



**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**
Octogésima Reunión
Montreal, 13-17 de noviembre de 2017

ENMIENDAS AL PROGRAMA DE TRABAJO DE LA ONUDI PARA 2017

OBSERVACIONES Y RECOMENDACIONES DE LA SECRETARÍA

1. La ONUDI solicita al Comité Ejecutivo aprobar la suma de 3.192.126 \$EUA, más gastos de apoyo de 271.369 \$EUA, para las enmiendas al programa de trabajo para 2017 que se indican en el Cuadro 1. Se adjunta al presente documento la presentación hecha por la ONUDI.

Cuadro 1: Enmiendas al programa de trabajo de la ONUDI para 2017

País	Actividad/Proyecto	Monto Solicitado (\$EUA)	Monto recomendado (\$EUA)
SECCIÓN A: ACTIVIDADES RECOMENDADAS PARA APROBACIÓN GENERAL			
A1: Renovación de proyectos de fortalecimiento institucional (FI)			
Bosnia y Herzegovina	Renovación proyecto de FI (etapa VI)	122.026	122.026
Serbia	Renovación proyecto de FI (etapa VI)	131.300	168.064
Turquía	Renovación proyecto de FI (etapa VII)	332.800	332.800
Subtotal A1		586.126	586.126
Gastos de apoyo (7% para fortalecimiento institucional)		41.029	41.029
Total A1		627.155	627.155
A2: Asistencia técnica para elaboración de informes de verificación			
Omán	Informe de verificación, etapa I del plan de gestión para la eliminación de HCFC (PGEH)	30.000	
Sudán	Informe de verificación, etapa I del plan de gestión para la eliminación de HCFC (PGEH)	30.000	
Subtotal A2		60.000	
Gastos de apoyo (9% para asistencia técnica)		5.400	
Total A2		65.400	
SECCIÓN B: ACTIVIDADES RECOMENDADAS PARA CONSIDERACIÓN INDIVIDUAL			
B1: Asistencia técnica para actividades de apoyo (decisión 79/46)			
Albania	Actividades de apoyo a la reducción progresiva de HFC	95.000	*
Armenia	Actividades de apoyo a la reducción progresiva de HFC	150.000	*
Bosnia y Herzegovina	Actividades de apoyo a la reducción progresiva de HFC	95.000	*
Burkina Faso	Actividades de apoyo a la reducción progresiva de HFC	150.000	*
Camerún	Actividades de apoyo a la reducción progresiva de HFC	150.000	*
Chile**	Actividades de apoyo a la reducción progresiva de HFC	86.000	*
República del Congo	Actividades de apoyo a la reducción progresiva de HFC	150.000	*
Gambia	Actividades de apoyo a la reducción progresiva de HFC	95.000	*
México	Actividades de apoyo a la reducción progresiva de HFC	220.000	*
Montenegro	Actividades de apoyo a la reducción progresiva de HFC	50.000	*
Serbia	Actividades de apoyo a la reducción progresiva de HFC	150.000	*
Somalia	Actividades de apoyo a la reducción progresiva de HFC	150.000	*
Sudán**	Actividades de apoyo a la reducción progresiva de HFC	75.000	*
Ex República Yugoslava de Macedonia	Actividades de apoyo a la reducción progresiva de HFC	95.000	*
Túnez***	Actividades de apoyo a la reducción progresiva de HFC	75.000	*
Turquía	Actividades de apoyo a la reducción progresiva de HFC	250.000	*
Uruguay**	Actividades de apoyo a la reducción progresiva de HFC	50.000	*
Vietnam	Actividades de apoyo a la reducción progresiva de HFC	250.000	*
Subtotal B1		2.336.000	*
Gastos de apoyo (9% para asistencia técnica)		210.240	*
Total B1		2.546.240	*
B2: Preparación de proyectos relativos a los HFC (decisión 78/3(g))			
Ecuador	Preparación de proyectos para eliminación de HFC-134a y R-404a en sector fabricación (empresa Ecasa)	30.000	*
Ecuador	Preparación de proyectos para eliminación de HFC-134a y R-404a en sector fabricación (empresa Induglob)	30.000	*

País	Actividad/Proyecto	Monto Solicitado (\$EUA)	Monto recomendado (\$EUA)
Líbano	Preparación de proyectos HFC en sector fabricación (empresa Lematic Industries)	30.000	*
México	Preparación de proyecto HFC en la fabricación de equipos autónomos de refrigeración (empresa Fersa)	30.000	*
México	Preparación de proyectos HFC en sector fabricación (empresa Imbera)	30.000	*
Marruecos	Preparación de proyecto HFC en sector fabricación (empresa Manar)	30.000	*
Vietnam	Preparación de proyectos HFC en sector fabricación (empresa Nagakawa Vietnam Company)	30.000	*
Subtotal B2		210.000	*
Gastos de apoyo (7% para preparación de proyectos)		14.700	*
Total B2		224.700	*
Total general (A1, A2, A3, B1, B2)		3.463.495	627.155

*Para consideración individual.

** Como organismo cooperante.

*** Con el Gobierno de Italia como organismo cooperante.

SECCIÓN A: ACTIVIDADES RECOMENDADAS PARA APROBACIÓN GENERAL

A1: Fortalecimiento institucional

Descripción

2. La ONUDI presentó solicitudes de financiamiento para la renovación de proyectos de fortalecimiento institucional en los países que se indica en el Cuadro 1. Los proyectos se describen en el Anexo I al presente documento.

Observaciones de la Secretaría

3. La Secretaría analizó las solicitudes de renovación de tres proyectos de fortalecimiento institucional presentados por la ONUDI a nombre de los respectivos gobiernos a la luz de las pautas y decisiones sobre criterios de admisibilidad y niveles de financiamiento, entre ellas la decisión 74/51(c).¹ Las solicitudes se confrontaron con el plan de trabajo de fortalecimiento institucional de la etapa anterior, con los datos del programa país y del artículo 7, con el último informe de ejecución del plan de gestión, con el informe de avance presentado por el organismo interviniente, y con las decisiones pertinentes de la Reunión de las Partes. Se tomó nota de que los países han dado cumplimiento a las metas de eliminación de SAO previstas en el Protocolo de Montreal y que su consumo anual de HCFC no excede el máximo permitido en sus respectivos acuerdos con el Comité Ejecutivo. Según lo dispone la decisión 74/51(e), las solicitudes contenían indicadores de desempeño para las actividades previstas en la siguiente etapa del proyecto de fortalecimiento institucional.

¹ El Comité Ejecutivo aprobó la totalidad de los proyectos y solicitudes de renovación a un nivel 28% mayor a lo históricamente acordado para fortalecimiento institucional, con un mínimo anual de 42.500 \$EUA, a fines de seguir apoyando las labores de cumplimiento con el Protocolo de Montreal y responder a los desafíos que plantea la eliminación de HCFC, todo ello de conformidad con los objetivos de la decisión XIX/6 y con la transición a alternativas que minimicen el impacto ambiental (decisión 74/51(c)).

Recomendación de la Secretaría

4. La Secretaría recomienda la aprobación general de las solicitudes de renovación de proyectos de fortalecimiento institucional para Bosnia y Herzegovina, Serbia y Turquía al nivel de financiamiento señalado en el Cuadro 1. Si lo estima necesario, el Comité Ejecutivo podrá hacer llegar a los mencionados gobiernos las observaciones que se formulan en el Anexo II al presente documento.

A2: Asistencia técnica para elaboración de informes de verificación de consumo de HCFC

Omán: Asistencia técnica para informe de verificación, etapa I del PGEH: 30.000 \$EUA

Sudán: Asistencia técnica para informe de verificación, etapa I del PGEH: 30.000 \$EUA

Descripción

1. En la decisión 79/26, el Comité Ejecutivo solicitó a los organismos bilaterales y de ejecución pertinentes que en sus respectivas enmiendas al programa de trabajo a presentar a la 80ª reunión incluyesen el financiamiento de los informes de verificación de la etapa I del PGEH para, entre otros, Omán y Sudán, donde la ONUDI es el principal organismo ejecutor.

Observaciones de la Secretaría

2. La Secretaría tomó nota de que el financiamiento solicitado se ajusta al nivel aprobado en reuniones anteriores para fines de verificación, haciendo notar que dichos informes deben presentarse al menos 60 días antes de la reunión del Comité Ejecutivo que deba resolver sobre el siguiente tramo de financiamiento del plan de gestión.

Recomendación de la Secretaría

3. La Secretaría recomienda la aprobación general del financiamiento solicitado para informes de verificación de la etapa I del PGEH para Omán y Sudán al nivel señalado en el Cuadro 1, en el entendido de que dichos informes deben presentarse al menos 60 días antes de la reunión del Comité Ejecutivo que deba resolver sobre el siguiente tramo de financiamiento del plan de gestión.

SECCIÓN B: ACTIVIDADES RECOMENDADAS PARA CONSIDERACIÓN INDIVIDUAL

B1: Asistencia técnica para actividades de apoyo (decisión 79/46)

Antecedentes

4. Conforme a lo dispuesto en la decisión 79/46,² la ONUDI presentó solicitudes de financiamiento para la ejecución de actividades de apoyo en los 18 países del artículo 5 que se mencionan en el Cuadro 1. El detalle de las propuestas se expone en la Sección 2 de la presentación de la ONUDI.

5. Las actividades de apoyo propuestas por los 18 países contemplan los siguientes elementos:

² El Comité Ejecutivo resolvió, entre otras cosas, aprobar las actividades de apoyo en el entendido de que los países dispondrán de flexibilidad para emprender actividades orientadas al cumplimiento de sus obligaciones iniciales en el marco de la Enmienda de Kigali, entre las cuales cabe mencionar, sólo a título ilustrativo, facilitar y promover la pronta ratificación de la Enmienda; disponer las medidas institucionales habilitantes; evaluar los sistemas de licencia; entregar informes sobre HFC y demostrar actividades sin inversión.

- a) Actividades en apoyo de la pronta ratificación de la Enmienda de Kigali, entre ellas realizar consultas con actores sociales, desarrollar instrumentos nacionales de ratificación y hacer conciencia sobre la eficiencia energética y la reducción progresiva de los HFC;
- b) Medidas institucionales en apoyo de los sistemas de licencia e información, entre ellas la actualización de códigos y normas para un uso eficaz de HFC y alternativas a las SAO en la cadena de valor; elaboración de códigos arancelarios armonizados según los compromisos en materia de control de HFC, con énfasis en sus mezclas, e inclusión del consumo de HFC en los mecanismos nacionales de información sobre SAO; y
- c) Elaboración de una estrategia nacional de ejecución de la Enmienda de Kigali que abarque una evaluación del sector servicio y mantenimiento de refrigeración y climatización; un catastro de los equipos de refrigeración y climatización, y un marco institucional, de gestión y de políticas públicas que facilite la reducción progresiva de HFC y la introducción de alternativas tecnológicas de bajo PCA.

Observaciones de la Secretaría

6. La Secretaría, como forma de facilitar la presentación de solicitudes relativas a actividades de apoyo, elaboró una guía para la presentación de actividades de apoyo a la reducción progresiva de HFC que entregó a los organismos bilaterales y de ejecución durante la reunión de coordinación interinstitucional.³ La Secretaría toma nota de que las solicitudes que presenta la ONUDI se ajustaron a dicha guía.

7. Los cuatro organismos de ejecución, más los gobiernos de Alemania e Italia en su calidad de organismos bilaterales, presentaron a nombre de 59 países del artículo 5 sendas solicitudes para el financiamiento de actividades de apoyo, conforme a lo dispuesto en la decisión 79/46. En el subpárrafo (e) de dicha decisión el Comité dispuso que las solicitudes que se presenten a la 80ª reunión deberían en lo posible financiarse con aportes voluntarios adicionales de países no acogidos al artículo 5. Para facilitar el análisis y discusión, y en vista de la modalidad de financiamiento acordada en la decisión 79/46(e), en el documento *Cuestiones identificadas durante el examen de proyectos* la Secretaría acompaña una relación de todas las solicitudes relativas a actividades de apoyo presentadas a la 80ª reunión, indicando niveles de financiamiento y organismos participantes.⁴

8. Tras analizar las solicitudes, la Secretaría concluyó que cumplen en todo con lo dispuesto en la decisión 79/46, a saber:

- a) La ONUDI presentó cartas de los gobiernos de los 18 países del artículo 5 en que manifiestan su intención de hacer lo posible para concretar la pronta ratificación de la Enmienda de Kigali;
- b) Las 18 propuestas exponen en detalle las respectivas actividades de apoyo, medidas institucionales, desglose de costos y cronograma de ejecución; y
- c) Todas las propuestas serán ejecutadas en un plazo de 18 meses.

Recomendación de la Secretaría

9. El Comité Ejecutivo podrá estimar oportuno someter a consideración las solicitudes relativas a actividades de apoyo a la reducción progresiva de HFC en los 18 países del artículo 5 mencionados en el

³ Montreal, 5-7 de septiembre de 2017. Dichos organismos agradecieron a la Secretaría por la elaboración de la guía.

⁴ UNEP/OzL.Pro/ExCom/80/22.

Cuadro 1, en el marco de la discusión de las propuestas sobre HFC descritas en el documento *Cuestiones identificadas durante el examen de proyectos* (UNEP/OzL.Pro/ExCom/80/22).

B2: Preparación de proyectos relativos a los HFC (decisión 78/3(g))

Descripción

10. La ONUDI presentó siete solicitudes para la preparación de proyectos de conversión de HFC a refrigerantes de bajo potencial de calentamiento atmosférico (PCA) en la fabricación de equipos comerciales en cinco países (dos proyectos en Ecuador, dos en México y uno en Líbano, Marruecos y Vietnam), según se menciona en el Cuadro 1. El detalle de las propuestas se expone en la Sección 2 de la presentación de la ONUDI.

Observaciones de la Secretaría

11. Tres organismos de ejecución más el gobierno de Alemania, en calidad de organismo bilateral, presentaron sendas solicitudes para financiar la preparación de proyectos de inversión relativos a la eliminación de HFC en el sector consumo de diez países del artículo 5, más otros cuatro proyectos de inversión (ya elaborados) para la eliminación de HFC-134a en Argentina,⁵ Bangladesh,⁶ Colombia⁷ y México,⁸ todo ello de conformidad con las decisiones 78/3⁹ y 79/45.¹⁰ Correspondería al Comité Ejecutivo someter a consideración las propuestas relativas a HFC que se presenten a la 80ª reunión, haciendo constar los criterios de selección (propuesta tecnológica, replicabilidad, distribución geográfica) y la modalidad de financiamiento (en la medida de lo posible, aportes voluntarios adicionales de países no acogidos al artículo 5, dando prioridad a las actividades de apoyo.)¹¹ Para facilitar el análisis y discusión, en el documento *Cuestiones identificadas durante el examen de proyectos* la Secretaría acompaña una relación de todas las propuestas relativas a los HFC presentadas a la 80ª reunión, agregando una breve descripción, la tecnología seleccionada, los niveles de financiamiento y los organismos participantes.

12. En cuanto a la solicitud para la preparación de los siete proyectos de eliminación de HFC, la Secretaría toma nota de que la presentación cumple en todo con lo dispuesto en las decisiones 78/3 y 79/45 y en aquellas relativas al financiamiento para la preparación de proyectos.

Recomendación de la Secretaría

13. El Comité Ejecutivo podrá estimar oportuno someter a consideración las solicitudes relativas al financiamiento de la preparación de proyectos de conversión de HFC a alternativas de bajo PCA para la producción de equipos de refrigeración en Ecuador, Líbano, México, Marruecos y Vietnam, según se

⁵ UNEP/OzL.Pro/ExCom/80/30.

⁶ UNEP/OzL.Pro/ExCom/80/32.

⁷ UNEP/OzL.Pro/ExCom/80/38.

⁸ UNEP/OzL.Pro/ExCom/80/45.

⁹ El Comité Ejecutivo resolvió, entre otras cosas, considerar la aprobación de un número reducido de proyectos en el sector fabricación con la idea de adquirir experiencia sobre los posibles sobrecostos de capital y operación asociados a la reducción progresiva de HFC, en el entendido de que todo país que presente un proyecto debe antes ratificar la Enmienda de Kigali o formalizar por escrito su intención de hacerlo; de que no se entregarán nuevos fondos hasta el depósito del instrumento de ratificación en la sede de Naciones Unidas en Nueva York, y de que la reducción de HFC que se logre a raíz del proyecto se rebajará del punto de partida.

¹⁰ El Comité Ejecutivo, entre otras cosas, reiteró la decisión 78/3(g), fijando los siguientes criterios para la consideración de propuestas relativas a HFC: los proyectos deben radicarse en empresas que hayan optado por convertirse a tecnologías probadas; deben ser en general replicables a nivel del país, región o sector; deben tomar en cuenta la distribución geográfica, y además ejecutarse en un plazo máximo de dos años. Los informes de finalización deben ser exhaustivos y entregar información detallada sobre los sobrecostos admisibles de capital, los sobrecostos de operación, las posibles economías logradas y los factores que facilitaron la ejecución.

¹¹ Decisión 79/45(d).

menciona en el Cuadro 1, en el marco de la discusión de las propuestas relativas a HFC descritas en el documento *Cuestiones identificadas durante el examen de proyectos* (UNEP/OzL.Pro/ExCom/80/22).

Annex I

INSTITUTIONAL STRENGTHENING (IS) PROJECT PROPOSALS

Bosnia and Herzegovina: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNIDO
Amounts previously approved for institutional strengthening (US \$):			
	Phase I:	Mar-99	110,000
	Phase II:	Jul-04	95,333
	Phase III:	Nov-11	95,333
	Phase IV:	Dec-13	95,333
	Phase V:	May-15	95,333
		Total:	491,332
Amount requested for renewal (phase VI) (US \$):			122,026
Amount recommended for approval for phase VI (US \$):			122,026
Agency support costs (US \$):			8,542
Total cost of institutional strengthening phase VI to the Multilateral Fund (US \$):			130,568
Date of approval of country programme:			1997
Date of approval of HCFC phase-out management plan:			2012
Baseline consumption of controlled substances (ODP tonnes):			
Annex B, Group III (methyl chloroform) (average 1998-2000)			1.6
Annex C, Group I (HCFCs) (average 2009-2010)			4.7
Annex E (methyl bromide) (average 1995-1998)			3.5
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:			
Annex B, Group III (methyl chloroform)			0.00
Annex C, Group I (HCFCs)			2.34
Annex E (methyl bromide)			0.00
			Total:
			2.34
Year of reported country programme implementation data:			2016
Amount approved for projects (as at July 2017) (US \$):			4,380,591
Amount disbursed (as at December 2016) (US \$):			4,015,285
ODS to be phased out (as at July 2017) (ODP tonnes):			257.0
ODS phased out (as at December 2016) (ODP tonnes):			315.4

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

Summary of activities	Funds approved (US \$)
(a) Investment projects:	3,309,659
(b) Institutional strengthening:	491,332
(c) Project preparation, technical assistance, training and other non-investment projects:	579,600
	Total:
	4,380,591

Progress report

2. The objective of phase V of the IS project for Bosnia and Herzegovina was to maintain zero consumption of non-HCFC ODS in parallel with the development of an accelerated phase-out schedule for HCFCs. Amendments to the “Decision of Council of Ministers of Bosnia and Herzegovina for implementation of the Montreal Protocol” adopted in August 2015 ban the import and consumption of pure HCFC-141b from 2015 and HCFC-141b contained in imported pre-blended polyols from 2016 resulting in zero consumption of HCFC-141b by 1 January 2016. The ban on the import and consumption of all other

HCFCs will take effect on 1 January 2021. The national ozone unit (NOU) is responsible for monitoring the implementation of the HPMP, coordinating the promulgation and enforcement of policy and legislation, and developing appropriate activities. Funding provided through phase V of the IS project allowed smooth implementation of the HPMP and the ODS alternatives survey, which contribute to the ratification and implementation of the Kigali Amendment. The NOU operationalized the new legal procedures in cooperation with customs authorities, and in 2015 established a refrigeration and air-conditioning (RAC) sector association in cooperation with the Chamber of Foreign Trade. The NOU also participated in HCFC consumption verification exercise for 2014 and 2015. Bosnia and Herzegovina was a member of the Implementation Committee in 2013 (Vice-President), 2014 (President), 2015 and 2016, and was also an active member of the Executive Committee in 2017.

Plan of action

3. During phase VI of the IS project the NOU will build capacity to target the HCFCs consumption phase-out targets and enhance the ongoing regulatory efforts. The NOU will improve HCFCs control and track the promulgation and enforcement of policy and legislation specifically the additional restrictions on HCFCs; cooperate with the customs authorities in order to prevent illegal trade, and with the RAC Association to support activities in that sector. The Government of Bosnia and Herzegovina is committed, through its NOU, to ratify the Kigali Amendment and to initiate enabling activities for early actions.

Serbia: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNIDO
Amounts previously approved for institutional strengthening (US \$):		
	Phase I: Jul-98	151,500
	Phase II: Dec-04	131,300
	Phase III: Nov-09	131,300
	Phase IV: Nov-11	131,300
	Phase V: Dec-13	131,300
	Total:	676,700
Amount requested for renewal (phase VI) (US \$):		168,064
Amount recommended for approval for phase VI (US \$):		168,064
Agency support costs (US \$):		11,764
Total cost of institutional strengthening phase VI to the Multilateral Fund (US \$):		179,828
Date of approval of country programme:		
Date of approval of HCFC phase-out management plan:		2010
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		0.0
Annex C, Group I (HCFCs) (average 2009-2010)		8.4
Annex E (methyl bromide) (average 1995-1998)		8.3
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.0
Annex C, Group I (HCFCs)		6.4
Annex E (methyl bromide)		0.0
	Total:	6.4
Year of reported country programme implementation data:		2016
Amount approved for projects (as at July 2017) (US \$):		9,604,205
Amount disbursed (as at December 2016) (US \$):		7,706,904
ODS to be phased out (as at July 2017) (ODP tonnes):		1,121.2
ODS phased out (as at December 2016) (ODP tonnes):		1,118.4

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

Summary of activities	Funds approved (US \$)
(a) Investment projects:	7,125,743
(b) Institutional strengthening:	676,700
(c) Project preparation, technical assistance, training and other non-investment projects:	1,801,762
Total:	9,604,205

Progress report

5. The NOU became part of the Ministry of Environmental Protection following the administrative restructuring. The NOU continued its work and achieved increased visibility both at national and international level through involvement in the decision-making processes of the Montreal Protocol. In 2016 Serbia adopted a new regulation regarding HCFCs and HFCs on the training and certification of personnel and companies. The ODS alternatives survey was completed in 2016. Verification reports on HCFC consumption were carried on annual basis to ensure the quality of annual ODS data reporting. The NOU also carried out public awareness activities in cooperation with non-governmental organizations, including celebration of International Ozone Day, and was involved in the ECA regional network, and maintained close cooperation with national technical experts and the professional associations in refrigeration sector.

Plan of action

6. Phase VI of institutional strengthening will continue to support NOU liaison with the HCFC consumption sector. The NOU will coordinate the submission of the 2018 tranche of the HPMP and ensure that HPMP activities are progressing in accordance with planned schedule; enabling activities with regard to the Kigali Amendment, and to discuss the Amendment with relevant officials in the Government. ODS regulations will be updated to introduce the ban for the import of equipment containing HCFCs, and legislation will be revised in line with European Union F-gas legislation.

Turkey: Renewal of institutional strengthening

Summary of the project and country profile	
Implementing agency:	UNIDO
Amounts previously approved for institutional strengthening (US \$):	
Phase I:	Oct-92 300,000
Phase II:	Dec-00 200,000
Phase III:	Dec-04 260,000
Phase IV:	Jul-09 195,000
Phase V:	Jul-11 260,000
Phase VI:	Jul-13 260,000
Phase VII	May-15 260,000
Total:	1,735,000
Amount requested for renewal phase VIII (US \$):	332,800
Amount recommended for approval for phase VIII (US \$):	332,800
Agency support costs (US \$):	23,296
Total cost of institutional strengthening phase VIII to the Multilateral Fund (US \$):	356,096
Date of approval of country programme:	1992
Date of approval of HCFC phase-out management plan:	2012
Baseline consumption of controlled substances (ODP tonnes):	
Annex B, Group III (methyl chloroform) (average 1998-2000)	37.4
Annex C, Group I (HCFCs) (average 2009-2010)	551.47
Annex E (methyl bromide) (average 1995-1998)	479.7

Summary of the project and country profile	
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:	
Annex B, Group III (methyl chloroform)	0.00
Annex C, Group I (HCFCs)	26.95
Annex E (methyl bromide)	0.00
Total:	26.95
Year of reported country programme implementation data:	2016
Amount approved for projects (as at July 2017) (US \$):	54,140,961
Amount disbursed (as at December 2016) (US \$):	47,183,603
ODS to be phased out (as at July 2017) (ODP tonnes):	4,937.0
ODS phased out (as at December 2016) (ODP tonnes):	4,847.0

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

Summary of activities	Funds approved (US \$)
(a) Investment projects:	46,780,563
(b) Institutional strengthening:	1,735,000
(c) Project preparation, technical assistance, training and other non-investment projects:	5,625,398
Total:	54,140,961

Progress report

8. The NOU was strengthened with additional staff supported by the regular budget of the Ministry of Environment, as an additional in-kind contribution to the IS project, which will be maintained for phase VIII. An advisory Steering Committee was set up to enhance the functionality of the NOU. Activities focused on the new quota system for refrigeration servicing purpose and the country initiated regulatory actions to control HFC consumption to align Turkish legislation with similar European Union regulations, specifically the F-Gas Regulation. The NOU was involved in ECA regional network and participated in the information exchange activities within region related to the implementation of the ODS alternatives survey, HPMPs, and technical issues for controlling and phasing down HCFCs.

Plan of action

9. During phase VIII of the IS project, the NOU of Turkey plans to advance its contributions in the RAC sector and focus on activities including awareness raising, combating illegal trade, regional cooperation, and data collection and data reporting. Specifically, activities will address: training and support for the new generation of ODS alternatives; increased monitoring of ODS trade to combat the illegal trade; data collection and reporting of ODS; and, communication, networking and awareness activities. The NOU will also initiate actions in coordination with the Ministry of Foreign Affairs to start the process of ratification of the Kigali Amendment.

Anexo II

CONSIDERACIONES PRELIMINARES DEL COMITÉ EJECUTIVO EN CUANTO A LA RENOVACIÓN DE LOS PROYECTOS DE FORTALECIMIENTO INSTITUCIONAL PRESENTADOS ANTE LA 80ª REUNIÓN

Bosnia y Herzegovina

1. Tras tomar conocimiento del informe adjunto a la solicitud relativa al proyecto de fortalecimiento institucional para Bosnia y Herzegovina (etapa VI), el Comité Ejecutivo constata con beneplácito que el país informó los datos de ejecución del programa país 2016 a la Secretaría del Fondo y los datos del artículo 7 para 2016 a la Secretaría del Ozono, lo que indica que se encuentra en cumplimiento con lo dispuesto en el Protocolo de Montreal. El Comité Ejecutivo reconoce con beneplácito que el país eliminó el consumo de HCFC-141b al 1º de enero de 2016 y que, en el marco del proyecto de fortalecimiento institucional, se ha reforzado la capacidad de la Dependencia Nacional del Ozono (DNO) para controlar los HCFC. El Comité Ejecutivo se complace en comprobar que el Gobierno de Bosnia y Herzegovina se ha comprometido, por medio de su DNO, a ratificar la Enmienda de Kigali al Protocolo de Montreal y que el proceso de ratificación forma parte del plan de trabajo del Consejo de Ministros para el año 2017.

Serbia

2. Tras tomar conocimiento del informe adjunto a la solicitud relativa al proyecto de fortalecimiento institucional para Serbia (etapa VI), el Comité Ejecutivo constata con beneplácito que el país ha cumplido con las metas de eliminación y la obligación de informar, y que ha logrado las metas de consumo anual de HCFC fijadas en el Plan de gestión acordado. El Comité Ejecutivo destaca además el que la DNO serbia no haya interrumpido sus labores durante el proceso de reestructuración del Ministerio del Medio Ambiente y la mayor figuración que ha alcanzado a nivel nacional e internacional. El Comité reconoce asimismo la activa participación que le cupo a Serbia en la Red Regional del Ozono para Europa y Asia Central y el importante papel que jugó en el intercambio regional de información técnica como sede de conferencias y exposiciones internacionales sobre refrigeración. Por último, el Comité Ejecutivo se complace en comprobar que el Gobierno de Serbia se ha comprometido, por medio de su DNO, a avanzar hacia la pronta ratificación de la Enmienda de Kigali.

Turquía

3. Tras tomar conocimiento del informe adjunto a la solicitud relativa al proyecto de fortalecimiento institucional para Turquía (etapa VIII), el Comité Ejecutivo constata con beneplácito que el país se encuentra en cumplimiento con la obligación de informar los datos de consumo de SAO y que ha alcanzado las metas de eliminación del consumo de HCFC fijadas en el Plan de gestión acordado. El Comité Ejecutivo toma nota de que la DNO se reforzó con personal proveniente del Ministerio de Medio Ambiente y Urbanización, así como de la mayor visibilidad que ésta ha adquirido. El Comité reconoce a Turquía como activo participante en la Red Regional del Ozono para Europa y Asia Central al que le ha cabido un importante papel en la promoción de alternativas a los HCFC en el sector refrigeración y climatización regional, y llamó a la DNO del país a seguir haciendo conciencia sobre alternativas a las SAO. El Comité Ejecutivo reconoce los esfuerzos del Gobierno de Turquía y espera que en los próximos dos años siga ejecutando con igual éxito tanto el plan de gestión para la eliminación de HCFC como el proyecto de fortalecimiento institucional.



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

80th Executive Committee of the
Multilateral Fund for the Implementation of the Montreal Protocol

UNIDO Work Programme

80th Meeting of the Executive Committee

Introduction

The UNIDO Work Programme for the consideration of the 80th Meeting of the Executive Committee (ExCom) of the Multilateral Fund (MLF) has been prepared following the Government requests as well as based on ongoing and planned activities. The Work Programme will support the implementation of UNIDO's three year Rolling Business Plan 2017-2019.

The 80th UNIDO WPA is addressing preparatory assistance, institutional strengthening, verification report and enabling activities requests.

Preparatory assistance requests are submitted for stand-alone investment projects in the refrigeration manufacturing sector at seven companies in five countries (Ecuador, Lebanon, Mexico, Morocco and Vietnam) in line with the Executive Committee Decision 78/3 (g), to facilitate the analysis of ICCs and IOCs associated with the phase-down on HFCs.

Institutional strengthening extension requests are submitted based on the country requests for Bosnia and Herzegovina, Serbia and Turkey.

Verification Report related funding is required in line with the Decision 79/26 for Oman and Sudan.

Requests for funding of enabling activities are submitted in line with Decision 79/46 in Albania, Armenia, Bosnia and Herzegovina, Burkina Faso, Cameroon, Chile, Gambia, FYR Macedonia, Mexico, Montenegro, Serbia, Somalia, Sudan, Tunisia, Turkey, Uruguay and Vietnam. UNIDO is the only implementing agency in all the countries, except Chile, Mexico, Sudan, Tunisia and Uruguay where in line with the countries' requests; activities will be shared with other implementing agencies as per the table shown in Section 1. Since UNIDO is the lead implementing agency of Mexico and Tunisia, the proposal is submitted as part of UNIDO's WPA. Detailed description of tasks and budget distribution between the agencies is included in the project concept. For Chile and Uruguay, however, the submission is made as part of UNDP's WPA to the 80th Meeting of the ExCom.

The UNIDO Work Programme Amendment for the consideration of the 80th ExCom Meeting comprises the following sections:

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

Funding is requested as follows:

- Preparatory assistance funding for stand-alone investment projects amounting to US\$ 224,700 (including US\$ 14,700 representing 7.0 % A.S.C);
- Institutional strengthening projects amounting to US\$ 627,155 (including US\$ 41,029 representing 7.0 % A.S.C);
- Verification Report funding amounting to US\$ 65,400 (including US\$ 5,400 representing 9.0 % A.S.C);
- Enabling activities funding amounting to US\$ 2,546,240 (including US\$ 210,240 representing 9.0 % A.S.C).

Total: US\$ 3,463,495 (including US\$ 271,369 agency support cost).

SECTION 1

Country	MLF HCFC Status	Type	Substance	Sector and Sub-Sector	Title of Project	Total amount USD	A.S.C.	Total (incl ASC) USD	A.S.C. %	P.D.	Remarks
Preparatory Assistance for Demonstration Projects - Based on Executive Committee Decision 78/3 (g)											
Ecuador	Non-LVC	PRP	HFC-134a	REF-Manufacturing	Project preparation for HFC-related projects in the manufacturing sector at Ecasa enterprise to gain experience in ICCs and IOCs associated with the phase-down of HFCs	30,000	2,100	32,100	7%	12	
Ecuador	Non-LVC	PRP	HFC-134a	REF-Manufacturing	Project preparation for HFC-related projects in the manufacturing sector at Induglob (former Indurama) enterprise to gain experience in ICCs and IOCs associated with the phase-down of HFCs	30,000	2,100	32,100	7%	12	
Lebanon	LVC	PRP	HFC-134a	REF-Manufacturing	Project preparation for HFC-related projects in the manufacturing sector at Lematic Industries to gain experience in ICCs and IOCs associated with the phase-down of HFCs in domestic refrigeration	30,000	2,100	32,100	7%	12	
Mexico	Non-LVC	PRP	HFC-134a	REF-Manufacturing	Project preparation for HFC-related projects in the manufacturing sector at Fersa enterprise to gain experience in ICCs and IOCs associated with the phase-down of HFCs	30,000	2,100	32,100	7%	12	
Mexico	Non-LVC	PRP	HFC-134a	REF-Manufacturing	Project preparation for HFC-related projects in the manufacturing sector at Imbera enterprise to gain experience in ICCs and IOCs associated with the phase-down of HFCs	30,000	2,100	32,100	7%	12	

Country	MLF HCFC Status	Type	Substance	Sector and Sub-Sector	Title of Project	Total amount USD	A.S.C.	Total (incl ASC) USD	A.S.C. %	P.D.	Remarks
Morocco	Non-LVC	PRP	HFC-134a	REF-Manufacturing	Project preparation for HFC-related project in the manufacturing sector at Manar enterprise to gain experience in ICCs and IOCs associated with the phase-down of HFCs	30,000	2,100	32,100	7%	12	
Viet Nam	Non-LVC	PRP	HFC-134a/ HFC-404a	REF-Manufacturing	Project preparation for HFC-related projects in the manufacturing sector at Nagakawa Vietnam Company to gain experience in ICCs and IOCs associated with the phase-down of HFCs	30,000	2,100	32,100	7%	12	
SUBTOTAL						210,000	14,700	224,700			
Institutional Strengthening											
Bosnia and Herzegovina	LVC	INS	All	SEV	Institutional strengthening	122,026	8,542	130,568	7%	24	
Serbia	LVC	INS	All	SEV	Institutional strengthening	131,300	9,191	140,491	7%	24	
Turkey	Non-LVC	INS	All	SEV	Institutional strengthening	332,800	23,296	356,096	7%	24	
SUBTOTAL						586,126	41,029	627,155			
Verification Reports											
Oman	Non-LVC	TAS	HCFC-22	SEV	Verification report	30,000	2,700	32,700	9%	24	
Sudan	Non-LVC	TAS	HCFC-22	SEV	Verification report	30,000	2,700	32,700	9%	24	
SUBTOTAL						60,000	5,400	65,400			
Enabling Activities											
Albania	LVC	TAS	SEV	SEV	Enabling activities	95,000	8,550	103,550	9%	18	
Armenia	LVC	TAS	SEV	SEV	Enabling activities	150,000	13,500	163,500	9%	18	

Country	MLF HCFC Status	Type	Substance	Sector and Sub-Sector	Title of Project	Total amount USD	A.S.C.	Total (incl ASC) USD	A.S.C. %	P.D.	Remarks
Bosnia and Herzegovina	LVC	TAS	SEV	SEV	Enabling activities	95,000	8,550	103,550	9%	18	
Burkina Faso	Non-LVC	TAS	SEV	SEV	Enabling activities	150,000	13,500	163,500	9%	18	
Cameroon	Non-LVC	TAS	SEV	SEV	Enabling activities	150,000	13,500	163,500	9%	18	
Chile	Non-LVC	TAS	SEV	SEV	Enabling activities	86,000	7,740	93,740	9%	18	In cooperation with UNDP and UN Environment. Concept is submitted by UNDP.
Congo (Republic of)	Non-LVC	TAS	SEV	SEV	Enabling activities	150,000	13,500	163,500	9%	18	
Gambia	LVC	TAS	SEV	SEV	Enabling activities	95,000	8,550	103,550	9%	18	
FYR Macedonia	LVC	TAS	SEV	SEV	Enabling activities	95,000	8,550	103,550	9%	18	
Mexico	Non-LVC	TAS	SEV	SEV	Enabling activities	220,000	19,800	239,800	9%	18	In cooperation with UNEP. Concept is submitted by UNIDO.
Montenegro	LVC	TAS	SEV	SEV	Enabling activities	50,000	4,500	54,500	9%	18	
Serbia	LVC	TAS	SEV	SEV	Enabling activities	150,000	13,500	163,500	9%	18	
Somalia	LVC	TAS	SEV	SEV	Enabling activities	150,000	13,500	163,500	9%	18	
Sudan	Non-LVC	TAS	SEV	SEV	Enabling activities	75,000	6,750	81,750	9%	18	In cooperation with UNEP
Tunisia	Non-LVC	TAS	SEV	SEV	Enabling activities	75,000	6,750	81,750	9%	18	In cooperation with Italy. Concept is submitted by UNIDO

Country	MLF HCFC Status	Type	Substance	Sector and Sub-Sector	Title of Project	Total amount USD	A.S.C.	Total (incl ASC) USD	A.S.C. %	P.D.	Remarks
Turkey	Non-LVC	TAS	SEV	SEV	Enabling activities	250,000	22,500	272,500	9%	18	
Uruguay	Non-LVC	TAS	SEV	SEV	Enabling activities	50,000	4,500	54,500	9%	18	In cooperation with UNDP. Concept is submitted by UNDP.
Vietnam	Non-LVC	TAS	SEV	SEV	Enabling activities	250,000	22,500	272,500	9%	18	
SUBTOTAL						2,336,000	210,240	2,546,240			
GRAND TOTAL						3,192,126	271,369	3,463,495			

SECTION 2

Project Concept

Country:	Ecuador
Title:	Project preparation for HFC-related projects in the manufacturing sector at ECASA to gain experience in ICCs and IOCs associated with the phase-down of HFCs
Project Duration:	12 months
Project Budget:	US\$ 30,000 (excl. 7% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	MIPRO - National Ozone Unit

Project Summary

The Executive Committee has decided in Decision 78/3 (g) *“To consider approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Committee to gain experience in the ICCs and IOCs that might be associated with phasing down HFCs in Article 5 countries...”*

In response to that above decision, UNIDO has received an official request from the Government of Ecuador for the preparation of a project in the manufacturing sector in order to convert from HFCs to low-GWP alternatives and to gain relevant experience in the associated ICCs and IOCs.

Ecuador is planning to ratify the Kigali Amendment as soon as possible.

ECASA is willing to initiate early actions and convert from HFCs to low-GWP alternatives in the domestic and commercial refrigeration sectors, where alternative technology is mature and readily available, in order to gain experience in ICCs and IOCs.

The strategy followed by Ecuador is based on the following criteria and priorities:

- I. Application of well-known, affordable, available and widely used replacement alternatives and related technologies, while supporting efforts for identification and selection of such alternatives.
- II. To start phasing-down HFCs in those HFC consuming manufacturing sectors, where low-GWP and mature alternatives are available.

III. Through adoption of appropriate alternative technologies, limit climate and adverse environmental impact of converted enterprises and comply with safety, economic and sustainability requirements.

Background of ECASA

Ecasa is 100% Ecuadorian-owned enterprise located in Quito. ECASA manufactures self-contained domestic refrigeration, vertical and horizontal coolers, typically used to cool soda, water, juices, beer, milk, dairy products. Each of them, with different temperature range.

ECASA uses metal mechanical process for cabinets with cyclopentane insulation. Ecasa phased out the HCFC-141b, in the premixed polyol, through the premixed polyol with cyclopentane. ECASA is importing the premixed polyol from PUMEX. The refrigerants used by this enterprise are R134a and HFC-404A.

Item	Ecasa
Number of units produced in 2016	56,590 units produced with R-134a 6,587 units produced with R-404A Average per unit 115 gr of R-134a Average per unit 330 gr of R-404A
HFC consumption in 2016	
R-134a	6.50 tons of R-134a
R-404A	2.17 tons of R-404A

In the framework of the proposed project, it is planned that the R134a based products will be converted to R600a.

Standards compliance for the use of hydrocarbons as refrigerant

For R600a refrigerant, the recommended charge limit is 150 grams, according to standard IEC 60335-2-89. The manufacturing facility for R600a is special to prevent explosions of refrigerant.

Funding Requirements

The preparatory funds are requested for UNIDO, as follows:

Activities	Cost US\$
Local activities (national expert, local travel costs, coordination meetings etc.)	6,000
International consultant (project preparation and development)	18,000
International travel costs (staff)	6,000
TOTAL	30,000

Activities to be undertaken to develop the umbrella project

- Detailed data collection, verification and validation at the enterprises
- Technology review of available, mature alternatives and discussion with the enterprises and the Government on the selection of a suitable low-GWP alternatives

- Cost assessment of conversion (ICC and IOC)
- Evaluation of the climate co-benefits of the selected alternative and possible interventions and related costs for additional climate benefits
- Preparation, review, endorsement and submission of the project document

Project Concept

Country:	Ecuador
Title:	Project preparation for HFC-related project in the manufacturing sector at Induglob to gain experience in ICCs and IOCs associated with the phase-down of HFCs
Project Duration:	12 months
Project Budget:	US\$ 30,000 (excl. 7% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	MIPRO - National Ozone Unit

Project Summary

The Executive Committee has decided in Decision 78/3 (g) *“To consider approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Committee to gain experience in the ICCs and IOCs that might be associated with phasing down HFCs in Article 5 countries...”*

In response to that above decision, UNIDO has received an official request from the Government of Ecuador for the preparation of a project in the manufacturing sector in order to convert from HFCs to low-GWP alternatives and to gain relevant experience in the associated ICCs and IOCs.

Ecuador is planning to ratify the Kigali Amendment as soon as possible.

Induglob (former Indurama) is willing to initiate early actions and convert from HFCs to low-GWP alternatives in the domestic and commercial refrigeration sectors, where alternative technology is mature and readily available, in order to gain experience in ICCs and IOCs.

The strategy followed by Ecuador is based on the following criteria and priorities:

- IV. Application of well-known, affordable, available and widely used replacement alternatives and related technologies, while supporting efforts for identification and selection of such alternatives.
- V. To start phasing-down HFCs in those HFC consuming manufacturing sectors, where low-GWP and mature alternatives are available.
- VI. Through adoption of appropriate alternative technologies, limit climate and adverse environmental impact of converted enterprises and comply with safety, economic and sustainability requirements.

Background of Induglob (former Indurama)

Induglob is 100% Ecuadorian-owned enterprise located in Cuenca, southwest of Ecuador.

Induglob manufactures self-contained domestic refrigeration, vertical and horizontal coolers, typically used to cool soda, water, juices, beer, milk, dairy products. Each of them, with different temperature range.

Induglob uses metal mechanical process for cabinets with cyclopentane insulation. The production line was successfully converted by UNIDO from HCFC-141b to cyclopentane. The refrigerant used are R134a.

Item	Induglob
Number of units produced in 2016	158,578 units produced Average per unit 115 gr of HFC-134a
HFC-134a consumption in 2016	18.23 tons

In the framework of the proposed project, it is planned that the R134a based products will be converted to R600a.

Standards compliance for the use of hydrocarbons as refrigerant

For R600a refrigerant, the recommended charge limit is 150 grams, according to standard IEC 60335-2-89. The manufacturing facility for R600a is special to prevent explosions of refrigerant.

Funding Requirements

The preparatory funds are requested for UNIDO, as follows:

Activities	Cost US\$
Local activities (national expert, local travel costs, coordination meetings etc.)	6,000
International consultant (project preparation and development)	18,000
International travel costs (staff)	6,000
TOTAL	30,000

Activities to be undertaken to develop the umbrella project

- Detailed data collection, verification and validation at Induglob
- Technology review of available, mature alternatives and discussion with the enterprise and the Government on the selection of a suitable low-GWP alternatives
- Cost assessment of conversion (ICC and IOC)
- Evaluation of the climate co-benefits of the selected alternative and possible interventions and related costs for additional climate benefits
- Preparation, review, endorsement and submission of the project document

PROJECT CONCEPT

Country:	Lebanon
Title:	Project preparation for HFC-related project in the manufacturing sector at Lematic Industries to gain experience in ICCs and IOCs associated with the phase-down of HFCs in domestic refrigeration
Project Duration:	12 months
Project Budget:	US\$ 30,000 (excl. 7.0% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	National Ozone Unit

Project Summary

The Executive Committee has decided in Decision 78/3 (g) *“To consider approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Committee to gain experience in the ICCs and IOCs that might be associated with phasing down HFCs in Article 5 countries...”*

In response to that above decision, UNIDO has received an official request from the Government of Lebanon for the preparation of an investment project in the domestic refrigeration sector in order to convert from HFC-134a to R-600a (isobutane) to gain relevant experience in actual ICCs and IOCs.

Lebanon is planning for a quick ratification of the Kigali Amendment by the end of 2017.

The enterprise, Lematic Industries, has been identified, being willing to initiate early actions and convert from HFC-134a to R-600a in the domestic refrigeration sector, where alternative technology is mature and readily available, in order to gain experience in ICCs and IOCs.

The strategy followed by Lebanon is based on the following criteria and priorities:

- VII. Application of well-known, affordable, available and widely used replacement alternatives and related technologies, while supporting efforts for identification and selection of such alternatives.
- VIII. To start phasing-down HFCs in those HFC consuming manufacturing sectors, where low-GWP and mature alternatives are available.
- IX. Through adoption of appropriate alternative technologies, limit climate and adverse environmental impact of converted enterprises and comply with safety, economic and sustainability requirements.

Background

Lematic is a 100% Lebanese company that is specialized in the production of household appliances and appliance industries. Lematic is now one of the major producers of appliances and equipment as a result of steady international growth over the last 50 years.

Lematic products are world leader in design and among the most competitive in the market. The range of household domestic and industrial appliances has resulted in the reputation for manufacturing top quality products.



The company began operation in the 1940s, has accumulated considerable experience, especially in the technology and production of all types of refrigeration and air-conditioning appliances.

Lematic has several factories located in Lebanon, Saudi Arabia and Syria, over 1800 employees and annual sales exceeding half a million units/per year.

Lematic's expertise also extends to the establishment of appliance industries in the countries where often little manufacturing activity exists specially in the Middle East, Africa, Central Asia and South America.

Lematic takes full responsibility for complex, logistical tasks such as design, construction, installation and commissioning up to optimum production so that maximum efficiency and profitability is achieved.



Lematic subsequently offers a complete service package since the company believes that an ongoing commitment is of a great importance to the plant operation. These services range from engineering support to the supply of raw materials, semi-finished components and spare parts as well as the coordination of all the support facilities needed for any type of projects.

Lematic produces products branded as Concorde such as:

- ❖ Refrigerators:
 - Side by Side
 - NoFrost Two Doors
 - DeFrost Two Doors
 - Single Door
- ❖ Freezers:
 - Chest Freezers
 - Vertical Freezers
- ❖ Coolers:

- Chest Bottle Cooler
- Vertical Bottle Cooler

In year 2000, Lematic has received assistance under the Montreal Protocol in the refrigeration production sector through the conversion of the insulation foam blowing system, redesign of the refrigeration system prototype, performance testing, trial manufacturing and adaptation, reliability tests, and HFC 134a recovery/recycling at the repairing line within the plant only. The adopted alternatives were:

- Refrigerant: HFC-134a
- Blowing Agent: Hydrocarbons (Pentane)

Funding Requirements

The preparatory funds are requested for UNIDO, as follows:

Activities	Cost US\$
Local activities (national expert, local travel costs, coordination meetings etc.)	15,000
International consultant (project preparation and development)	10,000
International travel costs (staff)	5,000
TOTAL	30,000

Activities to be undertaken to develop the umbrella project

- Detailed data collection, verification and validation Lematic Industries.
- Cost assessment of conversion (ICC and IOC).
- Evaluation of the climate co-benefits of the selected alternative and possible interventions and related costs for additional climate benefits
- Preparation, review, endorsement and submission of the project document

PROJECT CONCEPT

Country:	Mexico
Title:	Project preparation for HFC-related project in the manufacturing sector at Fersa enterprise to gain experience in ICCs and IOCs associated with the phase-down of HFCs
Project Duration:	12 months
Project Budget:	US\$ 30,000 (excl. 7.0% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	SEMARNAT - National Ozone Unit

Project Summary

The Executive Committee has decided in Decision 78/3 (g) *“To consider approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Committee to gain experience in the ICCs and IOCs that might be associated with phasing down HFCs in Article 5 countries...”*

In response to that above decision, UNIDO has received an official request from the Government of Mexico for the preparation of an investment project in the manufacturing sector in order to convert from HFCs to low-GWP alternatives and to gain relevant experience in the commercialization of low-GWP alternatives and the associated ICCs and IOCs.

Mexico was one of the proponents of the HFC phase-down under the Montreal Protocol and is planning to ratify the Kigali Amendment by July 2018.

Fersa company has been identified, which would be willing to initiate early actions and convert from HFCs to low-GWP alternatives in the commercial refrigeration sector, where alternative technology is mature and readily available, in order to gain experience in ICCs and IOCs.

The strategy followed by Mexico is based on the following criteria and priorities:

- I. Application of well-known, affordable, available and widely used replacement alternatives and related technologies, while supporting efforts for identification and selection of such alternatives.
- II. To start phasing-down HFCs in those HFC consuming manufacturing sectors, where low-GWP and mature alternatives are available.
- III. Through adoption of appropriate alternative technologies, limit climate and adverse environmental impact of the converted enterprise and comply with safety, economic and sustainability requirements.

Background on Fersa

FERSA is 100% Mexican-owned enterprise and manufactures self-contained commercial refrigeration equipment (self-contained equipment, is one that incorporates the condensing unit as its part), such as glass door refrigerators, show cases, solid door refrigerators, solid door freezers, display cases, glass door freezers.

The company uses metal mechanical process for cabinets with cyclopentane PU insulation. The refrigerants used are R134a and R404a.

Item	Fersa
Maximum charge R-134a	530g (manual) - 600g (machine)
Maximum charge R-404a	1,125g (manual)
Number of units produced HFC consumption in 2016	
R-134a based:	19,744 units 11,116 kg of R134a
R-404a based:	2,243 units 2,094 kg of R404a

In the framework of the proposed project, it is planned that the R134a based products will be converted to R290 and there will be an attempt to replace R-404a as well.

Standards compliance for the use of hydrocarbons as refrigerant

For R290 refrigerant, the recommended charge limit is 150 grams, according to standard IEC 60335-2-89. It is to be noted however, that the amount of R290 refrigerant charged into the appliance only around 40%-50% of the same for R134a.

The manufacturing facility for charging and handling of R290 refrigerant is designed and manufactured specifically to prevent explosions of refrigerant during the manufacturing process.

Use of R744 needs reinforced components of the refrigerant system and special manufacturing facilities, to handle the high pressure of the refrigerant. The maintenance and servicing of appliances using both types of refrigerants must be performed by qualified personnel.

In Mexico, there are no regulations for R290 and R744. Development of more equipment is limited by the availability and variety of specialized compressors, however compressors for R290 are easy to find and the range of R744 is developing rapidly.

Funding Requirements

The preparatory funds are requested for UNIDO, as follows:

Activities	Cost - US\$
Local activities (national expert, local travel costs, coordination meetings etc.)	5,000
International consultant (project preparation and development)	18,000
International travel costs (staff)	7,000

TOTAL	30,000
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Activities to be undertaken to develop the investment project

- Detailed data collection, verification and validation at the enterprise
- Technology review of available, mature alternatives and discussion with the enterprise and the Government on the selection of a suitable low-GWP alternatives
- Cost assessment of conversion (ICC and IOC)
- Evaluation of the climate co-benefits of the selected alternative and possible interventions and related costs for additional climate benefits
- Preparation, review, endorsement and submission of the project document

PROJECT CONCEPT

Country:	Mexico
Title:	Project preparation for HFC-related projects in the manufacturing sector at Imbera enterprise to gain experience in ICCs and IOCs associated with the phase-down of HFCs
Project Duration:	12 months
Project Budget:	US\$ 30,000 (excl. 7.0% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	SEMARNAT - National Ozone Unit

Project Summary

The Executive Committee has decided in Decision 78/3 (g) *“To consider approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Committee to gain experience in the ICCs and IOCs that might be associated with phasing down HFCs in Article 5 countries...”*

In response to that above decision, UNIDO has received an official request from the Government of Mexico for the preparation of an investment project in the manufacturing sector in order to convert from HFCs to low-GWP alternatives and to gain relevant experience in the commercialization of low-GWP alternatives and the associated ICCs and IOCs.

Mexico was one of the proponents of the HFC phase-down under the Montreal Protocol and is planning to ratify the Kigali Amendment by July 2018.

Imbera company has been identified, which would be willing to initiate early actions and convert from HFCs to low-GWP alternatives in the commercial refrigeration sector, where alternative technology is mature and readily available, in order to gain experience in ICCs and IOCs.

The strategy followed by Mexico is based on the following criteria and priorities:

- I. Application of well-known, affordable, available and widely used replacement alternatives and related technologies, while supporting efforts for identification and selection of such alternatives.
- II. To start phasing-down HFCs in those HFC consuming manufacturing sectors, where low-GWP and mature alternatives are available.
- III. Through adoption of appropriate alternative technologies, limit climate and adverse environmental impact of the converted enterprise and comply with safety, economic and sustainability requirements.

Background

IMBERA is 100% Mexican-owned enterprise and manufactures self-contained commercial refrigeration equipment (self-contained equipment, is one that incorporates the condensing unit as its part), such as glass door refrigerators, show cases, solid door refrigerators, solid door freezers, display cases, glass door freezers. More specifically, Imbera produces:

- Vertical and horizontal coolers, counter top, and specialties, typically used to cool soda, water, energy drinks, juices, bear, milk, dairy products. Each of them, with different temperature range.
- Vertical and horizontal freezers of low temperature (-23 °C), used for storage of ice cream.
- Vertical and horizontal freezers of medium temperature (-18 ° C), used for preserving meats and other frozen food.
- Refrigerated Deli-cases, for preservation of beverages, dairy products and meats.
- Open air merchandisers, used for storage of refrigerated products for easy display and easy access.
- Special refrigeration equipment for storage for: drugs and vaccines, wine, etc.

Imbera uses metal mechanical process for cabinets with cyclopentane PU insulation. The refrigerants used are R134a, R404a and R744 as well.

Item	Imbera
Maximum charge R-134a	850g
Maximum charge R-404a	500g
Number of units produced HFC consumption in 2016	
R-134a based:	102,111 units 33,640 kg of R134a
R-404a based:	5,370 units 1,700 kg of R404a

In the framework of the proposed project, it is planned that the R134a based products will be converted to R290 and there will be an attempt to replace R-404a as well.

Standards compliance for the use of hydrocarbons as refrigerant

For R290 refrigerant, the recommended charge limit is 150 grams, according to standard IEC 60335-2-89. It is to be noted however, that the amount of R290 refrigerant charged into the appliance only around 40%-50% of the same for R134a.

The manufacturing facility for charging and handling of R290 refrigerant is designed and manufactured specifically to prevent explosions of refrigerant during the manufacturing process.

Use of R744 needs reinforced components of the refrigerant system and special manufacturing facilities, to handle the high pressure of the refrigerant. The maintenance and servicing of appliances using both types of refrigerants must be performed by qualified personnel.

In Mexico, there are no regulations for R290 and R744. Development of more equipment is limited

by the availability and variety of specialized compressors, however compressors for R290 are easy to find and the range of R744 is developing rapidly.

Funding Requirements

The preparatory funds are requested for UNIDO, as follows:

Activities	Cost - US\$
Local activities (national expert, local travel costs, coordination meetings etc.)	5,000
International consultant (project preparation and development)	18,000
International travel costs (staff)	7,000
TOTAL	30,000

Activities to be undertaken to develop the investment project

- Detailed data collection, verification and validation at the enterprise
- Technology review of available, mature alternatives and discussion with the enterprise and the Government on the selection of a suitable low-GWP alternatives
- Cost assessment of conversion (ICC and IOC)
- Evaluation of the climate co-benefits of the selected alternative and possible interventions and related costs for additional climate benefits
- Preparation, review, endorsement and submission of the project document

PROJECT CONCEPT

Country:	Morocco
Title:	Project preparation for HFC-related project in the manufacturing sector at MANAR enterprise to gain experience in ICCs and IOCs associated with the phase-down of HFCs
Project Duration:	12 months
Project Budget:	US\$ 30,000 (excl. 7.0% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	National Ozone Unit

Project Summary

The Executive Committee has announced in Decision 78/3 (g) *“To consider approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Committee to gain experience in the ICCs and IOCs that might be associated with phasing down HFCs in Article 5 countries...”*

In order to gain the requested experience in the ICCs and IOCs, UNIDO is planning to design a project focussing on Morocco that has officially approached UNIDO to support Demo projects on the conversion of domestic refrigeration manufacturing from HFC-R134a to hydrocarbons isobutene R600a.

The governmental request is supported by a private sector company that is highly interested and ready to convert to the mature and available HFC-free technology in the household refrigeration sector.

Expected demonstration results

UNIDO, in partnership with the National Ozone Unit of Morocco proposes to develop a project that will demonstrate the technical, economic and environmental advantages of the production conversion of domestic refrigerators using isobutene as refrigerant.

Beside the well-known advantages of hydrocarbon refrigerants such as no ozone damage implications; low GWP ratings, and thus low global warming effects, the project intends to examine the challenges of converting to a flammable refrigerant and the safety implications in the implementation process. Other mentioned advantages when considering hydrocarbon as alternative refrigerant, including:

- 15- 40% energy-saving compared to HCFCs and HFC refrigerants;
- Easy implementation;

- Low investment requirements for conversion;
- Amount of refrigerant charge (e.g. R600a charge typically less than half compared to R134a);

are planned to be tested and demonstrated specifically for Article 5 countries.

The data and analysis gained throughout the project will create a wealth of information on the economically important and large sector of household appliances, their ICCs and IOCs and the implications for production conversions in this sector. In this regard, the project concept will also include an assessment on the potential global impact and replicability for other developing countries and economies in transition.

More than 100 million domestic refrigerators and freezers are produced in the world each year (2013) and as of 2014 hydrocarbon technology represents around 40% of the total. However, this represents mostly the developed world (and China). With more Article 5 countries interested and a strong demo project, it is projected that at least 75 to 80% of global new refrigerator production could use hydrocarbon refrigerants by 2020

Background on the 2 companies

	Manar
Ownership	100% national
Annual HFC consumption estimation	22-24 tonnes
HFC-based equipment	- domestic refrigerators
Baseline equipment	- 5 automatic chargers - 4 transfer pumps - 14 detectors - 35 vacuum pumps

In the framework of the proposed project, it is planned that the R134a based products will be converted to hydrocarbons R600a.

Additional information MANAR

MANAR is a local manufacturer and overall a leading player in the refrigerator market. MANAR Company is a 100 % indigenous Moroccan limited liability company, producing different refrigerator models as well as other electrical appliances. MANAR Company under its brand Siera is with a yearly production capacity of 300,000 units, of which 150,000 – 180,000 are refrigerators, one of the largest goods producers in this industry in Morocco.

MANAR leads refrigeration appliances with a 25% retail volume share in 2015. The majority of MANAR customers are local shops. The company employs 425 personnel. Parts of the produced goods are exported to Maghreb countries and West Africa. It was established in 1957 and is located in Casablanca.

Safety requirements

Because of their flammability, HCs are subject to international safety guidelines and legislation. Their use is limited to a per-system charge of no more than 150 grams – though within Europe this can be legally exceeded under certain optimum conditions. All manufacturers of HC systems must follow equipment safety guidelines, and service personnel must understand and comply with specified safe handling procedures. Safety legislation demands leakage-simulation testing, and strict specifications govern the sealing of electrical components in the vicinity of HC flows. Furthermore, many common domestic and commercial appliances, such as domestic fridges and freezers, heat pumps, commercial refrigerators, and motor compressors are subject to international safety directives.

Funding Requirements

The preparatory funds are requested for UNIDO, as follows (for each country):

Activities per country	Cost US\$ per country
Local activities (national expert, local travel costs, coordination meetings etc.)	10,000
International consultant (project preparation and development)	15,000
International travel costs (staff)	5,000
TOTAL	30,000

Activities to be undertaken to develop the umbrella project

- Detailed data collection, verification and validation at the enterprises
- Technology review of available, mature alternatives and discussion with the enterprises and the Government on the selection of a suitable low-GWP alternatives
- Cost assessment of conversion (ICC and IOC)
- Evaluation of the climate co-benefits of the selected alternative and possible interventions and related costs for additional climate benefits
- Preparation, review, endorsement and submission of the project document

PROJECT CONCEPT

Country:	Viet Nam
Title:	Project preparation for HFC-related projects in the manufacturing sector at Nagakawa Vietnam Company to gain experience in ICCs and IOCs associated with the phase-down of HFCs
Project Duration:	12 months
Project Budget:	US\$ 30,000 (excl. 7.0% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	National Ozone Unit - Ministry of Natural Resources and Environment

Project Summary

The Executive Committee has decided in Decision 78/3 (g) *“To consider approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Committee to gain experience in the ICCs and IOCs that might be associated with phasing down HFCs in Article 5 countries...”*

In response to that above decision, UNIDO has received an official request from the Government of Viet Nam for the preparation of a demonstration project in the manufacturing sector in order to convert from HFCs to low-GWP alternatives and to gain relevant experience in the associated ICCs and IOCs.

The enterprise Nagakawa Vietnam Company has been identified, which would be willing to initiate early actions and convert from HFCs to low-GWP alternatives in the commercial refrigeration sector, where alternative technology is mature and readily available, in order to gain experience in ICCs and IOCs.

The strategy followed by Viet Nam is based on the following criteria and priorities:

- X. Application of well-known, affordable, available and widely used replacement alternatives and related technologies, while supporting efforts for identification and selection of such alternatives.
- XI. To start phasing-down HFCs in those HFC consuming manufacturing sectors, where low-GWP and mature alternatives are available.
- XII. Through adoption of appropriate alternative technologies, limit climate and adverse environmental impact of converted enterprises and comply with safety, economic and sustainability requirements.

Background on Nagakawa Vietnam Company

Nagakawa Vietnam Company is a 100% Viet Nam-owned enterprise.

The enterprise manufactures self-contained commercial refrigeration equipment (self-contained equipment, is one that contains within its own body, the condensing unit.

	Nagakawa Vietnam Company
Ownership	100% national
Annual HFC consumption	Estimation: 400kg
HFC-based equipment	- single chamber freezers - two chamber freezers - ice-cream freezers - bottle coolers
Baseline equipment	- R-134a charging machine - vacuum pump - fixed gas detector - portable gas detector - mold for heat exchanger

In the framework of the proposed project, it is planned that the R134a (or R404a) based products will be converted to R290.

The company is still using HCFC-141b foam insulation, but a conversion under the HPP is currently taking place. However, a conversion of the refrigerants used has never been carried out under the HPMP stages yet.

Standards compliance for the use of hydrocarbons as refrigerant

Because of their flammability, HCs are subject to international safety guidelines and legislation. Their use is limited to a per-system charge of no more than 150 grams according to standard IEC 60335-2-89. All manufacturers of HC systems must follow equipment safety guidelines, and service personnel must understand and comply with specified safe handling procedures. Safety legislation demands leakage-simulation testing, and strict specifications govern the sealing of electrical components in the vicinity of HC flows. Furthermore, many common domestic and commercial appliances, such as domestic fridges and freezers, heat pumps, commercial refrigerators, and motor compressors are subject to international safety directives.

Funding Requirements

The preparatory funds are requested for UNIDO, as follows:

Activities	Cost US\$
Local activities (national expert, local travel costs,	10,000

coordination meetings etc.)	
International consultant (project preparation and development)	15,000
International travel costs (staff)	5,000
TOTAL	30,000

Activities to be undertaken to develop the umbrella project

- Detailed data collection, verification and validation at the enterprises
- Technology review of available, mature alternatives and discussion with the enterprises and the Government on the selection of a suitable low-GWP alternatives
- Cost assessment of conversion (ICC and IOC)
- Evaluation of the climate co-benefits of the selected alternative and possible interventions and related costs for additional climate benefits
- Preparation, review, endorsement and submission of the project document

PROJECT CONCEPT

Country:	Bosnia and Herzegovina
Title:	Extension of Institutional Strengthening for the implementation of Montreal Protocol in Bosnia and Herzegovina – Phase VI
Project Duration:	24 months (March 2018 to February 2020)
Project Budget:	122,026 (excluding 7 % Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina, National Ozone Unit of Bosnia and Herzegovina

Project Summary

The National Ozone Unit of Bosnia and Herzegovina is responsible for monitoring the implementation of the HCFCs National phase-out plan. The NOU is coordinating the promulgation and enforcement of policy and legislation with a specific focus on HCFCs management and will continue to further implement the HPMP activities, with special attention to the RAC sector.

Under the Institutional strengthening project – Phase V, the Government of BiH was supported through increased capacity building of the NOU and achieved a smooth implementation of the HPMP activities. Also, the ODS alternatives Survey, a very demanding and very useful project in terms of future Kigali amendment ratification was performed by BiH NOU. Lessons have been learned by finalizing the NoPP.

New legal procedures for controlling the HCFCs introducing quota system for HCFCs, permits for HFCs and ban on HCFC and its mixtures based equipment were approved by Council of Ministers of Bosnia and Herzegovina and it is operated smoothly by BiH NOU in cooperation with BiH ITA. In 2015 BiH RAC Association was established within BiH Foreign Trade Chamber. BiH NOU coordinated Verification report preparation for the years 2014 and 2015, as requirement of the third HPMP tranche approval in 2016.

The NOU is further committed to build up capacity at country level in view of compliance with the HCFCs consumption phase-out targets and it is expected that the ongoing regulatory efforts will be enhanced by the implementation of IS Phase VI.

The NOU will follow-up with priority the improvement of the HCFCs control, and it is important to note that the country have achieved the 10% reduction target in 2015. Also, the target of zero consumption of HCFC 141b by 1 January 2016 was achieved

The National Ozone Unit of Bosnia and Herzegovina will be responsible for tracking the promulgation and enforcement of policy and legislation with a specific focus on HCFCs additional restrictions (as a working group has been set-up to develop further regulatory measures on HCFCs placing on the market), special focus will be given to the cooperation with the customs authorities sector in order to prevent illegal trade and strengthen the cooperation with the RAC Association.

Government of Bosnia and Herzegovina is committed through BiH NOU to ratify Kigali Amendment and have made first step in that regard by having this activity in adopted work plan of Council of Ministers for year 2017 and also is committed to start with enabling activities for early actions in this context with UNIDO as partner implementing agency.

PROJECT CONCEPT

Country:	Serbia
Title:	Extension of Institutional Strengthening for the implementation of Montreal Protocol in Oman – Phase VI
Project Duration:	24 months, December 2017 – November 2019
Project Budget:	168,064 USD (excluding 7 % Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	NOU SERBIA, Ministry of Environmental Protection

Project Summary

In the period 2014 – 2017, in spite of the restructuring of the Government and the separation of the Ministry of Environment from Ministry of Agriculture Serbia NOU Office has been maintained and achieved increased visibility both at national and international level, by actively and permanent involvement in the decision making process of the Montreal Protocol.

Serbia has introduced in 2012 quotas for all HCFCs bulk imports as well as for their mixtures, and improved the ODS imports/exports records, as well as the statistics on the ODS place on the market. In 2016, with the support of the IS activities, Serbia introduced new legislation addressing certification system and covering HFCs beyond strengthening the control of HCFCs.

Public awareness activities are organized with the involvement of the NGOs as activities for celebrating the 16 September –International Day for the Preservation of the Ozone Layer.

The institutional strengthening support in Serbia, phase VI, will support NOU to remain active and to continue enforcement activities for managing the HCFCs phase-down. NOU will liaise with consumer sectors, and will enable appropriate coordination activities during HPMP implementation

Serbia NOU is an active member of the EECA regional network and the national technical experts, as well as the professional associations in refrigeration sector, are providing relevant technical support in the region and study cases on alternatives to HCFCs uses, through organization of exhibitions, conferences and other private initiatives.

PROJECT CONCEPT

Country:	Turkey
Title:	Extension of Institutional Strengthening for the implementation of Montreal Protocol in Turkey – Phase VIII
Project Duration:	24 months (December 2017 to November 2019)
Project Budget:	332,800 (excluding Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	Ministry of Environment and Urbanization of Turkey

Project Summary

National Ozone Unit (Division for the Protection of the Ozone Layer) is located under Climate Change and Air Management Department / Directorate General of Environment Management of the Ministry of Environment and Urbanization of Turkey (herein after referred as the Ministry). Having been designated as the National Ozone Unit vis-a-vis the Ozone Secretariat, Division for the Protection of the Ozone Layer has been accordingly serving as the Focal Point. Activity of the Turkish NOU is supervised by the Deputy Undersecretary of the Ministry.

The NOU is the main coordination and enforcement body, in charge of carrying out the follow-up and coordination of national and international activities related the Vienna Convention for the Protection of the Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer and controlling consumption and production of Ozone Depleting Substances (ODSs) and phasing them out within the country phase-out schedule. The Unit is in charge of the national coordination of all policies, regulations, projects and activities with the objective of implementation of the Vienna Convention and Montreal Protocol. The NOU is also responsible for ensuring the cooperation and coordination at country level and contributes to the work of the implementing agencies of the Montreal Protocol and other relevant governmental institutions, NGOs as well as other specific stakeholders.

Beside the role and its responsibilities in regard of MP implementation, during IS Phase VII implementation, NOU has been given also the mandate to follow up the implementation of the policies and regulations related to HFCs controls.

During IS Phase VII, NOU capacity has been increased from 5 to 6 staff, an additional permanent full time position being supported by the Ministry budget.

The next institutional strengthening Phase VII will aim at continuing capacity building of the National Ozone Unit in Turkey to ensure supporting the Government to meet its accelerated obligations with a view to the HCFCs phase out as well as initiating awareness activities to support Kigali Amendment ratification

The NOU will also follow-up with priority the issue of enforcement of the measures to improve the HCFCs control and coordinate the phase-out in servicing sector targeting a full phase-out by 2025.

A specific focus will be given on following the administrative procedures for the adoption of the newly drafted certification system in line with the EU F-Gas Regulation, that will introduce up-graded more stringent certification requirements for both HCFCs and HFCs emissions prevention as well as promotion of the 0 GWP non-ODS alternatives in RAC.

PROJECT CONCEPT

Country:	Oman
Title:	Verification report of national consumption targets
Project Duration:	12 months
Project Budget:	US\$ 30,000 (excl. 9% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	Ministry of Environment and Climate Affairs (MECA)

Project Summary

1. Background

Funding requirement for the preparation of verification report of national program is being requested in accordance with UNEP/OzL.Pro/ExCom/79/51.

The HCFC Phase-out Management Plan for Oman was approved in November 2011 at the 65th Meeting of Executive Committee of the Multilateral Fund for the implementation of the Montreal Protocol. The project was approved in accordance with the Agreement between the Government and the Executive Committee for the period 2011 to 2015 to meet the 10 per cent reduction in HCFC consumption, and on the understanding that US\$ 434,120 was provided to address HCFC consumption in the refrigeration servicing sector to reach up to and include the 10 per cent reduction in 2015 in line with decision 60/44.

2. Decision 79/26: Verification reports of low-volume consuming (LVC) countries' compliance with their HPMP agreement.

The Executive Committee decided to request relevant bilateral and implementing agencies to include, in their respective amendments to the work programmes for submission to the 80th meeting, funding for verification reports for stage I of the HCFC phase-out management plans (HPMPs) in the amount of US \$30,000, plus agency support costs, for each of the following 15 Article 5 countries: Belize; Botswana; Comoros (the); Djibouti; Eritrea; Gabon; Guinea-Bissau; **Oman**; Palau; Samoa; Solomon Islands; Sudan (the); United Republic of Tanzania (the); Togo; and Tonga.

Project Concept

Country:	Sudan
Title:	Verification report of compliance with HPMP agreement
Project Duration:	12 months
Project Budget:	US\$ 30,000 (excl. 9% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	Higher Council for Environment and Natural Resources (HCENR)

Project Summary

1. Background

Funding requirement for the preparation of verification report of compliance with HPMP agreement is being requested in accordance with UNEP/OzL.Pro/ExCom/79/51.

HCFC phase-out management plan stage I, first tranche (refrigeration service sector) was approved in accordance with the agreement between the Government and the Executive Committee for the period 2010 to 2017 to reduce HCFC consumption by 30 per cent of the baseline. Noted that the project to phase out HCFC-141b used for polyurethane rigid foam production in the manufacture of domestic refrigerators, commercial refrigerators and polyurethane insulated composite panels by four enterprises had already been approved at the 62nd meeting in 2010 and had been included in stage I of the HPMP. Noted that the Government had agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the consumption of 50.6 ODP tonnes reported for 2009 under Article 7 of the Montreal Protocol, which were the latest data available when the HCFC phase-out umbrella project had been approved at the 62nd meeting. Noted the deduction of 11.87 ODP tonnes of HCFCs from the starting point for sustained aggregate reduction in HCFC consumption for the project approved at the 62nd meeting, and UNIDO and the Government were requested to further deduct 4.28 ODP tonnes of HCFCs for implementation of stage I of the HPMP. Noted that approval of stage I of the HPMP did not preclude Sudan from submitting, prior to 2015, a proposal to achieve a reduction in HCFCs consumption beyond that addressed in stage I of the HPMP.

2. Decision 79/26: Verification reports of low-volume consuming (LVC) countries' compliance with their HPMP agreement

The Executive Committee decided to request relevant bilateral and implementing agencies to include, in their respective amendments to the work programmes for submission to the 80th meeting, funding for verification reports for stage I of the HCFC phase-out management plans (HPMPs) in the amount of US \$30,000, plus agency support costs, for each of the following 15

Article 5 countries: Belize; Botswana; Comoros (the); Djibouti; Eritrea; Gabon; Guinea-Bissau; Oman; Palau; Samoa; Solomon Islands; **Sudan** (the); United Republic of Tanzania (the); Togo; and Tonga.

Project Concept

Submission of funding request for enabling activities

Country:	Albania
Title:	Enabling activities for HFC phase-down in Albania
Project Duration:	18 months
Project Budget:	US\$95,000 (excl. 9% Agency Support Costs)
Implementing Agency:	UNIDO

General Statements

The Government of Albania as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Albania confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Albania confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline of Albania amounts to 6 ODP tonnes

The table below represents the country consumption of HFCs during the period 2012-2015.

Alternative	Estimated use (mt)			
	2012	2013	2014	2015
HFC-134a	15.15	17.45	22.97	27.21
HFC-227ea	3.61	4.48	5.38	6.89
R-404A	8.51	10.06	11.41	13.58
R-410A	6.11	7.86	9.84	11.82
R-507A	0.66	2.20	0.35	0.3
TOTAL	34.05	42.07	49.97	59.82

As it can be seen, the most commonly used alternative throughout the years has been HFC-134a. The second most commonly used alternative is R-404A (heavily used comparing to HFC-134a) with an overall increase from 2012 to 2015 of 59% compared to HFC-134a which has increased by 79% throughout the years. HFC-227ea has had a regular pattern of increase from around 24% and then 20% reaching its maximum increase of 28% in 2015. R-507A has increased by 233%

from 2012 to 2013 and it has decreased again from 2013 to 2014 by 83%, by keeping the same pattern when it comes to 2015 as well. HFO-1234yf has been introduced in the country during the year 2015.

2. Objectives

The main objective of these enabling activities is to prepare Tunisia for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated

c. National strategies that contained the activities in sub-paragraphs a and b above:

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (refrigeration and air-conditioning manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	20,000
b.2. Licensing systems	b.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3. Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
c. Preparation for national strategies	c.1. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
Total		95,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■														
b.2. Licensing systems	b.2.		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.		■	■	■	■	■	■	■	■									
c. Preparation for national strategy	c.1.										■	■	■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) of the Ministry of Environment and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Armenia

Title: Enabling activities for HFC phase-down in Armenia

Project Duration: 18 months

Project Budget: US\$150,000 (excl. 9% Agency Support Costs)

Implementing Agency: UNIDO

General Statements

The Government of Armenia as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects. .

The Government of Armenia confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Armenia confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline in Armenia amounts to 7 ODP tonnes.

The annual demand of ODS was in the range of 1.044 thousand tonnes in 2012 to 1.307 thousand tonnes in 2015, fluctuating in between to 1.182 thousand tonnes in 2014.

The stationary air-conditioning sector accounts for largest share of consumption (21%) in year 2015. The second highest demand is observed in the foam sector (17%), MAC sector accounts for 16 %, fire suppression sector for 15%, domestic refrigeration for 10.7%, industrial refrigeration sector for 9%, commercial refrigeration sector for 11%, and aerosols for 0.3% of the total ODS consumption.

2. Objectives

The main objective of these enabling activities is to prepare Armenia for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,

- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated

c. National strategies that contained the activities in sub-paragraphs a and b above;

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Assessment of the refrigeration and air-conditioning (RAC) servicing sector (formal and informal sector)	Relevant ministries	A report published on this topic	Accurate analysis of the characteristics of the servicing sector made
Inventory of the refrigeration and air-conditioning units currently used in the country and projections for next years (including a chapter on energy efficiency options for these devices)	Relevant ministries	Workshop delivered --- A report published on this topic	Knowledge on the current and future national market of RAC devices increased among decision makers
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (RAC manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	25,000
b.2. Licensing systems	b.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3 Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
c. Preparation for national strategies	c.1. Assessment of the refrigeration and air-conditioning servicing sector	25,000
	c.2. Inventory of the refrigeration and air-conditioning devices.	25,000
	c.3. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
Total		150,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■														
b.2. Licensing systems	b.2.		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.		■	■	■	■	■	■	■	■									
c. Preparation for national strategy	c.1.						■	■	■	■	■	■							
	c.2.								■	■	■	■	■						
	c.3.												■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) of the Ministry of Nature Protection of the Republic of Armenia, and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Bosnia and Herzegovina

Title: Enabling activities for HFC phase-down in Bosnia and Herzegovina

Project Duration: 18 months

Project Budget: US\$95,000 (excl. 9% Agency Support Costs)

Implementing Agency: UNIDO

General Statements

The Government of Bosnia and Herzegovina as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Bosnia and Herzegovina confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Bosnia and Herzegovina confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline in Bosnia and Herzegovina amounts to 4.7 ODP tonnes.

The survey on ODS alternatives in BiH has revealed that estimated use of ODS alternatives in the period 2012-2015 varies between 770 and 860 mt per year. The aerosol sector accounts for the largest share of consumption (42.56%) of ODS alternatives in 2015, followed by the foam sector (29.44%) and commercial refrigeration (11.17%).

In RAC sector the highest demand is associated with consumption of HFC-134a (44.53%) and R-404a (30.06%). In the foam, aerosol, solvent and fire suppression sector, the highest consumption is associated with use of hydrocarbons (74.4%) and DME (14.4%), followed by methyl chloride (4.8%) and C-pentane (4.0%).

2. Objectives

The main objective of these enabling activities is to prepare Bosnia and Herzegovina for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,

- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated

c. National strategies that contained the activities in sub-paragraphs a and b above:

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (refrigeration and air-conditioning manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	20,000
b.2. Licensing systems	b.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3. Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
c. Preparation for national strategies	c.1. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
Total		95,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■														
b.2. Licensing systems	b.2.		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.		■	■	■	■	■	■	■	■									
c. Preparation for national strategy	c.1.										■	■	■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) of the Ministry of Foreign Trade and Economic Relations, and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Burkina Faso
Title: Enabling activities for HFC phase-down in Burkina Faso
Project Duration: 18 months
Project Budget: US\$150,000 (excl. 9% Agency Support Costs)
Implementing Agency: UNIDO

General Statements

The Government of Burkina Faso as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Burkina Faso confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Burkina Faso confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline amounts to 28.9 ODP tonnes.

In Burkina Faso, alternatives to ODS, consisting mainly of HFCs and HCs, are:

- In Refrigeration: HFC 134a, Ammonia, HFC-404 A and HC-600a;
- In Fixed Air Conditioning: HFC-407 C; And HFC-410A;
- In Mobile Air Conditioning: HFC-134a.

Table 1: Amount of refrigerants used in Metric Tonne

Refrigerant	2012	2013	2014	2015
HFC-410a	2	6,99	12,36	20,05
HFC-407c	5	0,10	3,00	4,00
HFC-404a	0,05	11,17	22,13	34,50
HFC-134a	180	285,50	346,50	469,20
R717	7	7,00	6,50	8,50
HC-600a	0	0	10,00	10,80

2. Objectives

The main objective of these enabling activities is to prepare Burkina Faso for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated

c. National strategies that contained the activities in sub-paragraphs a and b above;

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Assessment of the refrigeration and air-conditioning (RAC) servicing sector (formal and informal sector)	Relevant ministries	A report published on this topic	Accurate analysis of the characteristics of the servicing sector made
Inventory of the refrigeration and air-conditioning units currently used in the country and projections for next years (including a chapter on energy efficiency options for these devices)	Relevant ministries	Workshop delivered --- A report published on this topic	Knowledge on the current and future national market of RAC devices increased among decision makers
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (RAC manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	25,000
b.2. Licensing systems	b.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3 Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
c. Preparation for national strategies	c.1. Assessment of the refrigeration and air-conditioning servicing sector	25,000
	c.2. Inventory of the refrigeration and air-conditioning devices.	25,000
	c.3. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
Total		150,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■														
b.2. Licensing systems	b.2.		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.		■	■	■	■	■	■	■										
c. Preparation for national strategy	c.1.						■	■	■	■	■	■							
	c.2.								■	■	■	■	■						
	c.3.												■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) of the Ministry of Environment of Burkina Faso, and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Cameroon

Title: Enabling activities for HFC phase-down in Cameroon

Project Duration: 18 months

Project Budget: US\$150,000 (excl. 9% Agency Support Costs)

Implementing Agency: UNIDO

General Statements

The Government of Cameroon as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Cameroon confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Cameroon confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline in Cameroon amounts to 88.8 ODP tonnes.

The result shows an estimated use of the ODS alternatives over the period of 2012 – 2015 as follows:

Alternative	Estimated use (mt)			
	2012	2013	2014	2015
HFC				
HFC-134a	1,700	1,768	1,904	1,999
HFC blends				
R-404A	141.7	152.6	163.5	174.4
R-407C	7.9	10.2	11.3	11.3
R-410A	282.5	293.8	316.4	327.7
Other alternatives				
Methyl formate	1.2	2.4	1.2	3.6
HC-600a	0.07	0.13	0.13	0.65
R-717	1.5	0	0	1.5

The conversion of the domestic refrigeration sub-sector to HFC-134a at an early stage is the reason for the large quantities of HFC-134a use. HFC-134a is also used in chillers and air conditioning equipment.

R-404A is used in the refrigeration sub-sector and of R-407C in chillers has been in use in Cameroon for over ten years. The bank of R-404A is growing since it is used in both locally manufactured and imported units. As Europe phases out the use of R-404A, more second hand equipment is expected to be sent to Cameroon, amongst other destinations.

The use of R-410A is second to R-134a in metric tonnes since this alternative is increasingly being used in the commercial and central air conditioning applications like rooftop packaged units and large splits. The high leakage rates of this equipment contribute to the high consumption.

2. Objectives

The main objective of these enabling activities is to prepare Cameroon for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented
Training of technicians on reducing refrigerant emissions as well as on the use of flammable and toxic low-GWP alternatives	Training centers	Training sessions on this topic	Knowledge on handling all type of refrigerants fostered among training centers

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated

- c. National strategies that contained the activities in sub-paragraphs a and b above;

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Assessment of the refrigeration and air-conditioning (RAC) servicing sector (formal and informal sector)	Relevant ministries	A report published on this topic	Accurate analysis of the characteristics of the servicing sector made
Survey to cover the sectors that have not been analyzed in the ODS alternatives survey	Relevant ministries	A report published on this topic	Complete view of the current ODS alternatives' consumption finalized
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (RAC manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	20,000
	b.1.2. Training of technicians on reducing refrigerant emissions as well as on the use of flammable and toxic low-GWP alternatives	10,000
b.2. Licensing systems	b.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3 Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
c. Preparation for national strategies	c.1. Assessment of the refrigeration and air-conditioning servicing sector	20,000
	c.2. Survey to cover the sectors that have not been analyzed in the ODS alternatives survey.	25,000
	c.3. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
Total		150,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.1	■	■	■	■														
	b.1.2	■	■	■	■														
b.2. Licensing systems	b.2.		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.		■	■	■	■	■	■	■	■									
c. Preparation for national strategy	c.1.						■	■	■	■	■	■							
	c.2.						■	■	■	■	■	■							
	c.3.												■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) of the Ministry of Environment, Nature Protection and Sustainable Development, and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Republic of Congo

Title: Enabling activities for HFC phase-down in Republic of Congo

Project Duration: 18 months

Project Budget: US\$150,000 (excl. 9% Agency Support Costs)

Implementing Agency: UNIDO

General statements

The Government of Republic of Congo as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Republic of Congo confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Republic of Congo confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution), including financial rules; procurement manual and human resource management; recruitment rules and regulations.

1. Background

HCFC baseline consumption in the Republic of Congo is 10.14 ODP tonnes.

The ODS alternatives survey recently completed in the Republic of Congo shows that in the period 2012-2015 an average amount of more than 83.9 metric tonnes of HFCs have been consumed every year.

The most common HFCs for all sectors are HFC-134a (more than 52 % of average) and HFC-410A (almost 35 % of average). In terms of GWP, these are the substances with highest GWP,, 1,430 (HFC-134a) and 2,088 (HFC-410A).

All consumption of HFCs is found in servicing sector. The installations with the charge of HFC and other alternatives are found in Domestic refrigeration, commercial refrigeration, industrial refrigeration, transport refrigeration, stationery air conditioning and mobile air conditioning.

Domestic and commercial refrigeration sub-sectors has a total of 150,058 equipment installed (98.43%), followed by industrial refrigeration sub-sector with 2, 397equipment installed (1.57%).

2. Objectives

The main objective of these enabling activities is to prepare Republic of Congo for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions. Proper technical, administrative and financial support to the NOU to be provided by Implementing Agency/ UNIDO.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification. Necessary technical, administrative and financial support to be provided by Implementing Agency/ UNIDO.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies. Technical, administrative and financial support, to be provided by Implementing Agency/ UNIDO.

Activities	Target group	Milestones	Expected outputs
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol. Proper technical, administrative and financial support to the NOU and to cooperating organizations, e.g. custom authorities; to be provided by Implementing Agency/ UNIDO.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated

c. National strategies that contained the activities in sub-paragraphs a and b above;

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Assessment of the refrigeration and air-conditioning servicing sector (formal and informal sector)	Relevant ministries	A report published on this topic	Accurate analysis of the characteristics of the servicing sector made
Inventory of the refrigeration and air-conditioning units currently used in the country and projections for next years (including a chapter on energy efficiency options for these devices)	Relevant ministries	Workshop delivered --- A report published on this topic	Knowledge on the current and future national market of RAC devices increased among decision makers
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (RAC manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	25,000
b.2. Licensing systems	b.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3 Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
c. Preparation for national strategies	c.1. Assessment of the refrigeration and air-conditioning servicing sector	25,000
	c.2. Inventory of the refrigeration and air-conditioning devices.	25,000
	c.3. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
Total		150,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■														
b.2. Licensing systems	b.2.		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.		■	■	■	■	■	■	■										
c. Preparation for national strategy	c.1.						■	■	■	■	■	■							
	c.2.								■	■	■	■	■						
	c.3.												■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) (National Bureau Ozone, Congo) belonging to the Ministry of Environment, and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Gambia
Title: Enabling activities for HFC phase-down in Gambia
Project Duration: 18 months
Project Budget: US\$95,000 (excl. 9% Agency Support Costs)
Implementing Agency: UNIDO

General Statements

The Government of Gambia as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Gambia confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Gambia confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline of Gambia amounts to 1.5 ODP tonnes.

The major ODS alternatives in use in the country are R-134a, R-404A, R-407C, R-410A, and R-600a. These are used in sectors and subsectors mainly in the Refrigeration and Air conditioning servicing and installation.

Consumption of ODS alternatives are generally on the increase from 2012 to 2015 while consumption of HCFC-22 is on the decline in compliance with the accelerated HCFC phase out provisions. Though the use of ODS Alternatives are increasing in most sectors, HCFC-22 is still the predominant refrigerant in the refrigeration and air conditioning sector.

The table below summarizes the current consumption of ODS alternatives in the country

Table 1. Use of ODS alternatives 2012 - 2015

<i>Alternative</i>	<i>Estimated use (Mt)</i>			
	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>
<i>HFC*</i>				
<i>HFC-134a</i>	<i>9</i>	<i>11</i>	<i>13</i>	<i>15</i>
<i>HFC blends</i>				
<i>R-404A</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>10</i>
<i>R-407C</i>	<i>5</i>	<i>6</i>	<i>10</i>	<i>12</i>
<i>R-410A</i>	<i>4</i>	<i>6</i>	<i>8</i>	<i>9</i>
<i>OTHERS</i>				
<i>Methyl formate</i>	<i>12</i>	<i>13</i>	<i>15</i>	<i>16</i>
<i>HC-600a</i>	<i>4</i>	<i>5</i>	<i>7</i>	<i>8</i>

2. Objectives

The main objective of these enabling activities is to prepare Tunisia for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated

c. National strategies that contained the activities in sub-paragraphs a and b above;

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (refrigeration and air-conditioning manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	20,000
b.2. Licensing systems	b.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3. Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
c. Preparation for national strategies	c.1. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
Total		95,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■														
b.2. Licensing systems	b.2.		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.		■	■	■	■	■	■	■	■									
c. Preparation for national strategy	c.1.										■	■	■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) of the Ministry of Environment, Climate Change and Natural Resources of Gambia, and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: The Former Yugoslav Republic of Macedonia
Title: Enabling activities for HFC phase-down in Macedonia
Project Duration: 18 months
Project Budget: US\$95,000 (excl. 9% Agency Support Costs)
Implementing Agency: UNIDO

General Statements

The Government of Macedonia as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Macedonia confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Macedonia confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline in Macedonia amounts to 1.8 ODP tonnes.

The estimated use of ODS alternatives in the period 2012-2015 varies between 60 – 112 mt for all types of refrigerants (see Table 1), while the summary of the used alternatives by sectors shows that in the manufacturing sector the rate of consumption is very low (1,36-14,66 mt) and in the servicing sector is higher (60-106mt) (see Table 2).

Table 1: Estimated use by ODS alternative

Estimated use by ODS alternative				
Alternative	Estimated use (mt)			
	2012	2013	2014	2015
HFC				
HFC-134a	31,7	36,85	38,87	40,89
HFC blends				
R-404A	18,52	18,8	18,92	25,94
R-407C	6,54	6,66	6,78	6,9
R-410A	8,39	8,96	9,53	10,1
R-507	1,12	0,77	0,89	0,214
Total	66,27	72,04	74,99	84,04

Table 73: Summary of use in all sectors for each year between 2012 - 2015 (mt)

2012								
Alternative	Refrigeration and air-conditioning		PU foam	XPS foam	Aerosol	Fire fighting	Solvent	Others
	Manufacturing	Service						
HFC								
HFC-134a	0,25	31,45						
HFC blends								
R-404A	1,11	17,41						
R-407C		6,51						
R-410A		8,39						
R-507		1,12						
R227ea						7		
Total	1,36	64,88	0	0	0	7	0	0
2013								
Alternative	Refrigeration and air-conditioning		PU foam	XPS foam	Aerosol	Fire fighting	Solvent	Others
	Manufacturing	Service						
HFC								
HFC-134a	2,7	34,15						
HFC blends								

R-404A	1,24	17,56						
R-407C		6,66						
R-410A		8,96						
R-507		0,77						
Total	3,94	68,10	0	0	0	0	0	0
2014								
Alternative	Refrigeration and air-conditioning		PU foam	XPS foam	Aerosol	Fire fighting	Solvent	Others
	Manufacturing	Service						
HFC								
HFC-134a	4,54	34,33						
HFC blends								
R-404A	1,35	17,57						
R-407C		6,78						
R-410A		9,53						
R-507		0,89						
Total	5,89	69,10	0	0	0	0	0	0
2015								
Alternative	Refrigeration and air-conditioning		PU foam	XPS foam	Aerosol	Fire fighting	Solvent	Others
	Manufacturing	Service						
HFC								
HFC-134a	6,48	34,34						
HFC blends								
R-404A	8,66	17,12						
R-407C	0	6,90						
R-410A	0	10,1						
R-507		0,214						
Total	15,14	68,67	0	0	0	0	0	0

2. Objectives

The main objective of these enabling activities is to prepare Macedonia for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Enhancement of the import and export license system to include HFCs and other alternatives	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	Identification of necessary regulatory and administrative measures for the control of HFCs' imports and exports
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated
Improving a national database to include HFCs and other ODS alternatives	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National database updated

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	20,000
b.2. Licensing systems	b.2.1. Enhancement of the import and export license system	15,000
	b.2.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3.1. Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
	b.3.2. Improving a national database	10,000
Total		95,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■														
b.2. Licensing systems	b.2.1					■	■	■	■	■									
	b.2.2					■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.1							■	■	■	■	■	■						
	b.3.2													■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) of the Ministry of Environment and Physical Planning, and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Mexico

Title: Enabling activities for HFC phase-down in Mexico

Project Duration: 18 months

Project Budget: US\$250,000 (excl. 9% Agency Support Costs)

Implementing Agency: UNIDO and UN Environment

1. Proposal enabling activities to be implemented by UNIDO as lead Agency, UNE as cooperating agency and the Government of Mexico.

The Government of Mexico through SEMARNAT has been very active in implementing the NPP and HPMP during the last years, phasing-out CFC and advancing on the phase-out of HCFCs. Besides, it is relevant to highlight that for over 8 years, Mexico was a key player in the negotiations to amend the Montreal Protocol in order to control the production and consumption of HFCs.

Following the historic pronouncement of the Kigali Amendment, at its 79th Meeting, the Executive Committee approved decision 79/46, which allows A5 countries to undertake a range of enabling activities to assist national ozone units to fulfil their initial obligations with regard to HFC phase-down under the Kigali Amendment.

Primary activities identified by the Government of Mexico are targeted to initiate institutional provisions which can facilitate the introduction of HFC phase-down obligations in future and can enforce the role of the National Ozone Unit in terms of HFC and energy efficiency. Description of each one of the enabling activities proposed by Mexico, including cost breakdown and the schedule for implementation, is described below.

I. PREPARATION OF THE HFC PHASE-DOWN ROAD MAP IN MEXICO.

The Montreal Protocol has demonstrated that formulation of national plans to control ODSs is the basis to assist A5 Countries to meet their obligations, consequently, it is essential to start with the preparation of a Road Map which should contain the main general supporting activities for the phase-down of HFC including capacity building for handling HFC alternatives.

As further detailed below, Mexico suggest the design of a Road Map to HFC phase-down made up in three segments: the first component will assess the impact of the HCFC Phase-Out in the potential consumption of HFC in México, while second component will address the HFC scenario in Mexico taking into account the national survey on ODS alternatives and the present conditions in terms of availability of technologies and costs, finally the third component will identify the policies and regulations to facilitate the HFCs phase-down and the introduction of low-GWP alternative technologies. These three main components will allow the further design of an implementation strategy of the Kigali amendment in Mexico.

Component 1. Assessment report on the impact of the Phase out of HCFC in the potential consumption of HFC in Mexico.

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
ODS Policy, legislative/regulatory and framework conditions and Stakeholders	Update of the information on the regulations regarding to the management and use of ODS. And its impact on the consumption of HFC	1	Assessment report on the impact of the Phase out of HCFC in the potential consumption of HFC in México	12,000
	Identify the list of associations, academy, other governmental stakeholders involved in the phase out of HCFC and HFC	0.5		
HCFC Phase Out Projects	Assessment of the impact of the HPMP implementation	2.5		
Total		4.0		

Component 2. Update and upgrade of the HFC consumption survey.

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
Methodology and validation	Data Verification	3.5	Update and upgrade of the HFC consumption survey	40,000
HFC Consumption Data assessment	HFC importers	0.5		
	HFC exporters	0.5		
	HFC Consumption 2016-2018 and projections until 2022	1.5		
	Estimation of the HFC base line and starting point for aggregate reduction in HFC consumption	1		
	HFC alternatives in terms of availability in the Mexican market and in the international markets. Technology, safety and operative costs. Cost/Effectiveness analysis	3		
Sectorial Distribution: RAC, MAC, Foams, Aerosols, Solvents, fire Suppressors and others	2			
Total		11		

Component 3. Policy Support
Subcomponent 3A- Policies and Regulations

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
Identification of Policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	Potential controls on the import of HFC-based equipment when nationally appropriate	3	Feasibility study to determine the options to control the imports of HFC based equipment and avoid its installation in México	7,000
	Updated Quota and licence system to control HFCs	4	Assessment on the requirements to implement the quota and licensing system for the HFC and its blends	8,000
	Identification of the regulations and safety standards for handling flammable and toxic alternatives	4	Evaluation of the existing safety standards for handling flammable and toxic alternatives and the general regulation modifications needed	12,000
	Assessment of the actual standards for the energy efficiency for RAC equipment, and identification of the new standards to adopt of new technologies	4	Comparative assessment of the actual energy efficiency standards and the requirements for the adoption of the new technologies, including the possible new developments in equipment design for its efficiency	8,000
	Identification of required regulations or its possible adaptation for disposal of old appliances, management of recovered refrigerants and the destruction of HFCs in its case	5	Development of the guidelines for the management of old RAC appliances and recovered refrigerants including its possible destruction	8,000

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
	Diagnosis of the conditions for the emission control obligations of HFC-23, considering the different funding sources.	4	Identification of the requirements to control the emissions of HFC-23, and consideration of technical assistance for process optimization and leakage control	8,000
Total		124	Total	51,000

¹ Enabling activities listed in subcomponent 3A will be performed at the same time in a maximum of 18 months, please see work program below.

Subcomponent 3B – Kigali Amendment Road Map

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
Design of the Road map for the implementation of the Kigali Amendment in México.	Policy and regulatory measures, and overarching activities to phase-down HFCs	3	Assessment report on the requirements of policies and overarching activities, considering: Linkage with the Stage III of the HPMP, Design of the quota and licensing system Safety and Energy Efficiency standards, Customs controls and Public awareness	15,000
	HFC-23 Monitoring Emissions	1	Design of an emission monitoring, report and verification model	
	Identification of the possible Investment and non-investment projects	3	Assessment on the upgraded survey to determine the possible initial projects and its priority	
	Climate Impact	1	Assessment on the climate impact of the strategy and the harmonization with the National policies on Climate Change	
Total		8		15,000

II. PRELIMINARY ACTIVITIES.

Capacity Building

With the implementation of the Kigali Amendment it would be essential to initiate with several preliminary capacity building activities paving the way to the HFC phase-down. A number of actions have been identified by Mexico including enforcement of the national ozone unit in energy efficiency issues, the identification of energy saving opportunities in RAC sectors as well as training programs for trainers addressing the handling of the flammable and toxic refrigerants.

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
Preliminary capacity building requirements for	Training programmes for refrigeration service technicians addressing issues	2	Train the trainers course for the identification of all kind of alternatives to the HFC (including other	15,000

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
the implementation of the Kigali Amendment and its related matters.	related to flammability and/or toxicity of refrigerants being phased in.		HFC and its blends)	
	Identification of the possible energy savings opportunities in the RAC sectors considering the implementation of the Kigali Amendment.	3	Report on the assessment of the EE policies, availability of new technologies, the potential energy savings per sector and feasible applications in the Mexican market	10,000
	Training for National Ozone officers and other related stakeholders on energy efficiency developments in the RAC systems.	2	Train to the NOO, Energy officers and other related stakeholders and technical experts in energy efficiency and the new developments to increase efficiency in RAC systems	18,000
Total		7	Total	43,000

III. PUBLIC AWARENESS.

In order to disseminate the new commitments of Mexico under the Montreal Protocol and the possible effects of the Kigali Amendment in the Mexican policies in terms of climate change, as one of the first enabling activities it is planned that one informative workshop will be organized aiming at the Industry, Academy, Government and other representatives.

Moreover, it would be very relevant to produce outreach materials that demonstrate the impact and benefits of the Kigali amendment as well as the documentation of the project within Mexico using low- GWP alternatives.

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
Kigali Amendment informative workshop	Arrangement of one event in a city of Mexico.	3	One workshop for 100 participants	15,000
Fact Sheets and Case Studies on Transitioning to Low-GWP Alternatives in Various Applications	Documentation of projects using low-GWP alternatives.	3	10 fact sheets on experiences using Low GWP alternatives in Mexico.	8,000

Total	9	Total	23,000
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IV. COORDINATION OF ENABLING ACTIVITIES.

In order to maximize the impacts, enabling activities will be executed in harmony with the HPMP and National Climate Policies. The coordination of these actions is an essential element of the National Strategy, since there must be regular coordination meetings with industry stakeholders, HFC importers and exporters, ministries, various industry associations, and all sectors involved, in order to identify the necessary measures to implement the Kigali Amendment on time and in a coordinated way.

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
General Coordination and Monitoring of the Enabling Activities		12	Enabling activities for HFC phase-down coordinated.	36,000

V. COST BREAKDOWN AND SCHEDULE FOR IMPLEMENTATION

Enabling Activity	Line of Activity	Budget Requested (USD)
1.Preparation of the HFC phase-down Road map in Mexico	1.1 Assessment report on the impact of the Phase out of HCFC in the potential consumption of HFC in Mexico	12,000
	1.2 Update and upgrade of the HFC consumption survey	40,000
	1.3 Policies and Regulations	51,000
	1.4 Kigali Amendment Road map	15,000
	Subtotal 1	118,000
2. Preliminary capacity building requirements for the implementation of the Kigali Amendment and its related matters	2.1 Training programmes for refrigeration service technicians	15,000
	2.2 Identification of the possible energy savings opportunities in the RAC sectors	10,000
	2.3 Training for National Ozone officers and other related stakeholders on energy efficiency	18,000
	Subtotal 2	43,000
3.Public awareness	3.1 Kigali Amendment informative workshop	15,000
	3.2 Fact Sheets on Transitioning to Low-GWP Alternatives in Various Applications	8,000
	Subtotal 3	23,000
4. Coordination of enabling activities.	4.1 General Coordination and Monitoring of the Enabling Activities	36,000
	Subtotal 4	36,000

TIME SCHEDULE

Enabling Activity	Line of activity	Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. HFC phase-down strategy	1.1	■	■	■															
	1.2				■	■	■	■	■	■	■	■	■						
	1.3				■	■	■	■	■	■	■								
	1.4										■	■	■	■	■				
2. Capacity Building	2.1													■	■				
	2.2														■	■	■	■	
	2.3																	■	■
3. Public awareness	3.1					■	■	■											
	3.2			■	■	■													
4. Coordination	4.1							■	■	■	■	■	■	■	■	■	■	■	■

UNE, as cooperating agency, will implement the following activities:

I. PRELIMINARY ACTIVITIES.

Capacity Building

With the implementation of the Kigali Amendment, it would be essential to start with several preliminary capacity building activities paving the way to the HFC phase-down. A number of actions has been identified by Mexico, one of the most important ones is to enforce Mexican customs and other stakeholders in the controls and obligations necessary to regulate HFC and its alternatives. In order to maximize the impact, this component will be harmonized with the efforts established under HPMP 2 by creating co-benefits in terms of prevention of illicit traffic of HCFC while controlling the import of HFC.

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
Preliminary capacity building requirements for the implementation of the Kigali Amendment and its related matters.	Training for customs and enforcement officers addressing the obligations under the Kigali Amendment, including the revised import/export licensing systems.	6	Update to the custom and enforcement officers on the regulations for the imports of HFC and its alternatives. Including the identification of the tools required for the control these substances.	20,000
	Total	6	Total	20,000

II. PUBLIC AWARENESS.

In order to disseminate Mexico's new commitments under the Montreal Protocol and the possible effects of the Kigali Amendment in the Mexican policies, in terms of climate change, as one of the first enabling activities, the organization of one informative workshop is planned, aiming at the Industry, Academy, Government, and other representatives. This way, the Mexican government considers it would be very relevant to produce outreach materials that demonstrate the impact and benefits of the Kigali amendment, as well as the documentation of the project within Mexico using low- GWP alternatives.

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
Kigali Amendment informative workshop	Elaboration of dissemination material for the different national actors with regard to the Kigali Amendment.	3	Design and printing of notebooks, posters, handbook and other promotional materials regarding Kigali Amendment.	10,000
Total		3	Total	10,000

III. COST BREAKDOWN AND SCHEDULE FOR IMPLEMENTATION

Enabling Activity	Line of Activity	Budget Requested (USD)
1. Preliminary capacity building requirements for the implementation of the Kigali Amendment and its related matters	1.1 Training for customs and enforcement officers addressing the obligations under the Kigali Amendment.	20,000
	<i>Subtotal 1</i>	20,000
2. Public awareness	2.1 Design and promotional materials regarding Kigali Amendment.	10,000
	<i>Subtotal 2</i>	10,000
<i>Total</i>		30,000

TIME SCHEDULE

Enabling Activity	Line of activity	Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Capacity Building	1.1																		
2. Public awareness	2.1																		

2. Proposal for enabling activities to be implemented by UN Environment and the Government of Mexico.

The Government of Mexico through SEMARNAT has been very active in implementing the NPP and HPMP during the last years, phasing-out CFC and advancing on the phase-down of HCFC. Besides, it is relevant to highlight that for over 8 years, Mexico was a key player in the negotiations to amend the Montreal Protocol in order to control the production and consumption of HFC.

In light with the historic pronouncement of the Kigali Amendment, on the 79th Meeting of the Executive Committee decision 79/46 was approved, which allows A5 countries to undertake a range of enabling activities to assist national ozone units to fulfil their initial obligations with regard to HFC phase-down.

Primary activities identified by the Government of Mexico are targeted to initiate institutional provisions, which can facilitate the introduction of HFC phase-down obligations in the future and can enforce the role of the National Ozone Unit in terms of HFC and energy efficiency. Description of each one of the enabling activities proposed by Mexico, including cost breakdown and the schedule for implementation, are described below.

Institutional arrangements for implementation of enabling activities.

Implementation of the enabling activities will be accomplished using existing national infrastructure and institutional setting already established for ODS phase-out activities. Institutional arrangement in México is such that management of ozone depleting substances projects are executed by the National unit of Ozone layer protection, belonging to the Direction of Quality Air Control of the Secretariat of Environment and Natural Resources. The UN Environment Compliance Assistance Programme staff members, regional and national experts/consultants will provide support to the NOU in the implementation of this project.

Other relevant stakeholders that will be involved in the discussion on the Kigali amendment enabling activities are the Customs Service and other governmental bodies related to the license system implementation in México.

I. PRELIMINARY ACTIVITIES.

Capacity Building

With the implementation of the Kigali Amendment, it would be essential to start with several preliminary capacity building activities paving the way to the HFC phase-down. A number of actions has been identified by Mexico, one of the most important ones is to enforce Mexican customs and other stakeholders in the controls and obligations necessary to regulate HFC and its alternatives. In order to maximize the impact, this component will be harmonized with the efforts established under HPMP 2 by creating co-benefits in terms of prevention of illicit traffic of HCFC while controlling the import of HFC.

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
Preliminary capacity building	Demonstration training sessions for customs and	6	Update to the custom and enforcement officers on the regulations for the	20,000

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
requirements for the implementation of the Kigali Amendment and its related matters.	enforcement officers addressing the obligations under the Kigali Amendment, including the revised import/export licensing systems.		imports of HFC and its alternatives. Including the research of the required tools to control the import of these substances, These tool research includes all the possible systems to be used for the gas identification.	
Total		6	Total	20,000

II. PUBLIC AWARENESS.

In order to disseminate Mexico's new commitments under the Montreal Protocol and the possible effects of the Kigali Amendment in the Mexican policies, in terms of climate change, as one of the first enabling activities, the elaboration of information materials for the different sectors such as Industry, Academy, Government and other relevant public sectors, highlighting the impact and benefits of the Kigali amendment, as well as the documentation of the project within Mexico using low- GWP alternatives.

Output	Task/Actions	Term (m)	Indicator	Budget Requested (USD)
Kigali Amendment informative workshop	Elaboration of information material for the different national actors with regard to the Kigali Amendment.	3	Design and printing of notebooks, posters, handbook and other promotional materials regarding Kigali Amendment.	10,000
Total		3	Total	10,000

III. COST BREAKDOWN AND SCHEDULE FOR IMPLEMENTATION

Enabling Activity	Line of Activity	Budget Requested (USD)
1. Preliminary capacity building requirements for the implementation of the Kigali Amendment and its related matters	1.1 Demonstration training sessions for customs and enforcement officers addressing the obligations under the Kigali Amendment.	20,000
	<i>Subtotal 1</i>	20,000
2.Public awareness	2.1 Design and printing of	10,000

	promotional materials regarding Kigali Amendment.	
	<i>Subtotal 2</i>	10,000
	<i>Total</i>	30,000

TIME SCHEDULE

Enabling Activity	Line of activity	Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Capacity Building	1.1																		
2. Public awareness	2.1																		

Statement by the Government and Implementing Agency

The Government of Mexico and the UN Environment confirm that the proposed enabling activities will not delay the implementation of HCFC phase-out activities in the country.

Submission of funding request for enabling activities

Country: Montenegro
Title: Enabling activities for HFC phase-down in Montenegro
Project Duration: 18 months
Project Budget: US\$50,000 (excl. 9% Agency Support Costs)
Implementing Agency: UNIDO

General Statements

The Government of Montenegro as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects. .

The Government of Montenegro confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Montenegro confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline in Montenegro amounts to 0.8 ODP tonnes.

Total consumption of substances in the period 2012-2015 is 189,19 MT. HFC-134a and R-404A are dominant with 35,14% and respectively 33,61%, followed by R-410A with 13,47%, R-717 (ammonia) with 9,01% and R-407C with 7,39%, while all others are 1,39%. Only two refrigerants (HFC-134a and R-404A) are used in the manufacturing sector.

The air-conditioning and refrigeration sector is the largest user of ODS alternatives in Montenegro. The main uses of refrigerants are in mobile air-conditioning followed by commercial refrigeration.

Table 1. Consumption by sectors for the period 2012-2015 (in MT)

Alternative	Manufacturing	Servicing	Total
HFC-134a	20,40	46,07	66,47
R-404A	44,05	19,53	63,58
R-410A		25,49	25,49
R-407C		13,99	13,99

R-507A		0,85	0,85
HFC-227ea		1,21	1,21
R-717 Ammonia		17,04	17,04
HC-600a		0,57	0,57
Total			189,19

Legislation is in place which ban on import of equipment based on HCFC-22. The HCFCs quota system has effectively reduced the consumption of HCFC. The Import and export of HFCs is subject for permits for monitoring purposes and reporting from importers is very good. No ban on non-refillable HCFC/HFC containers until the accession of Montenegro to the European Union; however, it is required Ban on import of refrigerants in disposable (refillable) cylinders as soon as possible, preferably from 2017.

2. Objectives

The main objective of these enabling activities is to prepare Montenegro for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment' s ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

Country-specific activities aimed at initiating supporting institutional arrangements. Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

c. National strategies that contained the activities in sub-paragraphs a and b above:

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (refrigeration and air-conditioning manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	20,000
c. Preparation for national strategies	c.1. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
<i>Total</i>		50,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■	■	■												
c. Preparation for national strategy	c.1.							■	■	■	■	■	■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) of the Environmental Protection Agency and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Serbia

Title: Enabling activities for HFC phase-down in Serbia

Project Duration: 18 months

Project Budget: US\$150,000 (excl. 9% Agency Support Costs)

Implementing Agency: UNIDO

General Statements

The Government of Serbia as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Serbia confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Serbia confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline in Serbia amounts to 8.4 ODP tonnes.

The total consumption of ODS alternatives is 1,727.79 tonnes for the period 2012-2015. HFC-134a is dominant with 54,28%, followed by R-404A with 35,34%, R-407C with 4,82% and R-410A with 4,48% while all others are 1,07%.

The distribution by sectors is provided in the table below:

Alternative	Manufacturing	Servicing	Total	%
HFC-134a	140,68	797,21	937,89	54,28%
R-404A	366,39	244,26	610,66	35,34%
R-410A	3,87	73,48	83,35	4,82%
R-407C	45,84	37,51	77,35	4,48%
Others			18,54	1,07%
Total (MT)	553,79	1.155,46	1.727,79	

2. Objectives

The main objective of these enabling activities is to prepare Serbia for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents for the vote on the amendment' s ratification
Awareness raising of stakeholders on HFC phase-down and energy efficiency improvement options	Relevant ministries --- Legislators	A workshop delivered with relevant ministries	Relevant stakeholders have sufficient information on the topic to proceed with the ratification of the amendment

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Enhancement of the import and export license system to include HFCs and other alternatives	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	Identification of necessary regulatory and administrative measures for the control of HFCs' imports and exports
Training of customs officers and environmental inspectors on HFCs control and alternatives	Customs and environment inspectors	A workshop with relevant stakeholders delivered	Knowledge on HFCs control and alternatives transmitted

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated
Improving a national database based on the above	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National database updated

c. National strategies that contained the activities in sub-paragraphs a and b above;

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Assessing national barriers and opportunities for the use and further uptake of low- and zero-GWP ODS alternatives	Relevant ministries --- Private sector (RAC manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Barriers and opportunities identified
Identification of appropriate policies, regulations, and financial instruments, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (RAC manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies, regulations and financial instruments identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Supporting national ratification instruments	2,500
	a.2. Awareness raising of stakeholders on HFC phase-down and energy efficiency improvement options	2,500
b.1. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	25,000
b.2. Licensing systems	b.2.1. Enhancement of the import and export license system	20,000
	b.2.2. Training of customs officers and environmental inspectors on HFCs control and alternatives	10,000
b.3. Data reporting on HFC consumption	b.3.1. Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
	b.3.2. Improving a national database based on the above	20,000
c. Preparation for national strategies	c.1. Assessing national barriers and opportunities	20,000
	c.2. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
Total		150,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■														
b.2. Licensing systems	b.2.1		■	■	■	■	■	■	■	■									
	b.2.2		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.1		■	■	■	■	■	■	■	■									
	b.3.2		■	■	■	■	■	■	■	■									
c. Preparation for national strategy	c.1.						■	■	■	■	■	■	■						
	c.2.								■	■	■	■	■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) of the Ministry of Environmental Protection and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Somalia

Title: Enabling activities for HFC phase-down in Somalia

Project Duration: 18 months

Project Budget: US\$150,000 (excl. 9% Agency Support Costs)

Implementing Agency: UNIDO

General Statements

The Government of Somalia as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Somalia confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Somalia confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline in Somalia amounts to 45.1 ODP tonnes.

No information has been obtained regarding the HFC consumption in the country. The Green Cooling Initiative states that the direct CO₂e emissions linked to domestic refrigeration, mobile air-conditioning and unitary air-conditioning amount to 653,000 tonnes, while indirect emissions amount to 442,000 tonnes.

2. Objectives

The main objective of these enabling activities is to prepare Somalia for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated

c. National strategies that contained the activities in sub-paragraphs a and b above;

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Assessment of the refrigeration and air-conditioning (RAC) servicing sector (formal and informal sector)	Relevant ministries	A report published on this topic	Accurate analysis of the characteristics of the servicing sector made
Inventory of the refrigeration and air-conditioning units currently used in the country and projections for next years (including a chapter on energy efficiency options for these devices)	Relevant ministries	Workshop delivered --- A report published on this topic	Knowledge on the current and future national market of RAC devices increased among decision makers
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (RAC manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	25,000
b.2. Licensing systems	b.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3 Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
c. Preparation for national strategies	c.1. Assessment of the refrigeration and air-conditioning servicing sector	25,000
	c.2. Inventory of the refrigeration and air-conditioning devices.	25,000
	c.3. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
Total		150,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■														
b.2. Licensing systems	b.2.		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.		■	■	■	■	■	■	■	■									
c. Preparation for national strategy	c.1.						■	■	■	■	■	■							
	c.2.								■	■	■	■	■						
	c.3.												■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Sudan

Title: Enabling activities for HFC phase-down in Sudan

Project Duration: 18 months

Project Budget: US\$75,000 (excl. 9% Agency Support Costs)

Implementing Agency: UNIDO and UNEP

General statements

The Government of Sudan as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Sudan confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Sudan confirms that all Enabling Activities will be implemented following UNIDO financial rules; procurement manual and human resource management including recruitment rules and regulations (UNIDO's execution).

1. Background

The HCFC baseline in Sudan amounts to 52.7 tonnes.

The ODS alternatives survey recently completed in Sudan shows that in the period 2012-2015 an average amount of 214.3 metric tonnes (mt) of HFCs have been consumed every year. This amount is equivalent to almost 465 kilo-tonnes CO₂, which represents 43% of the total global warming potential (GWP) of the ODS alternatives consumed in the country (1,063,882 CO₂-eq tons), since quite high amount of HCFC 141b and 22 has been still consumed.

According to 2015 consumption figures, the most common HFCs for all sectors are HFC-134a (more than 95%), HFC 407C (more than 1.8%), HFC-404A (more than 1.2%) and HFC-410A (around 1.2%). In terms of GWP, these substances have the biggest share on above mentioned total.

The largest consumption of HFCs in Sudan in metric tonnes was found in the refrigeration manufacturing and servicing sectors and also in air conditioning servicing sector, which represents practically total consumption, since only negligible consumption (0.3%) was identified in firefighting sector.

2. Objectives

The main objective of these enabling activities is to prepare Sudan for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Definition of the national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

The National Ozone Office to function as technical and administrative guarantor of the ratification process by providing the required data, information and background documents to the ratification institutions. Proper technical, administrative and financial support to the NOU to be provided by Implementing Agency/ UNIDO.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all support documents for the vote on the amendment' s ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification. Necessary technical, administrative and financial support to be provided by Implementing Agency/ UNIDO.

Activities	Target group	Milestones	Expected outputs
Assessment of linkages between the Kigali amendment (HFC control measures and energy efficiency objectives) and the national strategy on environment and on climate change	Relevant ministries	At least one workshop to be organized for relevant ministries --- Papers to be prepared	Links identified
Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- Relevant papers prepared	A proposal prepared for updating codes and standards

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the phasing out achievements under the Montreal Protocol. Licensing and quota system should continue to support future phase out strategies. Technical, administrative and financial support, to be provided by Implementing Agency/ UNIDO.

Activities	Target group	Milestones	Expected outputs
Enhancement of the import and export license system to include HFCs and other alternatives	Customs --- Relevant ministries	At least one workshop to be organized for relevant stakeholders --- A report drafted	Identification of necessary regulatory and administrative measures for the control of HFCs' imports and exports
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	At least one workshop to be organized for relevant stakeholders --- A report drafted	Tariff codes defined and officially introduced

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Proper technical, administrative and financial support to the NOU and to cooperating organizations, e.g. custom authorities; to be provided by Implementing Agency/ UNIDO.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector. Special attention to be paid to informal sector.	Relevant ministries --- Customs	At least one workshop to be organized for relevant stakeholders --- A report drafted	National mechanism updated

c. National strategies that contained the activities in sub-paragraphs a. and b. above;

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down.

Activities	Target group	Milestones	Expected outputs
Assessment report on the impact of the Phase out of HCFC in the potential consumption of HFCs and other ODS alternatives in refrigeration manufacturing and servicing sectors in Sudan	Relevant ministries and other stakeholders.	Workshop delivered --- A report drafted	Projection on ODS alternatives consumption estimated
Inventory of the refrigeration and air-conditioning units currently used in the country and projections for next years (including a chapter on energy efficiency options for these devices)	Relevant ministries and other stakeholders.	Workshop delivered --- A report drafted	Knowledge on the national market of RAC devices among decision makers increased
Assessment of the refrigeration and air-conditioning servicing sector (formal and informal sector)	Relevant ministries and other stakeholders like professional associations and service shops associations.	A report drafted	Understanding of the composition of the servicing sector reached
Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (RAC manufacturing, servicing sector, aerosols)	Workshop delivered --- A report drafted	National strategy defined
Consumers awareness raising on energy efficiency improvement options for RAC devices	Civil society, schools and training centers.	A brochure prepared and distributed in relevant events	Civil society and targeted professionals informed on this topic

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,000
	a.2. Supporting national ratification instruments	2,000
b.1. Institutional arrangements	b.1.1. Assessment of linkages between the Kigali amendment and the national strategy on environment	15,000
	b.1.2. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	10,000
b.2. Licensing systems	b.2.1. Enhancement of the import and export license system to include HFCs and other alternatives	15,000
	b.2.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	10,000
b.3. Data reporting on HFC consumption	b.3.1. Review of the national mechanisms used for ODS reporting to include HFCs consumption	11,000
c. National strategies	c.1. Assessment report on the impact of the Phase out of HCFC in the potential consumption of HFC in Sudan	15,000
	c.2. Inventory of the refrigeration and air-conditioning units .	20,000
	c.3. Assessment of the refrigeration and air-conditioning servicing sector	15,000
	c.4. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	15,000

c.5. Consumers awareness raising on energy efficiency improvement options for RAC devices	20,000
<i>Total</i>	150,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.1.		■	■	■	■	■												
	b.1.2.		■	■	■	■	■												
b.2. Licensing systems	b.2.1.		■	■	■	■	■												
	b.2.2.		■	■	■	■	■												
b.3. Data reporting on HFC consumption	b.3.1.		■	■	■	■	■												
c. National strategies	c.1.							■	■	■									
	c.2.							■	■	■									
	c.3.							■	■	■									
	c.4.										■	■	■	■	■	■	■	■	■
	c.5.										■	■	■	■	■	■	■	■	■

5. Institutional arrangements

Higher Council for Environment and Natural Resources (HCENR) under the Ministry of Environment Natural Resources & Physical Development and The National Ozone Unit (NOU) and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

The NOU will function as national focal point to implement different activities, including identification of local experts on different expertise and areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country:	Tunisia
Title:	Enabling activities for HFC phase-down in Tunisia
Project Duration:	18 months
Project Budget:	UNIDO: US\$ 75,000 (excl. 9% Agency Support Costs) Italy: US\$ 75,000 (excl. 13% Agency Support Costs)
Implementing Agency:	UNIDO and Italy

General Statements

The Government of Tunisia as well as UNIDO and the Government of Italy, as the implementing agencies, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Tunisia confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Tunisia confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline in Tunisia amounts to 40.7 ODP tonnes.

The ODS alternatives survey recently completed in Tunisia shows that in the period 2012-2015 an average amount of almost 485 metric tonnes (mt) of HFCs have been consumed every year. This amount is equivalent to more than 930,000 tCO₂, which represents 99% of the total global warming potential (GWP) of the ODS alternatives consumed in the country.

The substances HFC-134a (68%), HFC-404A (16%) and HFC-410A (8%) are the most common HFCs for all sectors. In terms of GWP, these substances have the biggest share: HFC-134a represents 51% of the total HFCs' global warming potential; HFC-404A, 33%, and HFC-410A, 9%.

The largest consumption of HFCs in Tunisia in metric tonnes occurs in the refrigeration and air conditioning servicing sector (66% of total HFC consumption), followed by the aerosols (16%) and the air-conditioning servicing sector (7%).

The use of HFC-134a is mainly focused on the refrigeration servicing sector (66% of total HFC-134a consumption in metric tonnes) and the aerosols sector (23%). On its turn, the use of HFC-404A occurs mainly in the refrigeration servicing sector (97%), while HFC-410A is used mostly in the air-conditioning servicing sector (82%).

2. Objectives

The main objective of these enabling activities is to prepare Tunisia for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems and
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated

c. National strategies that contained the activities in sub-paragraphs a and b above:

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Assessment of the refrigeration and air-conditioning (RAC) servicing sector (formal and informal sector)	Relevant ministries	A report published on this topic	Accurate analysis of the characteristics of the servicing sector made
Inventory of the refrigeration and air-conditioning units currently used in the country and projections for next years (including a chapter on energy efficiency options for these devices)	Relevant ministries	Workshop delivered --- A report published on this topic	Knowledge on the current and future national market of RAC devices increased among decision makers
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (RAC manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	25,000
b.2. Licensing systems	b.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3. Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
c. Preparation for national strategies	c.1. Assessment of the refrigeration and air-conditioning servicing sector	25,000
	c.2. Inventory of the refrigeration and air-conditioning devices.	25,000
	c.3. Identification of policies and regulations to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies	25,000
Total		150,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.	■	■	■	■														
b.2. Licensing systems	b.2.		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.		■	■	■	■	■	■	■	■									
c. Preparation for national strategy	c.1.						■	■	■	■	■	■							
	c.2.								■	■	■	■	■						
	c.3.												■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (NOU) of the Agency for the Protection of the Environment, belonging to the Ministry of Local Affairs and Environment, and the United Nations Industrial Development Organization (UNIDO) as well as the Government of Italy will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country: Turkey

Title: Enabling activities for HFC phase-down in Turkey

Project Duration: 18 months

Project Budget: US\$250,000 (excl. 9% Agency Support Costs)

Implementing Agency: UNIDO

General Statements

The Government of Turkey as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Turkey confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Government of Turkey confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. Background

The HCFC baseline in Turkey amounts to 551.47 ODP tonnes.

The most commonly used ODS alternatives in Turkey include HFC-134a and HFC-152a. Other HFCs are generally used as components of blends used mainly in the refrigeration, air conditioning; in middle scale in foam and small scale in firefighting and other applications. The three dominant HFC blends currently used are R-410A, R-404A and R-407C.

As it showed in the table 1, the most commonly used alternative throughout the years has been HFC-134a with 32 % of total consumption in the country. The second most commonly used alternative is HFC-152a (mainly used in XPS foam) with 23 % and followed by R-410A with 20% if the total HFC. The blend R-410A has had a regular pattern of increase and its consumption is around 15 % of the total and mainly in the refrigeration sector. Similar behavior occurred with R-404A but with less use in the country around 4 %, while R-507A has decreased from 2013 to 2015 with less than 1% before 2015 (reported zero consumption). It is relevant to mention that for MAC manufacturing HFO-1234yf has been introduced in the country during the year 2014.

Table 1. Country consumption of HFCs during the period 2012-2015

Alternative	Estimated use (mt)			
	2012	2013	2014	2015
HFC*				
HFC-134a	2,893.50	3,426.43	3,276.45	3,213.95
HFC-152a	1,996.13	2,561.83	2,561.83	2,307.62
HFC-245fa	40.00	60.00	60.00	100.00
HFC-227ea	114.73	161.71	207.18	109.99
HFC-227ea/HFC-365mfc	121.19	253.25	361.59	314.23
Other:HFC-23	0.24	0.37	0.35	0.90
R-404A	917.77	1,089.17	993.39	1,479.14
R-407C	291.49	257.28	346.23	421.25
R-410A	1,580.26	1,743.08	1,500.54	1,989.90
R-507A	5.53	3.95	3.95	0.00
TOTAL	7,960.84	9,557.07	9,311.51	9,936.98

The refrigeration and air-conditioning sector is the largest user of HFC in Turkey comprising 70.8 % of the overall consumption within the country. The other sectors occupy a small percentage, where foam represents 26.6% and firefighting and other sectors represent less than 3% of the total consumption. This information is reported in the survey of ODs alternatives, with special attention to year 2015.

Within the refrigeration and air-conditioning sector, the data indicates that the servicing sector consume the 53 % of the total consumption of HFC while in manufacturing subsector reach 18 % for 2015.

The AC servicing subsector has the most widespread consumption in the country comprising 21% of the overall HFC consumption in RAC sector, followed by mobile air-conditioning (MAC) servicing sector with approx. 17% and in last place with 14% of the consumption for domestic and commercial refrigeration in 2015. The Foam sector has the second most consumption, having 23% of the total consumption for XPS application while only 4% was consumed for PU foam sector in 2015. A stable pattern is held between 2012 and 2015.

2. Objectives

The main objective of these enabling activities is to prepare Turkey for the ratification and early implementation of the Kigali Amendment to the Montreal Protocol, considering the situation above stated with regard to the current HFCs' consumption and through the following lines of action:

- Support for the early ratification of the Kigali Amendment,
- Support to the institutional arrangements,
- Review of the licensing systems,
- Review of the data reporting systems,
- Preparation for national strategies.

3. Proposed approach and activities

a. Activities to facilitate and support the early ratification of the Kigali Amendment

National Ozone Officers should facilitate the ratification process by providing the required data, information and background documents to the ratification institutions.

Activities	Target group	Milestones	Expected outputs
Coordination with Government representatives	Related ministries and legislators	One meeting with ministries' representatives and legislators conducted	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders
Supporting national ratification instruments	Legislators	Supporting documents distributed among ministries and legislators	Legislators have all necessary documents and knowledge for the vote on the amendment's ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2, excluding institutional strengthening, as addressed in decision 78/4(b)

b.1 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification.

Activities	Target group	Milestones	Expected outputs
Assessment of linkages between the Kigali amendment (HFC control measures and energy efficiency objectives) and the national strategy on environment and on climate change	Relevant ministries	A workshop delivered with relevant ministries --- A report published on this topic	Links identified
Reviewing operating codes and standards for the correct and efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries --- Manufacturing and servicing sectors	A workshop delivered with relevant ministries --- A report published on this topic	A proposal for updating codes and standards prepared and presented

b.2 Review of licensing systems

Properly established and functioning licensing systems play a key role in sustaining the impressive results achieved so far under the Montreal Protocol and also in facilitating the realization of new, ambitious strategies.

Activities	Target group	Milestones	Expected outputs
Enhancement of the import and export license system to include HFCs and other alternatives	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	Identification of necessary regulatory and administrative measures for the control of HFCs' imports and exports
Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	Customs --- Relevant ministries	A workshop with relevant stakeholders delivered --- A report published on this topic	New tariff codes defined

b.3 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol.

Activities	Target group	Milestones	Expected outputs
Review of the national mechanisms used for ODS reporting to include HFCs consumption, especially considering the servicing sector (the informal sector in particular)	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National mechanism updated
Improving a national database to include HFCs and other ODS alternatives	Relevant ministries --- Customs	A workshop with relevant stakeholders delivered --- A report published on this topic	National database updated

c. National strategies that contained the activities in sub-paragraphs a and b above;

Well-defined national strategies and priorities can facilitate the ratification process and subsequently the whole HFC phase-down. Here, activities are proposed for preparing the basis of the national strategy.

Activities	Target group	Milestones	Expected outputs
Assessment of the refrigeration and air-conditioning (RAC) servicing sector (formal and informal sector)	Relevant ministries	A report published on this topic	Accurate analysis of the characteristics of the servicing sector made
Inventory of the refrigeration and air-conditioning units currently used in the country and projections for next years (including a chapter on energy efficiency options for these devices)	Relevant ministries	Workshop delivered --- A report published on this topic	Knowledge on the current and future national market of RAC devices increased among decision makers
Reviewing HFC alternative options and assessing their cost-efficiency	Relevant ministries	Workshop delivered --- A report published on this topic	Knowledge on the HFC alternatives increased among decision makers
Identification of appropriate policies and regulations, including HCFC phase-out strategies, to facilitate the phase-down of HFCs and the introduction of low-GWP alternative technologies – inclusive “not-in-kind” options – with higher rates of energy efficiency	Relevant ministries --- Customs --- Private sector (RAC manufacturing, servicing sector, aerosols)	Workshop delivered --- A report published on this topic	Feasible policies and regulations identified
Consumers awareness raising on energy efficiency improvement options for refrigeration and air-conditioning devices	Civil society	A brochure prepared and distributed in relevant events --- Events organized	Civil society informed on this topic

4. Implementation budget and plan

Enabling Activity		Budget Requested (USD)
a. Activities to support the early ratification of the Kigali Amendment	a.1. Coordination with Government representatives	2,500
	a.2. Supporting national ratification instruments	2,500
b.1. Institutional arrangements	b.1.1. Assessment of linkages between the Kigali amendment (HFC control measures and energy efficiency objectives) and the national strategy on environment and on climate change	10,000
	b.1.2. Reviewing operating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	25,000
b.2. Licensing systems	b.2.1. Enhancement of the import and export license system to include HFCs and other alternatives	20,000
	b.2.2. Preparing harmonized tariff codes according to HFCs commitments, with special attention to HFC blends	20,000
b.3. Data reporting on HFC consumption	b.3.1. Review of the national mechanisms used for ODS reporting to include HFCs consumption	25,000
	b.3.2. Improving a national database	20,000
c. Preparation for national strategies	c.1. Assessment of the refrigeration and air-conditioning servicing sector	25,000
	c.2. Inventory of the refrigeration and air-conditioning devices.	25,000
	c.3. Reviewing HFC alternative options and assessing their cost-efficiency	20,000
	c.4. Identification of policies and regulations to facilitate the phase-down of HFCs and the	25,000

	introduction of low-GWP alternative technologies	
	c.5. Consumers awareness raising on energy efficiency	30,000
	Total	250,000

Enabling Activity		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
a. Activities to support the early ratification of the Kigali Amendment	a.1.	■																	
	a.2.	■																	
b.1. Institutional arrangements	b.1.1	■	■	■	■														
	b.1.2	■	■	■	■														
b.2. Licensing systems	b.2.1		■	■	■	■	■	■	■	■									
	b.2.2		■	■	■	■	■	■	■	■									
b.3. Data reporting on HFC consumption	b.3.1		■	■	■	■	■	■	■	■									
	b.3.2		■	■	■	■	■	■	■	■									
c. Preparation for national strategy	c.1.						■	■	■	■	■	■							
	c.2.							■	■	■	■	■							
	c.3.							■	■	■	■	■							
	c.4.											■	■	■	■	■	■	■	■
	c.5.									■	■	■	■	■	■	■	■	■	■

5. Institutional arrangements

The National Ozone Unit (Division for the Protection of the Ozone Layer) under the Climate Change Department / Directorate General of Environment Management of the Ministry of Environment and Urbanization of Turkey, and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above mentioned activities.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.

Submission of funding request for enabling activities

Country:	Viet Nam
Title:	Enabling activities for HFC phase-down in Viet Nam
Project Duration:	18months
Project Budget:	US\$250,000 (excl. 9% Agency Support Costs)
Implementing Agency:	UNIDO
Coordinating Agency:	MONRE - National Ozone Unit

GENERAL STATEMENTS

The Ministry of National Resource and Environment of Viet Nam (MONRE) as well as UNIDO, as the implementing agency, confirm that implementation of the enabling activities would not delay implementation of HCFC phase-out projects.

The Government of Viet Nam confirms its intention to make best efforts to ratify the Kigali Amendment as early as possible.

The Ministry of National Resource and Environment of Viet Nam (MONRE) confirms that all activities under Enabling Activities will be implemented following model that UNIDO will administer the funds (UNIDO's execution) instead of national execution.

1. BACKGROUND

According to the results of National Survey on ODS Alternatives, a total of ten (10) HFCs or HFC blends are currently used in Viet Nam namely: HFC-23, HFC-32, HFC-125, HFC-134a, HFC-152a, HFC-227ea, HFC-404a, HFC-407c, HFC-410a and HFC-507c, in which HFC-134a, HFC-410a, HFC-404a and HFC-407c are prominently used. In the future, it is expected that HFC-134a and HFC-32 will be on high increase due to growing demand from HCFCs phase-out process.

The Survey provided the current use of other non-ODS substances including HC-290, HC-600a, NH₃ in refrigeration sector and CO₂ and fire extinguishing foam in the fire suppression sector. Regarding domestic production, the Survey shows Viet Nam does not produce HFCs and other ODS Alternatives other than Ethanol, Ammoniac (NH₃) and Carbon dioxide (CO₂).

Estimated use of ODS Alternatives in Viet Nam

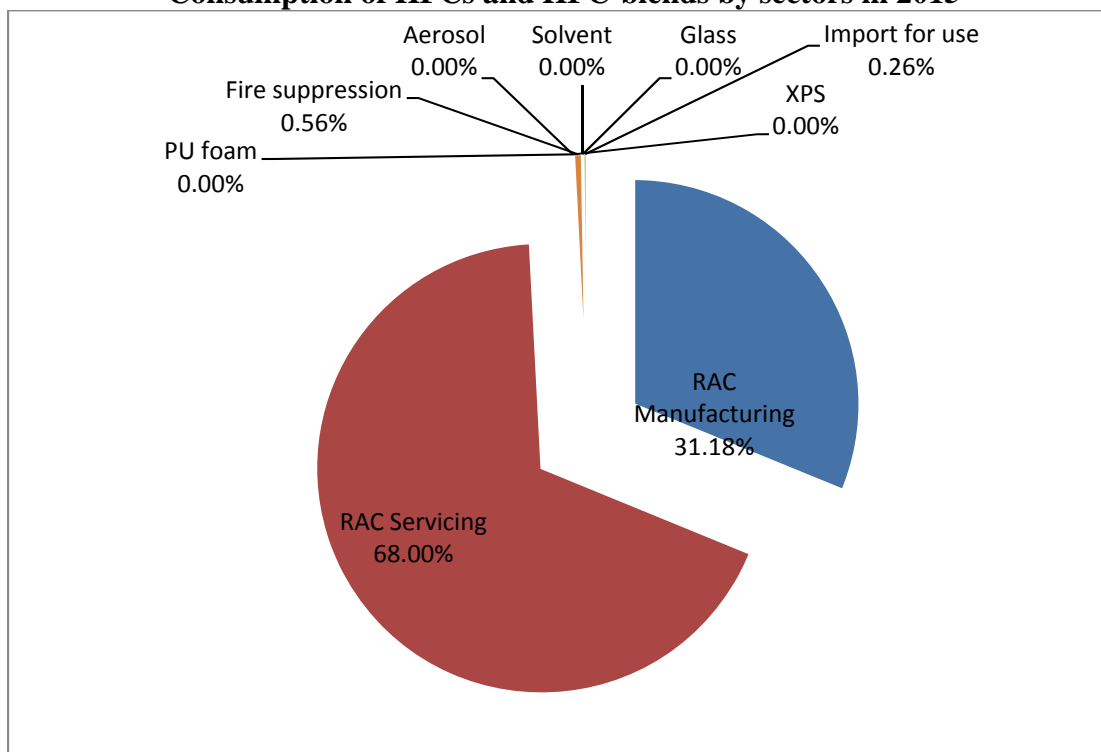
Alternative	Estimated use (tonne)				
	2011	2012	2013	2014	2015
HFC					
HFC 23	0.08	0.17	16.21	1.43	0.04
HFC 32	-	-	-	10.61	32.87
HFC 125	1.53	1.50	1.60	2.00	2.00

HFC 134a	360.63	464.26	586.86	784.79	999.61
HFC 152a	5.12	-	-	-	-
HFC 227ea	2.08	2.11	2.10	2.59	3.16
HFC blends					
R-404a	25.89	46.44	55.99	70.09	106.40
R-407c	7.27	16.87	25.76	29.01	63.47
R-410a	75.13	110.13	195.66	276.54	343.63
R-507c	1.38	2.09	2.75	4.00	6.12
Other alternatives					
HC-290	-	-	-	-	0.03
HC-600a	0.49	1.35	1.11	0.83	1.48
CO ₂	5.11	5.61	5.58	6.32	6.36
NH ₃	324.97	435.33	331.93	419.03	501.90
Foam (fire suppression)	3.00	1.00	2.00	2.00	2.00

Source: National Survey of ODS Alternatives, February 2017

HFCs and other ODS Alternatives are being used in several sectors, including the Air Conditioning manufacturing and servicing (RAC), the foam, the glass, the automotive and the fire suppression sectors. Among all these sectors, the RAC is currently the most intensive in consumption of HFCs in Viet Nam.

Consumption of HFCs and HFC-blends by sectors in 2015



Source: National Survey of ODS Alternatives, February 2017

2. OBJECTIVES

Under the Kigali Amendment, the phase-down schedule for HFCs for the countries like Viet Nam consists of 5 steps, including freezing from 2024 to 2028, 10% reduction from 2029 to 2034, 30% reduction from 2035 to 2039, 50% reduction from 2040 to 2044 and 80% reduction from 2045 onwards.

The project consists of a range of enabling activities with the objective to facilitate and support the early ratification of the Kigali Amendment as well as country-specific activities and national strategies in order to prepare for and to fulfil the above mentioned HFC phase-down schedule.

Priorities of enabling activities will be as follow:

1. Cost and Benefit Analysis when Vietnam ratifies the Kigali Amendment to the Montreal Protocol
2. Country-specific activities aimed at initiating supporting institutional arrangements
3. Data reporting on HFC consumption

At the moment, Vietnam is carrying out the socio-economic impact assessment of the Kigali Amendment to the national conditions. As a result from the survey, the Government of Viet Nam received recommendations that from the moment the phase-down of HFCs starts, an import/export licensing system of HFCs to control the import volumes and the usage shall be in function in order to meet the reporting obligations under the MP. The establishment of such a mechanism will be taken into consideration for this project.

3. PROPOSED APPROACH AND ACTIVITIES

d. Activities to facilitate and support the early ratification of the Kigali Amendment

The National Ozone Unit will facilitate the ratification process by engaging with legislators and all relevant stakeholders and provide the required data, information and background documents to the ratification institutions. In order to disseminate the new commitments of Vietnam under the Montreal Protocol and the possible effects of the Kigali Amendment, an informative workshop is planned aiming to the private sector, industry and their associations, academia, ministries, government agencies and public institutions, NGOs and groups responsible for labour safety, gender policies and other public subjects such as customer associations and youth employment. Moreover, the project will aim at producing outreach materials to demonstrate the impact and benefits of the Kigali amendment both Vietnam and in the global area, providing supporting the documentation of the project looking forward to the HFC phase-down.

Activities	Target group	Milestones	Expected outputs
1.1 Roadmap for ratification including cost and benefit analysis and LCA on the impact of the ratification	Related ministries and legislators	Assessment/roadmap prepared, supporting documents distributed among ministries and legislators	Legislators have all necessary background data and knowledge on implication of the Kigali amendment
1.2 Coordination with Government representatives and preparation of background documents	Related ministries and legislators	Meeting with ministries' representatives and legislators conducted, supporting documents distributed among ministries and legislators	Roles and tasks for the ratification of the amendment distributed among relevant stakeholders, legislators have all necessary documents for the vote on the amendment' s ratification
1.3 Awareness raising of stakeholders on HFC-phase down	Legislators and public society (stakeholders)	Kigali Amendment informative conference at the Ozone Day 2018 conducted, fact sheets and case studies on transitioning to low-GWP alternatives in various applications prepared and distributed	Legislators have the support of all relevant stakeholders for the vote on the amendment' s ratification

b. Initial activities identified in paragraph 20 of decision XXVIII/2,

b.4 Country-specific activities aimed at initiating supporting institutional arrangements

Institutional arrangement is what integrates analysis and decision-making tools, and it is the precondition of a successful ratification. In order to facilitate the process, the following activities are planned for the below target groups:

Activities	Target group	Milestones	Expected outputs
2.1 Reviewing institutional arrangements on HFC control measures and linkages to the national strategy on environment and on the mitigation of climate change	Relevant ministries Manufacturing and servicing sectors	A meeting/workshop delivered with relevant ministries --- A detailed report is prepared	A review prepared for institutional arrangements on HFC control measures and linkages to the national strategy
2.2 Reviewing codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	Relevant ministries Manufacturing and servicing sectors	A meeting/workshop delivered with relevant ministries --- A detailed report is prepared	A proposal prepared for updating codes and standards, permits, inspections, operating standards for HFC and ODS alternatives (use, maintenance, end-user), prohibitions, testing, labelling (production, manufacturing, wholesalers or distributors) etc.
2.3 Reviewing standards for flammable/toxic low- and zero-GWP alternatives in line with international standards	Relevant ministries Manufacturing and servicing sectors	A meeting/workshop delivered with relevant ministries --- A detailed report is prepared	A proposal prepared for updating national codes and standards in line with international standards for flammable/toxic alternatives

b.2 Data reporting on HFC consumption

National data reporting is the backbone of the strategic planning, monitoring and evaluation of the institutions of the Montreal Protocol. In order to facilitate the process, the following activities are planned for the below target groups:

Activities	Target group	Milestones	Expected outputs
3.1 Reviewing national mechanisms used for ODS reporting to include HFCs production/consumption (Decision 76/7d)	Relevant ministries --- Customs	A workshop is delivered with relevant stakeholders --- A detailed report is drafted	National mechanism updated, enhancing the records and control tools on HFCs and alternative substances in cooperation with customs, authorities and stakeholders
3.2 Improving inter-institutional coordination in the country, related to the collection, verification and reporting of HFCs consumption and production (where applicable) and ODS alternatives			
3.3 Carrying out gap analysis on the availability of ODS related data in the country			
3.4 Improving a national database based on the above			

b.3 Demonstration of non-investment activities

With the implementation of the Kigali Amendment it would be essential to initiate with several preliminary capacity building activities paving the way to the HFC phase-down. A number of actions has been identified by Vietnam which involves to enforce the national ozone unit in energy efficiency issues and the identification of energy saving opportunities in RAC sectors.

Activities	Target group	Milestones	Expected outputs
4.1 Identification of the possible energy savings	Relevant ministries, NOU, private	Report on the assessment of the	Preliminary capacity building on requirements

opportunities in the RAC sectors and assessing their cost-efficiency	sectors (manufacturers, end users, servicing and maintenance companies)	EE policies, availability of new technologies, the potential energy savings per sector and feasible applications in Vietnam	for the implementation of the KA
4.2 Training for National Ozone officers and other related stakeholders on energy efficiency	NOU and related stakeholders	Training to the NOO, Energy officers and other related stakeholders and technical experts in energy efficiency and the new developments to increase efficiency in RAC systems	Preliminary capacity building on requirements for the implementation of the KA

c. Coordination of enabling activities

In order to maximize the impacts, enabling activities will be executed in harmony with the HPMP and National Climate Policies. The coordination of these actions is an essential element of the National Strategy, since there must be regular coordination meetings with industry stakeholders, HFC importers and exporters, Ministries, various industry associations, and all sectors involved, in order to identify the necessary measures to implement the Kigali Amendment on time and in a coordinated way.

Activities	Target group	Expected outputs
5.1 General Coordination and Monitoring of the Enabling Activities	All stakeholders	Coordinated national strategy to phase-down HFC in Viet Nam involving all stakeholders

4. IMPLEMENTATION PLAN AND BUDGETS

According to the planned programme, foreseen activities and planned milestones, the following budget as well as time plan are shown:

Budget

Enabling Activity Category	Activities	Budget (in USD)
1. Activities to facilitate and support early ratification	1.1 Cost and benefit analysis and LCA on the impact of the ratification	22,000
	1.2 Coordination with government representatives and preparation of background documents	18,000
	1.3 Awareness raising of stakeholders on HFC-phase down (e.g; Kigali Amendment informative conference at the Ozone Day 2018, fact sheets and case studies on transitioning to low-GWP alternatives in various applications)	45,000
	<i>Subtotal 1</i>	85,000
2. Country-specific activities aimed at initiating supporting institutional arrangements	2.1 Reviewing institutional arrangements on HFC control measures and linkages to the national strategy on environment and on the mitigation of climate change	13,000
	2.2 Reviewing codes and standards, permits, inspections, operating standards for HFC and ODS alternatives (use, maintenance, end-user), prohibitions, testing, labelling (production, manufacturing, wholesalers or distributors) etc.	15,000
	2.3 Reviewing standards for flammable/toxic low- and zero-GWP alternatives in line with international standards	10,000
	<i>Subtotal 2</i>	38,000
3. Data reporting on HFC consumption	3.1 Reviewing national mechanisms used for ODS reporting to include HFCs production/consumption (Decision 76/7d)	12,000
	3.2 Improving inter-institutional coordination in the country, related to the collection, verification and reporting of HFCs consumption and production (where applicable) and ODS alternatives	10,000
	3.3 Carrying out gap analysis on the availability of ODS related data in the country	5,000
	3.4 Improving a national database based on the above - Enhancing the records and control tools on HFCs and alternative substances in cooperation with customs, authorities and stakeholders	15,000

		Subtotal 3	42,000
4. Demonstration of non-investment activities - Preliminary capacity building on requirements for the implementation of the KA	4.1 Identification of energy savings opportunities in the RAC sectors and assessing their cost-efficiency		30,000
	4.2 Training for National Ozone officers and other related stakeholders on energy efficiency		15,000
		Subtotal 4	45,000
5. Coordination of enabling activities	5.1 General Coordination and Monitoring of the Enabling Activities		40,000
		Subtotal 5	40,000
		Total	250,000

Time plan for the implementation of EA in Viet Nam

Enabling Activity	Line of activity	Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Early ratification support	1.1	■	■	■															
	1.2				■	■	■	■	■	■	■	■	■						
	1.3				■	■	■	■	■	■	■					■	■	■	■
2. Institutional arrangements	2.1									■	■								
	2.2										■	■	■						
	2.3												■	■	■	■			
3. Data reporting on HFC	3.1			■	■														
	3.2				■	■													
	3.3					■	■												
	3.4					■	■	■	■	■	■								
4. Demonstration of non-investment	4.1					■	■	■	■	■	■								
	4.2												■	■	■				

activities																					
5. Coordination	5.1																				

5. INSTITUTIONAL ARRANGEMENTS

The Ministry of Natural Resources and Environment (MONRE), through the National Ozone Unit (NOU), and the United Nations Industrial Development Organization (UNIDO) will be jointly responsible for the correct implementation of the above-mentioned activities.

The team in charge of project management in UNIDO will visit Viet Nam to discuss and agree with national counterparts and relevant stakeholders on the basics of project design and enabling activities implementation.

The role of UNIDO will be focused on the general implementation and execution of the enabling activities and the appropriate expenditure of the funds allocated for each of them. Besides that, UNIDO will provide technical assistance based on the support of international experts on the different areas of work.

On its turn, the NOU will collaborate in the implementation of the different activities, including the identification of local experts on the different areas of work, when necessary. Besides, the NOU will provide general guidance on the implementation of the enabling activities based on the national priorities.