



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



Distr.
GENERAL

UNEP/OzL.Pro/ExCom/79/21
7 de junio de 2017

ESPAÑOL
ORIGINAL: INGLÉS

COMITÉ EJECUTIVO DEL FONDO MULTILATERAL
PARA LA APLICACIÓN DEL
PROTOCOLO DE MONTREAL
Septuagésima novena Reunión
Bangkok, 3 – 7 de julio de 2017

PROGRAMA DE TRABAJO DEL PNUD PARA 2017

COMENTARIOS Y RECOMENDACIÓN DE LA SECRETARÍA DEL FONDO

1. El PNUD solicita la aprobación del Comité Ejecutivo de la cantidad de 846 552 \$EUA, más unos gastos de apoyo del organismo de 59 859 \$EUA para su programa de trabajo de 2017 que se expone en la tabla 1. La presentación se adjunta al presente documento.

Tabla 1: Programa de Trabajo del PNUD para 2017

País	Actividad/Proyecto	Cantidad solicitada (\$EUA)	Cantidad recomendada (\$EUA)
SECCIÓN A: ACTIVIDADES RECOMENDADAS PARA APROBACIÓN GENERAL			
A1: Renovación de proyectos de fortalecimiento institucional			
Chile	Renovación del proyecto de fortalecimiento institucional (fase XII)	238 784	238 784
Colombia	Renovación del proyecto de fortalecimiento institucional (fase XI)	352 768	352 768
Trinidad y Tobago	Renovación del proyecto de fortalecimiento institucional (fase IX)	85 000	85 000
		676 552	676 552
Gastos de apoyo al organismo (7 por ciento para fortalecimiento institucional) para A1:		47 359	47 359
Total para A1		723 911	723 911
A2: Preparación de proyectos			
República Democrática del Congo	Preparación de un plan de gestión de la eliminación de HCFC (estrategia general)	20 000	20 000
		Subtotal para A2	20 000
Gastos de apoyo al organismo (7 por ciento para preparación de proyectos):		1 400	1 400
Total para A2		21 400	21 400
A3: Asistencia técnica para la preparación de informes de verificación			
El Salvador	Informe de verificación para la etapa I del plan de gestión de la eliminación de los HCFC	30 000	30 000
		Subtotal para A3	30 000
Gastos de apoyo al organismo (9 por ciento para asistencia técnica):		2 700	2 700
Total para A3		32 700	32 700
SECCIÓN B: ACTIVIDADES RECOMENDADAS PARA CONSIDERACIÓN PARTICULAR			
B1: Preparación de proyectos para proyectos relacionados con HFC (decisión 78/3 (g))			
China	Preparación de proyectos para optimización de productos de aire acondicionado y de líneas de producción pasando del HFC-134a al HFO-1234yf como refrigerante en el caso de un fabricante de equipos de aire acondicionado de vehículos (MAC)	30 000	*
China	Preparación de proyecto para la conversión de HFC-245fa a HFO como agente de espuma en el caso de un fabricante de refrigeradores	30 000	*
China	Preparación de proyecto para la conversión de HFC-134a a HC-290 en el caso de un fabricante de congeladores	30 000	*
México	Preparación de proyecto para un proyecto de demostración para la eliminación del HFC en la producción de refrigeradores en Mabe México	30 000	*
		Subtotal para B1	*
Gastos de apoyo al organismo (7 por ciento para preparación de proyectos):		8 400	*
Total para B1		128 400	*
Gran total (A1, A2, A3, B1):		906 411	778 011

*Para consideración particular

SECCIÓN A: ACTIVIDADES RECOMENDADAS PARA APROBACIÓN GENERAL

A1: Fortalecimiento institucional

Descripción del proyecto

2. El PNUD presentó las solicitudes para la renovación de los proyectos de fortalecimiento institucional de los países enumerados en la tabla 1. La descripción de estos proyectos se presenta en el anexo I al presente documento.

Comentarios de la Secretaría

3. La Secretaría examinó las solicitudes de renovación de los tres proyectos de fortalecimiento institucional presentadas por el PNUD en nombre de los Gobiernos concernidos teniendo en cuenta las directrices y las decisiones pertinentes sobre admisibilidad y los niveles de financiación. Las solicitudes fueron doblemente verificadas comparándolas con el plan de trabajo original para el fortalecimiento institucional, los datos del programa del país y del Artículo 7, el último informe sobre la aplicación del plan de gestión de la eliminación de los HCFC, el informe sobre el avance de las actividades del organismo y cualquier decisión pertinente de la Reunión de las Partes. Se observó que estos países han presentado sus informes sobre la ejecución del programa de país para el año 2016, cumplen con los objetivos de eliminación gradual de SAO en virtud del Protocolo de Montreal y su consumo anual de HCFC no supera el consumo anual máximo permisible indicado en sus respectivos acuerdos del plan de gestión de la eliminación de los HCFC con el Comité Ejecutivo. Asimismo, todas las solicitudes incluían indicadores de desempeño para las actividades planificadas para la siguiente fase de los proyectos de fortalecimiento institucional, de acuerdo con la decisión 74/51(e)¹.

Recomendaciones de la Secretaría

4. La Secretaría recomienda la aprobación general de las solicitudes de renovación de proyectos de fortalecimiento institucional para Chile, Colombia y Trinidad y Tobago, con el nivel de financiación que se indica en la tabla 1 de este documento. El Comité Ejecutivo puede considerar oportuno expresar a los Gobiernos mencionados anteriormente los comentarios que aparecen en el anexo II a este documento.

A2: Preparación de proyectos

República Democrática del Congo Preparación de la etapa II del plan de gestión de la eliminación de los HCFC (estrategia general): 20 000 \$EUA

Descripción del proyecto

5. La descripción del proyecto de preparación de la estrategia general para la etapa II del plan de gestión de la eliminación de los HCFC presentado por el Gobierno de la República Democrática del Congo figura en el programa de trabajo para 2017 del Programa de las Naciones Unidas para el Medio Ambiente (ONU Medio Ambiente)², ya que ONU Medio Ambiente es el organismo de ejecución principal. El PNUD pidió financiamiento para parte de la preparación de la etapa II del plan de gestión de la eliminación de los HCFC como organismo de ejecución cooperante, con el nivel de financiación que se muestra en la tabla 1.

¹ El Comité Ejecutivo decidió seguir usando el formato existente para las renovaciones de proyectos de fortalecimiento institucional que se aprobó en la 61ª reunión (decisión 61/43(c)) con una modificación en la sección 10, para indicar que los indicadores de desempeño se deberían incluir, tal y como se recoge en el anexo XIX del documento UNEP/OzL.Pro/ExCom/74/56 (decisión 74/51(e)).

² UNEP/OzL.Pro/ExCom/79/22

6. La presentación incluyó una actualización sobre la ejecución de la etapa I del plan de gestión de la eliminación de los HCFC, la justificación de la financiación solicitada, las actividades a llevar a cabo y los presupuestos correspondientes.

Comentarios de la Secretaría

7. Los comentarios sobre la solicitud de preparación del proyecto figuran también en el programa de trabajo para 2017 de ONU Medio Ambiente. La Secretaría señaló que la solicitud para la preparación de proyectos del PNUD de la tabla 1 está en consonancia con la decisión 71/42.

Recomendaciones de la Secretaría

8. La Secretaría recomienda la aprobación general de la solicitud del componente del PNUD para la preparación de proyectos para la etapa II de los planes de gestión de la eliminación de los HCFC de la República Democrática del Congo con el nivel de financiación que se indica en la tabla 1, entendiéndose que, si en una futura reunión se revisa el punto de partida para la reducción total del consumo de HCFC, la financiación se ajustará en consecuencia y el saldo será devuelto en la misma reunión.

A3: Asistencia técnica para preparar informes de verificación sobre el consumo de HCFC

El Salvador: Asistencia técnica para el informe de verificación de la etapa I del plan de gestión de la eliminación de los HCFC: 30 000 \$EUA

Descripción del proyecto

9. El Comité Ejecutivo pidió a los organismos bilaterales y de ejecución pertinentes que incluyan en las modificaciones de sus programas de trabajo respectivos para su presentación a la 77ª reunión, la financiación de los informes de verificación de la etapa I de los planes de gestión de la eliminación de los HCFC para, *entre otros*, El Salvador, país para el que el PNUD es el organismo de ejecución principal (decisión 76/17).

Comentarios de la Secretaría

10. La Secretaría señaló que la solicitud para El Salvador se presentó únicamente en la 79ª reunión ya que el informe de verificación tiene que presentarse al menos 60 días antes de la reunión correspondiente del Comité Ejecutivo en la que se solicite el siguiente tramo de financiación de su plan de gestión de la eliminación de los HCFC. La financiación solicitada era coherente con las aprobadas para verificaciones similares en reuniones anteriores.

Recomendaciones de la Secretaría

11. La Secretaría recomienda la aprobación general de la solicitud para la preparación del informe de verificación de la etapa I del plan de gestión de la eliminación de los HCFC de El Salvador con el nivel de financiación que se indica en la tabla 1, entendiéndose que el informe de verificación debe presentarse por lo menos con 60 días de antelación a la reunión correspondiente del Comité Ejecutivo en la que se solicite el siguiente tramo de financiación de su plan de gestión de la eliminación de los HCFC.

SECCIÓN B: ACTIVIDADES RECOMENDADAS PARA CONSIDERACIÓN PARTICULAR

B1: Preparación de proyectos para proyectos relacionados con HFC (decisión 78/3 (g))

Descripción del proyecto

12. El PNUD presentó cuatro solicitudes de financiación para la preparación de proyectos relacionados con HFC en el sector manufacturero, que incluyen la sustitución de HFC-134a por refrigerantes alternativos sin HFC en los sectores de los MAC, congeladores y refrigeración doméstica y la sustitución del HFC-245fa por HFO como componente de la espuma en la fabricación de refrigeradores domésticos (tabla 1). Las presentaciones estuvieron en consonancia con la decisión 78/3(g).³

13. Cada una de las solicitudes de preparación de proyecto incluyó información sobre el concepto del proyecto, las actividades que se llevarán a cabo durante la preparación del proyecto y los costos asociados con dichas actividades. Todas las solicitudes de preparación de proyecto fueron presentadas con cartas de aval de los gobiernos respectivos, en consonancia con los requisitos de la decisión 78/3(g). Los detalles de cada solicitud figuran en la presentación adjunta al presente documento.

Comentarios de la Secretaría

14. En la 78ª reunión, durante el debate sobre la información pertinente para establecer criterios de financiación de la reducción gradual de los HFC, se señaló que se necesitaba información adicional para poder llegar a una decisión sobre los costos adicionales admisibles. Después de seguir examinando la cuestión, el Comité Ejecutivo estuvo de acuerdo con la decisión 78/3(g).

15. La Secretaría señaló que, si bien los proyectos fueron presentados en consonancia con los costos considerados por el Comité Ejecutivo para la financiación de la preparación de proyectos, y que las propuestas contenían suficientes detalles para permitir el examen de estas solicitudes, se requería mayor orientación para determinar las prioridades de los proyectos. Deben definirse los criterios, el alcance y el tipo de proyectos cubiertos, la financiación total disponible para estos proyectos, la duración de la ejecución de los proyectos, y los requisitos en materia de presentación de informes después de la terminación para que la Secretaría pueda examinar estas solicitudes y formular recomendaciones al Comité Ejecutivo.

16. La Secretaría ha examinado esta cuestión en el documento sobre la reseña de las cuestiones identificadas durante el examen de proyectos⁴.

Recomendación de la Secretaría

17. El Comité Ejecutivo puede considerar oportuno estudiar las propuestas para la preparación de proyectos relacionados con HFC para el sector de fabricación, tal como se muestran en la tabla 1 de este documento, en el contexto de su debate de las propuestas de proyectos relacionados con los HFC que se

³ Considerar la posibilidad de aprobar un número limitado de proyectos relacionados con los HFC únicamente en el sector de fabricación, sin perjuicio de diferentes tipos de tecnología, a más tardar en la primera reunión de 2019, a fin de que el Comité pueda adquirir experiencia con los costos adicionales de capital y los costos adicionales de explotación que pueden estar relacionados con la reducción de los HFC en los países que operan al amparo del artículo 5, en la inteligencia de que cualquier país que opera al amparo del artículo 5 que presente un proyecto debe haber ratificado la Enmienda de Kigali o haber enviado una nota oficial que indique la intención del gobierno de ratificar la Enmienda; de que no habría otros fondos disponibles hasta que el instrumento de ratificación no hubiera sido recibido por el depositario en la Sede de las Naciones Unidas en Nueva York; y de que cualquier cantidad de HFC reducida como resultado del proyecto se deduciría del punto de partida.

⁴ UNEP/OzL.Pro/ExCom/79/19.

UNEP/OzL.Pro/ExCom/79/21

describen en el documento sobre la reseña de las cuestiones identificadas durante el examen de proyectos (UNEP/OzL.Pro/ExCom/79/19).

Annex I

INSTITUTIONAL STRENGTHENING PROJECT PROPOSALS

Chile: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Jun. 1992	213,000
Phase II:	Oct. 1996	113,500
Phase III:	Jul. 1998	143,500
Phase IV:	Dec. 2000	143,500
Phase V:	Nov. 2002	186,550
Phase VI:	Apr. 2005 & Nov. 2005	186,550
Phase VII:	Mar. 2007	186,550
Phase VIII:	Apr. 2009	186,550
Phase IX:	Apr. 2011	186,550
Phase X:	Apr. 2013	186,550
Phase XI:	May 2015	186,550
	Total:	1,919,350
Amount requested for renewal (phase XII) (US \$):		238,784
Amount recommended for approval for phase XII (US \$):		238,784
Agency support costs (US \$):		16,715
Total cost of institutional strengthening phase XII to the Multilateral Fund (US \$):		255,499
Date of approval of country programme:		1992
Date of approval of HCFC phase-out management plan (stage I):		2011
Date of approval of HCFC phase-out management plan (stage II):		2015
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		6.4
Annex C, Group I (HCFCs) (average 2009-2010)		87.5
Annex E (methyl bromide) (average 1995-1998)		212.5
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.00
Annex C, Group I (HCFCs)		63.33
Annex E (methyl bromide)		-2.4
	Total:	63.33
Year of reported country programme implementation data:		2016
Amount approved for projects (as at December 2016) (US \$):		18,390,229
Amount disbursed (as at December 2015) (US \$):		12,751,515
ODS to be phased out (as at December 2016) (ODP tonnes):		1,296
ODS phased out (as at December 2015) (ODP tonnes):		1,003

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

Summary of activities	Funds approved (US \$)
(a) Investment Projects	11,091,769
(b) Institutional strengthening:	1,919,350
(c) Project preparation, technical assistance, training and other non-investment projects:	5,379,110
Total:	18,390,229

Progress report

2. During the eleventh phase of the IS project for Chile ozone matters continued to be addressed by the NOU located in the Office of Climate Change with oversight of the Deputy Minister of Environment. HCFC import and export controls are fully implemented, including those for formulated polyols. The NOU continued to coordinate the implementation of stage I of the HPMP working closely with local authorities and stakeholders including the National Customs Service. Multiple initiatives are underway including training of refrigeration and air-conditioning technicians on low-GWP alternatives and the application of good refrigeration practices. Implementation of stage II of the HPMP, which was approved during phase XI, was initiated. Chile reported the 2015 and 2016 country programme data in advance of the 1 May deadline and actively participated in regional network and international meetings relevant to the implementation of the Montreal Protocol and was successful in its efforts to maintain awareness of the topic of ozone layer protection among policy makers and the general public.

Plan of action

3. During phase XII of the IS project, the Government of Chile will maintain its ban on CFC and halons, and the reduction in HCFC consumption already achieved. The NOU will work with public and private entities to enforce HCFC consumption control measures and coordinate activities including investment projects, training programmes on good refrigeration practices, and public awareness activities. Additionally, the Government of Chile will initiate the internal process for the ratification of the Kigali Amendment, and will continue to participate in regional network and Montreal Protocol meetings in order to exchange information and experience that will foster the implementation of national policies and strategies for the protection of the ozone layer.

Colombia: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNDP
Amounts previously approved for institutional strengthening (US \$):			
Phase I:	Mar-94		317,790
Phase II:	Mar-98		212,000
Phase III:	Mar-00		212,000
Phase IV:	Nov-02		275,600
Phase V:	Apr-05		275,600
Phase VI:	Jul-07		275,600
Phase VII:	Jul-09		275,600
Phase VIII:	Jul-11		275,600
Phase IX:	Jul-13		275,600
Phase X:	May-15		275,600
	Total:		2,670,990
Amount requested for renewal (phase XI) (US \$):			352,768
Amount recommended for approval for phase XI (US \$):			352,768
Agency support costs (US \$):			24,694
Total cost of institutional strengthening phase XI to the Multilateral Fund (US \$):			377,462
Date of approval of country programme:			1994
Date of approval of HCFC phase-out management plan (stage I):			2010
Date of approval of HCFC phase-out management plan (stage II):			2015
Baseline consumption of controlled substances (ODP tonnes):			
Annex B, Group III (methyl chloroform) (average 1998-2000)			0.6
Annex C, Group I (HCFCs) (average 2009-2010)			225.6
Annex E (methyl bromide) (average 1995-1998)			110.1

Summary of the project and country profile	
Latest reported ODS consumption (2015) (ODP tonnes) as per Article 7:	
Annex B, Group III (methyl chloroform)	0.00
Annex C, Group I (HCFCs)	164.60
Annex E (methyl bromide)	0.00
Total:	164.60
Year of reported country programme implementation data:	2016
Amount approved for projects (as at December 2016) (US \$):	35,517,796
Amount disbursed (as at December 2015) (US \$):	28,689,141
ODS to be phased out (as at December 2016) (ODP tonnes):	2,005
ODS phased out (as at December 2015) (ODP tonnes):	1,896

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

Summary of activities	Funds approved (US \$)
(a) Investment projects:	26,163,439
(b) Institutional strengthening:	2,670,990
(c) Project preparation, technical assistance, training and other non-investment projects:	6,683,367
Total:	35,517,796

Progress report

5. During the tenth phase of the IS project for Colombia, the Government of Colombia through its NOU, completed stage I of the HPMP and initiated the strategy for stage II of the HPMP. Activities implemented included: cooperation with the Customs authority to achieve and maintain compliance with Montreal Protocol targets through monitoring trade; coordinating the collection, analysis, verification and submission of country programme data which was submitted in advance of the 1 May deadline; strengthening the legal framework to control and monitor HCFCs consumption through import/export licensing and quota systems and new regulations according to the commitments in stage II of the HPMP; developing synergies with climate change initiatives which resulted in the formulation and submission of the Nationally Appropriate Mitigation Actions (NAMA) for the domestic refrigeration sector in order to reduce emissions of greenhouse gases and contribute to sustainable development. The NOU also coordinated developments of the district cooling project and demonstration projects to promote ODS alternatives in several sectors. In international meetings, the country contributed to the discussions taking place at the regional, Executive Committee and Parties level. International Ozone Day was celebrated in nine cities in 2016 and information/awareness activities targeting technicians and customs officers were carried out.

Plan of action

6. During the eleventh phase of the IS project, Colombia aims to further reduce HCFC consumption through the implementation of stage II of the HPMP while maintaining the total phase out of other ODS. The process for ratification of the Kigali Amendment will be initiated and will require consultation with the Climate Change office and Energy Department as well as other stakeholders in order to coordinate the efforts through the Montreal Protocol and the United Nations Framework Convention on Climate Change. Collection and analysis of data on ODS alternatives will continue to provide further understanding of the country's status. Colombia will continue to participate in regional and Montreal Protocol meetings, to exchange information and experience that will foster the implementation of national policies and strategies for the protection of the ozone layer. The country plans to celebrate International Ozone Day and continue other awareness activities.

Trinidad and Tobago: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Oct-96	66,000
Phase II:	Dec-00	44,000
Phase III:	Nov-02	57,200
Phase IV:	Dec-04	60,000
Phase V:	Nov-06	60,000
Phase VI:	Nov-09 & Dec-10	60,000
Phase VII:	Dec-12	60,000
Phase VIII:	Nov-14	60,000
	Total:	467,200
Amount requested for renewal (phase IX) (US \$):		85,000
Amount recommended for approval for phase IX (US \$):		85,000
Agency support costs (US \$):		5,950
Total cost of institutional strengthening phase IX to the Multilateral Fund (US \$):		90,950
Date of approval of country programme:		1996
Date of approval of HCFC phase-out management plan:		2011
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		0.7
Annex C, Group I (HCFCs) (average 2009-2010)		46.0
Annex E (methyl bromide) (average 1995-1998)		1.7
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.00
Annex C, Group I (HCFCs)		20.81
Annex E (methyl bromide)		0.00
	Total:	20.81
Year of reported country programme implementation data:		2016
Amount approved for projects (as at December, 2016) (US \$):		3,360,697
Amount disbursed (as at December 2015) (US \$):		2,147,864
ODS to be phased out (as at December 2016) (ODP tonnes):		130.5
ODS phased out (as at December 2015) (ODP tonnes):		113.5

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

Summary of activities	Funds approved (US \$)
(a) Investment projects:	1,611,303
(b) Institutional strengthening:	467,200
(c) Project preparation, technical assistance, training and other non-investment projects:	1,282,194
Total:	3,360,697

Progress report

8. Phase VIII of the IS project for Trinidad and Tobago was implemented by the NOU located in the Ministry of Planning and Development and the country has maintained compliance with the Montreal Protocol. The country continued to implement stage I of the HPMP in coordination with the public and private sectors. A licensing and quota system for HCFC imports and exports has allowed the country to reduce HCFC consumption in accordance with the Agreement with the Executive Committee. The NOU continue monitoring activities in the air-conditioning sector, the regulation of imports, consultations with stakeholders, and the reporting of country programme data in advance of the 1 May deadline. The NOU improved the communication system between the Ministry of Trade, Customs and itself with the aim of

detering illegal trade, and conducted seminars with customs officials on labelling standards. Awareness activities were undertaken to sensitize the private sector about the challenges ahead and to support the national strategy towards an ODS-free and low-carbon plan. Information materials were also provided to the educational Science Bus project.

Plan of action

9. During the ninth phase of the IS project, the Government of Trinidad and Tobago will maintain its import regulations for ODS and ODS-based equipment, and the NOU will continue to coordinate the implementation of stage I of the HPMP, working with public and private entities to enforce HCFC consumption control measure and the ban on the import of pre-blended polyols containing HCFC-141b. Other activities include training programmes on good refrigeration practices, licensing and certification system of refrigeration and air-conditioning technicians; conversion of foam enterprises, seminars with customs officer on labelling and blend identification, and public awareness activities. The NOU will also prepare the submission of the fourth tranche of the HPMP. Trinidad and Tobago will celebrate international ozone day, continue information sharing, and participate in regional network and Montreal Protocol meetings.

Anexo II

OPINIONES PRELIMINARES EXPRESADAS POR EL COMITÉ EJECUTIVO SOBRE LA RENOVACIÓN DE PROYECTOS DE FORTALECIMIENTO INSTITUCIONAL PRESENTADOS A LA 79ª REUNIÓN

Chile

1. El Comité Ejecutivo examinó el informe presentado con la solicitud para el proyecto de fortalecimiento institucional de Chile (fase XII) y tomó nota con beneplácito de que el país está tomando las medidas necesarias para cumplir con las medidas de control del Protocolo de Montreal relativas a los HCFC. El Comité Ejecutivo felicitó al Gobierno de Chile por la ejecución de la etapa I del plan de gestión de la eliminación de los HCFC, la eficacia de su sistema de licencias y cuotas, y el enfoque participativo utilizado en la ejecución de todas las actividades relacionadas con el Protocolo de Montreal. El Comité Ejecutivo tomó nota con beneplácito de las actividades realizadas por el Gobierno de Chile para fomentar la adopción de alternativas con bajo potencial de calentamiento de la atmósfera en el sector de la refrigeración y del aire acondicionado y el nivel de sensibilización pública relacionada con las metas nacionales de eliminación, así como la intención de iniciar el proceso para ratificar la Enmienda de Kigali, y la continua y activa participación del país en la red regional y en las reuniones del Protocolo de Montreal. El Comité Ejecutivo espera que, en la fase XII del proyecto de fortalecimiento institucional, el Gobierno de Chile continúe con la ejecución de la etapa II del plan de gestión de la eliminación de los HCFC y con el proyecto de fortalecimiento institucional de forma que prepare al país para lograr la reducción del 35 % en el consumo de HCFC exigida para el 1 de enero de 2020.

Colombia

2. El Comité Ejecutivo examinó el informe presentado con la solicitud para el proyecto de fortalecimiento institucional de Colombia (fase XI) y tomó nota con beneplácito de que el país está tomando las medidas necesarias para cumplir con las medidas de control del Protocolo de Montreal relativas a los HCFC. El Comité Ejecutivo felicitó al Gobierno de Colombia por la ejecución de la etapa I y la preparación de la etapa II del plan de gestión de la eliminación de los HCFC, su eficaz sistema de licencias y cuotas, y la buena comunicación entre los importadores de HCFC y las autoridades aduaneras. El Comité Ejecutivo tomó nota con beneplácito de los esfuerzos realizados por el Gobierno de Colombia a través de los proyectos de demostración para encontrar alternativas a la utilización de los HCFC, el nivel de sensibilización de la opinión pública en relación con los retos de la eliminación de los HCFC y las metas nacionales de eliminación, y las medidas iniciales para la ratificación de la Enmienda de Kigali. El Comité también agradeció la activa participación del país en la red regional y en las reuniones del Protocolo de Montreal. El Comité Ejecutivo tomó nota de que la fase II aprobada del plan de gestión de la eliminación de los HCFC apoyará los esfuerzos de Colombia en los próximos años para cumplir con sus metas de reducción de los HCFC y, por lo tanto, confía en que el Gobierno de Colombia siga llevando a cabo actividades de eliminación de SAO para lograr la reducción del 35 % en el consumo de HCFC exigida para el 1 de enero de 2020.

Trinidad y Tobago

3. El Comité Ejecutivo examinó el informe presentado con la solicitud para el proyecto de fortalecimiento institucional de Trinidad y Tobago (fase IX) y tomó nota con beneplácito de que el país está tomando las medidas necesarias para cumplir con las medidas de control del Protocolo de Montreal relativas a los HCFC. El Comité Ejecutivo felicitó al Gobierno de Trinidad y Tobago por la ejecución de la etapa I del plan de gestión de la eliminación de los HCFC, su eficaz normativa de control de las exportaciones e importaciones para la importación de SAO, mezclas de SAO y equipos basados en SAO, así como su norma de etiquetado obligatorio para los envases de refrigerantes. El Comité Ejecutivo tomó nota con beneplácito de que el país llevó a cabo la capacitación en buenas prácticas de refrigeración haciendo énfasis en el uso seguro de los refrigerantes de hidrocarburos, preparó actividades de

sensibilización pública relacionadas con la eliminación de los HCFC, y participó en la red regional y en las reuniones del Protocolo de Montreal. El Comité Ejecutivo espera que, en la fase IX del proyecto de fortalecimiento institucional, el Gobierno de Trinidad y Tobago continúe con la ejecución del plan de gestión de la eliminación de los HCFC y con el proyecto de fortalecimiento institucional con el fin de lograr la reducción del 35 % en el consumo de HCFC exigida para el 1 de enero de 2020.



**79th Meeting of the Executive Committee of the Multilateral Fund
for the Implementation of the Montreal Protocol**

(3 – 7 July 2017)

**UNDP
2017 WORK PROGRAMME**

2017 WORK PROGRAMME

I. EXECUTIVE SUMMARY

15 May 2017

The present document constitutes UNDP's 2017 Work Programme and is being submitted for consideration of the Executive Committee (ExCom) at its 79th Meeting. The list of submissions for all funding requests (including investment projects) that will be submitted by UNDP to the 79th ExCom meeting in Annex 1 to this document is provided for information. Project documentation such as multi-year agreements (MYA) tranche requests, HCFC investment and demonstration projects and other individual/investment proposals, are not included in this document and are submitted separately as per normal practice. Only the following (non-investment) submissions are part of this document.

II. FUNDING REQUESTS PART OF THE WORK PROGRAMME

Institutional Strengthening Extensions

Requests for funding of extensions of institutional strengthening projects included in this document for submission at the 79th ExCom Meeting are tabulated below. The documents with terminal reports and requests for extension of IS funding are being submitted separately.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Chile	INS	Institutional Strengthening Renewal (Phase XII)	24	238,784	16,715	255,499
Colombia	INS	Institutional Strengthening Renewal (Phase XI)	24	352,768	24,694	377,462
Trinidad & Tobago	INS	Institutional Strengthening Renewal (Phase IX)	24	85,000	5,950	90,950
Total (3 requests)				676,552	47,359	723,911

Preparation funding requests for stage II HPMP

UNDP is submitting one funding request for the preparation of stage II of HPMPs to 79th ExCom meeting. The Annex 3 contains the PRP submission.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
DR of the Congo (cooperating)	PRP	Stage II HPMP Preparation (overarching strategy)	15	20,000	1,400	21,400
Total (1 requests)				20,000	1,400	21,400

Request to change the duration of the HPMP stage I agreement for Brazil

UNDP would like to request a change in the agreement for the HPMP stage I for Brazil and extend it to the end of 2019. There are many synergies and overlaps with the HPMP stage II Foam Sector Plan.

Other requests for non-investment projects

Pursuant to the ExCom decision 76/17, as part of the Work Programme Amendment, UNDP is submitting to 79th ExCom meeting the requests for funding for verification reports for stage I of HPMP for El Salvador.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
El Salvador	TAS	Verification report for stage I of HPMP	15	30,000	2,700	32,700
Total (1 request)				30,000	2,700	32,700

Submissions in response to the ExCom decision 78/3 (g)

UNDP is submitting 2 investment projects and 4 requests for the preparation of investment projects in response to the ExCom decision 78/3 (g). The list of submissions is provided in Annex 2. The associated requests for preparation funds are included in Annex 4 and the investment projects have been submitted separately.

III. SUMMARY OF FUNDING REQUESTS (WORK PROGRAMME)

The table below summarizes the funding requests for non-investment activities and proposals, as part of UNDP's Work Programme for 2017, submitted to the 79th ExCom Meeting:

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Chile	INS	Institutional Strengthening Renewal (Phase XII)	24	238,784	16,715	255,499
Colombia	INS	Institutional Strengthening Renewal (Phase XI)	24	352,768	24,694	377,462
DR of the Congo	PRP	Stage II HPMP Preparation (overarching strategy)	15	20,000	1,400	21,400
El Salvador	TAS	Verification report for stage I of HPMP	15	30,000	2,700	32,700
Trinidad & Tobago	INS	Institutional Strengthening Renewal (Phase IX)	24	85,000	5,950	90,950
Total (5 requests)				726,552	51,459	778,011

ANNEX 1

List of all UNDP HCFC related submissions for funding to the 79th ExCom Meeting

No	Country	Type	Description	Funding Request for the 79 th ExCom (US\$)		
				Amount	Agency Fee	Total
1	Angola	PHA	Stage II HPMP (servicing)	322,190	22,553	344,743
2	Barbados	PHA	Stage I HPMP - second tranche	38,000	3,420	41,420
3	Belize	PHA	Stage I HPMP - second tranche	6,500	585	7,085
4	Chile	INS	Institutional Strengthening Renewal (Phase XII)	238,784	16,715	255,499
5	Colombia	INS	Institutional Strengthening Renewal (Phase XI)	352,768	24,694	377,462
6	DR of the Congo	PHA	Stage I HPMP - third tranche	24,000	2,160	26,160
7	DR of the Congo	PRP	Stage II HPMP Preparation (overarching strategy)	20,000	1,400	21,400
8	Egypt	INV	Stage II HPMP (HC production, XPS and foam)	1,493,700	104,559	1,598,259
9	El Salvador	TAS	Verification report for stage I of HPMP	30,000	2,700	32,700
10	Lebanon	PHA	Stage I HPMP - fourth tranche	124,760	9,357	134,117
11	Mexico	PHA	HCFC phase-out in extruded polystyrene foam plank applications <i>No new funding is requested for this project. Potential savings from Foam Sector Plan in Mexico will be utilized.</i>	0	0	0
12	Peru	PHA	Stage I HPMP - third tranche	24,671	2,220	26,891
13	Trinidad & Tobago	INS	Institutional Strengthening Renewal (Phase IX)	85,000	5,950	90,950
Total (13 requests)				2,760,373	196,313	2,956,686

Notes:

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

ANNEX 2

List of project submissions and requests for preparatory funding being submitted in response to the ExCom decision 78/3 (g)

No	Country	Type	Description	Funding Request for the 79th ExCom (US\$)		
				Amount	Agency Fee	Total
1	Bangladesh	INV	Conversion from HFC-134a to isobutane in manufacturing household refrigerator at Walton Hi-Tech Industries Limited	4,936,507	345,555	5,282,062
2	China	PRP	Air conditioning and production line optimization from HFC-134a to HFO-1234yf as refrigerant in a mobile air conditioning manufacturer	30,000	2,100	32,100
3	China	PRP	Conversion from HFC-245fa to HFO as a foam agent in a refrigerator manufacturer	30,000	2,100	32,100
4	China	PRP	Conversion from HFC-134a to HC-290 in a freezer manufacturer	30,000	2,100	32,100
5	Colombia	INV	Conversion from HFC-134a to isobutane in the manufacture of domestic refrigerators at Mabe Colombia	3,829,157	268,041	4,097,198
6	Mexico	PRP	HCFC phase-out in the production of refrigerators at MABE Mexico	30,000	2,100	32,100
Total (6 requests)				8,885,664	621,996	9,507,660

ANNEX 3

Funding request for the preparation of stage II of HPMPs for:

Democratic Republic of the Congo

Funding Request for the Preparation of Stage-II HCFC Phase-out Management Plan of The Democratic Republic of Congo (DRC)

By: UNEP & UNDP

Background

The Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol, at its 63rd Meeting held in Montreal in April 2011, approved stage I of the HCFC phase-out management plan (HPMP) for DRC for the period 2011 to 2015 to reduce HCFC consumption by 10 per cent of the baseline, at the amount of:

- US \$235,000, plus agency support costs of US \$30,550 for UNEP;
- US \$240,000 plus agency support costs of US \$21,600 for UNDP.

The Government of DRC committed to the following control measures with the support of funding and technical assistance from the Multilateral Fund and implementing agency:

- Freeze the consumption of HCFCs in 2013 to the agreed baseline figure.
- Reduce consumption of HCFCs by 10% from 2015.

The HPMP for the Democratic Republic of the Congo was approved based on the estimated baseline at the time of submission (58 ODP tonnes of HCFC-22). The Government has agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the baseline of 58 ODP tonnes. The established baseline for the country is now 66.21 ODP tonnes. The Democratic Republic of the Congo requested a revision of the reported consumption of HCFC-22 in 2009 from 890 MT (48.95 ODP tonnes) to 1,014.98 MT (55.82 ODP tonnes). The request for the revision of the baseline submitted by the Democratic Republic of the Congo was reviewed during several meetings of the Implementation Committee (46 to 49). MOP Decision XXV/13 noted that “[...] the Democratic Republic of the Congo [...] [has] presented sufficient information, in accordance with decision XV/19, to justify their requests for the revision of their consumption data for hydrochlorofluorocarbons for 2009 [...] which are part of the baseline for parties operating under paragraph 1 of Article 5.

The approved HPMP Stage I preparation funds have been fully used, and it is confirmed that there is no balance remaining.

The endorsement from the Government for the request of the Stage-II HPMP preparation has been received.

Progress in the implementation of the Stage-I (brief information)

	Activity	Progress In Implementation
1	<i>Legislation</i>	
	Introduction of ODS import monitoring in the curricula of all customs schools;	License and Quota systems in place which currently restrict imports and exports of HCFC. The “Office Congolais du Contrôle” in charge of the control of all imports in DRC has integrated an Ozone Module including the control of ODS and ODS-based equipment into its curricula.
2	<i>Capacity Building</i>	
Tranche 1	Customs officers training programme to enhance the surveillance of import of HCFCs and HCFC based equipment;	A training workshop for twenty trainers was organized. Also, five workshops for 120 customs officers and inspectors were completed. Five refrigerant identifiers were purchased and used during the customs training workshops.
Tranche 2	Continuation of training programme for	A total of eighty five (85) customs and other

	Activity	Progress In Implementation
	customs and enforcement officers	enforcement officers were trained on control and identification of ODS and ODS-based equipment including HCFCs and HCFC-based equipment.
Tranche 1	Training of service technicians in good refrigeration practices including the use of hydrocarbon technologies in close cooperation with the refrigeration association in the country.	A training workshop for twenty five (25) trainers was completed. These trainers have provided training to ninety four (94) additional technicians with the main goal of the training workshops to equip refrigeration technicians with knowledge and necessary skills in good refrigeration practices and in hydrocarbon technologies.
Tranche 2	Continuation of the training of service technicians in good refrigeration practices including the use of hydrocarbon technologies in close cooperation with the refrigeration association in the country.	An additional sixty (60) technicians were trained in good refrigeration practices including the use of hydrocarbon technologies during the 2 training workshops that were organized by the NOU in cooperation with the industry association.
3	<i>Investment project</i>	
Tranche 1	Provision of Equipment and Reinforcement of 4 Training centres	Equipment received and distributed to 4 training centres of excellence (INPP Kinshasa, ITP N'Galema, ITI N'Djili and the ACROPOF, i.e. the refrigeration Association). A survey of the refrigeration professionals was also completed, accounting for ca. 6,000 technicians in the country
Tranche 2	Provision of new Equipment and Reinforcement of 4 new Training centres	Equipment received and distributed to 4 new training centres of excellence – as per the modification of the targets approved at ExCom 70, this was completed in lieu of commercial refrigeration end user programme and local filling facility development. - Two publications will be printed and widely distributed: <ul style="list-style-type: none"> • Results of national survey on refrigerant uses in DRC • Manual for importers and users of refrigerants
4	<i>Monitoring, evaluation of implementation of the HPMP</i>	
Tranches 1 and 2	Monitoring and evaluation	The NOU recruited two consultants (1 refrigeration expert and 1 customs expert) in addition to the existing NOU team to assist in the monitoring of the effective implementation of all the HPMP activities and collect accurate data for both tranches. Consultants provided to the NOU reports on the implementation of the HPMP.

Overarching Strategy

The overarching strategy that DRC expects to implement assumes that new commercially viable refrigeration and, in particular, air-conditioning technologies that use zero-ODP and low-GWP refrigerants in energy efficient equipment will become available in the coming decade.

The overarching strategy will be based on strengthening the implementation of the existing quota and licensing system and technical capacity building of trainers and technicians, to support appropriate technology choices.

HCFC Consumption

DRC has reported HCFC consumption for 2015 as 15.4 ODP Tonnes and estimated it preliminarily at 15 ODP Tonnes for 2016.

Information to be collected

Information to be collected during the Stage-II HPMP preparation would include:

- The current HCFC quantities consumed by servicing workshop/end users and legally imported HCFCs under the licensing/quota system (update of Stage 1 survey);
- Analysis of the current situation and development trends;
- Inventory of the HCFC-based equipment especially for room air conditioners and commercial HCFC-based equipment;
- Feedbacks from national stakeholders on the possible set-up and enforcement method of a refrigeration servicing technicians certificate system, as well as other policy initiatives and technical interventions;
- Consideration of the need for additional actions for introduction of low-GWP alternatives to HCFCs into the country (standards, training, incentives);
- Estimate of market share of the HCFC-based equipment vs various alternative technologies to get a better understanding of how the ozone- and climate-friendly alternative technologies are received.

Activities proposed for Stage II Preparation

As requested by the Government, the HPMP stage II would be developed with assistance of UNEP, as leading agency, and UNDP, as cooperating agency. The proposed activities and budget are as per following:

Activities	Proposed cost	UNEP	UNDP
Survey of the HCFC servicing workshops, as well as HCFC importers for the HCFC consumption	30,000	30,000	
Survey of end users, importers of the HCFC-based equipment to update the inventory of the HCFC equipment	5,000		5,000
National review, discussion and consultation meetings on the draft of Stage II HPMP	10,000	10,000	
Consultant for the draft and finalization of stage II HPMP	25,000	10,000	15,000
Total (USD) without PSC	70,000	50,000	20,000

Note: All the preparation activities including the stakeholder consultations and finalization of the Stage-II HPMP will be conducted in an integrated manner for both UNEP- and UNDP-led components. Thus, the funding level of each activity is indicative and subject to changes based on the further discussion between the NOU, implementing agencies and the national stakeholders during the Stage-II preparation.

ANNEX 4

Funding requests for the preparation of investments projects to phase down HFCs in:

China (3 PRPs)

Mexico (1 PRP)

These PRPs are being submitted in response to the ExCom decision 78/3 (g).

Country: **People's Republic of China**

Project Title: **Air conditioning and production line optimization from HFC-134a to HFO-1234yf as refrigerant in a mobile air conditioning manufacturer**

Lead Implementing Agency: **UNDP**

Sectors: **Mobile Air Conditioning**

Project Duration: **12 months**

Preparation cost: **US \$30,000**

Implementing Agency Support Cost: **US\$ 2,100**

Total Cost of Project to MLF: **US\$ 32,100**

National Coordinating Agency: **Foreign Economic Cooperation Office, Ministry of Environmental Protection (FECO/MEP)**

=====

Background and Introduction

The Kigali Amendment was adopted by the 28th Meeting of Parties to the Montreal Protocol on 15 October 2016 in Kigali, Rwanda. Under the amendment, countries committed to cut the production and consumption of HFCs by more than 80 percent over the next 30 years. The ambitious phase down schedule will avoid more than 80 billion metric tons of carbon dioxide equivalent emissions by 2050—avoiding up to 0.5° Celsius warming by the end of the century.

HFC-134a (R134a) is a controlled substance listed in the Annex F under the Kigali Amendment. R134a with Global Warming Potential (GWP) of 1,430, is one of the major refrigerants that contributes to global warming and was used as an alternative to CFC-12 from early 2000's in A5 countries in mobile air conditioning. Due to lack of the low GWP alternatives and strict leakage control policy and measures in most of the A5 countries currently, the consumption of R134a in the MAC sector is quite significant including for the first charge in new cars and for servicing demand. The introduction of low GWP alternative and improvement of leakage control of MAC products will lead to the reduction of consumption of R134a.

R1234yf, with zero ODP and very low GWP (4), was introduced as one of the alternatives of R134a in MAC. It has similar thermal properties as R134a and can be used as direct replacement of R134a after optimization of the system. As early as 2009, SAE's development project "CRP1234" has concluded that R1234yf can be used as the next generation refrigerant.

However, R1234yf is expensive and is slightly flammable; thus, in order to reduce the cost of using R1234yf as a replacement refrigerant, as well as to improve the safety and efficiency of the refrigeration system, it is necessary to control refrigerant leakage of MAC products. In developed countries, there exists strict regulations on the annual leakage rate of refrigerant. United States requires that the leakage rate for single system not to exceed 40g / year, whilst for double system the leakage rate shall not exceed 60g / year. European regulations are even more stringent, the annual leakage rate shall not exceed more than 15g / year.

Automotive air conditioning refrigerant leakage can be caused by different reasons; it can be divided mainly into external leakage and internal leakage. External leakage occurs mainly in the compressor, the pressure switch connection, the evaporator, the tank and the pipeline connection; internal leakage is mainly caused by the compatibility of the refrigerant and the lubricating oil. **Optimization** of the MAC products for the use of low GWP alternative is needed.

China is now the biggest car market in the world with annual sales over 20 million units, therefore, consumes a considerable amount of R134a both on the manufacturing and servicing sector in MAC.

Project Objectives:

1. To assess the cause and evaluate the current annual refrigerant leakage rate of the mobile air conditioning system; to assess the current level of annual leakage in mobile air conditioning system when R1234yf is used as refrigerant, including both internal leakage and external leakage, to gather demonstration data to propose an industry standards for mobile air conditioning system leakage.
2. To assess the performance of the AC system of using R1234yf as refrigerant after optimization to the AC products through introducing technological improvement.
3. Establish a production line for an optimized automotive air conditioning system.

Project Activities:

- Establish mobile air-conditioning system refrigerant test protocol and internal leakage test protocol to assess the current rate of refrigerant leakage and cause of the leakage in domestic vehicles, and prepare an assessment report;
- Assess the current rate of leakage, the annual leakage quantities when R1234yf is used as replacement refrigerant in automotive air-conditioning refrigeration system, and identify the cause of the leakage;
- Assess the performance of AC system using R1234yf and identify the necessary technological improvement measures;
- Based on the findings above, optimize the design of the automotive air conditioning system;
- Establish an optimized production line for the improved automotive air conditioning systems, generate demonstration data as basis to propose R134a and R1234yf Refrigerant Leakage Standard.

Research Progress and Stage Results

Stage 1:

- Set up automotive air conditioning system refrigerant leakage test protocol and internal leakage test protocol using SAE J2727 standard and JIS-K211 standard to test existing system on external and internal refrigerant leakage level, to assess the existing R134a system refrigerant leakage rate;
- Use R1234yf as replacement refrigerant for R134a and to assess the R1234yf system refrigerant performance and leakage rate;
- Stage results: R134a and R1234yf system refrigerant performance and leakage analysis report.

Stage 2:

- Through results of the test protocol performed on the R1234yf system, identify points of refrigerant leakage;
- Through the compatibility test to determine the compatibility of different lubricants and R1234yf refrigerant, determine the quantities of refrigerant leakage and identify the best lubricants compatible with R1234yf refrigerant;
- Optimize the design of R134a and R1234yf air-conditioning system to achieve reduction in the rate of refrigerant leakage and improve the performance of the system after the conversion;
- Stage results: optimized R134a and R1234yf system design.

Stage 3:

- Convert a production line to produce the optimized mobile air-conditioning system and establish a set of design and production specifications;
- Gather demonstration data as basis to propose a national standard on R134a and R1234yf refrigerant leakage;
- Stage results: the transformation and establishment of an optimized mobile air-conditioning system that generates demonstration data, and the finalization of a draft document to establish sector standard.

Estimated budget of full project proposal: TBD

Partnership

Shanghai Jiao tong University Institute of Automotive Engineering and Nanjing Xiezhong Auto-Airconditioner (Group) Co., Ltd. will jointly carry out the activities of analysis and assessment, and optimization of the MAC products and production line in this project.

Funding for preparation: US \$30,000

COUNTRY: People's Republic of China

PROJECT TITLE: Preparation project for Conversion from HFC-245fa to HFO as a foam agent in a refrigerator manufacturer

INTERNATIONAL IMPLEMENTING AGENCY: UNDP

PROJECT DURATION: 12 months

PROJECT COSTS: US\$ 30,000

IMPLEMENTING AGENCY SUPPORT COST: US\$ 2,100 (7%) – UNDP

TOTAL COST OF PROJECT TO MLF: US\$ 32,100

NATIONAL COORDINATING AGENCY: MEP/FECO OF CHINA

Background

1. In China, cyclopentane (C5) and HCFC-141b, as the foaming agents, were adopted to replace CFC-11 by the domestic refrigerator industry during the period from 1995 to 2007. Thanks to the implementation of HCFCs phase-out plans in China, HCFC-141b has been almost phased out in the domestic refrigerator sector in recent years. However, HFC-245fa was introduced to replace HCFC-141b to improve the insulation performance to meet the upgrade of energy efficient standard in China. In recent years, the volume of domestic refrigerators adopting HFC-245fa is increased more than 30% annually. It is estimated that approximately 7,000 tons of HFC-245fa is consumed in domestic refrigerator sector in 2016. Now, HFC-245fa, similar with cyclopentane (C5), has become the major foaming agent in the domestic refrigerator industry in China, and it is estimated that the demand of HFC-245fa will be increased rapidly in the future due to the energy efficient standard becoming more and more strict in the future and in the industry development.
2. Since around the year 2011, some domestic refrigerator companies have started to study the use of C5+HFOs foaming technology and commercialized some products in the last 2 years. However, the market share of domestic refrigerator with C5+HFOs is very low in China due to the higher cost compared with HFC-245fa and C5 technology.
3. China is the largest country to produce domestic refrigerator in the world and 70 million units of domestic refrigerators were produced in 2016. The Kigali Amendment of the Montreal Protocol agreed to phase down HFCs will pose a big challenge to China's domestic refrigerator industry due to its huge size and accordingly the huge demand for HFC-245fa.
4. The proposed project is expected to be designed to encourage the use of C5+HFOs technology as foaming agent in domestic refrigerator industry. It will focus on removing or mitigating the barriers for using this non-HFCs technology in this sector. This project will play an exemplary role in phasing-down the huge size HFCs consumed in this sector in China.
5. Moreover, this proposed project is expected to facilitate the country and industries to adopt non-HFCs technologies, as well as to assist the country to explore the efficient management mechanism on phasing down HFCs as foaming agent. This project will provide valuable references for the country and industry to control HFCs to meet the target of the Kigali Amendment in the future.

Objective of the project

6. Given the situation of China's domestic refrigerator industry and the HFC-245fa consumption, the goals of this proposed project are shown as follow:
 - ✓ To convert one production line for manufacturing domestic refrigerator from using HFC-245fa to adopting C5+HFOs as foaming agent in a beneficial manufacturer;
 - ✓ To collect the information of ICC, IOC and energy efficiency data of the conversion and share the experiences with other related industries in China and with the Ex.Com.

Brief introduction of the beneficiary company

7. In the process of preparing this project concept, UNDP had consulted with relevant governmental agencies in

China and the association CHEAA on the matter of choosing the beneficiary company. Considering the R&D capacity and basic capacity on using C5+HFOs technology, it is proposed that Hisense-Kelon Co., Ltd. To be selected to develop the demo production line as conversion activity. Hisense-Kelon Co., Ltd. is part of the Hisense Group, it is established in 1984 and is a major domestic refrigerator manufacturer in China. Hisense-Kelon has 5 manufacturing factories for domestic refrigerator with annual production capacity of 12.6 million units.

8. It is estimated that 1,200 tons of HFC-245fa is consumed by Hisense-Kelon to manufacture domestic refrigerators. Approximately 200 tons of HFC-245fa will be phased out by this project. It should be noted that the data is estimated and the exact data will be collected during the preparation of the full project proposal.

Project activities

9. To meet the targets of this proposed project, the following activities are designed:
- ✓ A demo project of conversion of the domestic refrigerator production line from HFC-245fa to C5+HFOs as foaming agent in the selected company;
 - ✓ Research on technical formulation of C5+HFOs as foaming agent in domestic refrigerator with cost-effectiveness and tests on insulation performance of C5+HFOs as foaming agent;
 - ✓ Preliminary roadmap to phase down HFC-245fa in the domestic refrigerator sector in China;
 - ✓ Summary of the experiences gained by the demo conversion project, as well as the management on controlling HFC-245fa in domestic refrigerator sector;
 - ✓ Dialog between the domestic refrigerator manufacturers and HFOs suppliers to communicate on the technical demands;
 - ✓ One workshop will be organized to share the technology experiences gained by the demo projects.

Budget for preparing the project document:

10. USD 30,000 is requested for the preparation of the project document on the Demo-Project for converting from HFC-245fa to C5+HFOs in domestic refrigerator industry in China.

No.	Budget description	Budget (US \$)
1.	National experts	8,000
2.	Information collection, consolidation and analysis	5,000
3.	Travels	6,000
4.	Meeting/workshop	7,000
5.	Documentation and information materials	4,000
6.	Total	30,000

Schedule

No.	Activities	2017		2018	
		Q3	Q4	Q1	Q2
Project Start-up					
1.	ExCom Project Approval				
2.	Receipt of Funds				
3.	Project/Grant Signature				
Project Implementation					
4.	Information collection and related survey on-site				

No.	Activities	2017		2018	
		Q3	Q4	Q1	Q2
5.	Meeting with the beneficial company and related parties				
6.	Draft the project document				
7.	Review process				
8.	Finalize the document and submission to the ExCom				

COUNTRY: People's Republic of China

PROJECT TITLE: Preparation project for Conversion from HFC-134a to HC-290 in a freezer manufacturer

INTERNATIONAL IMPLEMENTING AGENCY: UNDP

PROJECT DURATION: 12 months

PROJECT COSTS: US\$ 30,000

IMPLEMENTING AGENCY SUPPORT COST: US\$ 2,100 (7%) – UNDP

TOTAL COST OF PROJECT TO MLF: US\$ 32,100

NATIONAL COORDINATING AGENCY: MEP/FECO OF CHINA

Background

1. At the 28th meeting of the Montreal Protocol, the Parties agreed to phase down HFCs by adopting an amendment of the Protocol naming the Kigali Amendment.
2. In China, HFCs were introduced as alternatives to CFCs and HCFCs in several sectors, such as residential and commercial air conditioner industry, domestic and commercial refrigeration sector. China is the biggest production and consumption country of Ozone Depleting Substances in all A5 countries. It can be estimated that China possibly is in similar situation in terms of HFCs consumption. If there is no plan developed to encourage the industries to the roadmap of non-HFCs technologies at the same time of HCFCs phase-out, it can be predicted that the cost will be multiplied in order to control HFCs consumption in China in future.
3. The domestic freezer sector in China had the production volume of around 19 million units in 2016 and HFC-134a is one kind of refrigerant used in the sector. However, its consumption is not too large as compared with other sectors. It will thus make it a little easier to develop plans to control HFCs when the country does not establish the management system and capacity on handling this issue. Additionally, some companies have the willingness to replace HFC-134a with HC-290 due to HC-290's excellent cooling performance in domestic freezer products in recent years. However, the market penetration of domestic freezer with HC-290 is very low now without the relevant incentive being put in place.
4. Thus, it is the right industry that we can target to develop the project to demonstrate the production line conversion from HFCs to non-HFCs as refrigerants and the relevant management mechanism for the country.
5. This proposed project selected the domestic freezer industry in China to design the suitable activities for the conversion. This project will promote efforts to control HFCs in this domestic freezer industry, and will deliver an important signal for HFCs phase-down trend to fulfill the obligation of the Kigali Amendment.

Objective of the project

6. Given the situation of China's domestic freezer and HFC-134a consumption, the goals of this proposed project are set out as below:
 - ✓ To convert one production line for manufacturing domestic freezer from using HFC-134a to adopting HC-290 in the beneficial manufacturer;
 - ✓ To convert one production line for manufacturing compressors from HFC-134a to HC-290 in a selected company;
 - ✓ To collect the information of ICC, IOC and energy efficiency data of the conversion and to identify the barrier of the conversion.
 - ✓ To disseminate the experience and knowledge gained.

Brief introduction of the beneficiary company

7. After consultation with MEP/FECO and CHEAA, it is proposed that Qingdao Haier Freezer Co., Ltd. would be selected to develop the demo production line's conversion activity. Qingdao Haier Freezer Co., Ltd., which belongs to the Haier Group, is established in 2001 and is the biggest domestic freezer manufacturer in China. They have 3 manufacturing factories for domestic freezer with annual production capacity of 7 million units.

8. It is estimated that approximately 50 tons of HFC-134a will be phased out by this project. It should be noted that the data is estimated and the exact data will be collected during the period of preparing the project document.

Project activities

9. To meet the targets of this proposed project, the following activities are designed:
- ✓ A demo project on the conversion of the freezer production line from HFC-134a to R290 in a selected company;
 - ✓ Accordingly, a demo project of the conversion of the compressor production line from HFC-134a to HC-290 in a selected company;
 - ✓ Research and development on domestic freezer and compressor using HC-290;
 - ✓ Research on revising the related safety standards for using HC-290 in freezer product;
 - ✓ Summary of the experience gained by the demo conversion projects, as well as the management on controlling HFC-134a in the domestic freezer sector;
 - ✓ One workshop will be organized to share the technology experiences gained by the demo projects.

Budget for preparing the project document

10. USD 30,000 MLF fund is requested for the preparation of the project document for converting from HFC-134a to HC-290 in the domestic freezer industry in China.

No.	Budget description	Budget (US \$)
1.	National experts	8,000
2.	Information collection, consolidation and analysis	5,000
3.	Travels	6,000
4.	Meeting	7,000
5.	Documentation and information materials	4,000
	Total	30,000

Schedule

No.	Activities	2017		2018	
		Q3	Q4	Q1	Q2
Project Start-up					
9.	ExCom Project Approval				
10.	Receipt of Funds				
11.	Project/Grant Signature				
Project Implementation					
12.	Information collection and related survey on-site				
13.	Meeting with the beneficial company and related parties				
14.	Draft the project document				
15.	Review process				
16.	Finalize the document and submission to the ExCom				



环境保护部环境保护对外合作中心
(环境保护部环境公约履约技术中心)

Foreign Economic Cooperation Office
(Environmental Convention Implementation Technical Center)
Ministry of Environmental Protection, P. R. China

15 May 2017

Dear Ms. Zhou,

In reference to the decision 78/3 (g), through which the MLF Executive Committee (the ExCom) has decided to consider approving a limited number of HFC-related projects in the manufacturing sector without prejudice to different kinds of technology, we request kind support from UNDP to submit the project preparation proposals below for consideration at the 79th ExCom.

1. Air conditioning and production line optimization from HFC-134a to HFO-1234yf as refrigerant in a mobile air conditioning manufacturer
2. Conversion from HFC-134a to R290 as refrigerant in a freezer manufacturer
3. Conversion from HFC-245fa to HFO as foam agent in a refrigerator manufacturer

We are aware of that, when the preparation work are to be completed and full project proposals are to be submitted to the ExCom, a formal letter indicating the government's intention to ratify the Kigali Amendment should be provided to the Secretariat in line with the decision 78/3(g), and that no further funding would be available until the instrument of ratification had been received by the depositary at the Headquarters of the United Nations in New York; and that any amount of HFC reduced as a result of the project would be deducted from the starting point which might be agreed in the future.

We also request UNDP to keep us informed about the review process of this proposal by the MLF Secretariat.

Sincerely yours,

Wang Kaixiang
Division Chief
MEP/FECCO

Ms. Xiaofang Zhou
Director
Montreal Protocol Unit/ Chemicals
Sustainable Development Cluster
Bureau for Policy and Programme Support
United Nations Development Programme

C.C. Carsten Germer, UNDP Beijing Office
Christine Wellington Moore, UNDP MPU Bangkok team
Hong Yun, UNDP Beijing Office

FUNDING REQUEST FOR THE PREPARATION OF A DEMONSTRATION PROJECT FOR HFC PHASEOUT IN THE PRODUCTION OF REFRIGERATORS AT MABE MEXICO

Background

With reference to the decision 78/3 (g), through which the MLF Executive Committee (ExCom) has decided to consider approving a limited number of HFC-related projects in the manufacturing sector without prejudice to different kinds of technology, Mexico’s NOU requested assistance of UNDP for the funding request for preparation of a demonstration project to phase out the HFC use in the production of refrigerators at MABE-Mexico.

Objective

The objective of this document is to request funding for the preparation of a Demonstration Investment Project for the elimination of HFC-134a in the manufacture of domestic refrigerators and to improve energy efficiency and contribute to global warming reduction as part of the process.

The requested PRP funding is **US \$30,000** as the project preparation covers one Company.

Company overview

The MABE Group is the most important appliance producer in Latin America. Its production and commercial operations include Canada, Mexico, Central America, Brazil, Argentina, Colombia, Venezuela, Ecuador, Peru, Chile and Costa Rica.

MABE-Mexico retains its domestic refrigeration production in its Celaya plant. The Celaya plant manufactures over 8,300 refrigerator units daily. Production is geared towards the local market and export including Article 5 countries. MABE-Mexico’s local ownership is 51.6%, and the remaining part is owned by other A5 countries.

HFCs consumption for MABE’s production

	Consumption in MT				
	2012	2013	2014	2015	2016 (partial)
HFC-134a	121	160	147	170	51*
HC-600a**		0.3156	0.19667	0.4994	0.5907

Note*: Complete quantity for 2016 still not available.

Note**: quantity used for testing.

Replacement Technology

During the preparatory work for the demonstration project, the efforts will focus on identifying the suitable alternatives to the use of R-134a in the domestic refrigeration manufacturing at MABE-Mexico. The important criteria, in addition to suitability in terms of technology, cost, availability, etc., will be the low negative climate impact of alternatives. For example the suitability of the use of hydrocarbons will be explored. The final proposal for the demonstration project will specify the replacement technology and activities needed for the conversion.



Subsecretaría de Gestión para la Protección Ambiental
Dirección General de Gestión de la Calidad del Aire y
Registro de Emisiones y Transferencia de
Contaminantes

OFICIO NO. DGGCARETC/ 273 /2017

CIUDAD DE MÉXICO A, 15 MAY 2017

XIAOFANG ZHOU
DIRECTOR
MONTREAL PROTOCOL UNIT
UNITED NATIONS DEVELOPMENT PROGRAMME

Dear Ms. Xiaofang,

Regarding to the procedures of the Multilateral Fund for the Implementation of the Montreal Protocol and the Executive Committee's decision 78/3, I kindly request the submission of the project for the preparation of the Hydrofluorocarbon Phase-out in the Domestic Refrigeration Mexican Company Mabe; in order for it to be considered in the 79th Executive Committee Meeting in July 2017.

In accordance with the referred Decision 78/3, we acknowledge that: a) when the full investment project is approved by the Executive Committee of the Montreal Protocol, no further funding will be available until the Kigali Amendment is ratified and, b) the amount of HFC reduced as a result of the implementation of the project, would be deducted from the agreed starting point.

Thank you for your kind cooperation.

Sincerely Yours,

LA DIRECTORA GENERAL

M. EN I. ANA PATRICIA MARTÍNEZ BOLÍVAR

Por un uso responsable del papel, las copias de conocimiento de este asunto son remitidas vía electrónica
QFB. Martha Garcíaayas Palmeros, Subsecretaría de Gestión para la Protección Ambiental. Presente
Lic. Miguel Ángel Espinosa Luna, Coordinador de Asesoría de la SGPRA. Presente

APMBIASCIAR/RARC



Ejército Nacional s/n, colonia Venustiano Carranza, Delegación Miguel Alemán, S.P.A., Ciudad de México
Tel: +52 (55) 57 00 00 Fax: +52 (55) 57 00 02 www.semarnat.gob.mx

Página 1 de 2