representatives emphasizing the importance of the network's twinning activities.
- **Breakout working group exercises** were designed to help build relationships within the region and between the different roles. Participants had the opportunity to collaborate with people in similar roles in other countries and across different roles to complete workgroup assignments. Both workshop days had a workgroup activity on the agenda. Workgroup sessions concluded in plenary with interactive discussions.
- **Case studies** were presented by countries from within the networks that had made significant progress with policy frameworks and instruments, programmes, and financing schemes. It provided an opportunity for participants to learn from their peers. Presenters and participants had the opportunity to share success stories and challenges in their respective countries, ask questions, and discuss different solutions. Feedback suggested that these were a highlight of the workshop and led to valuable discussions and engagement in the group. Feedback also suggested that more opportunities for discussion would have been welcomed. Participants were encouraged to follow up on these discussions during breaks.
- **Knowledge-sharing and capacity-building** sessions were led by experts from different regional and international organizations. Expert inputs provided information regarding technical and financial resources, technology developments, and capacity-building opportunities that are available to countries and specifically to the countries in this network. Participants had the opportunity to ask questions and engage with speakers.

On day 2, an evaluation form was distributed, inviting participants to provide feedback on their workshop experience and indicate additional areas for development, capacity building, and future engagements.

3. TWINNING WORKSHOPS INSIGHTS AND ANALYSIS

ANGLOPHONE AFRICA

Africa Anglophone Network Twinning Workshop, 13-14 June 2024, Maputo, Mozambique

Context - Anglophone Africa

In many countries across Africa's Anglophone region, unreliable electricity grids and limited access to markets in rural areas pose significant challenges for the adoption of modern cooling solutions. The increasing demand for cooling, driven by rising temperatures and rapid urbanization, is placing additional strain on energy systems and contributing to a rise in greenhouse gas emissions. Although some nations have introduced policies such as Minimum Energy Performance Standards (MEPS) to address these issues, the enforcement and harmonization of such policies remain inconsistent throughout the region. Compounding the problem is a shortage of trained technicians and a lack of expertise among policymakers, which further hinders the



effective adoption and regulation of energy-efficient cooling systems. In addition, consumers often lack awareness of the benefits associated with energy-efficient solutions, while the markets are inundated with low-cost, inefficient products that dominate the landscape. This combination of factors presents substantial challenges to building a sustainable and energy-efficient cooling infrastructure in the region.

Needs assessment and lessons learned - Anglophone Africa

- Participants highlighted the importance of understanding funding processes and accessing resources from the Multilateral Fund. Practical workshops or modules on structuring "bankable" project proposals and navigating co-financing expectations were identified as a priority.
- Strengthening standards and certification frameworks was emphasized, with existing resources like U4E guides providing comprehensive guidance on establishing product registration systems and compliance monitoring. Harmonizing these standards across the region was recognized as critical to improving enforcement and market regulation.
- Inconsistent enforcement of MEPS and energy labelling was noted as a recurring issue. Participants recommended sharing lessons from successful implementations to strengthen regional enforcement mechanisms.
- Targeted interventions for sectors like hospitality were proposed, including consolidated guidelines for energy-efficient cooling and data collection on public health impacts from noncompliant refrigerants.
- UNEP and UN-Habitat guides on sustainable building design were recognized as valuable resources for promoting energy efficiency, with recommendations for broader dissemination and adaptation to local contexts.
- Tailored support for countries struggling with Kigali Amendment implementation was deemed crucial. Proposed solutions included mentorship programs, networking opportunities, and customized journey maps guided by U4E frameworks. Pairing countries with twin or sister nations within the African network or internationally was suggested to facilitate knowledge sharing and accelerate compliance efforts.

Summary of key outcomes - Anglophone Africa

- The workshop fostered stronger national and regional collaboration, enabling knowledge sharing and network building. Roles and responsibilities among stakeholders in the Refrigeration and Air Conditioning (RAC) sector were clarified, and the importance of interagency collaboration and stakeholder engagement in advancing clean cooling objectives was emphasized.
- Networking opportunities created at the workshop facilitated connections among national, regional, and international stakeholders. Strengthened relationships established during the workshop provide a solid foundation for future collaboration and successful implementation of clean cooling policies and initiatives.
- Discussions reinforced the need for strong partnerships across ministries, particularly between energy and financial focal points, to ensure the effective implementation of clean cooling policies. Participants gained a clearer understanding of their roles, the importance of collaboration, and the benefits of knowledge sharing to advance Kigali Amendment commitments.
- Participants gained awareness of the increasing demand for cooling in warm climates and the potential for policy interventions, such as MEPS, to improve energy efficiency. RAC solutions that

produce less heat, use efficient refrigerants, and align with clean cooling objectives were discussed as achievable through strategic policy actions.

- Knowledge-sharing sessions highlighted available tools and resources, including model standards and regulations, and emphasized their potential for harmonization within regional blocs like SADC and EAC. Key elements of national cooling plans, baseline development, and integrated policy planning across ministries were explored, showcasing expected economic, environmental, and efficiency benefits.
- Participants learned about training and skills development programs available to build capacity for implementing energy-efficient cooling solutions, both in-person and online. They identified tools and resources that could be leveraged to enhance the capacity of NOOs and NEEPs.
- Presentations provided an overview of RAC technology advancements, showcasing efficiency gains achievable through policy interventions. Participants gained insights into how MEPS and other regulatory frameworks could drive efficiency improvements in the RAC sector.
- Awareness of financing options and potential funding sources was raised through discussions led by representatives from the Multilateral Fund. Participants explored innovative financing models, such as subsidies, private-sector finance, and business models like “Cooling-as-a-Service,” to improve the affordability and accessibility of energy-efficient cooling appliances.
- Participants benefitted from shared experiences, with case studies highlighting common challenges and successful strategies from other countries. These examples inspired confidence that implementation challenges could be overcome and provided actionable insights for advancing clean cooling objectives.

Recommendations and future directions - Anglophone Africa

- Structured training programs and information material on low-GWP refrigerants, energy-efficient technologies, and policy enforcement could be implemented through regional centres of excellence, such as the Africa Centre of Excellence for Sustainable Cooling and Cold-Chain.
- Collaboration among Anglophone countries should be strengthened through joint initiatives such as harmonized MEPS and energy labelling strategies, while promoting peer learning through shared case studies.
- Innovative financing mechanisms, including public-private partnerships and access to international climate funds, should be prioritized. Sustainable cooling projects should be integrated into national development plans to attract funding and private-sector investment.
- Public awareness campaigns should be launched to highlight the cost savings and environmental benefits of energy-efficient cooling solutions, driving consumer demand for compliant and sustainable technologies.
- Tailored mentorship and capacity-building efforts could be offered to countries facing specific implementation challenges, with a focus on addressing local needs and gaps.

CARIBBEAN

Caribbean Network Twinning Workshop, 27-28 June 2024, Panama City, Panama

Context - Caribbean: As a collection of island nations, the region relies heavily on imported fossil fuels for electricity generation, leading to some of the highest energy costs in the world. This dependence creates significant barriers to adopting energy-efficient technologies, and adding to this challenge is the region's acute vulnerability to climate change, with frequent extreme weather events necessitating resilient infrastructure and sustainable cooling solutions. Moreover, limited technical expertise and institutional capacity have hindered the implementation of advanced RAC systems and energy efficiency measures. Despite these obstacles, the region has demonstrated a solid commitment to climate resilience. Regional collaboration and a growing focus on innovative technologies position the Caribbean to emerge as a leader in sustainable cooling practices.



Needs assessment and lessons learned - Caribbean

- The workshop revealed critical gaps in technical expertise, policy development, and access to modern tools. Key recommendations included the creation of regional training programs on energy audits and psychrometric charts, the development of mobile apps for refrigerant tracking, and the dissemination of tailored guidelines for policymakers. Participants emphasized the importance of accessible resources to empower stakeholders and advance energy efficiency efforts across the region.
- Presentations from Trinidad and Tobago, Saint Lucia, and Barbados emphasized the progress made in adopting energy-efficient cooling technologies. Trinidad and Tobago showcased district cooling pilot projects that promise to reduce energy consumption by 30–40%. Barbados highlighted its successful implementation of MEPS, a policy framework that aligns energy efficiency with Kigali Amendment goals. Meanwhile, Grenada shared its green public procurement initiatives, illustrating how government policies can drive market demand for sustainable cooling technologies.
- The Caribbean's pioneering efforts in sustainable cooling and RAC systems innovations were observed during the workshop. Barbados' National Cooling Strategy emerged as a comprehensive policy framework aligning energy efficiency with Kigali's goals. Other innovative projects, such as photovoltaic-powered air conditioning units, showcased the potential of integrating renewable energy with advanced cooling technologies. Community-focused initiatives also played a pivotal role, raising awareness about energy efficiency benefits and fostering behavioural change.
- Collaborative discussions emphasized the need for stronger coordination between NOOs and NEEPs. Key barriers such as limited capacity, inadequate training, and financial constraints were addressed, leading to better aligning national and regional policies.
- Insights from the Organization of Eastern Caribbean States (OECS) and the Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE) emphasized the economic and environmental benefits of energy efficiency measures. The importance of incentive-based mechanisms and transparent regulatory frameworks was highlighted as essential for encouraging adoption and driving market transformation. Participants also explored global energy efficiency initiatives,

advocating for a regional approach that fosters cooperation and consistency across Caribbean nations.

- Existing regional policies and standards in the RAC sector were reviewed, with discussions focusing on overcoming barriers to national implementation. Enhancing national capacities and raising public awareness were identified as key priorities to ensure better alignment with regional energy efficiency goals. Participants shared successful projects that integrated energy efficiency and refrigeration technologies, showcasing innovative solutions that could be scaled or replicated across the region.

Summary of key outcomes - Caribbean

- Established cooperation between NOOs and NEEPs in the Caribbean region, and enhanced awareness of integrating energy efficiency into ozone protection efforts within the Montreal Protocol framework.
- Documented key barriers including limited institutional capacity, inadequate training, financial constraints, and regulatory gaps.
- Breakout sessions fostered a rich exchange of ideas, enabling participants to craft practical solutions tailored to the Caribbean's unique challenges. Expert-led discussions introduced participants to emerging trends such as "Cooling as a Service," which shifts financial burdens from consumers to service providers, and the integration of renewable energy into RAC technologies.
- Showcased successful projects integrating refrigeration and energy efficiency considerations from different countries in the region.
- Increased understanding of funding opportunities through the Multilateral Fund and other sources.
- Developed specific recommendations including terminology clarification between sectors, practical training on energy calculations, and increasing workshop frequency.
- Tools and resources provided by UNEP's United for Efficiency (U4E) initiative were introduced, offering practical support to implement sustainable refrigeration technologies. These resources, combined with enhanced collaboration and innovative financing, create a pathway for the Caribbean to lead in sustainable cooling practices.

Recommendations and future directions - Caribbean

- Participants emphasized the importance of a unified Caribbean Cooling Action Plan to harmonize policies, align standards, and pool resources. Expanding the Caribbean Appliance Database to include benchmarks for energy efficiency and refrigerant usage was also identified as a priority.
- The establishment of regional training hubs was proposed to provide specialized education for RAC technicians, policymakers, and business leaders. Modular training programs focused on low-GWP refrigerants and advanced technologies could ensure a more skilled and informed workforce.
- Innovative models like "Cooling as a Service" were highlighted as transformative approaches to reducing financial barriers. Participants also emphasized the need to leverage international funding mechanisms, including the Multilateral Fund and the Green Climate Fund, to support large-scale implementation of energy-efficient solutions.
- Public-private collaboration was recognized as a cornerstone for sustainable cooling initiatives. Transparent regulatory frameworks and incentives for private sector investment were recommended to drive the adoption of advanced RAC technologies across the region.

EUROPE AND CENTRAL ASIA AND WEST ASIA

Europe and Central Asia (ECA) and West Asia Networks Joint Twinning Workshop, 25-26 September 2023, Amman, Jordan

Context - ECA and West Asia

Europe and Central Asia (ECA): The ECA region encompasses a diverse set of countries, from developed economies with advanced energy efficiency frameworks to transitioning economies with varying technical capacities. Climatically, the region experiences a broad range of temperatures, creating a dual demand for heating and cooling solutions. These climatic extremes drive significant energy consumption in residential and commercial sectors, underscoring the need for sustainable and energy-efficient technologies.



West Asia: West Asia is identified by its dry climate and extreme heat, with cooling needs dominating energy consumption patterns. High temperatures create a critical reliance on air conditioning, particularly in urban centres and Gulf Cooperation Council (GCC) countries. This dependency has made the region one of the highest consumers of energy for cooling per capita globally, contributing significantly to greenhouse gas emissions.



Needs assessment and lessons learned – ECA

The needs assessment for the ECA network highlighted the region's diverse economic and technical capacities, reflecting significant disparities in infrastructure and national policies. While some countries, such as Turkey, have made substantial progress with robust frameworks like MEPS and energy labelling systems, others face challenges in aligning with international energy efficiency benchmarks. Countries in transition are particularly hindered by aging infrastructure, limited technical capacity, and inconsistent consumer awareness. Key findings:

- While countries like Turkey and Georgia have adopted energy efficiency regulations, many countries lack comprehensive policies governing low-GWP refrigerants and energy-efficient technologies.
- A shortage of trained RAC technicians proficient in new refrigerants and advanced systems limits effective implementation. This gap is evident in countries with older infrastructure, where technicians often lack the skills to retrofit or manage modern systems.
- Widespread use of aging cooling equipment delays the transition to sustainable technologies, increasing energy consumption and greenhouse gas emissions.
- Consumers and businesses are often unaware of the economic and environmental benefits of energy efficiency, slowing the adoption of advanced technologies.
- Aligning MEPS across the region can create a consistent market framework, encouraging the adoption of energy-efficient products/ systems and reducing trade barriers.

- Training technicians and policymakers are critical to bridging gaps in technical expertise and ensuring successful policy implementation. For example, Georgia's energy efficiency policy showcases how training programs enhance stakeholder capabilities.
- Leveraging collaborations between governments and private sectors, as seen in Turkey, can expedite the deployment of advanced cooling technologies.

Needs assessment and lessons learned – West Asia

The needs assessment in West Asia highlighted the region's high dependency on energy-intensive cooling systems driven by its dry climate and extreme temperatures. These climatic conditions, combined with economic differences and energy subsidies, add to the challenges in adopting sustainable cooling solutions. High cooling demand is further hindered by limited regulatory enforcement and financial barriers. Key Findings:

- Subsidized electricity prices in many West Asian countries disincentivize energy-efficient practices, making sustainable cooling technologies less appealing.
- The high upfront costs of advanced RAC systems and limited access to financing mechanisms hinder widespread adoption. Countries like Oman emphasized the need for accessible funding models during the workshop.
- Although green building codes and energy policies exist in some countries, enforcement and compliance mechanisms remain insufficient.
- The workshop revealed a critical need to involve broader stakeholder groups, such as retailers, private sector entities, and end-users, to cultivate a culture of energy efficiency.
- Expanding campaigns that target consumers and businesses can accelerate behavioural shifts toward energy-efficient practices.
- Harmonizing MEPS across GCC countries offers a pathway to create unified markets and economies of scale. This approach has been effective in promoting efficiency within the Gulf Cooperation Council (GCC).
- Cooling-as-a-service and similar financing solutions could address financial barriers, enabling broader adoption of sustainable technologies.

Shared lessons and opportunities - ECA and West Asia

- Both networks emphasized the integration of energy efficiency into national cooling policies as essential to achieving sustainable development goals. Tailored training programs emerged as a shared priority, with a focus on equipping technicians and policymakers with the skills needed to implement advanced systems and enforce regulations effectively. The stakeholder mapping exercises conducted during the workshop revealed significant untapped potential in engaging the private sector and underrepresented actors. Collaborative efforts between regional networks, such as knowledge-sharing initiatives, can amplify the best practices and accelerate policy implementation.
- Alignment with international frameworks like the Paris Agreement and Sustainable Development Goals (SDGs) remains a central theme. By harmonizing policies, strengthening capacity, and leveraging financial innovations, the ECA and West Asia networks are well-positioned to drive progress toward the Kigali Amendment's objectives and a sustainable cooling future.

Summary of key outcomes - ECA and West Asia

- Cross-regional collaboration between ECA and West Asia networks was strengthened, fostering knowledge exchange on successful policies, technologies, and financial mechanisms.
- National Cooling Action Plans were highlighted as a tool to integrate sustainable cooling into broader climate action frameworks, aligning with the Paris Agreement and multiple SDGs.
- Participants were introduced to advanced technologies, including low-GWP refrigerants, ventilation systems, and integrated building-HVAC solutions.
- The workshop encouraged public-private partnerships to address market barriers and promote sustainable practices.
- Participants explored financing opportunities through voluntary carbon markets, and other international funding sources to address the high upfront costs of energy-efficient systems, including leveraging carbon trading and incentives to influence market dynamics.
- Participants valued the interactive formats and technical content but suggested extending the workshop duration for deeper discussions.
- Future workshops were recommended to focus on technical advancements, and case studies to enhance practical learning.

Recommendations and future direction - ECA and West Asia Networks

In terms of policy development:

- Accelerate the harmonization of MEPS and energy labelling across regions to create unified markets for energy-efficient technologies.
- Ensure integration of energy efficiency considerations into national Montreal Protocol compliance frameworks and National Cooling Action Plans (NCAPs).
- Develop and enforce comprehensive regulatory frameworks to address refrigerant management, including leakage prevention and low-GWP refrigerant adoption.
- Capacity Building:
 - Expand training programs for RAC technicians to reduce refrigerant leaks, improve servicing practices, and enhance energy efficiency in systems.
 - Strengthen capacity-building initiatives for policymakers, focusing on linking energy efficiency with Montreal Protocol objectives
 - Increase education and training opportunities for investors and design engineers to incorporate energy-efficient technologies into projects.

In terms of stakeholder engagement:

- Broaden stakeholder engagement to include underrepresented groups such as retailers, private-sector entities, and community organizations.
- Foster partnerships between governments, private sectors, and international organizations to drive collaborative solutions.
- Regularly engage stakeholders through workshops, forums, and public awareness campaigns to enhance understanding and adoption of energy-efficient technologies.
- Financial Mechanisms:
 - Develop financing strategies, including voluntary carbon markets to address high upfront costs for energy-efficient systems.

- Explore incentives, such as subsidies and tax benefits, to promote the adoption of low-GWP and energy-efficient cooling technologies.
- Facilitate access to international funding sources, such as the Multilateral Fund and the Green Climate Fund, for energy efficiency projects.

In terms of technical advancements:

- Encourage the adoption of alternative refrigerants like CO₂ and natural solutions, with adequate preparation through training and certification programs.
- Promote ventilation products and systems as part of energy efficiency standards and regulations.
- Strengthen product certification processes to ensure quality control and build consumer trust in energy-efficient appliances.

Future workshop and research priorities:

- Extend the duration of future workshops to allow for deeper discussions and technical sessions.
- Focus future events on climate finance, practical case studies, and advancements in green technologies.
- Increase collaboration between regions to share best practices and successful models for policy implementation and technology adoption.

FRANCOPHONE AFRICA

Francophone Africa Network Twinning Meeting, 10-11 October 2024, Tunis, Tunisia

Context - Francophone Africa

The Francophone Africa region faces significant opportunities and challenges in its efforts to implement sustainable cooling solutions in alignment with the Kigali Amendment. Rising temperatures, driven by climate change, and rapid urbanization are increasing the demand for refrigeration and air conditioning (RAC) technologies. This growing need for cooling places a heavy burden on energy systems, which in many countries are already under strain due to limited infrastructure, unreliable access, and high operational costs. The region encounters persistent challenges that cause difficulties in its transition to sustainable cooling. Institutional frameworks in many countries are fragmented, leading to uncoordinated efforts between environmental, energy, and financial stakeholders. A shortage of skilled professionals capable of installing, operating, and maintaining these advanced systems further delays progress and increases reliance on outdated and inefficient technologies.



Needs assessment and lessons learned - Francophone Africa

- Across multiple countries, the fragmentation of responsibilities among ministries of environment, energy, trade, and finance has led to duplicated efforts and missed opportunities in cooling sector

governance. To address this challenge, several countries have developed effective models of institutional integration that offer valuable lessons for the broader region. Nigeria, Niger, and Egypt have successfully established inter-institutional technical committees for cooling that bring together diverse stakeholders under a unified framework. Niger's approach of formally including energy efficiency authorities in ozone committees has proven particularly effective in streamlining policy development and reducing redundancies. These collaborative structures have enabled the harmonization of policies, including the successful implementation of MEPS and anti-dumping measures. These bodies, comprising representatives from key ministries alongside stakeholders from academia, trade associations, and the private sector, can effectively coordinate policy development, national cooling action plans, and funding applications. Regular meetings, data-sharing platforms, and targeted capacity-building for task force members were identified as essential elements for ensuring accountability and driving meaningful change. Many participants expressed interest in UNEP's support for broader regional collaboration and knowledge-sharing to replicate these successful coordination models.

- Participants emphasized the need for national communication campaigns, regulatory measures to phase out high-GWP equipment, capacity building for technicians, and the development of national action plans. Participants expressed a clear need for harmonized communication strategies to promote awareness of energy efficiency and Kigali Amendment goals. Support from UNEP and other implementing agencies was sought to develop and implement these strategies effectively. Recognition of the importance of strategic communication and a commitment to work toward unified messaging across countries.
- Despite the success of targeted campaigns, such as the Dumping on Africa initiative, many participants pointed out the lack of consistent messaging to stakeholders. Francophone countries, in particular, stressed the need for communication materials in French, underscoring a linguistic barrier in accessing essential resources. Cameroon and Sierra Leone provided examples of innovative approaches, including solar-powered cooling solutions for vaccines, which serve as a case study for effective communication and implementation.
- Training for technicians, awareness-raising programmes, and skill development for policy implementation emerged as key areas requiring investment. Tunisia and Egypt presented projects to upgrade energy efficiency testing labs under Decision 91/65, but funding constraints limited their impact. Participants also emphasized the importance of technician training in proper refrigerant handling and energy-efficient servicing, with examples from Nigeria showcasing national associations filling the gap by providing tools and training to local technicians.
- Existing resources, such as U4E model regulations and the Dumping on Africa brochure, were shared during the workshop. However, participants highlighted the need for additional localized resources, particularly in French. Success stories from Senegal and Ghana, where MEPS have been effectively implemented, were shared, but further examples from across the region were requested to enhance learning and adoption.
- Examples from Cameroon highlighted innovative building solutions, such as insulating with mud bricks and using white-painted roofs, which reduce cooling loads and energy consumption. Participants emphasized the need for efficient design, low-GWP refrigerants, and maintenance practices to address the sector's growing impact.
- As regional challenges, the participants identified illegal trade, non-compliance with regulations, and the lack of energy efficiency awareness in sectors such as building design as significant

barriers. While Rwanda has made strides with MEPS and labelling systems, regional coordination and enforcement mechanisms remain weak. Many countries lack dedicated institutional capacity, such as specialized agencies, to oversee and implement EE initiatives effectively.

- Demonstration projects were highlighted as essential for introducing innovative technologies and building local capacity. However, participants noted that such projects often face funding limitations and administrative scrutiny. Regional centres of excellence, such as those proposed in Tunisia and Egypt, could play a vital role in scaling up these initiatives.
- Participants discussed the utility of tools such as the MEPSY calculator, which models the climate impacts of energy policies, and the Energy Efficiency Hub, which promotes collaboration on EE practices. However, the need for more localized training on tool usage was emphasized.
 - Voluntary EE agreements, such as those between South African industries and the government, have proven effective in achieving energy savings targets.
 - Green public procurement policies, as adopted in Kenya, demonstrate the potential for governments to lead by example in prioritizing energy-efficient appliances.
 - Sharing success stories, such as the adoption of solar cooling solutions in Sierra Leone, inspires regional collaboration and adaptation.
 - Monitoring and evaluation systems, when implemented effectively, drive innovation and foster investment in EE initiatives.
- Cameroon and Sierra Leone have demonstrated innovative approaches, including solar refrigeration and natural building materials, to address these challenges.
- Decisions such as 91/65 and XXVIII/2 were discussed as frameworks for integrating EE into the HFC phase-down process. Participants highlighted the potential for combined reductions in direct and indirect emissions through systemic approaches that prioritize building design, efficient technologies, and regulatory measures.
- Participants cited a lack of consumer awareness and weak enforcement of regulations as significant obstacles. Consumer education campaigns, financial incentives, and stricter regulations, such as banning inefficient imports, were identified as critical solutions.
- The workshop emphasized the importance of having ready-to-implement projects to mobilize additional resources. Many African countries were found to be missing out on funding opportunities due to a lack of project preparedness. A renewed focus on creating project portfolios to secure additional resources for energy efficiency initiatives.

Summary of key outcomes - Francophone Africa

- The workshop provided a unique space for interaction between NOUs, EE focal points, and financial focal points. Many participants from the same country had never met or discussed their roles and responsibilities before the workshop. Through the “Building Bridges” breakout session, participants gained a better understanding of their national counterparts’ responsibilities and achievements. They also exchanged best practices with peers from other countries. This opened new communication channels within countries and established cross-border networks, fostering collaboration at multiple levels.
- Participants were introduced to key aspects of the RACHP industry, including its technical, regulatory, and energy efficiency policies. Opportunities for improvement through the introduction of regulations and initiatives were explored in detail. Stakeholders were informed about industry-

specific energy efficiency practices and the importance of policy intervention. However, participants also expressed a need for further tools and training to deepen their understanding.

- The workshop intensified participants' understanding of the linkages between the Montreal Protocol, the Kigali Amendment, and energy efficiency. Discussions emphasized the operationalization of various decisions on energy efficiency taken by the Parties and the ongoing need for stakeholder commitment to maintain and enhance energy efficiency. This provided a broader awareness of the synergies between EE and the Montreal Protocol, reinforcing the importance of collaboration among all stakeholders.
- The Multilateral Fund provided an overview of funding decisions related to energy efficiency, highlighting the limited timeframe for taking advantage of certain initiatives. NOUs gained a clearer understanding of funding opportunities available under the MLF, while EE and financial focal points recognized the Protocol's serious commitment to energy efficiency initiatives.

Recommendations and future direction - Francophone Africa

The workshop provided a wealth of recommendations from two distinct perspectives: the participants and the workshop moderator. The moderator's recommendations were also included aiming to build long-term capacity and institutional frameworks:

- Participants emphasized the importance of fostering stronger collaboration among NOUs and energy policy makers focal points. Many highlighted the need for improved communication and coordination to mobilize funding effectively and ensure the alignment of efforts across government departments, that would include the following:
 - The creation of cross-departmental task forces to bring together ozone, energy, and finance stakeholders. These task forces would have clear mandates to coordinate activities, identify funding opportunities, and support project implementation.
 - Regular strategy meetings to align goals, track progress, and address challenges, ensuring a cohesive approach to energy efficiency initiatives.
- The need for large-scale, regionally coordinated projects was a recurring theme. While small pilot projects have been instrumental in demonstrating potential, participants stressed the importance of scaling up efforts to achieve a broader impact. Recommendations included:
- Designing and implementing regional infrastructure projects in refrigeration and energy efficiency, leveraging economic communities for shared resources.
- Developing comprehensive project portfolios to attract additional funding and align efforts with Kigali Implementation Plans (KIPs) and HCFC Phase-Out Management Plans (HPMPs).
- Participants identified a lack of strategic communication as a barrier to advancing energy efficiency goals. They called for harmonized communication strategies to educate and engage stakeholders at all levels. Suggestions included:
- Providing NOUs, EE focal points, and financial focal points with ready-to-use materials, such as templates, social media content, and infographics, to ensure consistent messaging.
- Organizing outreach programs/events, and campaigns to raise awareness about the benefits of energy efficiency and sustainable cooling technologies.

LATIN AMERICA AND CENTRAL AMERICA

Latin America and Central America Twinning Workshop, 1-2 August 2024, Santiago, Chile

Context - Latin America & Central America

Latin America faces different challenges in transitioning to sustainable cooling systems. Rising urbanization, climate-driven cooling demands, and economic disparities create a complex landscape for adopting energy-efficient and low-GWP technologies. Regulatory gaps, financial barriers, and limited technical capacity further complicate efforts to achieve Kigali Amendment targets. However, the region also presents significant opportunities, such as emerging innovations in the RAC sector, potential for renewable energy integration, and growing interest in harmonized policy frameworks. The workshop was specifically designed to address these regional conditions by fostering collaboration among stakeholders, sharing technical insights, and developing actionable strategies.



Needs assessment and lessons learned - Latin America & Central America

- A key priority identified by participants was the importance of raising awareness and conducting outreach programs. For instance, Colombia's Caribe Eficiente pilot project was highlighted as a successful model that combined awareness campaigns with financial incentives to promote energy-efficient appliances in low-income communities. Similarly, Chile's mandatory appliance labelling program has helped increase consumer awareness and encourage the adoption of energy-efficient products by providing clear and accessible information about energy consumption.
- Participants also emphasized the need for technical skills training to support the adoption of low-GWP refrigerants and advanced cooling technologies. The shortage of skilled technicians in the region was identified as a significant barrier to the effective deployment and maintenance of these systems. Brazil's large-scale technician certification initiatives under its Procel program were presented as a best practice, demonstrating how structured training programs can build workforce competence and enhance technical capacity.
- Policy development and implementation emerged as another critical priority. Many countries in the region face challenges in harmonizing energy efficiency policies with Kigali Amendment objectives. For example, Mexico's NOM-ENER standards were highlighted as a strong regulatory framework that aligns national policies with international goals, supporting energy efficiency and emissions reductions. However, participants noted the need for further updates to these standards to address emerging technologies and market dynamics. The discussions also emphasized the importance of inter-ministerial collaboration to align energy efficiency policies with ozone protection measures. Countries like Costa Rica and Nicaragua shared their experiences of institutional overlaps that often hinder policy coherence, emphasizing the value of coordinated policy frameworks.
- In the area of sustainable public procurement, participants recognized the role of governments in leading by example. Tools such as the U4E Green Public Procurement Guidelines for energy-efficient air conditioners and refrigerators were identified as valuable resources. These guidelines,

which provide technical specifications and cost-comparison analyses, have been successfully applied in countries like Chile to integrate energy efficiency into public procurement practices, ensuring that government purchases support sustainable cooling technologies.

- Participants also discussed the types of information materials and tools that would be most effective in addressing these priorities. Case studies and best practices from regional leaders like Brazil, Mexico, Chile, and Colombia were recognized as essential learning tools. These examples provide practical insights into how countries have successfully implemented energy efficiency initiatives in the RAC sector. For instance, Brazil's Procel program and Colombia's PROURE framework were highlighted for their comprehensive approaches to energy efficiency policy development and implementation.
- Technical guides and manuals were another key resource identified. U4E's guidelines on Green Public Procurement and sustainable cooling technologies were particularly valued for their ability to support governments in creating and enforcing technical requirements for energy-efficient products.
- Online platforms and databases were seen as critical for supporting data-driven decision-making. U4E's Product Registration System (PRS) was recognized for its ability to provide detailed product databases, enabling governments to monitor market trends, ensure compliance with national policies, and track environmental impacts. Uruguay's customs training programs, which incorporate elements of data tracking, were cited as a regional example of how such tools can enhance enforcement and market monitoring capabilities.
- The workshop also addressed several challenges that hinder the widespread adoption of energy-efficient technologies in the region. Data gaps and weak price signals were noted as significant barriers, limiting the ability to reflect the true cost of energy and its environmental impact. Costa Rica and Paraguay shared their struggles with limited data availability, which slow down the development of effective policies and programs. Participants emphasized the need for robust data collection systems, supported by tools like OLADE's sieLAC platform, which provides regional energy statistics and policy insights.
- Financial constraints were another recurring challenge, with many countries struggling to overcome the high upfront costs associated with energy-efficient technologies. The workshop highlighted innovative financing models, such as Colombia's tax incentives for energy-efficient appliances and the "cooling-as-a-service" model, as potential solutions. Participants also discussed the need for enhanced international support, with organizations like the Multilateral Fund and the IDB providing critical resources for regional projects.
- Other lessons learned during the workshop reinforced the importance of consumer awareness campaigns to drive demand for sustainable cooling solutions. Countries like Brazil and Chile shared examples of successful campaigns that increased public understanding of the benefits of energy-efficient products.

Summary of key outcomes - Latin America & Central America

- Participants gained insights into revising or establishing policies to reduce high-GWP refrigerants while promoting energy efficiency. For example, countries like Mexico and Chile, which shared their experiences with updating Minimum Energy Performance Standards (MEPS) and energy labelling, provided tangible illustrations of aligning national policies with Kigali goals. This knowledge-sharing inspired participants to explore tailored approaches for their own national

contexts, ensuring that energy efficiency becomes an integral part of their refrigerant transition strategies.

- The workshop facilitated vital discussions on funding mechanisms, creating opportunities for partnerships between countries and financial entities. For instance, participants explored innovative financing structures like "cooling as a service" models, which shift the financial burden from end-users to service providers, enabling broader adoption of energy-efficient cooling technologies.
- The workshop fostered robust inter-country and inter-agency collaboration, encouraging ongoing dialogue among key actors. Regular communication channels were established to maintain engagement across sectors, ensuring continued cooperation beyond the workshop. Examples like Uruguay's customs training program, which bridges gaps between government agencies and industry, were highlighted as models for fostering collaboration. By sharing success stories and case studies, such as Brazil's Procel program, participants were equipped with actionable examples of how to implement sustainable practices effectively. This collaborative spirit empowers countries to tackle challenges together, accelerating progress toward shared goals.
- The presentation of success stories and case studies during the workshop allowed participants to leverage collective expertise to promote sustainable refrigeration and air conditioning practices. For example, Chile's mandatory labelling for appliances and Colombia's Caribe Eficiente pilot program served as case studies that provided clear pathways for integrating energy efficiency into national policies. These examples not only showcased the feasibility of these initiatives but also provided a framework for replicating successes in other countries, fostering a culture of shared learning.
- A critical outcome of the workshop was the enhancement of participants' skills, networks, and institutional capacities. The interactive sessions helped identify potential inter-institutional initiatives, enabling stakeholders to collaborate more effectively on project execution and policy implementation.
- The workshop laid a foundation for continuous improvement, aligning national and regional efforts with the global goals of the Kigali Amendment. By equipping participants with the existing tools, knowledge, and partnerships needed to address challenges, the event ensured a forward-looking approach to sustainable cooling solutions.

Key recommendations and future direction - Latin America & Central America

- A key recommendation emphasized strengthening institutional cooperation at the national level. Many countries, including Colombia, Costa Rica, Nicaragua, and Mexico, reported challenges due to overlapping responsibilities between their NOUs and energy efficiency authorities. The workshop suggested creating inter-ministerial committees or working groups to align policy frameworks and ensure consistency in efforts to phase down high-GWP refrigerants while promoting energy efficiency.
- Another critical recommendation involved developing unified standards across the region. By promoting harmonized MEPS and energy labelling for refrigeration and air conditioning (RAC) equipment, countries could drive improvements in energy efficiency while ensuring market consistency.
- The workshop also identified financial constraints as a significant barrier to progress. To address this, participants recommended leveraging international support and adopting innovative financial models, such as subsidies or tax credits for efficient cooling systems.

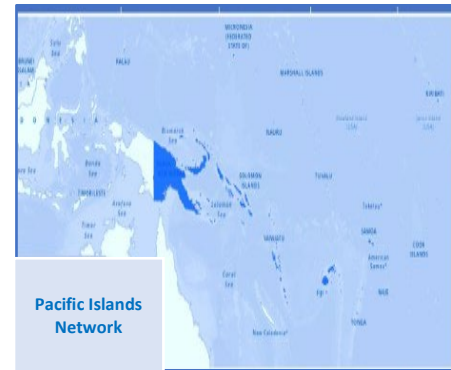
- Capacity building emerged as another area of focus, with participants stressing the importance of training programs for technicians and customs officials. The need for technical competence in handling low-GWP refrigerants and maintaining efficient systems was seen as essential for achieving long-term sustainability. Uruguay's customs training programs and Brazil's large-scale technician certification initiatives were cited as best practices that could be expanded across the region to build workforce capacity.
- At the regional level, the workshop emphasized enhancing collaboration among countries to align policies, share knowledge, and foster mutual learning. OLADE and U4E were highlighted as valuable partners in this effort, offering tools, training, and data resources to support regional initiatives.
- Participants also called for robust data collection and policy support systems to track energy efficiency impacts and guide decision-making. Tools like OLADE's sieLAC platform were recommended for their ability to provide detailed energy statistics and greenhouse gas emissions data. This data-driven approach was seen as essential for designing effective policies and monitoring progress toward Kigali Amendment goals.
- The adoption of advanced cooling technologies was another priority, with recommendations to promote innovative solutions like IoT-enabled systems, variable-speed compressors, and CO₂-based refrigerants. Mexico's implementation of CO₂ systems in cold storage facilities offered a compelling example of how such technologies could deliver substantial energy efficiency gains while reducing emissions.
- Public awareness and engagement also featured prominently in the recommendations. Educating consumers about the long-term benefits of energy-efficient products was seen as critical for driving demand.
- The workshop concluded with a call for ongoing collaboration and dialogue among stakeholders to sustain progress. Participants recommended the formation of task forces comprising NOUs, energy policymakers, and financial focal points to ensure alignment and continuous improvement. Regular strategy meetings, joint action plans, and feedback mechanisms were suggested to track progress and address challenges dynamically.

PACIFIC ISLAND COUNTRIES

Pacific Islands Countries (PIC) Network Twinning Workshop, 5-6 February 2024, Rarotonga, Cook Islands

Context – PICs

The Pacific Islands face significant challenges due to their geographic isolation, which leads to high transportation costs and logistical barriers to importing energy-efficient technologies. Small, fragmented markets further complicate efforts to implement region-wide standards for sustainable cooling. The region's hot and humid climate drives extensive use of RAC systems, which accounts for a significant portion of energy consumption and places strain on the limited energy infrastructure. The workshop, therefore, emphasized the need for harmonized regional strategies to overcome these barriers and promote efficient cooling solutions.



Needs assessment and lessons learned – PICs

- Participants collectively agreed on the urgent need to enhance their capacity to monitor and report emissions, develop robust policies, raise awareness, and cultivate technical expertise for low-GWP alternatives. Monitoring and reporting were emphasized as the foundation for effective policymaking and compliance with international environmental commitments. For example, Fiji's successful MEPS and labelling program has become a benchmark, significantly reducing greenhouse gas emissions and energy costs by phasing out inefficient RAC equipment. However, countries like Kiribati and Tuvalu face challenges in implementing similar systems due to limited technical resources and expertise.
- Policy development also emerged as a critical priority. Samoa's integration of energy efficiency goals into its Energy Sector Plan 2023–2028 was highlighted as a leading example of aligning national policies with international objectives, including the Kigali Amendment. This strategic alignment has enabled Samoa to attract international funding and implement impactful energy efficiency measures. Conversely, smaller nations like Nauru struggle to draft and enforce policies due to resource constraints, underlining the need for regional cooperation and shared resources.
- Awareness-raising was another crucial need identified by participants. The Marshall Islands demonstrated the impact of targeted public campaigns in educating consumers about the benefits of energy-efficient appliances. These efforts have driven the adoption of compliant products and created a demand for sustainable technologies.
- Many countries reported a shortage of trained technicians to handle emerging refrigerant technologies. Tonga's collaborative workshops for RAC technicians, which provide hands-on training on installation and maintenance, were cited as a replicable model. Such programs equip technicians with the skills needed to optimize RAC systems in the Pacific's unique climatic conditions.
- To address these priorities, participants identified critical tools and resources:
 - The development of a comprehensive training manual, tailored to Pacific climates, was proposed. Such a manual would build on Tonga's successful training programs, offering step-by-step guidance on installation, maintenance, and repair, supported by regional case studies.
 - Pacific Appliance Database (PAD): Already utilized by countries like Samoa and the Solomon Islands, PAD has proven to be an invaluable tool for monitoring and regulating the energy efficiency of appliances. Samoa's innovative use of PAD to streamline product approvals and enforce MEPS was highlighted as a model for other PICs. Expanding the

database to include additional product categories and harmonized standards would enhance its regional impact.

- The U4E model regulation guidelines were recognized as critical resources for aligning national regulations with global standards. Fiji's application of these guidelines to support its green tourism policies exemplifies their practicality in driving compliance and fostering sustainable practices.
- One significant challenge is the absence of local testing laboratories in most Pacific countries, which increases the cost of product certification and limits the availability of energy-efficient appliances. Establishing a regional testing facility, accessible to all PICs, was proposed as a solution to reduce these barriers.
- Collaboration among government agencies was also a recurring theme. Samoa's success in integrating MEPS compliance into its customs procedures reflects effective interdepartmental cooperation. Similarly, Tonga's coordinated inspections of imported RAC equipment demonstrated the value of joint efforts in enforcement and monitoring.
- Policy harmonization remains a challenge, with countries like the Solomon Islands and Vanuatu reporting difficulties in aligning local regulations with international commitments. Sharing best practices, such as Palau's renewable energy roadmap, could help these nations craft more effective and cohesive policies.

Summary of key outcomes – PICs

- The workshop proved to be an essential platform for exchanging reduced practices among Pacific Island Countries (PICs). Tonga stood out as a model for integrating energy efficiency with ozone layer protection, showcasing its cohesive policy framework that links MEPS and Labelling (MEPSAL) with National Ozone Layer regulations. By enhancing inter-departmental collaboration and running joint awareness campaigns on management, Tonga highlighted the tangible benefits of an integrated approach. This collaborative model set a benchmark for other PICs to emulate, fostering a sense of shared purpose and mutual learning across the region.
- The workshop emphasized the development of tailored Energy Efficiency Plans for RAC appliances and recommended regional assessments to refine legislative frameworks, ensuring alignment with global energy standards.
- The Pacific Appliance Database (PAD) emerged as a pivotal tool, enabling countries like Samoa and Fiji to register energy-efficient products and enforce MEPS compliance. While countries demonstrated varying levels of engagement, partnerships with initiatives such as UNEP's United for Efficiency (U4E) proved instrumental in promoting best practices. However, challenges like maintaining knowledge transfer and increasing stakeholder awareness were noted. These insights provided a roadmap for enhancing future project implementations, with PAD serving as a cornerstone for regional cooperation.
- The technical sessions offered in-depth knowledge on enhancing RAC efficiency and managing leaks. These sessions emphasized the urgency of establishing stringent import standards for RAC equipment and emphasized the importance of regular energy audits. Practical training methods, combined with comprehensive capacity-building initiatives, were recommended to equip stakeholders with the skills needed to address energy consumption challenges.
- A significant outcome of the workshop was the exploration of funding opportunities to support the transition to energy-efficient, low-GWP RAC appliances. Realistic budgeting and coordinated

resource mobilization were identified as essential for avoiding duplication and ensuring the efficient use of funds. The workshop stressed the need for synergy among financial initiatives to maximize their impact and facilitate the adoption of sustainable technologies.

Practical Success Stories were introduced:

- Fiji demonstrated the transformative power of integrating international energy efficiency standards into national policies. By adopting PAD, Fiji reduced the importation of low-efficiency appliances, leading to a measurable decrease in national electricity consumption and greenhouse gas emissions. The financial savings for consumers further emphasized the economic benefits of these efforts.
- Samoa successfully incorporated HFC data into its Nationally Determined Contributions (NDCs) under the Paris Agreement. By utilizing PAD as a reliable source of data, Samoa presented a comprehensive plan to the international community, securing international funding for additional energy efficiency projects. This case highlighted the importance of aligning national systems with global climate reporting frameworks to attract support and enhance implementation.

Recommendations and future direction – PICs

- Advocating for updates to building codes to include energy-efficient and low-GWP RAC appliances is essential. For example, Fiji mandates Environmental Impact Assessments (EIA) for new tourism developments, ensuring compliance with energy efficiency standards. This approach not only reduces energy demand but also mitigates the long-term environmental impact of construction projects.
- Developing guidelines that prioritize energy-efficient RAC appliances in public procurement is vital. This ensures alignment with national sustainability goals and fosters international cooperation. Samoa's use of the Pacific Appliance Database (PAD) to regulate RAC imports exemplifies how procurement policies can drive compliance and sustainability.
- Countries with established energy regulations should adopt comprehensive plans for RAC appliances. These plans could include minimum efficiency standards, incentives for adopting energy-efficient models, and regular maintenance protocols. Fiji's green tourism policy is an excellent example of targeted strategies driving sectoral energy efficiency.
- Standardizing energy efficiency regulations across PICs, especially between South Pacific (aligned with Australian/New Zealand standards) and Northern Pacific (aligned with U.S. standards), is critical. This harmonization will facilitate smoother trade and improve compliance. Regional collaboration is necessary to address the high costs and logistical challenges of laboratory testing.
- PICs should conduct energy and refrigerant leakage assessments to inform legislative improvements. Countries such as the Marshall Islands demonstrated success by conducting energy audits of government facilities, leading to a 50% reduction in energy consumption after adopting inverter-style air conditioners.
- Programs must equip technicians with skills in leak detection, proper refrigerant handling, and energy-efficient RAC maintenance. Tonga's annual training for RAC technicians is a replicable model that underscores the importance of practical, hands-on instruction.
- Raising public awareness about the benefits of energy-efficient appliances and the importance of regular maintenance can lead to significant energy savings. Samoa's outreach campaigns targeting consumers and retailers have successfully improved compliance and market transformation.

- The creation of a Regional PIC RAC/NOO/NEO Professional Network would facilitate ongoing knowledge sharing and collaboration among stakeholders, ensuring that best practices are disseminated and adopted across the region.
- PICs can utilize funding opportunities under Decision 89/6, enabling low-volume consuming countries to secure up to \$100,000 for energy efficiency enhancements in their HCFC Phase-out Management Plans. This funding can support pilot projects for energy-efficient refrigeration and capacity-building initiatives.
- Sharing success stories, such as Fiji's significant energy savings through MEPSAL, can demonstrate the tangible benefits of energy efficiency initiatives. Case studies serve as powerful tools for advocacy, helping to persuade policymakers and businesses to adopt sustainable practices.
- Integrating hydrofluorocarbon (HFC) management into Nationally Determined Contributions (NDCs) under the Paris Agreement provides a comprehensive framework for climate action. Samoa's success in aligning its RAC data with global climate reporting showcases the benefits of this approach.
- Encouraging governments and businesses to employ energy auditors for thorough assessments can identify inefficiencies and propose upgrades. Tonga and the Marshall Islands have demonstrated the cost savings and environmental benefits achievable through energy audits and subsequent technological upgrades.

SOUTH ASIA

South Asia Network Twinning Workshop, 20-21 May 2024, Guangzhou, China

Context – South Asia

South Asia, characterized by its rapid urbanization, growing economies, and increasing cooling demands, faces critical challenges in transitioning to energy-efficient and climate-friendly cooling solutions. The workshop addressed these challenges by focusing on strategies such as implementing MEPS, and promoting the adoption of low-GWP refrigerants. Participants gained insights into overcoming barriers like limited financial resources, insufficient technical capacity, and outdated technologies. By equipping policymakers with the existing tools and frameworks needed to modernize cooling infrastructure, the workshop emphasized the importance of regional collaboration in achieving sustainable cooling solutions while meeting international climate commitments.



Workshop needs assessment and lessons learned – South Asia

- Public awareness campaigns emerged as a priority, aiming to educate consumers and stakeholders about the benefits of energy-efficient and climate-friendly cooling. Alongside this, specialized training for government officials, policymakers, and RAC technicians was highlighted as a cornerstone for developing technical and institutional capabilities.

- A recurring theme in the discussions was the need for appliance labelling systems and robust standards enforcement mechanisms. Participants noted that labelling could not only guide consumers toward energy-efficient choices but also create market incentives for manufacturers to innovate. Similarly, enforcing MEPS was recognized as a vital step in transforming markets and phasing out inefficient technologies.
- The workshop also identified specific tools and resources required to address these needs. These included accessible online training courses, such as UNEP-ASHRAE's Refrigerant Literacy and Energy Efficiency Literacy eLearning courses, which provide policymakers with foundational knowledge in energy-efficient cooling. For technicians, a modular RAC training curriculum was deemed essential to equip them with skills in handling low-GWP refrigerants and maintaining energy-efficient systems. Participants also called for energy audit briefing sheets and instructional videos to promote the adoption of energy audits and effective maintenance practices. These resources were seen as crucial for empowering technicians to advocate for energy efficiency and educate end-users about long-term cost savings.
- Financial constraints emerged as the most significant obstacle, with high initial costs of energy-efficient equipment limiting their adoption. Access to funding mechanisms was seen as inadequate, leaving countries reliant on traditional technologies that are both inefficient and environmentally harmful.
- Another key challenge was the shortage of trained professionals. The lack of technical expertise in managing advanced RAC technologies has created a gap in implementation capacity. Additionally, weak policy frameworks and inconsistent enforcement of MEPS have allowed inefficient appliances to dominate the market. These issues were compounded by low consumer awareness, which limits demand for energy-efficient solutions.
- To address these barriers, participants discussed practical strategies. Developing integrated policies, such as National Cooling Action Plans (NCAPs), was highlighted as a way to align RAC goals with broader energy efficiency and climate commitments. Collaboration between energy and environmental ministries was seen as crucial for ensuring a cohesive policy approach. The importance of engaging diverse stakeholders, including training institutions, private sector players, and consumer advocacy groups, was also emphasized as a means to foster a supportive ecosystem for energy-efficient technologies.
- Incentive mechanisms, such as public procurement programs and innovative business models like "cooling as a service," were identified as effective tools for reducing adoption barriers. These strategies aim to lower upfront costs and create demand for efficient products, paving the way for market transformation.
- The importance of ongoing communication emerged as a recurring theme. Regular updates through newsletters, case studies, and online platforms were recommended to maintain momentum and facilitate knowledge sharing among regional stakeholders.

Summary of key outcomes – South Asia

- Participants gained a deeper understanding of energy-efficient technologies and their applications in RAC systems. Discussions showcased the transformative potential of the Near-Zero Cooling Pathway, highlighting its ability to reduce global emissions by 94% compared to 2022 levels.
- Participants were introduced to practical methods for improving the efficiency of RAC systems over their lifecycle. Energy audits were showcased as a vital tool for identifying inefficiencies and

unlocking cost-saving opportunities. A pilot project in Malaysia demonstrated how implementing energy audit recommendations reduced energy consumption in commercial buildings by 30%. Additionally, tools like temperature and humidity data loggers were highlighted for monitoring HVAC system performance, with Thailand's deployment of these tools in large office complexes serving as a successful example. Proper refrigerant leak management was also emphasized, with Singapore's technician training programs for water-cooled chillers illustrating how effective maintenance practices can mitigate leaks and improve system efficiency.

- Participants examined how transitioning to high-efficiency cooling systems could double the climate mitigation benefits of the HFC phase-down. For instance, Singapore's integration of GWP values into MEPS and labelling systems demonstrated how energy efficiency and refrigerant management could be addressed cohesively. Participants also explored strategies to promote consumer adoption of efficient appliances, drawing inspiration from Thailand's star rating program, which highlights cost savings and environmental benefits.
- The importance of robust policies to drive market transformation was a recurring theme. Presentations highlighted how MEPS and labelling policies can prevent the import of inefficient RAC equipment while guiding consumer behaviour. Singapore's streamlined registration process for MEPS and refrigerant restrictions served as a best practice example, demonstrating the value of regulatory alignment. Participants also discussed the potential of regional collaboration to harmonize standards, adopting UNEP U4E Model Regulations to ensure consistency with global best practices.
- Financial constraints were identified as a significant barrier to adopting energy-efficient cooling technologies. The workshop introduced innovative approaches to address these challenges, such as public procurement programs. The Philippines' bulk procurement initiatives, which have reduced costs for energy-efficient air conditioners in government facilities, were cited as a successful model. Incentive schemes, like Singapore's subsidies for efficient appliances, showcased how financial support can make sustainable options accessible. The concept of "cooling as a service" was also discussed as a viable solution for low-income regions, allowing end-users to benefit from efficient cooling without upfront costs.
- Participants worked collaboratively to define stakeholder roles and identify opportunities for engagement. Using a Stakeholder Matrix, they mapped critical actors, including government ministries, manufacturers, retailers, training institutes, and consumer advocacy groups. Thailand's collaboration with the Electricity Generating Authority of Thailand (EGAT) to share efficiency data with policymakers provided a compelling example of public-private partnership. The matrix served as a tool to encourage ongoing dialogue and collaboration among diverse stakeholders.
- The workshop facilitated regional knowledge sharing, offering participants insights from successful initiatives across ASEAN. Malaysia's energy label tracking system demonstrated the potential of post-market data collection to evaluate program impacts, while Singapore's monitoring of online marketplaces, such as Shopee and Lazada, illustrated how compliance with MEPS and labelling requirements can be maintained. These exchanges inspired participants to explore regional initiatives, such as harmonizing standards and developing joint training programs for technicians.
- Participants were introduced to a variety of tools and resources to support Kigali Amendment objectives. Open-source Product Registration Systems (PRS) were presented as solutions for tracking appliance compliance, while resources like the Refrigerant Servicing and Best Practices

Manual were identified as vital for building technical capacity. These tools equip countries with the means to advance energy efficiency through informed policymaking and robust implementation.

Key recommendations and future direction - South Asia

- **Adopt a Multi-Solution Strategy:** The workshop emphasized the importance of integrating multiple approaches to achieve energy efficiency goals. No single intervention can suffice; instead, success relies on a combination of financial support, governmental coordination, stakeholder engagement, energy labelling, and technical training.
 - **Financing:** Participants highlighted the critical role of the Multilateral Fund and other international financing mechanisms as catalysts for private-sector investment. For example, projects in India that linked funding from the Global Environment Facility (GEF) to local cooling efficiency programs were cited as successful models.
 - **Governmental Coordination:** Collaboration between energy and environmental ministries was noted as vital. Countries like Bhutan showcased examples of integrating RAC policies across ministries to create cohesive energy efficiency plans.
 - **Energy Labelling and MEPS:** Implementing and enforcing MEPS and labelling programs was recommended to create market demand for efficient appliances. Countries like Sri Lanka demonstrated progress in labelling air conditioners, providing a model for other nations to emulate.
- **Develop National Policies on Sustainable Cooling Technologies:** National policies must be rooted in realistic, attainable goals and focus on integrating sustainable cooling solutions.
- **Integrated Systems Approach:** Policymakers were encouraged to adopt load reduction strategies, such as improving building insulation and utilizing passive cooling techniques. For instance, passive cooling designs in Nepal's building sector have reduced reliance on active air conditioning systems.
- **Improved MEPS and Labelling:** Participants were shown how MEPS and labelling, when updated regularly, can improve energy efficiency globally. Labelling programs in China have driven consumer demand for efficient appliances, reducing energy consumption significantly.
- **Technological Innovation:** Incorporating advanced technologies like inverter air conditioners and low-GWP refrigerants is essential. India's National Cooling Action Plan serves as an example, combining technology adoption with targeted training programs for technicians.
- **Foster Broad Stakeholder Engagement:** A recurring theme was the need for a multi-stakeholder approach to achieve Kigali Amendment goals. Energy efficiency is a complex issue requiring the active involvement of diverse actors.
- **Stakeholder Mapping:** Workshop activities encouraged countries to identify and engage engineers, architects, contractors, manufacturers, and others. Bhutan's collaboration with vocational training institutes to develop RAC-specific curricula exemplifies the value of broad engagement.
- **Inter-Sectoral Collaboration:** Participants from Bangladesh shared how their energy ministry worked with customs officials to streamline the import of compliant cooling technologies.
- **Leverage Energy Audit Tools:** Energy audits were recognized as a transformative tool to identify and implement efficiency measures in buildings and cooling systems.
- **Participants learned how audits can reduce utility costs, improve building performance, and increase property value.** For example, a pilot project in Maldives revealed that energy audits reduced air conditioning energy use by 25% in public buildings.

- Creating accessible guides and videos was recommended to train technicians and promote audits among end-users. Practical demonstrations during the workshop showcased how simplified tools could empower technicians to advocate for energy-efficient practices.
- Enhance MEPS and Energy Labelling Implementation: The role of MEPS and energy labelling was emphasized as a cornerstone of energy efficiency policies.
- Labelling programs can educate consumers while driving demand for efficient appliances. Thailand's star rating system for air conditioners, supported by public awareness campaigns, was presented as a model of success.
- Participants discussed the importance of updating MEPS and labelling systems to keep pace with technological advancements. Countries were encouraged to collaborate regionally to harmonize standards, as seen in the ASEAN roadmap for energy-efficient appliances.
- Promote Knowledge Sharing Among Countries: The workshop stressed the value of collaboration and continuous learning across countries.
- Sharing success stories, such as India's efforts in aligning its National Cooling Action Plan with Kigali Amendment goals, provided practical insights for other participants.
- Establishing an online resource library was recommended to facilitate knowledge sharing and provide access to templates, tools, and guides.
- Regular surveys and evaluations were proposed to improve communication and foster a dynamic exchange of ideas.

SOUTHEAST ASIA

Southeast Asia Network Twinning Workshop, 20-21 May 2024, Guangzhou, China

Context - Southeast Asia

Southeast Asia, facing rising cooling demands due to its tropical climate, urbanization, and economic growth, struggles to align these needs with climate goals. Key challenges include fragmented policies, financing gaps, technical barriers, and outdated infrastructure. The event emphasized empowering policymakers with data, funding tools, and capacity-building while leveraging ASEAN collaboration to harmonize standards and share solutions.



Needs assessment and lessons learned - Southeast Asia

- A key challenge identified was the lack of sufficient awareness among policymakers, regulators, and consumers regarding the benefits of energy-efficient and low-GWP technologies. Action suggested: Develop and sustain tailored information materials in SEA countries to educate stakeholders about emerging technologies, regulations, and the benefits of sustainable cooling.
- Many countries lack structured frameworks to implement EE and refrigerant phase-down policies effectively. Action suggested: Adopt and adapt these guidelines in countries with limited or fragmented regulatory systems to create cohesive frameworks that drive market transformation.

- Although countries like Singapore and the Philippines have successfully implemented low-GWP refrigerant policies and energy labelling programs, there is an absence of documented case studies and best practices. These are critical for guiding other countries on implementation and scaling. Action: Develop and disseminate case studies to share lessons learned, highlight successes, and provide actionable blueprints for similar initiatives across the region.
- Tools such as UNEP's U4E Product Registration System (PRS) and ASEAN's Regional Product Database were recognized as vital resources for countries without robust tracking mechanisms. These tools can standardize data collection and facilitate compliance monitoring.
- Policymakers highlighted a significant gap in the availability of accurate market data on RAC equipment. Current ad-hoc data collection efforts result in inconsistencies, delaying program development. The lack of Harmonized System (HS) codes for RAC equipment further complicates tracking imports and sales. Action suggested: Establish standardized protocols for data collection, engage Customs and industry stakeholders, and harmonize HS codes to streamline reporting and policymaking.
- The shortage of skilled technicians was identified as a critical barrier to achieving energy efficiency and safe refrigerant handling. Poor installation practices and mishandling of flammable low-GWP refrigerants significantly reduce system efficiency and pose safety risks. Action suggested: Implement mandatory training and certification programs, focusing on installation, maintenance, and safe refrigerant handling practices to build a competent workforce.
- High upfront costs of energy-efficient and low-GWP cooling solutions remain a significant barrier to adoption. Innovative models such as "cooling as a service" and targeted subsidies can help address cost concerns. Action suggested: Develop clear guidelines for accessing funding, create public procurement programs, and promote financial incentives to reduce adoption barriers.
- Policymakers often face delays due to inconsistent and incomplete market data. Without accurate insights into market trends, energy performance, and refrigerant use, program design becomes resource-intensive. Tools like the SIRIM energy label tracking system in Malaysia were highlighted as effective solutions to address this gap.
- Frequent staff rotations and fragmented responsibilities across government agencies disrupt continuity in policy implementation. The workshop emphasized the importance of Memorandums of Understanding (MOUs) between ministries and regular interagency dialogue to ensure smoother collaboration.
- The lack of trained RAC technicians leads to suboptimal system performance and safety risks, particularly with flammable refrigerants. Programs in Singapore and the Philippines that mandate technician training for advanced systems were presented as models for regional adoption.
- The growing popularity of online platforms like Shopee and Lazada for RAC equipment sales poses unique challenges. Issues such as counterfeit energy labels and unregistered imports were identified as major concerns. Singapore's efforts in monitoring online and retail sales for compliance with MEPS and labeling requirements offered a practical example.

Summary of key outcomes - Southeast Asia

- The workshop highlighted the importance of robust product registration systems (PRS) for ensuring compliance with MEPS and labeling requirements. While countries like Malaysia and Singapore have established PRS frameworks, others, such as Cambodia and Lao PDR, are in the early stages of development. The U4E-PRS prototype was introduced as a valuable resource for countries

lacking national systems, offering a cost-effective solution to standardize data collection and monitoring.

- For countries without testing facilities, Mutual Recognition Agreements (MRAs) were identified as a mechanism to facilitate conformity assessments using accredited laboratories. These initiatives, combined with UNEP U4E's tools, can streamline implementation and ensure regional consistency in policy enforcement.
- Effective monitoring of RAC equipment after market entry was another focus of the workshop. Participants recognized the dynamic nature of market data and the challenges in collecting detailed information on sales, energy performance, and refrigerants. The lack of specific Harmonized System (HS) codes for RAC equipment further complicates data collection.
- Country presentations highlighted best practices in post-market monitoring. For instance, Singapore's regular inspections of physical retail and online platforms, combined with stringent MEPS and labeling enforcement, provide a robust model for ensuring compliance. Malaysia's energy label tracking system, operated by SIRIM, demonstrated the potential of leveraging market data to evaluate program impacts and guide policy adjustments.
- The workshop emphasized various mechanisms to accelerate the adoption of energy-efficient and low-GWP RAC technologies. Training and certification programs for technicians were identified as critical for ensuring the proper installation and maintenance of advanced systems. Participants discussed the integration of efficiency and refrigerant requirements into building energy codes, as well as the development of green procurement policies for government and private sector organizations.
- Singapore's mandatory technician training programs for water-cooled chillers and Thailand's studies on high-efficiency mobile air conditioning systems exemplify how targeted initiatives can promote sustainable practices. These efforts highlight the importance of building technical capacity across all levels of the supply chain.
- The workshop shed light on financial barriers to adopting energy-efficient technologies and explored solutions to overcome these challenges. Participants learned about fiscal incentives, such as subsidies and tax benefits, and innovative models like "cooling as a service," which allows end-users to access efficient cooling solutions without upfront costs.
- Experts highlighted the role of financial assistance from the Multilateral Fund and other international funding sources in unlocking private-sector investments. These resources can serve as seed funding to create favorable conditions for scaling energy-efficient and low-GWP technologies.
- Case studies presented by Singapore, Malaysia, and Thailand provided valuable insights into the implementation of MEPS, labeling, and refrigerant phase-down efforts:
 - Singapore demonstrated the benefits of integrating MEPS and refrigerant restrictions into a unified regulatory framework, supported by stakeholder engagement and grace periods for compliance.
 - Malaysia showcased its e-permit system, which simplifies import processes for RAC equipment while addressing counterfeit labeling and non-compliance issues through interagency coordination.
 - Thailand highlighted the potential of high-efficiency mobile air conditioning systems to reduce CO₂ emissions, offering a pathway for other AMS to explore.

Key recommendations and future direction - Southeast Asia

- The workshop highlighted the importance of formal mechanisms, such as Memorandums of Understanding (MOUs), to institutionalize collaboration and foster a shared commitment among stakeholders. Training programs were also emphasized as a means to educate technicians, policymakers, and stakeholders about sustainable cooling practices, the benefits of energy efficiency, and the use of low-GWP refrigerants. By bridging institutional silos, countries can align their efforts and create a unified front for addressing Kigali Amendment objectives.
- The role of well-designed policies and financial strategies in transforming the RAC sector was a recurring theme. The implementation of MEPS and energy labelling systems can stimulate demand for efficient products, as seen in countries like Thailand, where labelling initiatives have successfully informed consumer choices.
- Public procurement policies were recommended as a powerful tool for setting an example in adopting energy-efficient technologies. Additionally, innovative financing models, such as "cooling as a service," were discussed as mechanisms to reduce the financial burden on end-users by eliminating upfront costs. Participants emphasized the need for an integrated approach that combines efficiency measures, refrigerant GWP considerations, and broader building energy efficiency practices.
- The financial complexity of the RAC sector calls for strategic funding approaches. The Multilateral Fund was identified as a critical resource for providing seed funding to unlock private-sector investments. Workshop discussions also highlighted the importance of raising awareness about available financial mechanisms, ensuring that stakeholders can effectively access and utilize these resources.
- By developing regional funding frameworks and promoting collaborative financing models, Southeast Asian countries can pool resources to tackle shared challenges. The availability of subsidies, tax benefits, and innovative financial schemes can encourage widespread adoption of energy-efficient and low-GWP technologies.
- The workshop encouraged countries to focus on passive cooling strategies, such as improved building designs and insulation, to reduce the need for active cooling. Proper sizing and optimization of cooling equipment were also emphasized as critical factors for enhancing system efficiency and reducing energy costs.
- Localized approaches tailored to the climatic and socioeconomic conditions of each country were deemed essential. By adopting these strategies, countries can achieve significant energy savings while meeting the growing demand for cooling.
- The workshop highlighted the transformative potential of inverter technologies, which offer greater energy efficiency and lower operating costs. However, their adoption is often influenced by cost-to-benefit considerations. End-user education on the long-term savings of such technologies can drive broader adoption.
- Participants also discussed the importance of adopting building energy codes that incorporate energy-efficient design principles. Conducting evaluations of daytime and nighttime cooling needs was recommended as a way to optimize equipment performance in residential and commercial buildings.
- Aligning national standards with international benchmarks is essential for fostering global competitiveness and ensuring the adoption of efficient technologies. While many Southeast Asian countries have harmonized their RAC standards with international guidelines, some have yet to

adopt the latest editions of these standards. The workshop urged countries to prioritize updates to standards like ISO 5151:2017 to stay aligned with technological advancements.

- Participants also stressed the importance of considering country-specific factors, such as climate conditions and safety requirements, when implementing MEPS. Strengthening standards can prevent the importation of low-efficiency appliances and ensure that markets are not saturated with outdated technologies.
- A reliable Product Registration System (PRS) is crucial for tracking and enforcing compliance with MEPS and labeling requirements. The UNEP U4E prototype PRS was introduced as a resource that can be adapted to meet national needs. For countries without testing facilities, Mutual Recognition Agreements (MRAs) were recommended as a way to accept testing and certification results from accredited laboratories in other ASEAN Member States (AMS).
- The workshop emphasized the importance of post-market surveillance to track energy performance and refrigerant usage. Specific Harmonized System (HS) codes were recommended to facilitate detailed tracking and reporting.
- Country presentations offered valuable insights into enforcement practices. For example, Singapore's regular checks of physical and online marketplaces have been instrumental in maintaining compliance with MEPS and labeling standards. Collaborative efforts with online marketplaces, such as Shopee and Lazada, were identified as opportunities to combat counterfeit labeling and unregistered imports.
- Awareness and education are fundamental to achieving sustainable cooling transitions. Public campaigns highlighting the benefits of energy-efficient and low-GWP technologies were recommended to build consumer trust and drive demand.
- The workshop further encouraged knowledge sharing among AMS, emphasizing the value of case studies and best practices in inspiring regional collaboration and innovation.

4. SHARED LESSONS LEARNED, ACHIEVEMENTS AND RECOMMENDATIONS

The Twinning Project provided technical assistance and capacity building to Article 5 countries that promoted global, regional and national cooperation to further the objectives of the Montreal Protocol's Kigali Amendment. This initiative has successfully helped countries align national and regional efforts to transition to energy-efficient, low-GWP refrigerants while simultaneously addressing climate challenges and promoting energy savings. The following consolidates the shared findings, challenges, and recommendations across all participating regions—Africa Anglophone, Caribbean, Francophone Africa, Latin and Central America, Pacific Islands, South Asia, Southeast Asia, and Europe & Central Asia, and West Asia.

Shared lessons learned and achievements

- ***Knowledge sharing emerged as a foundational achievement of the Twinning Project, emphasizing the critical importance of equipping stakeholders with the knowledge and tools needed to drive energy efficiency.*** Through structured workshops and interactive sessions, participants gained a deep understanding of the principles underlying energy-efficient RAC systems, low-GWP refrigerants, and policy frameworks for sustainable cooling solutions. The

project's emphasis on knowledge sharing also empowered stakeholders to address systemic gaps, enhance compliance with the Kigali Amendment, and integrate energy efficiency considerations into national strategies. the project created opportunities for governments to strengthen internal coordination, improve inter-agency collaboration, and foster more robust governance frameworks.

The diverse training approaches used across regions—ranging from expert-led discussions to practical toolkits—demonstrated the project's adaptability to meet the unique needs of stakeholders in different networks. The emphasis on tailored learning ensured that stakeholders were not only informed but also equipped with actionable solutions that could be implemented within their national contexts.

- ***Advancing Policy Integration: The Twinning Project has been instrumental in aligning national energy efficiency policies with Kigali Amendment objectives, emphasizing the need for cohesive policy frameworks that integrate MEPS, energy labelling, and National Cooling Action Plans (NCAPs).*** By bridging the gaps between refrigerant transition policies and broader climate strategies, the project established a roadmap for achieving sustainable cooling solutions.

Stakeholders were encouraged to adopt robust monitoring and compliance systems to ensure that policy frameworks are effectively enforced. The integration of data management practices into policymaking processes was identified as a transformative approach for tracking progress, identifying gaps, and refining strategies.

Additionally, the project highlighted the importance of embedding energy efficiency measures into broader national frameworks, such as climate action plans and sustainable development strategies. This alignment ensures that refrigerant transition objectives contribute to achieving global climate goals while addressing local environmental and economic priorities.

- ***Cross-Sectoral Collaboration and Regional Synergies: The Twinning Project's success is rooted in its ability to foster collaboration across sectors and regions. By bringing together NOOs, NEEPs, and FMFPs, the initiative created a platform for addressing shared challenges collectively.*** These collaborations bridged gaps between energy, climate, and environmental policy areas, enabling a unified approach to energy efficiency.

The project also emphasized the importance of engaging a broad spectrum of stakeholders, including private sector actors, civil society organizations, and academic institutions. These partnerships were critical for driving innovation, fostering inclusivity, and scaling the adoption of energy-efficient practices. Regional synergies further amplified these efforts, with countries working together to harmonize standards, share knowledge, and coordinate initiatives.

- ***A key focus of the Twinning Project was the promotion of advanced technologies that enhance energy efficiency and reduce environmental impact.*** The initiative introduced stakeholders to RAC systems, low-GWP refrigerants, and international standards that ensure the sustainable performance of cooling equipment.

The project emphasized the importance of adopting technologies that are not only energy-efficient but also compatible with international trade and environmental benchmarks. This dual focus on innovation and compliance helped stakeholders align their technological initiatives with global best practices while addressing local needs.

Additionally, the project emphasized the role of maintenance and servicing in sustaining energy efficiency. By promoting regular equipment maintenance, stakeholders were able to ensure that efficiency gains were preserved over time. This comprehensive approach to technology adoption highlighted the interconnectedness of innovation, policy, and capacity building in achieving long-term sustainability.

- ***Financial sustainability emerged as a critical theme in the Twinning Project, highlighting the role of funding mechanisms in overcoming cost barriers to energy-efficient technologies.*** Stakeholders were introduced to a range of international financing opportunities, including the Multilateral Fund and Green Climate Fund.

The project also emphasized the importance of building capacity to develop project proposals, enabling countries to access global funding more effectively. Innovative financial models, such as public-private partnerships, bulk procurement programs, and incentive schemes, were identified as key strategies for scaling adoption and ensuring affordability. By addressing financial barriers, the project laid the groundwork for accelerating the transition to sustainable cooling solutions while ensuring that these initiatives remain economically viable.

Shared challenges

- Insufficient financial resources emerged as a significant barrier to implementing energy efficiency initiatives. Limited budgets restricted the ability of countries to scale projects, conduct training programs, and invest in necessary infrastructure. The need for scalable, region-specific financial solutions was repeatedly highlighted as a priority.
- Although progress has been made in developing policies, enforcement remains a challenge. Weak regulatory frameworks, coupled with inconsistent monitoring systems, hinder the effectiveness of MEPS, energy labeling, and other policy measures. Strengthening regulatory capacity and ensuring robust enforcement mechanisms are essential for sustaining progress.
- The shortage of skilled technicians and trained personnel in the RAC sector was a recurring challenge. Many countries lack the human resources needed to maintain and operate energy-efficient systems, underscoring the need for expanded training programs and capacity-building initiatives.
- Low public awareness of energy-efficient technologies continues to impede progress. The lack of accessible information on the environmental and economic benefits of sustainable cooling discourages widespread adoption. Public education campaigns are needed to bridge this gap and drive demand for energy-efficient solutions.
- Unique geographic, economic, and climatic conditions across regions necessitate tailored approaches to policy and program implementation. These variations often complicate the adoption

of uniform strategies, requiring flexible and adaptive solutions to address local challenges effectively.

Common recommendations from the Twinning workshops

These recommendations emphasize the importance of integrating key policies, enhancing capacity-building, leveraging financial models, and fostering collaboration across sectors. Additionally, there is a critical need for the development of tailored knowledge tools, information materials, and resources that will equip stakeholders with the information they need to achieve these goals effectively:

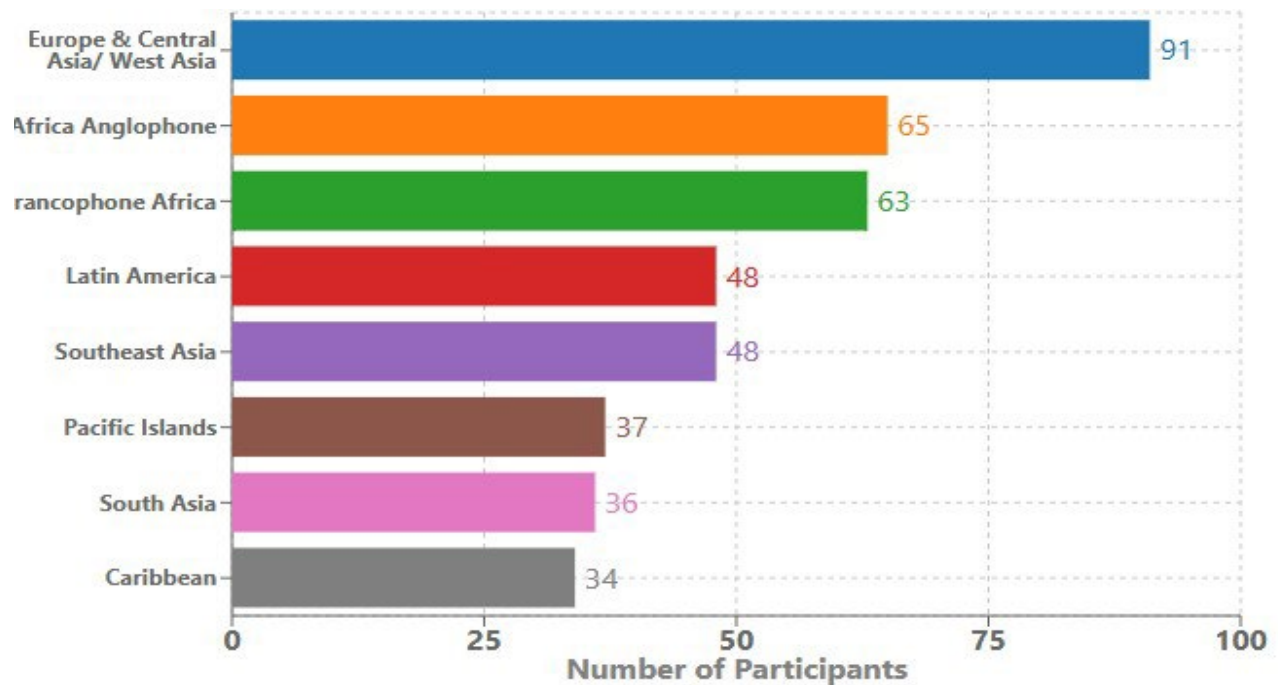
- Developing comprehensive policies that integrate MEPS, energy labeling, and climate strategies should be a priority. These frameworks must be supported by enforcement mechanisms, data-driven monitoring systems, and periodic evaluations to ensure sustained progress.
- Comprehensive training initiatives should target all stakeholders, from policymakers to technicians. Training should focus on practical skills, technical innovation, and policy implementation, ensuring that capacity gaps are addressed holistically.
- Innovative financial models, such as public-private partnerships and incentive schemes, should be scaled to address funding challenges. Governments should focus on strengthening their ability to develop compelling funding proposals to access international financing opportunities.
- National task forces should be established to coordinate energy efficiency initiatives, engaging a broad spectrum of stakeholders, including academic institutions, industry leaders, and civil society organizations. Collaborative governance structures can drive innovation and ensure inclusivity.
- Consumer-focused campaigns should emphasize the long-term benefits of energy-efficient technologies, including cost savings and environmental advantages. Tailored messaging strategies should resonate with local audiences to maximize impact.
- Preparing and disseminating region-specific success cases that seamlessly integrate refrigerant transition with energy efficiency gains. These targeted examples should detail measurable impacts, implementation challenges overcome, and replicable stakeholder collaboration models to accelerate regional adoption.

5. DATA ANALYSIS AND VISUAL INSIGHTS

The Twinning Project workshops collectively brought together 422 participants from nine regional networks to foster collaboration among NOOs, NEEPs, and FMFPs, as well as specialists from UN agencies and international, regional, and national experts. By analyzing participation data across regions, we can identify important patterns in regional approaches, gender representation, and stakeholder engagement—insights that will improve future workshops and strengthen collaboration for greater climate impact.

Total Workshop Participation by Region

Comparison of total participants across all regional networks

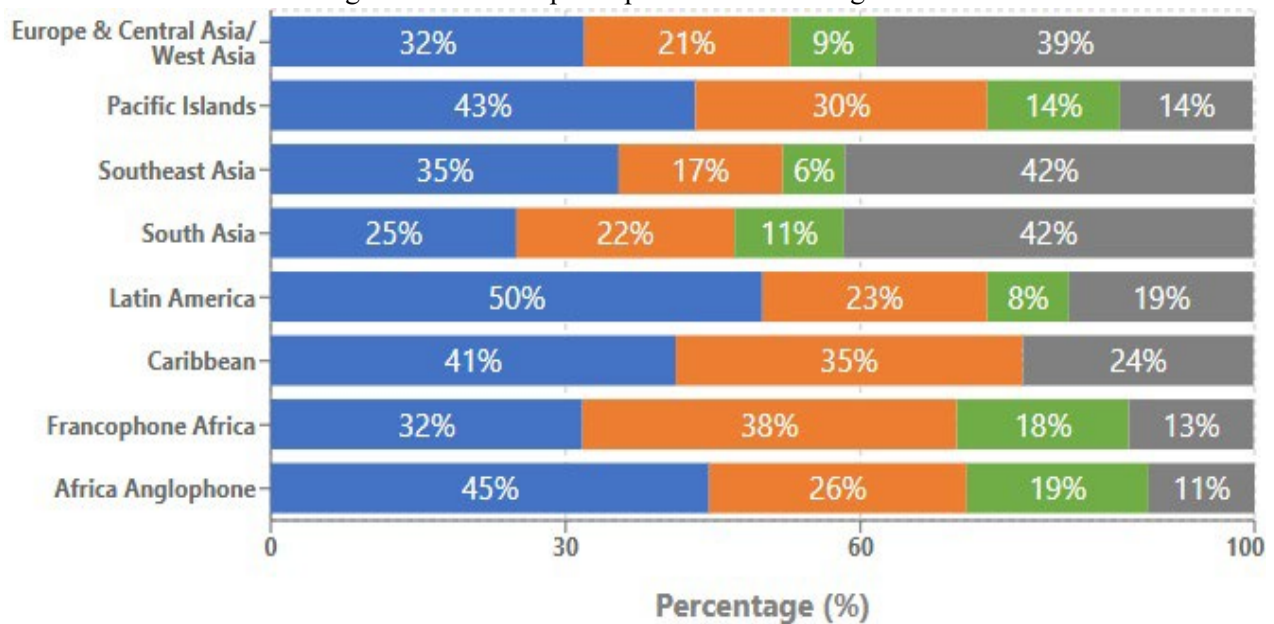


Workshop participation and demographics overview

The data shows global engagement with 422 participants across eight regions. Europe & Central Asia/West Asia leads (91 participants, 21.6%), followed by robust African representation (Anglophone and Francophone together: 128 participants, 30.3%). Balanced distribution across other regions—Latin America and Southeast Asia (48 each), Pacific Islands (37), South Asia (36), and the Caribbean (34)

Participant Role Distribution by Region

Percentage breakdown of participant roles across regional networks



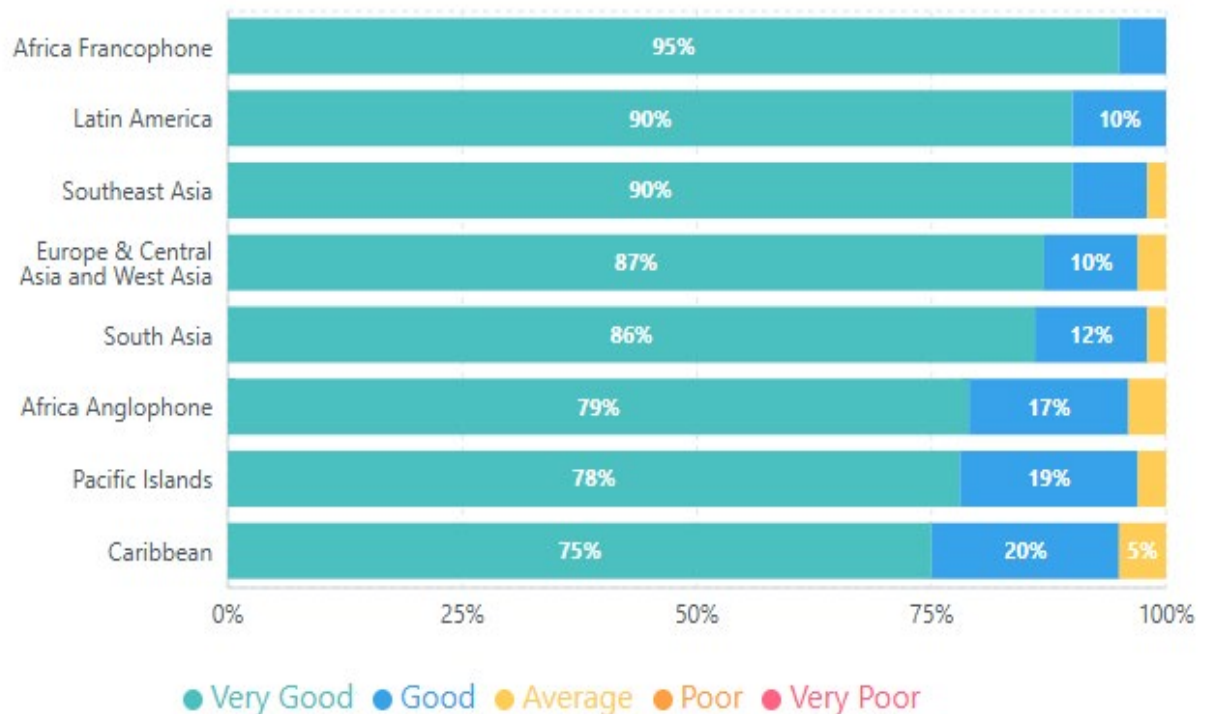
■ **National Ozone Officers (NOOs)**
■ **National Energy Efficiency Personnel (NEEPs)**
■ **Financial Management Focal Points (FMFPs)**
■ **Others**

Participant Role Distribution:

The regional participation chart reveals complementary strengths across regional networks, showcasing strong NOO leadership in Latin America (50%) and Africa Anglophone (44.6%), alongside robust NEEP representation in Francophone Africa (38.1%). Southeast Asia and South Asia significantly benefit from the rich diversity of the "Others" participants category (approximately 41% in both regions), which brings valuable international and regional experts in addition to the Twinning workshop host countries stakeholders who participated in the workshops.

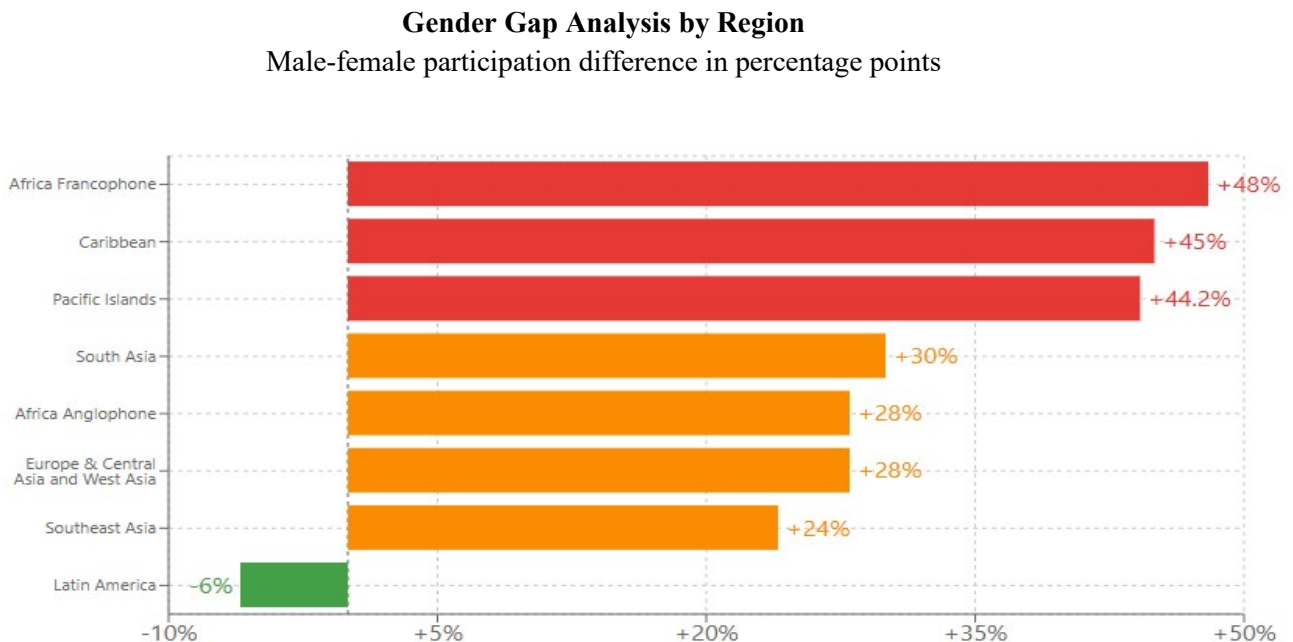
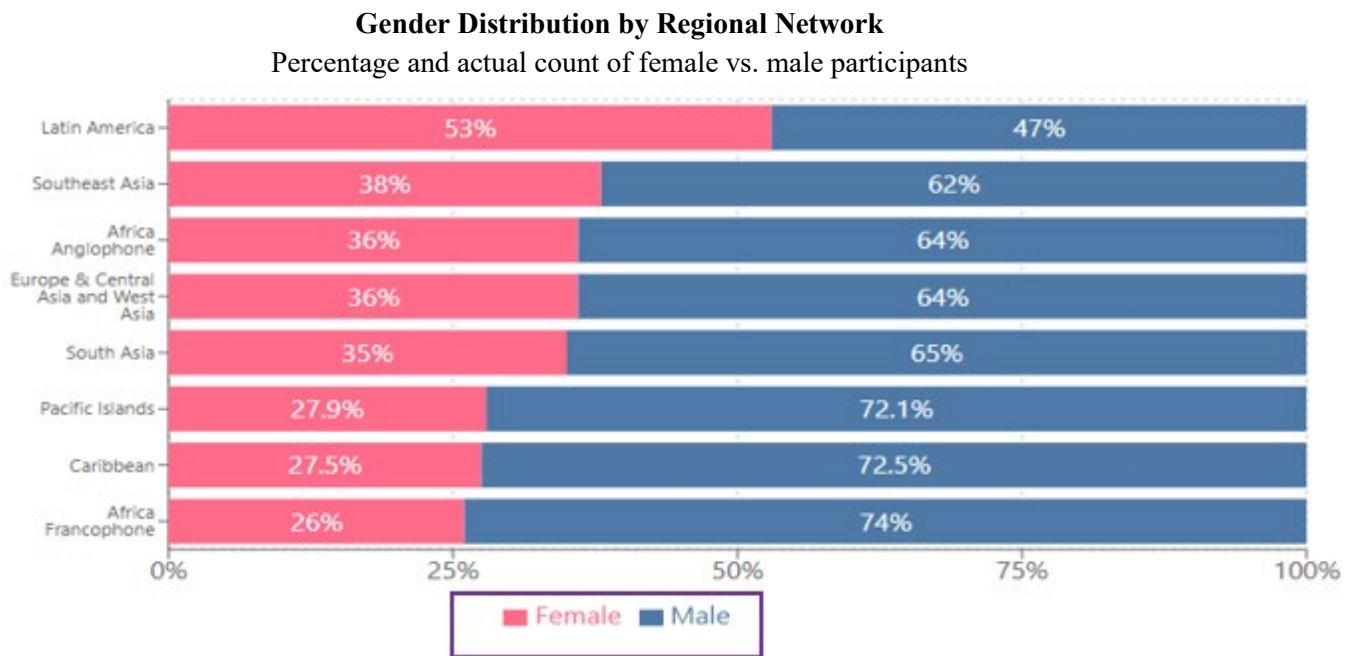
Workshop Evaluation Scores by Region

Breakdown of participant ratings across all regional networks



Workshop quality and satisfaction

Evaluation scores varied significantly across regions, ranging from a high of 95% (Africa Francophone) to a low of 75% (Caribbean). Remarkably, the top-rated workshops represented diverse role distributions, suggesting that participant satisfaction was not necessarily tied to a specific professional composition.



Gender analysis

The gender landscape presented notable disparities. Overall, only 35.3% of participants were female, with considerable variation across networks. Latin America stood out as a positive outlier, being the sole region with female representation exceeding male participation at 53%. In contrast, Africa Francophone displayed the most significant gender imbalance, with female participation as low as 26%—creating a 48% gender gap.

5. FUTURE DIRECTIONS - PHASE II

While Phase I successfully facilitated knowledge exchange, introduced policy integration frameworks, and strengthened stakeholder engagement, countries still face challenges in operationalizing these insights. Key barriers include the lack of tailored information resources, limited access to structured technical guidance, and the need for standardized knowledge tools that can be directly applied at national and regional levels.

To bridge these gaps, Phase II is proposed to work on the development and dissemination of comprehensive information tools and materials that equip stakeholders with the resources needed to implement sustainable cooling solutions effectively—and subsequently integrate them into the second phase of Twinning workshops. These refined workshops will provide stakeholders with practical, ready-to-use resources, ensuring that discussions translate into concrete implementation strategies. This two-step approach will enhance national and regional capacities, foster policy harmonization, and enable more effective access to financing mechanisms, ultimately accelerating Kigali-aligned transitions across participating countries.

Strengthening Knowledge Tools and Information Resources:

The creation of tailored knowledge materials is critical to bridge the gap between policy ambition and on-the-ground implementation. Standardized reference materials provide policymakers, technicians, and financial stakeholders with technical guidance, best practices, and benchmarks needed to operationalize Kigali-aligned strategies. Without these tools, countries face inconsistent approaches to shared challenges, which hinder technological adoption, market growth, and regional harmonization.

Phase II will focus on developing high-quality, region-specific materials that offer practical solutions, case studies, and success stories. These toolkits will help countries integrate refrigerant transitions with energy efficiency improvements, ultimately accelerating sustainable cooling efforts. Examples include guidelines for integrating refrigerants into energy labeling frameworks, protocols for market surveillance and product testing, and educational resources for end-users, such as businesses and community organizations. By equipping stakeholders with these resources, Phase II aims to improve decision-making and foster the adoption of sustainable cooling technologies.

Twinning Workshops as a Platform for Practical Implementation:

Once these knowledge tools are developed, the Twinning workshops will serve as the primary platform for their dissemination. The workshops will be redesigned to include practical exercises, real-world applications, and peer-to-peer learning opportunities. Key elements will include structured training on how to use policy toolkits and technical manuals, as well as cross-country exchanges to share best practices for applying these resources in different regulatory and economic contexts. This approach will ensure that stakeholders not only gain access to essential knowledge but also develop the capacity to implement Kigali-aligned policies and projects effectively.

6. ANNEX

The final reports of each workshop organised under Phase I are available on the OzonAction Meeting Portal as follows:

No	Description	Report
1	<i>Twinning Workshop for the Africa Anglophone Network</i> , Maputo, Mozambique, 13-14 June 2024	Link
2	<i>Joint Twinning Workshop for Europe & Central Asia Network and the West Asia Network</i> , Amman, Jordan, 25-26 September 2023	Link
3	<i>Twinning Workshop for the Caribbean Network</i> , Panama City, Panama, 27-28 June 2024	Link
4	<i>Twinning Workshop for the Francophone Africa Network</i> , Tunis, Tunisia, 10-11 October 2024	Link
5	<i>Twinning Workshop for the Latin America Network</i> , Santiago, Chile, 1-2 August 2024	Link
6	<i>Twinning Workshop for the Pacific Islands Network</i> , Rarotonga, Cook Islands, 5-6 February 2024	Link
7	<i>Twinning Workshop for the South Asia Network</i> , Guangzhou, China, 20-21 May 2024	Link
8	<i>Twinning Workshop for the Southeast Asia Network</i> , Guangzhou, China, 20-21 May 2024	Link



**TWINNING OF
OZONE OFFICERS AND NATIONAL ENERGY EFFICIENCY
POLICYMAKERS TO SUPPORT KIGALI AMENDMENT OBJECTIVES
(PHASE II)**

PROJECT PROPOSAL

Submitted by
United Nations Environment Programme

to the 96th meeting of the Executive Committee of
the Multilateral Fund

28 March 2025

TABLE OF CONTENTS

1. Introduction.....	22
2. Rationale and approach.....	25
3. Strategic objectives	27
4. Project implementation	29
5. Sustainability.....	33
6. Gender mainstreaming considerations	34
7. Performance indicators	35
8. Budget.....	36
9. Workplan.....	37

1. INTRODUCTION

The Montreal Protocol has long been recognized for its success in addressing ozone layer depletion. Over the years, discussions have increasingly focused on the energy efficiency aspects of implementing the Protocol, especially following the adoption of the Kigali Amendment. Recognizing that the transition to low global warming potential (GWP) alternatives to hydrofluorocarbons (HFCs) presents an opportunity to maintain or enhance energy efficiency in the cooling sector, the Parties to the Protocol agreed to extend such support in the refrigeration servicing sector. Since its 77th meeting, the Executive Committee of the Multilateral Fund has been exploring different approaches to operationalize Meeting of the Parties Decision XXVIII/2, emphasizing the need to integrate energy efficiency considerations into Kigali Amendment implementation, including via Kigali HFC Implementation Plans (KIPs), special funding windows, and other means.¹ As part of this assistance, the Executive Committee approved UNEP's global technical assistance project entitled "Twinning of Ozone Officers and National Energy Efficiency Policymakers to Support Kigali Amendment Objectives Phase I" (GLO/SEV/91/TAS/365). The first phase of the Twinning project, implemented from 2023 to 2024, enhanced the climate benefits of the refrigerant transitions by promoting energy efficiency improvements in the refrigeration and air conditioning (RAC) sector via capacity building and networking of key national stakeholder groups: National Ozone Officers (NOOs), National Energy Efficiency Policymakers (NEEPs), and Financial Mechanism Focal Point (FMFPs).

Bridging policy and technical expertise: the Twinning approach

At the national level, NOOs are responsible for implementing the Montreal Protocol and ensuring compliance with its provisions. However, integrating energy efficiency considerations into the refrigerant transitions requires a broader policy approach that mainly involves NEEPs as well as other stakeholders.² The Twinning project was structured to bridge these domains by fostering collaboration between NOOs and their energy and finance counterparts. This initiative was aligned with the 2023 Compliance Assistance Programme (CAP) work plan and directly supported UNEP's 2021–2023 CAP Strategy. It also complemented national initiatives such as KIPs by helping to ensure that efforts to phase down HFCs were accompanied by corresponding improvements in cooling efficiency.

Recognizing the importance of regional cooperation, the project was linked to UNEP's Regional Networks of National Ozone Officers, which facilitate the exchange of information, experiences, and best practices among

¹ The Paper on ways to operationalize paragraph 16 of Decision XXVIII/2 and paragraph 2 of Decision XXX/5 of the Parties considered by the 83rd Executive Committee meeting highlighted that although energy efficiency policies are not within the responsibilities of NOOs, they have been encouraged to develop and enforce policies and regulations to avoid market penetration of energy-inefficient RACHP equipment and promote access to energy-efficient technologies in those sectors. Such actions would necessarily require close coordination with their national energy efficiency counterparts. (UNEP/OzL.Pro/ExCom/83/40, paragraph 32).

² The 83rd Executive Committee meeting emphasized that 'Cooperation among NOOs and the authorities responsible for energy efficiency, who have limited experience and a limited role in the adoption of low- or zero- GWP-based technologies, might result in reduced costs to manufacturers and might offer coordinated policy direction to meet national targets. (UNEP/OzL.Pro/ExCom/83/40, paragraph 33). Additionally, the Committee noted that "Capacity building activities relating to regulations, training and institutional coordination with energy efficiency authorities are essential for facilitating the adoption of low- and zero-GWP refrigerants." (UNEP/OzL.Pro/ExCom/83/40, paragraph 49).

Article 5 countries, agencies, and international partners. Under the Twinning project, each participating country was encouraged to engage one NEEP and, optionally, one FMFP, creating a structured mechanism for cross-sectoral collaboration that was appreciated by different regions.

Twining workshops: strengthening regional and national cooperation

Between 2023 and 2024, UNEP designed eight two-day Twinning workshops covering the ten CAP regional networks and organized them back-to-back with the network meetings, as follows:

- *Joint Twinning Workshop for Europe & Central Asia Network and the West Asia Network*, Amman, Jordan, 25-26 September 2023.
- *Twining Workshop for the Pacific Islands Network*, Rarotonga, Cook Islands, 5-6 February 2024.
- *Twining Workshop for the South Asia Network*, Guangzhou, China, 20-21 May 2024.
- *Twining Workshop for the Southeast Asia Network*, Guangzhou, China, 20-21 May 2024.
- *Twining Workshop for the Africa Anglophone Network*, Maputo, Mozambique, 13-14 June 2024.
- *Twining Workshop for the Caribbean Network*, Panama City, Panama, 27-28 June 2024.
- *Twining Workshop for the Latin America Network*, Santiago, Chile, 1-2 August 2024.
- *Twining Workshop for the Francophone Africa Network*, Tunis, Tunisia, 10-11 October 2024.

As documented in the final report of the Twinning Project Phase I, these workshops brought together stakeholders from Article 5 countries (including notably from both Groups 1 and 2), providing a platform for discussing best practices, sharing experiences, and exploring strategies to maximize the climate benefits of low-GWP refrigerant adoption and energy efficiency improvements. By facilitating direct engagement between the ozone, climate change, energy, and finance sectors, the workshops enabled stakeholders to:

- Identify synergies between Montreal Protocol compliance, national energy policies, and climate strategies.
- Explore financial mechanisms to support sustainable cooling transitions.
- Discuss policy interventions, such as energy-efficient building codes, minimum energy performance standards (MEPS), and green procurement guidelines.
- Learn from expert insights provided by international/ regional organizations, industry representatives, and regional policymakers.

The Twinning Project has helped national and regional efforts to advance the transition to energy-efficient, low-GWP cooling. Through a series of strategic workshops and stakeholder engagements, the Twinning Project has fostered cross-sectoral collaboration, strengthened policy integration, and introduced financial mechanisms that accelerate the adoption of sustainable cooling solutions.

Below are the key findings, challenges, and recommendations from Phase I which were used to inform the future direction of Phase II.

Key findings and achievements from Phase I

- One of the Twinning Project's most significant achievements has been its focus on knowledge sharing and institutional strengthening as foundational pillars for transitioning to energy-efficient refrigeration and air conditioning (RAC) systems and low-GWP refrigerants. The project's structured workshops and interactive sessions equipped participants with a comprehensive understanding of the technical, regulatory, and financial dimensions of sustainable cooling solutions. By bridging knowledge gaps and offering practical tools, the project has enhanced compliance with the Kigali Amendment and integrated energy efficiency into national strategies. Furthermore, it encouraged stronger collaboration between government agencies, improved internal coordination, and facilitated the development of more robust governance frameworks. The flexibility in training methods allowed participants to apply practical solutions effectively within their specific national contexts.
- Phase I played a crucial role in aligning national energy efficiency policies with the Kigali Amendment's goals, emphasizing the need for a coordinated approach to sustainable cooling. Workshop participants recognized the critical importance of integrating MEPS, energy labeling programs, and National Cooling Action Plans (NCAPs) into broader climate strategies. By bridging refrigerant transition policies with overarching sustainability objectives, the project created a clear pathway for more effective policy implementation. Participating countries were encouraged to develop monitoring and compliance systems to ensure long-term impacts from adopted policy frameworks. Furthermore, the integration of data management practices into policy planning was identified as a pivotal tool, enabling governments to track progress, identify gaps, and refine energy efficiency strategies using evidence-based approaches.
- The success of the Twinning Project lies in its ability to encourage collaboration across sectors and regions. By bringing together NOOs, NEEPs, and FMFPs, the project provided a multidisciplinary platform for addressing shared challenges collectively. This collaborative approach bridged the gaps between energy, climate, and environmental policies, enabling a more coordinated response to sustainable cooling. Furthermore, the workshops highlighted the importance of involving a diverse range of stakeholders, including private sector innovators, civil society organizations advocating for sustainable practices, and academic institutions providing research-driven insights. These partnerships were essential for scaling the adoption of energy-efficient technologies, fostering inclusivity, and promoting innovation. Additionally, regional collaboration helped harmonize energy efficiency standards, facilitating knowledge exchange and coordinating joint initiatives among countries facing similar challenges.
- Phase I introduced stakeholders to cutting-edge RAC technologies, low-GWP refrigerants, and international standards that enhance energy efficiency while minimizing environmental impacts. The initiative ensured that adopted technologies were compatible with international trade and environmental benchmarks, fostering global alignment in cooling solutions.
- A critical emphasis was placed on the importance of regular equipment maintenance and servicing to sustain energy efficiency over time. By focusing on long-term maintenance, the project demonstrated how efficiency gains could be preserved, avoiding performance deterioration. This comprehensive approach integrated technology, policy, and capacity building, ensuring that energy efficiency remained a long-term sustainability goal rather than a temporary intervention.
- Financial sustainability emerged as a key support of the Twinning Project, with the initiative emphasizing the role of innovative funding mechanisms in overcoming the cost barriers associated with

energy-efficient technologies. Stakeholders were introduced to a range of financing options, including the Multilateral Fund, the Green Climate Fund (GCF), public-private partnerships (PPPs), and bulk procurement programs with incentive schemes. By addressing financial barriers through these innovative models, the Twinning Project laid the groundwork for scaling up sustainable cooling solutions and ensuring their long-term economic viability.

To strengthen the implementation of the Kigali Amendment and advance sustainable cooling efforts, a series of common and key recommendations have emerged from the Twinning Project workshops. These recommendations emphasize the importance of integrating key policies, enhancing capacity-building, leveraging financial models, and fostering collaboration across sectors. Additionally, there is a critical need for the development of tailored knowledge tools, information materials, and resources that will equip stakeholders with the information they need to achieve these goals effectively:

- Developing comprehensive policies that integrate MEPS, energy labeling, and climate strategies should be a priority. These frameworks must be supported by enforcement mechanisms, data-driven monitoring systems, and periodic evaluations to ensure sustained progress.
- Innovative financial models, such as public-private partnerships and incentive schemes, should be scaled to address funding challenges. Governments should focus on strengthening their ability to develop compelling funding proposals to access international financing opportunities.
- National task forces and/or national collaboration mechanisms should be established to coordinate energy efficiency initiatives, engaging a broad spectrum of stakeholders, including academic institutions, industry leaders, and civil society organizations. Collaborative governance structures can drive innovation and ensure inclusivity.
- Consumer-focused targeted campaigns should emphasize the long-term benefits of energy-efficient technologies, including cost savings and environmental advantages. Tailored messaging strategies should resonate with local target audiences to maximize impact.
- Preparing and disseminating region-specific success cases that seamlessly integrate refrigerant transition with energy efficiency gains. These targeted examples should detail measurable impacts, implementation challenges overcome, and replicable stakeholder collaboration models to accelerate regional adoption.

2. RATIONALE AND APPROACH

While Phase I successfully facilitated initial knowledge exchange, introduced policy integration frameworks, and strengthened stakeholder engagement, countries still face challenges in operationalizing these insights. Key barriers include the lack of tailored information resources, limited access to structured technical guidance, and the need for standardized knowledge tools that can be directly applied at national and regional levels. The final report of Phase I highlighted several implementation challenges, including limited FMFP participation and the need for standardized knowledge tools to operationalize insights gained during the Phase I workshops.

To bridge these gaps, Phase II will focus on increasing stakeholder involvement, using resources more effectively while developing and disseminating comprehensive information tools and materials. This approach

will equip stakeholders with the resources needed to implement sustainable cooling solutions effectively, which will subsequently be integrated into the second phase of Twinning workshops. These refined workshops will provide participants with practical, ready-to-use resources, ensuring that discussions translate into concrete implementation strategies. This two-step approach will enhance national and regional capacities, foster policy harmonization, and enable more effective access to financing mechanisms, ultimately accelerating Kigali Amendment-aligned transitions across participating countries.

Optimizing stakeholder participation and resource allocation in Phase II

The evaluation of Phase I workshops revealed that while the twinning approach between NOOs and NEEPs was highly effective, the participation of FMFPs was uneven across the regions. Analysis of participation data from the eight regional workshops conducted in 2023-2024 indicates that FMFP attendance was inconsistent and substantially lower than that of NOOs and NEEPs. This can be attributed to several factors, including competing preferences and priorities at the national level and the specialized nature of the workshops. Additionally, the limited time available during a two-day workshop to cover multiple topics made it difficult to adequately address the potential role of financial mechanisms in Kigali Amendment implementation. Therefore, Phase II will implement a strategic adjustment to maximize impact and resource efficiency by focusing in-person workshop participation exclusively on NOOs and NEEPs, the two stakeholder groups that demonstrated the highest level of engagement and cross-sectoral collaboration potential during Phase I. Phase II will also allocate resources to developing need-based knowledge tools. These resources could for example include information on financial innovation mechanisms, for example those related to "Cooling as a Service," bulk procurement mechanisms, public-private partnerships (PPPs), or case studies of successful sustainable cooling initiatives.

Strengthening and enhancing knowledge tools and information resources

Information materials and toolkits represent the missing link between policy ambition and practical implementation. Without them, stakeholders at all levels—from national policymakers to local technicians—lack the technical guidance, standardized procedures, and reference benchmarks needed to translate the shared knowledge into actionable steps. The development of targeted information materials and toolkits is essential for three fundamental reasons:

- Without standardized reference materials, countries develop inconsistent approaches to similar challenges, creating barriers to technology adoption, market growth, and regional harmonization.
- The Kigali Amendment requires unprecedented coordination between traditionally separate domains of refrigerant management and energy efficiency. Targeted information materials create a common language and shared understanding between environmental agencies, energy departments, industry actors, and financial institutions.
- Countries at earlier stages of Kigali Amendment implementation need not reinvent processes already developed elsewhere. Comprehensive toolkits capture the best practices and case studies, allowing countries to leapfrog common obstacles.

Phase II will contribute to developing these high-quality, region-specific materials that empower policymakers, technicians, and financial stakeholders with the insights needed to drive Kigali Amendment-aligned cooling transitions. By providing practical guidance and success stories, these resources will bridge critical knowledge

gaps and catalyze informed decision-making. Additionally, Phase II will document and disseminate case studies that highlight how refrigerant transitions can be seamlessly integrated with energy efficiency improvements. These knowledge tools and resources will help lay the foundation for the workshop component of this phase.

Twinning workshops: a platform for practical implementation

Once these knowledge tools and resources are developed, Twinning workshops will serve as the primary platform for their dissemination and application. These workshops will be redesigned to ensure that stakeholders receive structured guidance on utilizing the newly developed materials, bridging the gap between knowledge acquisition and on-the-ground implementation. Key enhancements to the workshops will include:

- Practical exercises and real-world applications using policy toolkits, and technical manuals/guidelines.
- Facilitating cross-country exchanges to discuss best practices in applying knowledge tools within different regulatory and economic contexts.

By embedding structured information tools into the Twinning workshops, Phase II will ensure that stakeholders not only gain access to essential knowledge but also develop the capacity to implement Kigali-aligned policies and national projects effectively. This approach will drive meaningful progress in sustainable cooling transitions, supporting national and regional efforts to achieve climate resilience.³

3. STRATEGIC OBJECTIVES

Phase II will serve as a bridge between policy planning and implementation, focusing on three key areas:

1. ***Strengthening institutional capacity and collaboration through national coordination mechanisms:*** To foster stronger coordination between NOOs, NEEPs and other stakeholders to ensure harmonized policymaking and regulatory alignment, and that would include:
 - Facilitate the establishment of National Coordination Mechanisms to enhance cooperation among regulatory agencies, industry representatives, and financial institutions.
 - Develop model governance frameworks and operational guidelines for National Coordination Mechanisms to improve decision-making and accountability. A National Coordination Mechanisms Toolkit will be developed to guide their formation, covering governance structures, role definitions, and templates for Memoranda of Understanding (MOUs) and proposals.
2. ***Enhancing technical knowledge and resources:*** To develop and/or adapt existing toolkits and information materials that address specific challenges identified during Phase I. This could include one or more of the following:

³ This approach aligns with the Executive Committee's recognition at its 83rd meeting of the need for 'Coordination with energy efficiency policy makers in setting up and/or operationalizing MEPS, labelling systems and other mechanisms for the introduction of energy-efficient RACHP equipment.(UNEP/OzL.Pro/ExCom/83/40, paragraph 50(b)). The *Evaluation of Regional Networks of National Ozone Officers* presented to the 86th Executive Committee meeting further reinforced this by noting that networks are 'requiring engagement of new stakeholders (e.g., climate and energy-efficiency experts) while maintaining momentum for the remaining ODS phase-out.(UNEP/OzL.Pro/ExCom/86/11, paragraph 73).

- Refrigerant Integration Guidelines to incorporate refrigerant-related data into MEPS and energy labeling frameworks, with procedures for integrating information on refrigerant type, quantity, and GWP; alignment with international safety standards; and methodologies for assessing RAC systems performance while considering refrigerant environmental impact.
 - Market Surveillance Toolkit to equip regulatory bodies with resources for effective market surveillance and compliance verification, offering protocols for product testing and market audits, verification guidelines for assessing energy performance and refrigerant data, and enforcement frameworks with appropriate penalties and consumer protection mechanisms.
 - Technical Assessment Toolkit providing comprehensive documentation for evaluating RAC systems' performance, including standardized testing protocols based on global standards, detailed criteria for assessing efficiency with a focus on refrigerant performance, and preformatted templates for documenting evaluation results and simplifying compliance reporting.
 - Policy Integration Toolkit to support the alignment of MEPS and energy labeling standards across regions to promote consistency in trade and technology adoption. The toolkit will be offering structured templates, guidelines, and checklists for incorporating MEPS and energy labelling into regulatory frameworks, with pre-designed policy templates for country-specific contexts, comprehensive regulatory checklists to ensure compliance with existing regulations, and step-by-step guidance for embedding standards into legislative frameworks.
 - Document and disseminate region-specific case studies that integrate refrigerant transition with energy efficiency improvements. These cases will showcase measurable impacts, outline the challenges overcome, and present replicable stakeholder collaboration models to accelerate adoption across different regions.
 - End-User Awareness resource development with educational materials tailored to businesses, schools, and community organizations to promote sustainable cooling practices.
3. ***Twinning workshops for scaling knowledge and collaboration:*** Following the development of toolkits and resources, regional Twinning Workshops (held back-to-back with regional network meetings to maximize participation, with interpretation support when required) will be organized across the nine networks to introduce key knowledge tools, provide hands-on training, facilitate National Coordination Mechanisms formation, and foster regional cooperation.

Expected outcomes

Phase II will transform strategies into concrete results by strengthening institutional cooperation, providing stakeholders with essential knowledge tools, aligning policies, and enhancing access to financing. This comprehensive approach will deliver measurable, tangible outcomes. By connecting refrigerant transitions with energy efficiency improvements, the initiative addresses both climate change mitigation and energy security, generating lasting environmental and economic benefits. The structured, region-specific strategy will enable countries to implement sustainable cooling solutions, cut emissions, and contribute to global resilience.

By the end of Phase II, the project expects to achieve:

- Active participation of over 290 stakeholders in implementing Kigali-aligned projects.
- Formal national coordination mechanisms established or strengthened in at least one country per region.
- Up to 5 comprehensive toolkits developed, peer-reviewed, and tested with stakeholders.
- At least 9 regional workshops conducted with multi-sectoral representation.

4. PROJECT IMPLEMENTATION

Implementation plan

This implementation plan draws on lessons learned and stakeholder feedback captured in the final report of Twinning Project Phase I, ensuring continuity while addressing identified gaps and opportunities.

This plan outlines a comprehensive strategy that is designed to bridge the gap between policy planning and practical implementation of the Kigali Amendment and energy efficiency measures across CAP regional networks. Building on the foundation established in Phase I, this plan presents a structured approach with timelines, resource allocations, and expected outcomes to ensure successful implementation of the Kigali Amendment commitments while promoting energy-efficient cooling technologies across all regions.

The implementation plan is organized into three interconnected components:

1. ***Preparation and assessment:*** Establishing baseline knowledge through comprehensive regional gap analysis and laying the groundwork for all project components and mainly the knowledge and information resources required.
2. ***Knowledge and information resource development:*** Creating tailored tools and resources to address identified needs
3. ***Twinning workshop organization:*** Facilitating practical knowledge transfer and cross-sectoral collaboration

The plan spans 30 months, with Components 1 and 2 completed within the first 12 months, followed by 18 months for Component 3 implementation.



Component 1: Preparation & Assessment (Months 1 to 5)

Activities

- 1. Regional technical experts' identification:** The first key activity in Phase 1 will be to identify and recruit qualified technical experts for each of the regional networks. These regional experts will play vital ongoing roles throughout the entire 30-month project timeline. During Phase 1 (Months 1-5), they will conduct regional gap analyses, evaluate existing coordination mechanisms, collect baseline data, and contribute to workshop framework development. As the project progresses to Phase 2 (Months 6-12), these same experts will provide technical input and coordination for toolkits and knowledge resources development, review draft materials, ensure regional customization, and validate resource accuracy. In the final Phase 3 (Months 13-30), they will support workshop design, deliver regional training sessions, provide post-workshop technical assistance, and contribute to the impact assessment. Candidate screening will be based on established criteria, including relevant technical experience in refrigerant management and energy efficiency, qualifications in environmental science, engineering, or related fields, and demonstrated familiarity with regional contexts and challenges.
- 2. Regional gap analysis:** Conduct comprehensive assessments across all CAP regional networks to identify and confirm specific knowledge gaps, technical needs, and implementation barriers, taking into consideration the projects' Phase I findings and reflected in the final report of Twinning Project Phase I. Analyze regional differences in cooling sector challenges and opportunities, highlighting unique constraints and favorable conditions in each region.
- 3. National coordination mechanism assessment:** Evaluate existing coordination mechanisms between National Ozone Units, energy agencies, and other key stakeholders in participating countries. Map institutional frameworks, administrative processes, communication channels, and decision-making procedures that impact cross-sectoral coordination on cooling issues. Identify structural barriers to effective collaboration and potential opportunities for integration.
- 4. Baseline data collection:** Document existing best practices and success stories for inclusion in knowledge resources, with particular focus on initiatives that successfully integrate energy efficiency with refrigerant transition. Identify specific regional constraints in technology adoption and policy implementation through stakeholder interviews, document review, and field assessments.
- 5. Twinning workshop groundwork:** Develop concepts for workshop curricula informed by preliminary assessment findings. Identify regional and international technical experts for each region with demonstrated experience in participatory learning methodologies. Establish comprehensive criteria for participant selection to ensure appropriate representation across sectors and gender balance. Begin strategic planning to synchronize workshops with regional network meeting schedules to maximize participation and resource efficiency.

Timeline

- Month 1: Expert recruitment and methodology development
- Months 2 to 3: Regional gap analyses and coordination assessments
- Months 3 to 4: Baseline data collection
- Month 5: Analysis finalization and workshop planning

Resources required

- Human resources: 9 regional technical experts, assessment methodologists, and data analysts
- Technical resources: Survey platforms, analytical software, mapping tools, data management systems

Key milestones

- Month 1: Experts contracted, methodologies finalized
- Month 2: Stakeholder engagement strategy completed
- Month 3: Assessment protocols established
- Month 4: All regional data collection completed
- Month 5: Assessment reports and workshop framework finalized

Component 2: Knowledge and Information Resource Development (Months 6 to 12)

Methodology and activities

1. Content Planning: Confirm knowledge and information resources required by each region based on Phase I findings and Component-1 assessment. Establish expert working groups for each toolkit category. Identify existing resources that can be adapted or referenced.
2. Resource Development Process: Draft initial content based on assessment findings. Conduct peer reviews with technical experts. Test resources with target users from different regions. Refine Knowledge and Information resources based on feedback.
3. Tailoring to Regional Contexts: Customize resources to address regional priorities and challenges. Translate materials into relevant languages. Create an accessible online platform to host all resources.

Examples of the proposed knowledge and information resources

- Policy Integration Toolkit: Provides structured templates for incorporating MEPS and energy labeling into regulatory frameworks, adaptable policy templates for country-specific contexts, regulatory checklists for compliance, step-by-step guidance for embedding standards into legislation, and the Legislative & Policy Options/RAC Sector Action Tool for tracking HFC phase-down progress and developing targeted policies.
- Technical Assessment Toolkit: Offers standardized testing protocols for RAC systems based on global standards, criteria for assessing efficiency with a focus on refrigerant performance, templates for documenting evaluation results, and tools for simplifying compliance reporting.
- Market Surveillance Toolkit: Includes protocols for product testing and market audits in the RAC sector, verification guidelines for assessing energy performance and refrigerant data, and enforcement frameworks with penalties and consumer protection mechanisms.
- Refrigerant Integration Guidelines: Provide procedures for integrating refrigerant type, quantity, and GWP into MEPS, guidance on aligning with international safety standards, and methodologies for assessing RAC systems' performance considering refrigerant impact.
- National Coordination Mechanisms Toolkit: Includes governance structures, operational guidelines, role definitions, templates for MOUs between agencies, and best practices for cross-sectoral collaboration.

- End-User Awareness Resources: Provide targeted educational materials for businesses, schools, and communities, guidance on sustainable cooling practices, and communication materials highlighting the benefits of efficient, Kigali-compliant cooling.

Timeline

- Months 6 to 8: Initial content development Months 9 to 10: Expert review and revision
- Month 11: Translation and regional customization
- Month 12: Finalization of resources and platform development.

Resources required

- Human Resources: subject matter specialists, translators
- Financial Resources: content development, design, translation.

Key milestones

All toolkit content drafted (Month 8)

- Expert review completed (Month 10)
- Resources translated and adapted to regional contexts (Month 11)
- Digital platform launched with all resources (Month 12)

Component 3: Twinning Workshop Organization (Months 13 to 30)

Workshop planning and implementation activities

1. Develop comprehensive workshop curricula based on knowledge resources. Design interactive sessions that facilitate peer-to-peer learning. Create practical exercises for applying the toolkits. Finalize region-specific case studies and discussions.
2. Confirm workshop schedules with regional network meetings. Secure appropriate venues with necessary technical capabilities. Arrange for interpretation and workshop materials. Finalize participant selection based on established criteria.
3. Prepare detailed session guides and facilitation content and methodologies. Conduct facilitator briefings for regional context awareness.
4. Distribute preparatory materials to participants. Conduct needs assessment surveys to refine workshop content. Engage with participants to identify specific country challenges.

Workshop execution

1. Workshop Structure: Introduction to knowledge tools and resources. Hands-on training with toolkits. Facilitated discussions on regional and national applications. Action planning sessions for national-level implementation.
2. Participant Engagement Strategies: Balanced mix of presentations, discussions, and practical exercises. Peer-to-peer knowledge exchange sessions. Country case study presentations. Small working groups focused on specific implementation challenges.

3. Cross-Sectoral Collaboration Focus: Facilitate the formation of National Coordination Mechanisms. Develop draft MOUs between agencies and other supporting material.

Timeline

- Months 13 to 15: Final workshop design and preparation
- Months 16 to 26: Workshop delivery across ten regional networks
- Months 27 to 30: Follow-up/ Impact assessment and Final reports completed

Resources required

- Human resources: Regional experts to facilitate workshops, technical specialists, and logistics coordinators
- Financial resources: Budget for venues, travel, accommodation, materials, interpretation

Key milestones

- Workshop curricula and materials finalized (Month 15)
- All regional workshops conducted (Month 26)
- Impact assessment and Final reports completed (Months 27 to 30)

5. SUSTAINABILITY

The sustainability approach for Phase II incorporates key recommendations from the Twinning Project Consolidated Completion Report of Phase I (2023-2024), particularly regarding the institutionalization of cross-sectoral collaboration mechanisms.

Phase II envisions a transformative approach that extends well beyond the 30-month implementation period. This strategy doesn't seek to complete project activities; rather, it aims to catalyze enduring systemic change in how countries approach energy efficiency and Montreal Protocol implementation. At its core, the strategy recognizes that true sustainability emerges from embedding new practices within existing institutional structures. By encouraging the establishment of National Coordination Mechanisms as permanent inter-ministerial committees, the project seeks to create enduring platforms where energy, environment, and finance stakeholders can continue their collaboration long after project completion. These mechanisms, when successfully integrated into national development plans and climate strategies, may become the backbone of ongoing Kigali Amendment implementation in participating countries.

Technical sustainability represents another critical dimension of this approach. The project envisions the development of South-South cooperation networks where countries facing similar challenges can exchange knowledge and solutions independently. This could potentially lead to regional centers of excellence that serve as hubs for continued innovation and adaptation of energy-efficient cooling technologies. The creation of formal pathways for technology transfer might enable ongoing partnerships with research institutions and manufacturers, fostering a self-sustaining ecosystem of technical advancement.

Strategic partnerships form the third pillar of this sustainability vision. By formalizing relationships through memoranda of understanding with key partners and connecting national stakeholders to international networks, the project aims to create lasting channels for knowledge exchange and resource mobilization. If successful, these partnerships could evolve into durable alliances that continue driving progress on sustainable cooling solutions for decades to come.

The project also anticipates long-term impacts through policy integration and regulatory frameworks. The development of model regulatory approaches for MEPS, energy labeling, and refrigerant controls could provide countries with templates that inform policy evolution well into the future. Similarly, the creation of tools for regulatory impact assessments will equip policymakers with the means to continuously refine their approaches as technologies and markets evolve.

While these outcomes represent the project's vision, their realization remains contingent on multiple factors, including political will, resource availability, and competing priorities in participating countries. The degree to which these sustainability mechanisms take root will likely vary across regions, with some countries potentially emerging as leaders while others face continued challenges in institutionalizing the project's approaches.

The sustainability strategy for Phase II of the Twinning Project provides a clear pathway for ensuring long-term impact. The expected long-term outcome of this sustainability strategy—if successfully implemented—would be a fundamental shift in how countries approach cooling challenges. Rather than viewing energy efficiency and refrigerant management as separate domains, countries might increasingly adopt integrated approaches that maximize climate benefits while meeting growing cooling demands. This integration could potentially lead to accelerated adoption of climate-friendly cooling solutions, significant energy savings, and measurable progress toward national climate commitments under the Paris Agreement.

6. GENDER MAINSTREAMING CONSIDERATIONS

UNEP OzonAction is dedicated to advancing gender equality and the empowerment of women in alignment with UNEP's *Policy and Strategy for Gender Equality and the Environment* and the Multilateral Fund's *Operational Policy on Gender Mainstreaming for Multilateral Fund-supported Projects*. In March 2022, OzonAction launched its internal Gender Mainstreaming Plan, outlining a structured approach to integrating gender considerations into both institutional (internal) and programmatic (external) activities.

The final report of Phase I (2023-2024) highlighted significant gender disparities across regional networks, with female participation averaging only 35.3% overall. Notable regional variations were observed, with Latin America achieving the highest female representation (53%), while Africa Francophone had the lowest at 26%. Four regions (Africa Francophone, Caribbean, Pacific Islands, and Africa Anglophone) demonstrated gender gaps exceeding the global average of 30%.

Building on these findings, Phase II will implement enhanced gender mainstreaming measures:

- Embedding gender considerations at all stages of the project lifecycle, from preparation and implementation to monitoring and reporting, with specific targets to address regional disparities identified in Phase I.
- Ensuring equal participation opportunities for female NOOs and NEEPs in workshops, with special emphasis on regions where gender gaps were most pronounced.
- Utilizing e-learning and digital knowledge tools to provide gender-neutral and accessible training opportunities, removing potential barriers to female participation.
- Establishing minimum thresholds for female representation among speakers, facilitators, and participants for workshops, with participation data systematically tracked and reported against Phase I baselines.
- Encouraging NOOs and project partners to actively consider gender balance when nominating participants, with specific guidance materials included in the project's knowledge resources.
- Incorporating gender-specific considerations into knowledge materials and toolkits to ensure they address the unique challenges faced by women in the cooling sector.

By including these gender-responsive strategies into the project execution and measuring progress against Phase I benchmarks, UNEP aims to cultivate a more inclusive and equitable approach to capacity building, policy development, and implementation in the cooling sector, ultimately reducing the identified gender gaps.

7. PERFORMANCE INDICATORS

The following table outlines the proposed performance framework for Phase II. Building on insights from the final report of Phase I (2023-2024), these indicators establish clear metrics to measure project success across all three components. The framework emphasizes tangible, measurable outcomes that directly support the strategic objectives while enabling adaptive management throughout the implementation period. These performance metrics will be systematically tracked and evaluated, to ensure transparency and accountability.

Component	Expected outcomes	Performance indicators
1. Preparation & Assessment	▪ Comprehensive understanding of regional needs, gaps, and barriers. ▪ Mapped institutional frameworks and coordination mechanisms for cross-sectoral collaboration. ▪ Documentation of best practices and successful case studies. ▪ Evidence-based framework for designing workshops aligned with regional priorities.	▪ 9 regional technical experts contracted. ▪ 9 regional assessment reports finalized with detailed gap analysis and recommendations. ▪ Institutional coordination mechanisms mapped in at least 70% of participating countries. ▪ At least 3 successful case studies documented per region, covering policy, technical, and financial aspects. ▪ Workshop framework developed and validated by regional experts, ensuring alignment with identified needs.
2. Knowledge & Information Resource Development	▪ Development of a suite of tailored toolkits and resources addressing regional challenges. ▪ Establishment of an online knowledge-sharing platform.	▪ Up to 5 comprehensive toolkits developed, peer-reviewed, and tested with stakeholders. ▪ Online platform launched and operational, within the first year.

Component	Expected outcomes	Performance indicators
	- Regional customization and translation of materials to enhance usability. - Strengthened stakeholder capacity for integrating energy efficiency with refrigerant transition.	- At least 2 customized regional adaptations per toolkit based on country-specific needs. - At least 3 languages used for translation, ensuring broad accessibility
3. Twinning Workshop	- Strengthened technical and institutional capacity of stakeholders to implement Kigali Amendment commitments. - Improved cross-sectoral collaboration for integrated policy and technology adoption. - Enhanced financial literacy and access to funding mechanisms for sustainable cooling initiatives.	- At least 250 stakeholders actively participating across all regional networks - Formal coordination mechanisms established or strengthened in at least one country from each region. - At least 9 regional workshops conducted with multi-sectoral representation.

8. BUDGET

The budget allocation reflects the resource optimization strategy recommended previously in the "Rationale and Approach for Twinning Project Phase II" section of the proposal. This strategic budgetary approach was developed in direct response to the participation patterns observed during Phase I and documented in the final report.

Item	Description	Amount (US\$)	Subtotal
COMPONENT 1: PREPARATION & ASSESSMENT			
Regional technical experts (energy efficiency)	One expert per region. Supports analysis and production of regional assessment reports, development of workshop frameworks and methodologies, and planning and delivery of twinning workshops	135,000	
Needs assessment tools	Survey software, data analysis tools, and analytical frameworks	1,200	
Regional assessment reports	Analysis, compilation, and production of assessment reports	0	
<i>Subtotal</i>			136,200
COMPONENT 2: KNOWLEDGE & INFORMATION RESOURCE DEVELOPMENT			
Subject matter consultants/specialists	Content development experts for up to 5 toolkits and information resources categories	116,000	
Design and production	Graphic design, layout, and production of materials	10,000	
Translation	Translation of materials into regional languages	29,000	
Digital platform development	Web development for online resource repository	2,000	
<i>Subtotal</i>			157,000
COMPONENT 3: TWINNING WORKSHOP ORGANIZATION			
Travel and daily subsistence allowance (DSA) for National Ozone Officers (NOO) and	147 participants in each category. NOOs costing only for additional days of DSA	350,000	

National Energy Efficiency Policymakers (NEEP)			
Travel and daily subsistence allowance (DSA) for Regional Energy Efficiency Organisations	20 participants	50,000	
Travel and daily subsistence allowance (DSA) for Resource persons	20 participants	100,000	
Workshop venues and logistics	9 regional workshops including venue rental, equipment, and support services		
		<i>Subtotal</i>	500,000
		<i>Grand total</i>	793,200

Notes:

1. The budget allocates Technical Regional Expert fees (\$15,000 per expert × 9 networks = \$135,000) equally across all three components to ensure continuity throughout the 30-month project.
2. Travel costs are concentrated in Component 3 to support the extensive in-person workshop activities across all 9 regional networks.
3. The digital platform developed in Component 2 will continue to serve as a resource repository throughout Component 3 and beyond the project timeline, providing sustainable value.

This budget structure ensures appropriate resource allocation across all project phases while maintaining flexibility to address region-specific needs identified during the assessment phase.

9. WORKPLAN

This work plan covers the 30-month implementation of Phase II of the Twinning Project, designed to bridge the gap between policy planning and practical implementation of the Kigali Amendment and energy efficiency measures across CAP regional networks.

Milestone	Time period	Duration	Deliverables
COMPONENT 1: PREPARATION & ASSESSMENT			
Experts contracted, methodologies finalized	Month 1	1 month	Expert contracts, assessment methodology documents
Regional gap analyses & coordination assessments	Months 2-3	2 months	Stakeholder database, assessment protocols
Baseline data collection	Months 3-4	2 months	Regional data collection reports
Assessment reports & workshop framework finalized	Month 5	1 month	Regional assessment reports, workshop framework document
COMPONENT 2: KNOWLEDGE & INFORMATION RESOURCE DEVELOPMENT			
Initial content development	Months 6-8	3 months	Draft toolkit content
All toolkit content drafted	Month 8	Milestone	Draft knowledge resources for all toolkit categories
Expert review and revision	Months 9-10	2 months	Expert-reviewed toolkit content
Translation and regional customization	Month 11	1 month	Regionally adapted resources
Digital platform launched with resources	Month 12	1 month	Finalized toolkits, launched digital resource platform

Milestone	Time period	Duration	Deliverables
COMPONENT 3: TWINNING WORKSHOP ORGANIZATION			
Workshop design finalization	Months 13-15	3 months	Detailed workshop design documents
Workshop curricula and materials finalized	Month 15	Milestone	Workshop curricula, facilitation guides, participant materials
Workshop delivery across regional networks	Months 16-26	11 months	Regional workshop implementation
All regional workshops conducted	Month 26	Milestone	Workshop reports, participant action plans, national coordination mechanisms
Post-workshop support	Months 27-30	4 months	Follow-up assistance reports
Impact assessment and final reporting	Months 29-30	2 months	Final impact assessment report, success stories documentation

Critical path and dependencies

The critical path for successful implementation involves several key dependencies:

- Regional gap analyses must be completed to properly inform resource development
- Knowledge resources must be finalized before workshop curricula can be designed
- Workshop materials must be completed before regional workshops can begin
- All workshops must be conducted before the final impact assessment