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COMITÉ EJECUTIVO DEL FONDO MULTILATERAL
PARA LA APLICACIÓN DEL
PROTOCOLO DE MONTREAL
Quincuagésima novena Reunión
Puerto Ghalib, Egipto, 10 al 14 de noviembre de 2009

ENMIENDAS AL PROGRAMA DE TRABAJO DEL PNUD PARA 2009

OBSERVACIONES Y RECOMENDACIÓN DE LA SECRETARÍA DEL FONDO

1. El PNUD pide al Comité Ejecutivo que apruebe 1 006 107 $EUA para las enmiendas a su programa de trabajo de 2009, más costos de apoyo de organismo de 75 464 $EUA.

2. En el Cuadro 1 a continuación se presentan las actividades propuestas en las Enmiendas al programa de trabajo del PNUD:

Cuadro 1: Enmiendas al programa de trabajo del PNUD

País	Actividad/Proyecto	Monto solicitado ($EUA)	Monto recomendado ($EUA)
SECCIÓN A: ACTIVIDADES RECOMENDADAS PARA APROBACIÓN GENERAL			
A1. Renovación de proyectos de fortalecimiento institucional:			
Argentina (la)	Renovación de proyecto de fortalecimiento institucional (Fase VI)	155 784	155 784
Costa Rica	Renovación de proyecto de fortalecimiento institucional (Fase VIII)	70 257	70 257
Cuba	Renovación de proyecto de fortalecimiento institucional (Fase VII)	74 533	74 533
Indonesia	Renovación de proyecto de fortalecimiento institucional (Fase VII)	135 623	135 623
Trinidad y Tabago	Renovación de proyecto de fortalecimiento institucional (Fase VI)	30 000	30 000
	Subtotal para la sección A1:	466 197	466 197
A2. Solicitudes adicionales para preparación de planes de gestión de eliminación de HCFC para actividades de inversión			
Filipinas	Preparación de actividades de inversión para eliminación de HCFC (sectores de refrigeración y aire acondicionado)	65 000	65 000
	Subtotal para A2:	65 000	65 000
A3. Preparación de proyecto adicional para planes de gestión de eliminación de HCFC:			
Trinidad y Tabago	Preparación para un plan de gestión de eliminación de HCFC (financiación adicional)	65 000	65 000
	Subtotal para A3:	65 000	65 000
SECCIÓN B: ACTIVIDADES RECOMENDADAS PARA CONSIDERACIÓN INDIVIDUAL			
B1. Proyectos de demostración para la destrucción de las SAO			
Colombia	Preparación de proyecto para un proyecto de destrucción de SAO	40 000	*
Cuba	Preparación de proyecto para un proyecto de destrucción de SAO	40 000	*
India	Preparación de proyecto para un proyecto de destrucción de SAO	80 000	*
	Subtotal para B1:	160 000	
B2. Asistencia técnica			
Mundial	Movilización de recursos para lograr cobeneficios climáticos	250 000	*****
	Subtotal para B2:	250 000	
B3. Preparación de proyecto para proyectos de demostración de HCFC			
China	3 solicitudes para preparación de proyecto para proyectos de demostración de HCFC (sectores de espumas y solventes)	0	[1]
	Subtotal para B3:	0	
Subtotal para las secciones A y B:		1 006 197	596 197

País	Actividad/Proyecto	Monto solicitado ($EUA)	Monto recomendado ($EUA)
Costos de apoyo al organismo (7,5 por ciento para preparación de proyectos y fortalecimiento institucional y para otras actividades por encima de 250 000 $EUA y 9 por ciento para otras actividades por debajo de 250 000 $EUA):		75 464	44 714
	Total:	1 081 661	640 911

*Proyecto sometido a consideración individual o pendiente.
[1] Considerado en el Documento UNEP/OzL.Pro/ExCom/59/11

SECCIÓN A: ACTIVIDADES RECOMENDADAS PARA APROBACIÓN GENERAL

A1. Renovación de proyectos de fortalecimiento institucional:

a) Argentina (la) (Fase VI): 155 784 $EUA
b) Costa Rica (Fase VIII): 70 257 $EUA
c) Cuba (Fase VII): 74 533 $EUA
d) Indonesia (Fase VII): 135 623 $EUA
e) Trinidad y Tabago (Fase VI): 30 000 $EUA

Descripción del proyecto

3. El PNUD presentó solicitudes para la renovación de los proyectos de fortalecimiento institucional para los cinco países antes enumerados. Las descripciones de las solicitudes para estos países se presentan en el Anexo I a este documento.

Observaciones de la Secretaría

4. La Secretaría del Fondo examinó los informes finales de fortalecimiento institucional y los planes de acción presentados por el organismo en nombre de los países mencionados para apoyar las solicitudes de renovación, y considera que los informes están en orden y guardan conformidad con los requisitos.

5. Al examinar estos proyectos, la Secretaría tomó en cuenta la decisión 57/36 b), en la que el Comité decidió "seguir financiando las solicitudes de proyectos de fortalecimiento institucional hasta fines de diciembre de 2010, con los niveles actuales, a la espera de que el Comité Ejecutivo adopte en su 58ª Reunión una resolución final sobre el asunto", que fue reiterada por el Comité Ejecutivo en la 58ª Reunión en la decisión 58/16, en la que se decidió "aprobar las renovaciones de los proyectos de fortalecimiento institucional hasta el 31 de diciembre de 2010". En vista de estas decisiones, la financiación recomendada para las renovaciones de fortalecimiento institucional se calculó en forma prorrateada hasta diciembre de 2010 únicamente.

Recomendaciones de la Secretaría

6. La Secretaría del Fondo recomienda la aprobación general de las solicitudes de renovación de fortalecimiento institucional para la Argentina, Costa Rica, Cuba, Indonesia y Trinidad y Tabago, con el nivel de financiación indicado en el Cuadro 1 de este documento. El Comité Ejecutivo pudiera manifestar a los gobiernos de estos países los comentarios que figuran en el Anexo II a este documento.

A2. Solicitudes de preparación adicional de planes de gestión de eliminación de HCFC para actividades de inversión:

Filipinas: Preparación para las actividades de inversión del plan de gestión de eliminación de HCFC: 65 000 $EUA

Descripción del proyecto

7. El PNUD pidió fondos adicionales para la preparación de actividades de inversión para Filipinas. Filipinas recibió fondos para la preparación de un plan de gestión de eliminación de HCFC, que se aprobaron en la 55ª Reunión. En sus propuestas, el PNUD proporcionó la información básica sobre el consumo de HCFC del país y los sectores donde se utilizan HCFC, además de indicar la manera en que estos sectores planean vincularse con un plan de gestión de eliminación de HCFC exhaustivo, en especial para este país, donde la ejecución se comparte entre varios organismos.

Observaciones de la Secretaría

8. La Secretaría examinó en detalle la propuesta, y consideró que la información proporcionada y la financiación solicitada son congruentes con la decisión 56/16 d).

9. La Secretaría señaló que esta actividad no está incluida en el plan administrativo del PNUD para 2009 que se aprobó en la 57ª Reunión. Pidió aclaraciones sobre esta cuestión, y se le informó que se trataba de una solicitud específica del país dado que, conforme a la decisión 56/16 y sobre la base del consumo de Filipinas en 2007 (de 180,2 toneladas PAO), el país tiene derecho a recibir 200 000 $EUA como máximo para preparación de proyecto para el componente de inversión del plan de gestión de eliminación de HCFC. La Secretaría también señaló que esta solicitud se agrega a lo que solicitan la ONUDI y el Banco Mundial para los restantes sectores de fabricación de HCFC. La financiación total solicitada para este país se encuentra dentro de los límites establecidos por la decisión 56/16 d). La Secretaría señaló asimismo que se han realizado consultas entre los organismos en cuestión y que existe un claro entendimiento acerca de la división de responsabilidades de cada organismo para Filipinas. La Secretaría también consideró que, a pesar de que esta solicitud no está incluida en el plan administrativo del organismo, puede ser tenida en cuenta por el Comité Ejecutivo, dado que no hay ninguna cuestión de criterios relacionada con la misma y que la propuesta guarda conformidad con la decisión 56/16.

Recomendación de la Secretaría

10. La Secretaría recomienda la aprobación general de la preparación de proyecto para las actividades de inversión para el sector de refrigeración y aire acondicionado como parte del plan de gestión de eliminación de HCFC para Filipinas, con un nivel de 65 000 $EUA.

A3. Financiación adicional para preparación de proyecto para planes de gestión de eliminación de HCFC:

Trinidad y Tabago: Preparación para plan de gestión de eliminación de HCFC (financiación adicional): 65 000 $EUA

Descripción del proyecto

11. El PNUD presentó una solicitud de fondos adicionales para preparación de proyecto por un monto de 65 000 $EUA para Trinidad y Tabago, país para el que se habían aprobado fondos para la preparación de un plan de gestión de eliminación de HCFC en la 55ª Reunión. La solicitud se presenta considerando que el país ha notificado datos con arreglo al Artículo 7 para el año 2007 que demuestran

que su consumo de HCFC le permite ser admisible para recibir fondos de preparación de proyecto adicionales conforme a la decisión 56/16.

Observaciones de la Secretaría

12. La Secretaría señala que la propuesta guarda conformidad con la decisión 56/16, según la cual los países son admisibles para recibir un nivel de fondos para preparación de planes de gestión de eliminación de HCFC basado en sus datos con arreglo al Artículo 7 oficiales para el año 2007. En el caso de Trinidad y Tabago, el país recibió 85 000 $EUA en la 55ª Reunión, dado que había notificado únicamente consumo de HCFC-22 para servicio y mantenimiento. En su ponencia, el PNUD indicó que el país registra consumo de HCFC-142b para el sector de fabricación de espumas y, por lo tanto, solicitaba 65 000 $EUA adicionales para la preparación del plan de gestión de eliminación de HCFC para Trinidad y Tabago. El consumo de HCFC de Trinidad y Tabago en 2007 es de 45,4 toneladas PAO (44,1 toneladas PAO de HCFC-22 y 1,34 tonelada PAO de HCFC-142b); dichos datos se han tomado de los datos notificados con arreglo al Artículo 7 y del informe de ejecución del programa de país.

Recomendación de la Secretaría

13. La Secretaría del Fondo recomienda la aprobación general de la solicitud de financiación adicional para la preparación del plan de gestión de eliminación de HCFC para Trinidad y Tabago con un nivel de 65 000 $EUA.

SECCIÓN B: ACTIVIDADES RECOMENDADAS PARA CONSIDERACIÓN INDIVIDUAL

B1. Proyectos de demostración para la destrucción de las SAO

Colombia: Preparación de proyecto para un proyecto de destrucción de SAO: 40 000 $EUA
Cuba: Preparación de proyecto para un proyecto de destrucción de SAO: 40 000 $EUA
India: Preparación de proyecto para un proyecto de destrucción de SAO: 80 000 $EUA

Antecedentes

14. El Comité Ejecutivo, en la 58ª Reunión, aprobó un conjunto de directrices provisionales para la financiación de los proyectos de demostración para la destrucción de SAO conforme al párrafo 2 de la decisión XX/7 de la Reunión de las Partes. En la decisión 58/19, también estipuló que "el Fondo Multilateral financiará un número limitado de proyectos de demostración" en virtud de condiciones específicas establecidas en la misma decisión.

15. En el caso de las solicitudes de fondos para preparación de proyecto, se espera que las propuestas incluyan la información siguiente:

a) Indicación de la categoría o las categorías de actividades para la eliminación de SAO (acopio, transporte, almacenamiento, destrucción) que se incluirán en la propuesta de proyecto;

b) Indicación acerca de si los programas de destrucción de las sustancias químicas relativas a otros acuerdos ambientales multilaterales se están ejecutando en la actualidad en el país o han sido planificados para un futuro próximo y si será posible desarrollar sinergias;

c) Un cálculo estimativo de la cantidad de cada SAO que se gestionará dentro del proyecto;

d) La base del cálculo estimativo de SAO; dicho cálculo se podría basar en las existencias conocidas ya acopiadas, o en las actividades de acopio que ya se encuentren en una etapa de preparación muy avanzada y bien documentada;

e) Para las actividades de acopio, información respecto a esfuerzos y programas de acopio existentes o para el futuro cercano y creíbles que se encuentren en una etapa avanzada de preparación y con los que las actividades comprendidas en el proyecto estarían relacionadas;

f) Para las actividades que se centren por lo menos parcialmente en el CTC o halones, una explicación de cómo el proyecto tendría un valor de demostración importante;

16. El PNUD presentó cuatro solicitudes para preparación de proyecto para proyectos de destrucción de SAO en cuatro países. De estos cuatro, solamente tres (Colombia, Cuba y la India) han cumplido con los requisitos de información establecidos en la decisión 58/19 a) iv), y son los únicos que se consideran en esta enmienda al programa de trabajo. A continuación se incluye una descripción de cada una de las propuestas.

17. La Secretaría indicó que ninguno de estos países está incluido en la lista de proyectos piloto de destrucción de SAO prioritarios establecida por el Comité Ejecutivo en la decisión 57/6, pero que se reflejan en el Anexo II del Informe de la 57ª Reunión del Comité Ejecutivo, en el que se listan todos los proyectos piloto de destrucción de SAO suprimidos de los planes administrativos de los organismos para 2009.

Colombia: preparación de proyecto para un proyecto de destrucción de SAO: 40 000 $EUA.

Descripción del proyecto

18. El PNUD presentó una solicitud para la preparación de proyecto de un proyecto piloto de destrucción de SAO en Colombia. El proyecto definirá un enfoque piloto para la destrucción de 11 toneladas PAO de CFC-12 que actualmente están almacenadas en contenedores y están disponibles para la destrucción. Éstas fueron acopiadas en instalaciones de servicio y mantenimiento por los centros de recuperación y reciclaje de Colombia.

19. En su propuesta, el PNUD indica que ya se está realizando acopio de SAO no deseadas de bancos en el país, como una actividad autofinanciada iniciada y mantenida por los fabricantes de equipo por medio de un programa de retiro anticipado. Las SAO no deseadas futuras que puedan acopiarse y requerir destrucción se beneficiarán con el proyecto piloto que se está diseñando. La cantidad de SAO propuesta para la destrucción no proviene de este programa de retiro anticipado.

20. El PNUD indica que el proyecto piloto examinará dos opciones: 1) la logística y el costo de transporte de las SAO no deseadas ya sea a compañías de gestión de desechos locales o para su exportación a un país que cuente con instalaciones de destrucción comerciales, o 2) analizar el uso de tecnología de plasma para pequeñas cantidades de SAO en equipos de destrucción móviles. Cubrirá el transporte, almacenamiento y destrucción (o la exportación para la destrucción) de las SAO que ya se encuentran en cilindros. En el Anexo I del programa de trabajo del PNUD adjunto a este documento se incluye información detallada sobre la solicitud.

Observaciones de la Secretaría

21. La Secretaría examinó este proyecto considerando la información requerida en la decisión 58/19. Pidió al PNUD que aclarase si el proyecto incluiría acopio, dado que la propuesta describía un refuerzo del programa de retiro de equipos del país. El PNUD aclaró que se ha revisado la propuesta y confirmó que el proyecto no incluirá el refuerzo del programa y tampoco incluirá acopio.

22. El PNUD explicó además que, dado que el programa de retiro de equipos está siendo bien acogido en Colombia, esperaba que el proyecto piloto también examinase las opciones para la destrucción de alrededor de 102 toneladas PAO de CFC-11 de espumas, analizando la posibilidad de incinerar todas las espumas sin tener que extraer el CFC de las mismas. Esta cantidad se ha calculado en base a equipos que ya han sido acopiados y que pueden tener dicha cantidad de CFC-11 en la espuma.

23. La Secretaría también solicitó más detalles acerca de las sinergias con el programa de destrucción de bifenilos policlorados (PCB) que se mencionaba en la propuesta. El PNUD explicó que el proyecto piloto identificará la mejor alternativa posible para la destrucción en el país, comparando las inversiones requeridas para las opciones antes indicadas así como examinando las sinergias con un posible proyecto que el país ha presentado al FMAM para la financiación de la gestión y destrucción ambientalmente razonables de los PCB, que incluye un análisis de las tecnologías de destrucción.

24. La Secretaría señala que el PNUD cree firmemente que si se pueden identificar soluciones a estas cuestiones relacionadas con la destrucción por medio del proyecto piloto, el gobierno podrá implementarlo a gran escala, y desarrollar un sistema de gestión de desechos de SAO completo que cubrirá todos los aspectos, posiblemente incluyendo cofinanciación en el futuro. La Secretaría indica, asimismo, que el monto que se solicita para preparación de proyecto es razonable y congruente con lo aprobado anteriormente para fondos de preparación para un proyecto de este tipo.

Recomendación de la Secretaría

25. El Comité Ejecutivo pudiera considerar la solicitud para preparación de proyecto para un proyecto piloto de destrucción de SAO en Colombia, en vista de la información antes presentada, y su aprobación de conformidad con la decisión 58/19.

Cuba: preparación de proyecto para un proyecto de destrucción de SAO (40 000 $EUA)

Descripción del proyecto

26. El proyecto piloto de destrucción de SAO para el Gobierno de Cuba examinará un enfoque para la destrucción de 133 toneladas PAO de SAO no deseadas en el país. Éstas consisten en una combinación de CFC y HCFC-22 acopiados por medio de los programas de recuperación y reciclaje establecidos en el marco del programa nacional de eliminación de Cuba.

27. En su solicitud para preparación de proyecto, el PNUD indica que este proyecto piloto se ocupará de todos los aspectos de un sistema de gestión de desechos de SAO completo en un pequeño estado insular en desarrollo. Ya se está realizando acopio de SAO no deseadas de bancos en el país a través del programa de sustitución de equipos de refrigeración y aire acondicionado en curso. También se acopian SAO no deseadas por medio del programa de sustitución de enfriadores y el programa de retroadaptación de refrigeración comercial. Estas SAO no deseadas que puedan acopiarse y requerir destrucción se beneficiarán con el proyecto piloto que se está diseñando.

28. El PNUD señala que el proyecto piloto demostrará la factibilidad de una tecnología de destrucción desarrollada en el Japón para hornos de cemento que no se ha probado anteriormente en la región. En la propuesta también se ha identificado un posible horno de cemento candidato, donde se demostrará la tecnología, en una de las provincias de Cuba. En el Anexo I del programa de trabajo del PNUD adjunto a este documento se incluye información detallada sobre la solicitud.

Observaciones de la Secretaría

29. La Secretearía examinó este proyecto considerando la información requerida en la decisión 58/19. Pidió al PNUD aclaración acerca de la tecnología japonesa propuesta en el proyecto. El PNUD confirmo que se está deliberando con el Gobierno del Japón acerca de la tecnología de horno de cemento para la destrucción, y que se ha podido identificar en Cuba un horno de cemento específico que sería adecuado para este fin. El PNUD señaló que el ejercicio de preparación de proyecto permitirá al PNUD y Cuba examinar los elementos necesarios relacionados con la transferencia de tecnología del Japón, incluidos costo, control de emisiones y verificación de las cantidades específicas de SAO destruidas, etc.

30. En vista de estas respuestas y de las deliberaciones con el PNUD, la Secretaría indicó que esta solicitud para preparación de proyecto cumple con los requisitos de información para preparación de proyecto de la decisión 58/19, tal como se estipula en las directrices para los proyectos de destrucción de SAO, por los siguientes motivos:

a) Indica con claridad que el proyecto es para destrucción y que analizará el uso de un horno de cemento en el país, usando una tecnología japonesa;

b) Se incluye una cantidad determinada de SAO de desecho/no deseada ya acopiada mediante un programa de recuperación y reciclaje en el país;

c) El proyecto es un proyecto piloto en tanto que, una vez que esta tecnología haya sido demostrada en Cuba, se podrá reproducir en otros países de la región que tengan pequeñas cantidades de SAO por destruir; y

d) El plan nacional de eliminación de CFC y el programa de enfriadores incluyen un enfoque operativo para la sustitución de artefactos de refrigeración doméstica y el acopio de las SAO de desecho que contienen dichos equipos.

31. La Secretaría indica que el PNUD ha explicado además que Cuba ya ha desarrollado otros elementos tal como acopio, transporte y almacenamiento de SAO no deseadas en el país, y que la demostración de una tecnología de destrucción específica es el elemento faltante que requiere atención, con lo que se justifica la solicitud de fondos. El PNUD también señaló que actualmente no hay en el país ningún programa de destrucción en curso vinculado con otros acuerdos ambientales multilaterales. La Secretaría indica, asimismo, que el monto que se solicita para preparación de proyecto es razonable y congruente con lo aprobado anteriormente para fondos de preparación para un proyecto de este tipo.

Recomendación de la Secretaría

32. El Comité Ejecutivo pudiera considerar la solicitud para preparación de proyecto para un proyecto piloto de destrucción de SAO en Cuba, en vista de la información antes presentada, y su aprobación de conformidad con la decisión 58/19.

India: preparación de proyecto para un proyecto de destrucción de SAO (80 000 $EUA)

Descripción del proyecto

33. En nombre del Gobierno de la India, el PNUD presentó una solicitud para preparación de proyecto para un proyecto de demostración piloto para la destrucción de CTC y otras SAO en el país, con un nivel de 80 000 $EUA. Según los documentos de apoyo suministrados, el proyecto establecerá instalaciones para la destrucción de diversas SAO utilizando mecanismos de organización, operaciones y finanzas innovadores que garantizarían la sostenibilidad. El ejercicio de preparación de proyecto propuesto estará dirigido específicamente al exceso de producción de CTC, que es un subproducto importante de la producción de clorometano, una industria importante del país. La propuesta indica que habrá como mínimo un monto calculado de 3 500 toneladas métricas, o 3 850 toneladas PAO, de exceso de producción como subproducto disponible para la destrucción anualmente. Además, también se dirigirá a otras SAO acopiadas de electrodomésticos y otros equipos que contienen SAO.

34. En su solicitud para preparación de proyecto, el PNUD incluye un enfoque para el ejercicio de preparación, y ha indicado que éste cubrirá el análisis de posibles bancos de SAO y un análisis del uso de CTC en el cloruro del ácido DV (DVAC), identificará cantidades para la destrucción, y definirá un proceso de acopio así como los parámetros técnicos para una planta de destrucción de SAO para varios productos. El PNUD también hizo hincapié en que se espera que esta planta funcione por medio de una posible financiación de carbono, por lo que las normas técnicas de funcionamiento de definirán conforme al MDL, el CCX u otras normas de mercado para el VCM. En el Anexo I del programa de trabajo del PNUD adjunto a este documento se incluye información detallada para la solicitud.

Observaciones de la Secretaría

35. La Secretearía examinó este proyecto considerando la información requerida en la decisión 58/19. En sus comentarios al PNUD, la principal observación de la Secretaría fue el hecho de que el proyecto piloto analizará la destrucción de la producción excesiva de CTC como una prioridad, en relación con la eliminación de la producción de CTC en la India financiada por el Fondo Multilateral. Si bien la cantidad de CTC excesiva es conocida y puede ser necesario destruirla, la Secretaría expresó inquietud acerca de la posibilidad de que esto constituya una doble financiación, dado que la eliminación de la producción de CTC ya ha recibido fondos.

36. Según el acuerdo de eliminación de producción de CTC, el Fondo Multilateral financió la eliminación de la producción y el consumo de CTC, con un nivel de financiación relacionado de 52 millones de $EUA. Este acuerdo se celebró en la inteligencia mutua de que la India podría registrar cantidades de coproducción de CTC no advertidas en la producción de productos de metano clorado, tales como el cloroformo. En este acuerdo, la India se comprometió a asegurar que no habría producción para usos controlados más allá de los límites de consumo estipulados en el acuerdo. Además, a discreción de la India, la producción no advertida se puede reducir, por ejemplo, reduciendo el volumen general de producción de metanos clorados por medio de la actualización de las instalaciones, con lo que la fracción de CTC que se coproduce es más baja, usando CTC para usos no controlados tales como materia prima o bien destruyendo el CTC. El PNUD informó a la Secretaría que los fabricantes indios optaron por reducir su producción de CTC para usos controlados usando el CTC como materia prima, especialmente para la producción de DVAC. No obstante, el PNUD indicó que se espera que la demanda futura de CTC para uso como materia prima en la India disminuya y que, por lo tanto, se podría producir un exceso de CTC. El PNUD hizo hincapié en que este exceso de CTC debe destruirse de manera segura ya que, en caso contrario, podría ingresar en el mercado de consumo y posiblemente poner a la India en situación de incumplimiento.

37. En vista de lo antedicho, la Secretaría formula las siguientes reservas acerca de la propuesta en cuanto a su relación con la destrucción de CTC:

a) Según lo entiende la Secretaría, el acuerdo entre el Gobierno de la India y el Comité Ejecutivo obliga a la India a asegurar que ninguna porción del CTC producido se use para usos controlados más allá del nivel especificado en el acuerdo. La India debe decidir acerca de los medios para lograr este objetivo, que incluyen varias opciones tales como uso como materia prima y destrucción, entre otras. En consecuencia, la Secretaría entiende que todas las necesidades de financiación de parte del Fondo Multilateral han sido cubiertas por el Acuerdo para el sector de CTC para la India aprobado en la 38ª Reunión, y que la actividad propuesta parecería constituir una doble financiación.

b) El cambio en las condiciones de mercado y la viabilidad económica de cualquiera de las opciones para evitar los usos controlados del CTC coproducido no parece tener consecuencias respecto de la validez del acuerdo. Además, se debe señalar que los productores de clorometano tanto de países que operan al amparo del Artículo 5 como de países que no operan al amparo de dicho artículo han demostrado que la producción de grandes cantidades de clorometano puede ir acompañada de medidas para evitar que el exceso de CTC ingrese en el mercado de consumo;

c) Considerando la obligación de eliminar por completo los usos controlados de CTC antes de 2010 tanto conforme al Protocolo de Montreal como según el Acuerdo con el Comité Ejecutivo, la Secretaría duda de que la India pueda demostrar que se requiere alguna actividad financiada por carbono adicional; es decir, demostrar que dicha destrucción no se llevaría a cabo sin la financiación.

38. La Secretaría también pidió aclaraciones acerca de otros aspectos de la propuesta, que resulta claro que analizaría el acopio de otras SAO además del CTC de bancos del país en equipos existentes. La Secretaría señaló que no existe un enfoque para acopiar sistemáticamente los equipos antiguos y extraer las SAO de los mismos para su destrucción, y recordó al PNUD que el acopio no se puede financiar en el marco del proyecto piloto a menos que sea parte de una actividad ya existente en el país. El PNUD respondió que hay planes piloto para la sustitución de electrodomésticos del sector privado, y que uno de los resultados de la propuesta sería lograr que estos planes sean más viables y abarcadores, desarrollando asociaciones con dichas iniciativas para aumentar la sostenibilidad.

39. El PNUD explicó además que la propuesta actual se ocupará del desarrollo de un modelo comercial para la destrucción de SAO, según el cual la planta de destrucción puede ser financiada en parte por el Fondo Multilateral, en parte por empresas privadas y, posiblemente, en forma parcial con créditos de carbono por la destrucción. Se espera que los costos de acopio sean sufragados por la entidad receptora, y que el transporte, el cumplimiento de normas y la supervisión sean parte del proyecto presentado para la financiación del Fondo Multilateral.

40. La Secretaría indica que el monto que se solicita para preparación de proyecto es razonable y congruente con lo aprobado anteriormente para fondos de preparación para un proyecto de este tipo.

41. En vista de las aclaraciones proporcionadas y de las deliberaciones con el PNUD, la Secretaría sugiere que el Comité Ejecutivo considere si el proyecto, tal como fue presentado, que analizará opciones para la destrucción de la producción excesiva de CTC, resulta admisible como un proyecto piloto, o si constituye una financiación por partida doble en vista de la financiación ya proporcionada para la eliminación de la producción de CTC.

Recomendación de la Secretaría

42. El Comité Ejecutivo pudiera considerar la solicitud para preparación de proyecto para un proyecto piloto de destrucción de SAO en la India, en vista de la información antes presentada, y de conformidad con la decisión 58/19.

B2. Asistencia técnica

Mundial: Movilización de recursos para lograr cobeneficios climáticos en la eliminación de HCFC: 250 000 $EUA

Descripción del proyecto

43. El PNUD presentó a las 57ª y 58ª Reuniones una solicitud para un proyecto de asistencia técnica para la movilización de recursos para maximizar los beneficios climáticos de la eliminación de HCFC, con un nivel de financiación de 250 000 $EUA. El PNUD vuelve a presentar la propuesta enmendada a fin de que sea considerada por esta reunión. La descripción del proyecto se incluye en las enmiendas al programa de trabajo del PNUD para esta reunión.

44. La propuesta se enmendó a fin de tener en cuenta los acontecimientos recientes en varias reuniones, así como para permitir al PNUD continuar con actividades paralelas a la labor en curso acerca del posible Mecanismo para obtener ingresos adicionales. El proyecto continuará examinando posibles actividades que pueden requerir cofinanciación de beneficios adicionales para el clima, pero se centrará en dos esferas: 1) gestión de proyectos de destrucción de SAO en bancos, especialmente en relación con la gestión de electrodomésticos al fin de la vida útil; y 2) oportunidades de cofinanciación en la eliminación de los HCFC.

45. La enmienda propuesta ahora analiza la ejecución de actividades en dos fases. La Fase I podría comenzar inmediatamente y proporcionará estudios de casos concretos, de aprendizaje práctico, de cuatro propuestas piloto diferentes. La Fase II, por otro lado, podría comenzar en una etapa posterior e incluiría el análisis de estos estudios de casos en el contexto de cualquier mecanismo para la movilización de recursos que pueda ser adoptado por el Comité Ejecutivo.

46. El cuadro siguiente contiene un desglose de los 250 000 $EUA pedidos por el PNUD:

Rubro de costo	Fase I	Fase II	Total
Consultor internacional para coordinación técnica	45 000	0	45 000
Cuatro expertos técnicos para análisis/metodologías	169 000	0	169 000
Costos de viajes y generales	36 000	0	36 000
Recuperación de costos de aportes del PNUD	150 000	100 000	250 000
Total	**$400 000**	**$100 000**	**$500 000**
Equivalencia de cofinanciación en especies del PNUD	(150 000)	(100 000)	(250 000)
Requerimiento neto de financiación del Fondo Multilateral	**$250 000**	**0**	**$250 000**

Observaciones de la Secretaría

47. El párrafo 11 b) de la decisión XIX/6 de la 19ª Reunión de las Partes proporcionó orientación al Comité Ejecutivo para que diera a prioridad, *entre otras cosas*, a "los sustitutos y alternativas que limitan

a un mínimo otras repercusiones en el medio ambiente, incluido el clima, teniendo en cuenta el potencial de calentamiento de la atmósfera, el uso energético y otros factores de importancia", al examinar los proyectos de eliminación de HCFC. En su 54ª Reunión, el Comité Ejecutivo aprobó un conjunto de directrices para la preparación de planes de gestión de eliminación de HCFC y, en las 55ª y 56ª Reuniones, aprobó fondos para la preparación de dichos planes en 115 países.

48. Las directrices para la preparación de planes de gestión de eliminación de HCFC, dispuestas en la decisión 54/39, establecieron la disposición para que los países del Artículo 5 consideren incentivos financieros y oportunidades de cofinanciación en sus planes de gestión de eliminación de HCFC finales, que podrían ser pertinentes para asegurar que los resultados de la eliminación de HCFC produzcan beneficios, de acuerdo con el párrafo 11 b) de la decisión XIX/6 mencionado anteriormente.

49. La Secretaría observó que los resultados de esta propuesta enmendada del PNUD pueden ayudar a examinar opciones de cofinanciación, no solo para los beneficios climáticos de la eliminación de HCFC, sino también para los proyectos de destrucción de SAO. Al igual que en la presentación original, el PNUD examinará tecnologías incipientes para evaluar las reducciones de emisiones de CO_2, pero este examen ahora se realizará en el contexto de cuatro escenarios diferentes propuestos en la Fase I.

50. En su 57ª Reunión, el Comité Ejecutivo examinó un mecanismo de financiación especial para obtener ingresos adicionales de préstamos y otras fuentes (documento UNEP/OzL.Pro/ExCom/57/64) y, en su decisión 57/37, decidió solicitar a la Secretaría que sometiera un análisis más detallado de este mecanismo a la consideración de la 58ª Reunión del Comité Ejecutivo.

51. En la 58ª Reunión, el Comité Ejecutivo adoptó la decisión 58/37, que incluyó aplazar la consideración de ésta propuesta y otras similares hasta una reunión futura. Por lo tanto, esta propuesta no se analizó en la 58ª Reunión. La Secretaría señala que la nueva presentación de esta propuesta para que sea considerada por el Comité Ejecutivo en esta reunión guarda conformidad con las deliberaciones en el marco de la cuestión 11 del Orden del día, Documento conceptual adicional sobre un mecanismo especial para obtener ingresos adicionales de préstamos y otras fuentes**.**

Recomendación de la Secretaría

52. El Comité Ejecutivo pudiera considerar la solicitud de asistencia técnica para movilizar recursos para maximizar los beneficios climáticos de la eliminación de los HCFC, en vista de la información precedente, y en las deliberaciones en el contexto de la cuestión 11 del Orden del día, Documento conceptual adicional sobre un mecanismo especial para obtener ingresos adicionales de préstamos y otras fuentes.

Anexo I

PROPUESTAS DE PROYECTOS DE FORTALECIMIENTO INSTITUCIONAL

Argentina: Renovación de fortalecimiento institucional

Resumen del proyecto y perfil del país	
Organismo de ejecución:	PNUD
Montos aprobados anteriormente para fortalecimiento institucional ($EUA):	
Fase I: Jul-94	359 500
Fase II: Nov-99	239 700
Fase III: Nov-02	311 413
Fase IV: Jul-05	311 567
Fase V: Nov-07	311 567
Total	1 533 747
Monto solicitado para renovación (Fase VI) ($EUA):	155 784
Monto recomendado para la aprobación de la Fase VI ($EUA):	155 784
Costos de apoyo al organismo ($EUA):	11 684
Costo total de fortalecimiento institucional, Fase VI, para el Fondo Multilateral ($EUA):	167 468
Cantidad equivalente de eliminación de CFC debida a fortalecimiento institucional, Fase VI, a 12,1 $EUA/kg (toneladas PAO):	n/d
Fecha de aprobación del programa de país:	1994
Consumo de SAO notificado en el programa de país (1994) (toneladas PAO):	3 407,8
Consumo básico de sustancias controladas (toneladas PAO):	
a) Grupo I del Anexo A (CFC) (Promedio 1995-1997)	4 697,2
b) Grupo II del Anexo A (Halones) (Promedio 1995-1997)	167,8
c) Grupo II del Anexo B (Tetracloruro de carbono) (Promedio 1998-2000)	187,2
d) Grupo III del Anexo B (Metilcloroformo) (Promedio 1998-2000)	65,7
e) Anexo E (Metilbromuro) (Promedio 1995-1998)	411,3
Último consumo de SAO notificado (2008) (toneladas PAO) con arreglo al Artículo 7:	
a) Grupo I del Anexo A (CFC)	50,9
b) Grupo II del Anexo A (Halones)	0
c) Grupo II del Anexo B (Tetracloruro de carbono)	-52,8
d) Grupo III del Anexo B (Metilcloroformo)	17,4
e) Anexo E (Metilbromuro)	282,4
f) Grupo I del Anexo C (HCFC)	356,9
Total	654,8
Año de los datos de ejecución del programa de país:	2008
Monto aprobado para proyectos ($EUA):	63 555 025
Monto desembolsado (a septiembre de 2009) ($EUA):	53 778 793
SAO por ser eliminadas (toneladas PAO):	7 111,4
SAO eliminadas (a septiembre de 2009) (toneladas PAO):	6 061,8

1. Resumen de las actividades y fondos aprobados por el Comité Ejecutivo:

Resumen de actividades		**Fondos aprobados ($EUA)**
a)	Proyectos de inversión:	56 935 605
b)	Fortalecimiento institucional:	1 533 747
c)	Preparación de proyectos, asistencia técnica, capacitación y otros proyectos ajenos a la inversión	5 085 673
	Total:	63 555 025

Informe sobre la marcha de las actividades

2. Durante la fase V del proyecto de fortalecimiento institucional en Argentina, se alcanzaron varios objetivos diferentes. Entre estos objetivos, se realizaron campañas de sensibilización del público como prioridad. Por medio de estas campañas se divulgaron diversos materiales de sensibilización, que incluyeron impresión de folletos y pósteres. Se realizó un taller para lanzar la preparación de proyecto para el plan de gestión de eliminación de HCFC en diciembre de 2008; participaron en el mismo representantes de la ONUDI y el PNUD, el sector privado y las cámaras industriales.

Plan de acción

3. Los principales objetivos de la fase VI del proyecto de fortalecimiento institucional es continuar planificando, organizando y coordinando todas las acciones requeridas al Gobierno de Argentina. Durante esta fase siguiente, la unidad del ozono tendrá los siguientes objetivos específicos: fortalecer el centro de coordinación y enlace de las autoridades del país con las Secretarías del Fondo y el Ozono y los organismos de ejecución del Protocolo de Montreal, coordinar y supervisar las actividades entre diferentes interesados públicos y privados relacionados en forma directa a fin de lograr la eliminación completa del consumo de CFC y el tetracloruro de carbono (CTC) antes del 1 de enero de 2010 y, simultáneamente con la prevención del tráfico ilícito, aplicar las medidas de control necesarias para que el país cumpla con los niveles de consumo admisibles para metilbromuro y metilcloroformo, la determinar el nivel básico de consumo de HCFC nacional, y gestionar el proceso para la preparación e implementación de la estrategia nacional para la primera etapa de eliminación de HCFC de acuerdo con las disposiciones adoptadas en la 19ª Reunión de las Partes en el Protocolo de Montreal.

Costa Rica: Renovación de fortalecimiento institucional

Resumen del proyecto y perfil del país	
Organismo de ejecución:	PNUD
Montos aprobados anteriormente para fortalecimiento institucional ($EUA):	
Fase I: Oct-92	213 160
Fase II: Feb-97	108 087
Fase III: Mar-99	105 568
Fase IV: Dic-01	104 224
Fase V: Dic-03	139 737
Fase VI: Nov-05	140 513
Fase VII: Nov-07	140 513
Total	951 802
Monto solicitado para la renovación (Fase VIII) ($EUA):	70 257
Monto cuya aprobación se recomienda para la Fase VIII ($EUA):	70 257
Costos de apoyo al organismo ($EUA):	5 269
Costo total para el Fondo Multilateral de la Fase VIII de fortalecimiento institucional ($EUA):	75 526
Cantidad equivalente de CFC eliminada mediante la Fase VIII del fortalecimiento institucional a 12,1 $EUA/kg (toneladas PAO):	n/d
Fecha de aprobación del programa de país:	1992
Consumo de SAO notificado en el programa de país (1992) (toneladas PAO):	647,6
Consumo básico de sustancias controladas (toneladas PAO):	
a) Grupo I del Anexo A (CFC) (Promedio 1995-1997)	250,2
b) Grupo II del Anexo A (Halones) (Promedio 1995-1997)	0
c) Grupo II del Anexo B (Tetracloruro de carbono) (Promedio 1998-2000)	0
d) Grupo III del Anexo B (Metilcloroformo) (Promedio 1998-2000)	0
e) Anexo E (Metilbromuro) (Promedio 1995-1998)	342,5

Último consumo de SAO notificado (2008) (toneladas PAO) con arreglo al Artículo 7:	
a) Grupo I del Anexo A (CFC)	13,9
b) Grupo II del Anexo A (Halones)	0
c) Grupo II del Anexo B (Tetracloruro de carbono)	0
d) Grupo III del Anexo B (Metilcloroformo)	0
e) Anexo E (Metilbromuro)	212,4
f) Grupo I del Anexo C (HCFC)	10,7
Total	236,69
Año de los datos de ejecución del programa de país:	2008
Monto aprobado para proyectos ($EUA):	8 671 702
Monto desembolsado (a septiembre de 2009) ($EUA):	7 444 911
SAO por ser eliminadas (toneladas PAO):	616,5
SAO eliminadas (a septiembre de 2009) (toneladas PAO):	505,4

4. Resumen de las actividades y fondos aprobados por el Comité Ejecutivo:

	Resumen de actividades	**Fondos aprobados ($EUA)**
a)	Proyectos de inversión:	5 697 868
b)	Fortalecimiento institucional:	951 802
c)	Preparación de proyectos, asistencia técnica, capacitación y otros proyectos ajenos a la inversión	2 022 032
	Total:	8 671 702

Informe sobre la marcha de las actividades

5. La Oficina Técnica del Ozono (OTO) continuó trabajando en la planificación, organización, dirección y coordinación de actividades para la aplicación de la estrategia nacional de eliminación en todas las esferas relacionadas con la reducción y posterior eliminación de las sustancias que agotan el ozono (SAO) para cumplir con lo estipulado en el Protocolo de Montreal. Durante la fase VII del proyecto de fortalecimiento institucional en Costa Rica, se implementó el sistema de otorgamiento de licencias mejorado para la importación de SAO, que impuso controles más estrictos al consumo de SAO. Se establecieron programas de sensibilización y apoyo a la educación para proporcionar orientación al Ministerio de Educación acerca de cuestiones relacionadas con la capa de ozono. Se publicaron documentos para maestros relacionados con la preservación de la capa de ozono. También se inició un proyecto en colaboración con la Universidad Nacional y el Instituto Meteorológico Nacional, con el objetivo de medir la radiación UV y elaborar un índice UV.

Plan de acción

6. En la fase siguiente, Costa Rica continuará implementando el sistema de otorgamiento de licencias para las sustancias reguladas por el Protocolo de Montreal, incluidos los HCFC contenidos en equipos y otros productos. También se supervisará detalladamente la importación de metilbromuro para aplicaciones de cuarentena y previas al envío. También se continuará trabajando con la Dirección General de Aduanas para detectar el comercio ilícito de SAO, además de realizar actividades de sensibilización del público acerca de la preservación de la capa de ozono, considerando la importancia de este tema. También se iniciará el plan de gestión de eliminación de HCFC a fin de completar el desarrollo de la primera etapa de dicho plan y cumplir con las medidas de control para 2013 y 2015.

Cuba: Renovación de fortalecimiento institucional

Resumen del proyecto y perfil del país	
Organismo de ejecución:	PNUD
Montos aprobados anteriormente para fortalecimiento institucional ($EUA):	
Fase I: Jun-93	171 995
Fase II: Nov-98	114 666
Fase III: Jul-01	114 666
Fase IV: Jul-03	149 066
Fase V: Nov-05	149 066
Fase VI: Nov-07	149 066
Total	848 525
Monto solicitado para renovación (Fase VI) ($EUA):	74 533
Monto recomendado para la aprobación de la Fase VI ($EUA):	74 533
Costos de apoyo al organismo ($EUA):	5 590
Costo total de fortalecimiento institucional, Fase VI, para el Fondo Multilateral ($EUA):	80 123
Cantidad equivalente de eliminación de CFC debida a fortalecimiento institucional, Fase VI, a 12,1 $EUA/kg (toneladas PAO):	n/d
Fecha de aprobación del programa de país:	1993
Consumo de SAO notificado en el programa de país (1993) (toneladas PAO):	564,5
Consumo básico de sustancias controladas (toneladas PAO):	
a) Grupo I del Anexo A (CFC) (Promedio 1995-1997)	625,1
b) Grupo II del Anexo A (Halones) (Promedio 1995-1997)	0
c) Grupo II del Anexo B (Tetracloruro de carbono) (Promedio 1998-2000)	2,7
d) Grupo III del Anexo B (Metilcloroformo) (Promedio 1998-2000)	0
e) Anexo E (Metilbromuro) (Promedio 1995-1998)	50,5
Último consumo de SAO notificado (2008) (toneladas PAO) con arreglo al Artículo 7:	
a) Grupo I del Anexo A (CFC)	74,4
b) Grupo II del Anexo A (Halones)	0
c) Grupo II del Anexo B (Tetracloruro de carbono)	0
d) Grupo III del Anexo B (Metilcloroformo)	0
e) Anexo E (Metilbromuro)	0
f) Grupo I del Anexo C (HCFC)	13,3
Total	87,7
Año de los datos de ejecución del programa de país:	2008
Monto aprobado para proyectos ($EUA):	13 178 242
Monto desembolsado (a septiembre de 2009) ($EUA):	9 461 444
SAO por ser eliminadas (toneladas PAO):	587,8
SAO eliminadas (a septiembre de 2009) (toneladas PAO):	413,5

7. Resumen de las actividades y fondos aprobados por el Comité Ejecutivo:

Resumen de actividades		**Fondos aprobados ($EUA)**
a)	Proyectos de inversión:	9 870 660
b)	Fortalecimiento institucional:	848 525
c)	Preparación de proyectos, asistencia técnica, capacitación y otros proyectos ajenos a la inversión	2 459 057
	Total:	13 178 242

Informe sobre la marcha de las actividades

8. Durante la sexta fase del proyecto de fortalecimiento institucional para los años 2008-2009, el Gobierno de Cuba logró varios objetivos; entre ellos, la ejecución del proyecto sobre eliminación de

CFC-11 y 12 y la producción de inhaladores de dosis medidas para uso médico y farmacéutico por medio de la conversión de la planta de inhaladores de dosis medidas "Reinaldo Gutiérrez". El programa de recuperación y reciclaje ha sido bastante exitoso y se ha retroadaptado una gran cantidad de refrigeradores domésticos, de los cuales se ha recuperado el refrigerante. Se ha capacitado a más de 5 000 técnicos y mecánicos de refrigeración en buenas prácticas de refrigeración y se ha logrado un importante impacto en la economía nacional y en el sector de refrigeración. El PNUD y el Gobierno de Cuba han firmado el proyecto de demostración destinado a la sustitución de enfriadores de sistemas de aire acondicionado que usan CFC-11, que se está ejecutando actualmente. Se han instalado 4 sistemas de enfriadores nuevos y se están preparando otros 5 sitios de enfriadores.

Plan de acción

9. La ampliación del proyecto de fortalecimiento institucional para la séptima fase tiene por objetivo contribuir en gran medida a los esfuerzos realizados por el Gobierno de Cuba para cumplir con los objetivos de eliminación de SAO convenidos conforme al Protocolo de Montreal. El principal objetivo de este proyecto es brindar asistencia para crear las condiciones necesarias para sostener la reducción del 100 por ciento del consumo básico de CFC, metilbromuro y CTC, y la reducción del 70 por ciento del metilcloroformo en 2009. Todos estos objetivos son para 2010. Durante este período, se comenzará a desarrollar el plan de gestión de eliminación de HCFC, que incluye determinar el consumo básico de HCFC.

Indonesia: Renovación de fortalecimiento institucional

Resumen del proyecto y perfil del país	
Organismo de ejecución:	PNUD
Montos aprobados anteriormente para fortalecimiento institucional ($EUA):	
Fase I: Jun-93	314 780
Fase II: Nov-97	208 385
Fase III: Dic-00	208 564
Fase IV: Dic-03	271 245
Fase V: Nov-05	271 245
Fase VI: Nov-07	271 245
Total	1 545 464
Monto solicitado para renovación (Fase VII) ($EUA	135 623
Suma recomendada para la aprobación de la fase VII ($EUA):	135 623
Costos de apoyo al organismo ($EUA):	10 172
Total costos de la fase VII de fortalecimiento institucional para el Fondo Multilateral ($EUA):	145 795
Cantidad equivalente de eliminación debida a fortalecimiento institucional en la Fase VII	n/d
Fecha de aprobación del programa de país:	1994
Consumo de SAO notificado en el programa de país (1994) (toneladas PAO):	5 557,2
Consumo básico de sustancias controladas (toneladas PAO):	
a) Grupo I del Anexo A (CFC) (Promedio 1995-1997)	8 332,7
b) Grupo II del Anexo A (Halones) (Promedio 1995-1997)	354
c) Grupo II del Anexo B (Tetracloruro de carbono) (Promedio 1998-2000)	0
d) Grupo III del Anexo B (Metilcloroformo) (Promedio 1998-2000)	13,3
e) Anexo E (Metilbromuro) (Promedio 1995-1998)	40,7

Último consumo de SAO notificado (2008) (toneladas PAO) con arreglo al Artículo 7:	
a) Grupo I del Anexo A (CFC)	0
b) Grupo II del Anexo A (Halones)	0
c) Grupo II del Anexo B (Tetracloruro de carbono)	0
d) Grupo III del Anexo B (Metilcloroformo)	0
e) Anexo E (Metilbromuro)	0
f) Grupo I del Anexo C (HCFC)	299,9
Total	299,9
Año de los datos de ejecución del programa de país:	2008
Monto aprobado para proyectos ($EUA):	55 618 429
Monto desembolsado (a septiembre de 2009) ($EUA):	52 512 081
SAO por ser eliminadas (toneladas PAO):	11 211,4
SAO eliminadas (a septiembre de 2009) (toneladas PAO):	10 710,8

10. Resumen de las actividades y fondos aprobados por el Comité Ejecutivo:

	Resumen de actividades	**Fondos aprobados ($EUA)**
a)	Proyectos de inversión:	47 977 390
b)	Fortalecimiento institucional:	1 545 464
c)	Preparación de proyectos, asistencia técnica, capacitación y otros proyectos ajenos a la inversión	6 095 575
	Total:	55 618 429

Informe sobre la marcha de las actividades

11. Los objetivos y resultados clave de la fase VI de fortalecimiento institucional fueron continuar aplicando los reglamentos sobre SAO mejorando la aplicación de de los controles existentes a la prohibición de importación de metilbromuro para aplicaciones que no sean de cuarentena y previas al envío y CFC, por medio de la capacitación y creación de capacidad para oficiales de aplicación; mejorar los sistemas y aumentar el apoyo a los gobiernos locales para que participen en la supervisión y aplicación. Se formularon, divulgaron y aplicaron procedimientos operacionales estándar para la vigilancia de las SAO; se aumentó la interacción y coordinación con los organismos de aplicación; se adquirieron otros equipos de detección de SAO que se distribuyeron entre los puntos de entrada aduaneros y gobiernos locales; se realizaron varios talleres de capacitación para gobiernos locales en tres provincias (alrededor de 60 regencias) para promover la sensibilización entre el público, así como las instituciones gubernamentales interesadas, para apoyar la ejecución del programa de eliminación de SAO. Se continuaron realizando evaluaciones de desempeño de los proyectos de inversión terminados a fin de facilitar la preparación del plan de gestión de eliminación de HCFC mediante la participación temprana de los interesados. Se realizó el taller nacional inicial sobre el plan de gestión de eliminación de HCFC, que contó con una amplia participación.

Plan de acción

12. Los elementos clave de la fase VII de fortalecimiento institucional son continuar aplicando los reglamentos sobre SAO, enfocándose especialmente en la supervisión descentralizada por medio de una mejor participación de los gobiernos locales, fortalecer la capacidad de aplicación y supervisión y mejorar la calidad de la supervisión y evaluación; sostener la eliminación de los CFC por medio de la introducción de un sistema de registro de talleres de refrigeración y aplicar el reglamento para la certificación de técnicos para institucionalizar la observación de los rayos UV y el ozono mediante la creación de una red de observación; alistarse eficazmente para la preparación del plan de gestión de eliminación de HCFC de Indonesia; continuar y fortalecer la actividades de sensibilización dirigidas, tanto para el público general como para los interesados de la industria y el gobierno.

Trinidad y Tabago: Renovación de fortalecimiento institucional

Resumen del proyecto y perfil del país	
Organismo de ejecución:	PNUD
Montos aprobados anteriormente para fortalecimiento institucional ($EUA):	
Fase I: Oct-96	60 777
Fase II: Dic-00	44 000
Fase III: Nov-02	57 200
Fase IV: Dic-04	60 000
Fase V: Nov-06	60 000
Total	281 977
Monto solicitado para renovación (Fase VI) ($EUA):	30 000
Monto recomendado para la aprobación de la Fase VI y VI ($EUA):	30 000
Costos de apoyo al organismo ($EUA):	2 250
Costo total de fortalecimiento institucional, Fase VI, para el Fondo Multilateral ($EUA):	32 250
Cantidad equivalente de eliminación de CFC debida a fortalecimiento institucional, Fase VI, a 12,1 $EUA/kg (toneladas PAO):	n/d
Fecha de aprobación del programa de país:	1996
Consumo de SAO notificado en el programa de país (1996) (toneladas PAO):	120,4
Consumo básico de sustancias controladas (toneladas PAO):	
a) Grupo I del Anexo A (CFC) (Promedio 1995-1997)	120
b) Grupo II del Anexo A (Halones) (Promedio 1995-1997)	46,6
c) Grupo II del Anexo B (Tetracloruro de carbono) (Promedio 1998-2000)	0
d) Grupo III del Anexo B (Metilcloroformo) (Promedio 1998-2000)	0,7
e) Anexo E (Metilbromuro) (Promedio 1995-1998)	1,7
Último consumo de SAO notificado (2008) (toneladas PAO) con arreglo al Artículo 7:	
a) Grupo I del Anexo A (CFC)	0
b) Grupo II del Anexo A (Halones)	0
c) Grupo II del Anexo B (Tetracloruro de carbono)	0
d) Grupo III del Anexo B (Metilcloroformo)	0
e) Anexo E (Metilbromuro)	0,4
f) Grupo I del Anexo C (HCFC)	56,4
Total	56,8
Año de los datos de ejecución del programa de país:	2008
Monto aprobado para proyectos ($EUA):	1 502 022
Monto desembolsado (a septiembre de 2009) ($EUA):	1 222 468
SAO por ser eliminadas (toneladas PAO):	123,6
SAO eliminadas (a septiembre de 2009) (toneladas PAO):	113,5

13. Resumen de las actividades y fondos aprobados por el Comité Ejecutivo:

Resumen de actividades		**Fondos aprobados ($EUA)**
a)	Proyectos de inversión:	579 570
b)	Fortalecimiento institucional:	281 977
c)	Preparación de proyectos, asistencia técnica, capacitación y otros proyectos ajenos a la inversión	640 475
	Total:	1 502 022

Informe sobre la marcha de las actividades

14. El principal objetivo de la fase V del proyecto de fortalecimiento institucional fue mantener las importaciones de CFC en cero a fin de alcanzar los objetivos de cumplimiento conforme al Protocolo de Montreal para eliminar completamente las SAO. Durante la fase V del proyecto de fortalecimiento

institucional se realizaron diversas actividades. Entre éstas, se realizó un curso de actualización para oficiales de aduanas a través de la escuela de capacitación aduanera, con lo que se capacitó a una cantidad mayor de oficiales. El país también experimentó un aumento de los consumidores que usan tecnología de alternativa a los CFC, lo que está reduciendo la demanda de CFC. También se realizaron importantes actividades de sensibilización del público, que incluyeron la celebración del Día Mundial del Ozono, apariciones en televisión y radio, publicación de anuncios e información para consumidores en periódicos y ferias científicas.

Plan de acción

15. El principal objetivo de la sexta fase del proyecto de fortalecimiento institucional en Trinidad y Tabago es la consolidación de los objetivos descritos para el proyecto en las fases anteriores. Algunos de los objetivos de la fase siguiente son fortalecer el sistema que utilizan los oficiales de aduanas para supervisar y controlar las SAO y las tecnologías que dependen de las SAO, con miras a identificar las lagunas y actualizar el sistema actual a fin de asegurar la capacidad del país para disuadir el comercio ilícito de SAO. Otros objetivos incluyen gestionar la importación de HCFC en el país a fin de garantizar que la eliminación del consumo de HCFC se realice sin complicaciones. También continuará trabajando para reducir las importaciones de metilbromuro formulando políticas y leyes más estrictas para la venta minorista y mayorista y el uso de metilbromuro específicamente para aplicaciones de cuarentena y previas al envío. Estos objetivos también incluyen aumentar la capacidad institucional de la dependencia nacional del ozono y aumentar la sensibilización del público respecto a los HCFC y sus sustancias de alternativa. En Trinidad y Tabago, se realizó un examen de seguimiento del uso de metilbromuro y de la asistencia para preparar el plan de gestión de eliminación de HCFC

Anexo II

OPINIONES EXPRESADAS POR EL COMITÉ EJECUTIVO SOBRE LAS RENOVACIONES DE LOS PROYECTOS DE FORTALECIMIENTO INSTITUCIONAL PRESENTADOS A LA 59ª REUNIÓN

Argentina

1. El Comité Ejecutivo ha examinado el informe presentado con la solicitud de renovación del proyecto de fortalecimiento institucional para la Argentina, y ha tomado nota con agrado de que la Argentina se encuentra bien encaminada para cumplir con los objetivos del Protocolo de Montreal. El Comité Ejecutivo apoya firmemente los esfuerzos de la Argentina para esta nueva fase, y señala que la prioridad será sostener la eliminación de los CFC, así como iniciar la preparación del plan de gestión de eliminación de HCFC y, posteriormente, la preparación y ejecución de actividades de inversión y ajenas a la inversión para cumplir con los objetivos de congelación en 2013 y reducción del 10 por ciento en 2015 para los HCFC. El Comité Ejecutivo espera, por lo tanto, que la Argentina continúe ejecutando las actividades de su programa de país y su plan nacional de eliminación y registre importantes progresos en la reducción de los actuales niveles de consumo de SAO.

Costa Rica

2. El Comité Ejecutivo ha examinado el informe presentado con la solicitud de renovación del proyecto de fortalecimiento institucional para Costa Rica, y ha tomado nota con agrado de que el país se encuentra bien encaminado para cumplir con los objetivos del Protocolo de Montreal. El Comité Ejecutivo también toma nota de la adecuada estructura de la unidad del ozono establecida dentro del Ministerio de Ambiente, Energía y Telecomunicaciones (MINAET), que resulta fundamental para liderar al país para lograr el cumplimiento del Protocolo de Montreal. Apoya los esfuerzos del país y señala que los dos próximos años serán de fundamental importancia para el futuro del programa del Protocolo de Montreal en Costa Rica, especialmente por la inclusión de los HCFC en su sistema de otorgamiento de licencias y las actividades que se deben ejecutar para completar el plan de gestión de eliminación de HCFC a fin de asegurar que los resultados sean sostenibles en el largo plazo. El Comité Ejecutivo espera, por lo tanto, que Costa Rica continúe ejecutando las actividades de su programa de país y su plan nacional de eliminación y registre importantes progresos en la reducción de los actuales niveles de consumo de SAO.

Cuba

3. El Comité Ejecutivo ha examinado el informe presentado con la solicitud de renovación del proyecto de fortalecimiento institucional para Cuba, y ha tomado nota con agrado de que el país se encuentra bien encaminado para cumplir con los objetivos del Protocolo de Montreal. El Comité Ejecutivo también toma nota de que Cuba enfrentará importantes retos en los dos próximos años para sostener la eliminación del consumo de CFC y establecer el consumo básico de HCFC basado sobre el consumo de 2009 y 2010. Le resulta alentador el hecho de que haya una unidad del ozono fuerte durante este período fundamental y apoya la ampliación del proyecto de fortalecimiento institucional para mantener el impulso. El Comité Ejecutivo espera, por lo tanto, que Cuba continúe ejecutando las actividades de su programa de país y su plan nacional de eliminación y registre importantes progresos en la reducción de los actuales niveles de consumo de SAO.

Indonesia

4. El Comité Ejecutivo ha examinado el informe presentado con la solicitud de renovación del proyecto de fortalecimiento institucional para Indonesia, y ha tomado nota con agrado de que el país se encuentra bien encaminado para cumplir con los objetivos del Protocolo de Montreal. El Comité Ejecutivo toma nota con agrado de las diversas iniciativas de políticas y reglamentarias aplicadas por el Gobierno de Indonesia supervisar y controlar eficazmente las SAO. El Comité Ejecutivo también toma nota de que Indonesia continuará descentralizando la supervisión y aplicación por medio del fortalecimiento de las entidades gubernamentales locales, a fin de asegurar la sostenibilidad de la eliminación de SAO. El Comité también expresa la expectativa de que Indonesia complete satisfactoriamente la ejecución de las actividades programadas con progresos importantes, sosteniendo y fortaleciendo sus logros en el control de las SAO para cumplir con sus obligaciones conforme al Protocolo de Montreal.

Trinidad y Tabago

5. El Comité Ejecutivo ha examinado el informe presentado con la solicitud de renovación del proyecto de fortalecimiento institucional para Trinidad y Tabago, y toma nota con agrado de que el país se encuentra bien encaminado para cumplir con los objetivos del Protocolo de Montreal. El Comité Ejecutivo toma nota de que el consumo actual de HCFC en el país es elevado para un país del tamaño de Trinidad y Tabago, y alienta al país a usar estos fondos de fortalecimiento institucional para fortalecer a la unidad del ozono a fin de que pueda liderar el proceso de preparación de una estrategia nacional sobre los HCFC, a fin de cumplir con el objetivo de congelación en 2013. El Comité también expresa la expectativa de que Trinidad y Tabago complete satisfactoriamente la ejecución de las actividades programadas con progresos importantes, sosteniendo y fortaleciendo sus logros en el control de las SAO para cumplir con sus obligaciones conforme al Protocolo de Montreal.

United Nations Development Programme
Montreal Protocol & Chemicals Unit

59th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol

(10 - 14 November, Port Ghalib, Egypt)

AMENDMENT TO THE 2009 WORK PROGRAMME

16 September 2009
(Final 07 October 2009)

UNDP
AMENDMENT TO THE 2009 WORK PROGRAMME

I. INTRODUCTION

UNDP's 2009-2011 Business Plan and the 2009 Work Programme were approved at the 57th Meeting of the Executive Committee in March 2009. This document represents an Amendment to the 2009 approved Work Programme and is being submitted for consideration at the 59th Meeting of the Executive Committee, to be held in November 2009. The funding requests submitted as part of this Amendment, after review by the MLF Secretariat, are presented in the document under item II. Section III presents the Policy Issues. Relevant documents are in the Annexes to this WPA.

II. FUNDING REQUESTS

Institutional Strengthening Extensions

The requests for funding for extensions of Institutional Strengthening projects are made for five countries, namely, Argentina, Costa Rica, Cuba, Indonesia and Trinidad & Tobago **(Annex 1**). All these requests cover funding requirements for two years duration. As requested by the Secretariat, the amounts for a one-year duration are also provided and tabulated below (based on an extension for two years):

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total	Coop Agency
Argentina	INS	Institutional Strengthening Extn (Phase VI)	24	311,567	23,368	334,935	N/A
Costa Rica	INS	Institutional Strengthening Extn (Phase VIII)	24	140,513	10,538	151,051	N/A
Cuba	INS	Institutional Strengthening Extn (Phase VII)	24	149,066	11,180	160,246	N/A
Indonesia	INS	Institutional Strengthening Extn(Phase VII)	24	271,245	20,343	291,588	N/A
Trinidad & Tobago	INS	Institutional Strengthening Extn (Phase VI)	24	60,000	4,500	64,500	N/A
Total (5 requests)				**932,391**	**69,929**	**1,002,320**	

The amounts calculated for a one-year extension period for the above would be as tabulated below:

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total	Coop Agency
Argentina	INS	Institutional Strengthening Extn (Phase VI)	12	155,784	11,684	167,468	N/A
Costa Rica	INS	Institutional Strengthening Extn (Phase VIII)	12	70,257	5,269	75,526	N/A
Cuba	INS	Institutional Strengthening Extn (Phase VII)	12	74,533	5,590	80,123	N/A
Indonesia	INS	Institutional Strengthening Extn(Phase VII)	12	135,623	10,172	145,795	N/A
Trinidad & Tobago	INS	Institutional Strengthening Extn (Phase VI)	12	30,000	2,250	32,250	N/A
Total (5 requests)				**466,197**	**34,965**	**501,162**	

The relevant supporting documents are submitted separately.

Agency Programme (Core Unit support)

Funding request for UNDP's administrative costs (core unit support) for 2010 has been requested as below, reflecting a 3% increase from the previous year, consistent with ExCom Decisions 46/35, 56/41 and 56/42. Submitted separately from this WPA document.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total	Coop Agency
Global	TAS	Agency programme (core unit support)	12	1,913,365	N/A	1,913,365	N/A
Total (1 request)				**1,913,365**	**N/A**	**1,913,365**	

Preparation funding requests for ODS Disposal Pilots

Funding requests for preparation of pilot/demonstration projects are being submitted for countries as tabulated below (**Annex 2** contains the detailed project concepts/proposals).

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total	Coop Agency
Colombia	PRP	Pilot project for ODS Disposal/Bank Mgmt	12	40,000	3,000	43,000	None
Cuba	PRP	Pilot project for ODS Disposal/Bank Mgmt	12	40,000	3,000	43,000	None
India	PRP	Pilot project for ODS Disposal	12	80,000	6,000	86,000	None
Total (3 requests)				**160,000**	**12,000**	**172,000**	

The proposals are in response to the Decision XX/7 (2) of the Meeting of Parties (for ODS disposal), and take into account the stipulations of Decision 58/19 of the Executive Committee. These requests for preparation of ODS disposal pilots will result in proposals for achieving destruction of unwanted ODS and generate practical data and experience on technologies, operational issues, costs, synergies with other related initiatives and opportunities for leveraging additional finance. This will help determine technical, economic, institutional, market and other conditions required to have cost-effective ODS disposal systems in place.

HCFC Activities

(a) Additional preparation funding for HCFC investment and associated activities

Funding requests for preparation of investment and associated activities are being made for 2 countries, Trinidad & Tobago and the Philippines, in accordance with ExCom Decision 56/16 (d).

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total	Coop Agency
Trinidad & Tobago	PRP	HCFC investment activities	12	65,000	4,875	69,875	NA
Philippines	PRP	HCFC investment and associated activities in the Refrigeration and Air Conditioning Sector including the Servicing Sector (excluding the air-to-air air conditioning sector)	12	65,000	4,875	69,875	UNIDO
Total (requests)				**130,000**	**4,875**	**69,875**	

For Trinidad and Tobago, UNDP requested at the 55 meeting 85,000 US$ for the preparation of the HPMP. At that time, the national ozone unit in T&T and UNDP were under the impression that all HCFC consumption in T&T was for servicing. Meanwhile however the country's latest HCFC consumption (2008) was reported to be 1,032.94 metric tons, which is much higher than anticipated. In addition to this, it has come to known during the preparation of the HPMP that HCFCs are also used for manufacturing (Foam and Commercial Refrigeration). It has also been revealed that HCFC 141b has been imported in premixed systems and have therefore not been detected by customs. Preliminary results confirm the presence of 3 foam companies and 1 commercial refrigeration manufacturer. This

number could be higher, and this needs further investigation during the HPMP preparation. UNDP would therefore like to request an additional 65,000 US$ (150,000 US$ in total) to take the high consumption into account, and to include the manufacturing sector in the development of the HPMP.

For the Philippines, a request for additional preparation funding for HCFC investment and associated activities in the Refrigeration and Air Conditioning Sector (excluding air-to-air air conditioning sector) is being made for the Philippines (related project concept and government endorsement letter are in the **Annex 3**):

(b) Preparation funding for HCFC pilot/demonstration projects

Please see Section III: Policy Issues.

Global Activities

UNDP had submitted a request for funding for a global technical assistance activity to the 57th ExCom meeting, for resource mobilization for maximizing climate co-benefits in HCFC phase-out. This request is being resubmitted for the 59th ExCom meeting **(Annex 4).**

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total	Coop Agency
Global	TAS	Resource mobilization for climate co-benefits	12	250,000	18,750	268,750	N/A
Total (1 request)				**250,000**	**18,750**	**268,750**	

Investment Projects

TPMPs and Sector National Plans

A total of 11 requests for annual tranches of TPMPs and Sector/National Plans are being submitted, supported by progress reports on the implementation of annual plans for the previous year and performance verification reports wherever required, which are submitted separately.

Funding requests for tranches of approved ongoing TPMPs and Sector/National Plans are tabulated below (the relevant progress reports and performance verification documentation are submitted separately):

Country	Type	Title	Amount	Agency Fee	Total	Cooperating Agency
Bahrain	INV	TPMP 2nd tranche	40,000	3,000	43,000	UNEP lead
Brazil	INV	CFC Phase-out Plan 8th tranche	100,000	5,000	105,000	UNDP lead
China	INV	Solvents Sector Plan	1,480,000	111,000	1,591,000	N/A
Costa Rica	INV	MeBr 5th tranche	726,792	54,509	781,301	N/A
Cuba	INV	National CFC Phase-out Plan 5th / 6th tranches	156,000	11,700	167,700	UNDP lead
Grenada	INV	TPMP 3rd tranche	30,000	2,700	32,700	UNEP lead
Guyana	INV	TPMP 2nd tranche	91,000	8,190	99,190	UNEP lead
Kyrgyzstan	INV	TPMP 3rd tranche	60,000	4,500	64,500	UNEP lead
Mozambique	INV	TPMP 2nd tranche	17,000	1,530	18,530	UNEP lead
Nigeria	INV	National CFC Phase-out Plan 7th/ 8th tranche	454,200	36,518	490,718	UNDP lead
Swaziland	INV	TPMP 2nd tranche	40,000	3,600	43,600	UNEP lead
Total (11 requests)			**3,194,992**	**242,247**	**3,437,239**	

HCFC investment projects

Two HCFC phase-out investment projects (one in Mexico and one in Dominican Republic) are being submitted. Funding requests for those projects are tabulated below. The relevant documents are being submitted separately.

Subst.	Type	Sector	Title	Amount	Agency Fee	Total
HCFC	INV	FOA	HCFC phase-out project in Dominican Republic (1 request)	395,500	29,663	425,163
HCFC	INV	FOA	HCFC phase-out project in Mexico (1 request)	2,790,660	209,300	2,999,960
Total (2 requests)				**3,186,160**	**238,963**	**3,425,123**

III. POLICY ISSUES

Requests for Renewal of Institutional Strengthening Projects

During the 29th Open Ended Working Group Meeting held in July 2009, intensive deliberations were made on the issue of funding of Institutional Strengthening projects beyond 2010. A decision pertaining to this issue will be considered at the upcoming XXIst Meeting of the Parties (MOP) in November 2009, preceding the 59th ExCom Meeting. In light of this, UNDP had requested a number of institutional strengthening extensions (see relevant section above) with a duration of 24 months, with the understanding that these durations could be affected by the decisions of the XXIst MOP and 59th ExCom Meeting in November 2009.

The MLF Secretariat asked UNDP to submit proposals for renewal of Institutional Strengthening projects with a duration of 12 months only. Since clear policy guidance on this issue is likely to be available prior to the 59th ExCom Meeting, UNDP has submitted the above requests for both 12 months and 24 months durations.

Preparation funding (PRP) requests for HCFC pilot/demonstration projects

The Secretariat has requested that the following submissions of preparation funding requests for three HCFC pilot/demonstration projects (two projects in the Solvents Sector in China and one project in the XPS Foam Sector in China) should not be included in the work programme amendment for the 59th ExCom meeting, as they were removed from UNDP's business plan in the 57th ExCom Meeting:

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total	Coop Agency
China	PRP	HCFC Demonstration project in Solvents	12	30,000	2,250	32,250	N/A
China	PRP	HCFC Demonstration project in Solvents	12	30,000	2,250	32,250	N/A
China	PRP	HCFC Demonstration project in XPS Foam	12	80,000	6,000	86,000	N/A
Total (3 requests)				**140,000**	**10,500**	**150,500**	

China has requested UNDP to bring this to the Committee's attention and requests that the Committee considers these requests at the 59th ExCom Meeting, although these are technically not in UNDP's 2009 business plan. Justification is provided in **Annex 5.**

HCFC Demonstration project in XPS(full project)

A request to consider inclusion back in the UNDP 2009 Business Plan came from Turkey. The funding request for a full-fledged HCFC demonstration project in the XPS Foam Sector was removed from the business plan at a previous ExCom meeting. The project, as per request of Turkey, was re-submitted separately but not recommended by the Secretariat due to the above reason.

Subst.	Type	Sector	Title	Amount	Agency Fee	Total
HCFC	DEM	XPS	HCFC demonstration project in Turkey (1 request)	192,500	14,500	207,000
Total (1 request)				**192,500**	**14,500**	**207,000**

Amendment to the UNDP Work Programme
Annexes

Annex 1. **Institutional Strengthening Renewal Requests (Argentina, Costa Rica, Cuba, Indonesia and Trinidad & Tobago)**

Annex 2. **Justification/Concepts for PRP Requests for Pilot Projects on ODS Disposal/Destruction (Colombia, Cuba, India)**

Annex 3. **Request for additional preparatory funding for the Philippines**

Annex 4. **Resource Mobilization for Climate Co-Benefits**

Annex 5. **Justifications for preparatory funding requests for HCFC pilot/demonstration (China)**

Annex 1. Institutional Strengthening Renewal Requests

(Argentina, Costa Rica, Cuba, Indonesia and Trinidad & Tobago)

Annex 2. Justification for PRP Requests for Pilot Projects on ODS Disposal/Destruction

COLOMBIA

In behalf of the Government of Colombia UNDP is requesting funding for the preparation of a pilot project on ODS destruction. The project complies with the criteria established by Decision 58/19 and it is focused on specific aspects not previously addressed by pilot projects. Previous pilot projects approved in the region were addressed to countries where there is already ODS destruction technologies in place and there is potentially a major supply of ODS from banks that could justify investments (CFC baselines above 4,000 tonnes). The case of Colombia has the following particularities:

1. Medium Size country without destruction facilities in place. This is the situation of many countries in the region, which makes this pilot attractive as the information produced could be used by other countries with comparable characteristics. The destruction of CFC 11 will be analyzed for at least one incineration technology of CFC 11 contained in the PU Foams (the information obtained could be compared with the technology being used in other pilots that consist of extracting the CFC from the foam and destroying it, which requires high volumes of CFC 11 to be economically feasible). For CFC 12 at least one destruction technology will be analyzed against mobilizing the CFCs to other countries through private operators using their existing waste management expertise and infrastructure..
2. ODS banks management and destruction research in an advanced stage. Previous and current initiatives have set the conditions to work on destruction, data has been collected and partnerships with the private sector and other governmental entities exist. This will make the pilot easier to implement.
3. Geographic conditions in the country make ODS banks fragmented in regions not always easily communicated. The project is considering including ten cities representing three climate areas (1 to 1,000; 1,000 to 2,500, and higher than 2,500 m above the sea level), each one of these areas will generate ODS from different sources (i.e. higher zones will focus more in refrigeration and lower zones in air conditioning).

The government of Colombia has been working for several years in looking for solutions to destroy the CFCs contained in banks and have implemented pilots on collection of ODS from existing banks. The present project will build from this learning experience and put the last step in the waste management chain in Colombia. We are presenting attached a comprehensive proposal explaining the background of the work being done in Colombia and what is required. Below is a summary on how the project complies with the Decision 58/19:

i. An indication of the category or categories of activities for the disposal of ODS (collection, transport, storage, destruction), which will be included in the project proposal;

This proposal will cover transport, storage and destruction (or export for destruction) of ODS already in cylinders coming from different sources as presented in the table presented in section iii below. This pilot project does not aim to duplicate what a pilot initiative in early retirement of appliances (collection) already did. Instead, it will be complementary by tackling the areas not covered yet by that pilot (transport, storage and actual destruction of the ODS). The Government has already tackled and created the partnerships required to work in collection, by having resolved the issues related to destruction

through the present proposal; the government will be able to implement in a large scale a complete ODS waste management system including collection, transportation, storage and final destruction of ODS.
Once information on logistics, costs and technical requirements to undertake these 3 categories (transport, storage and actual destruction) is generated, decisions will be made on how each one of them is going to be addressed and all the elements for the ODS waste management and disposal will be in place. At this point the country will be able to combine these steps with the existing collection scheme and expand operations. The collection efforts will provide a portion of the ODS for destruction but as mentioned before, the collection scheme is already tackled and funded by other sources.
An important aspect to consider is that Colombia is a country with several climate areas, which turns complex the management of a national project. In this sense, taking into account the regionalized infrastructure created by the National Phase Out Plan, the work will be done in 10 cities that include the three climate areas (0 to 1.000 m, 1 000 m to 2 500 m, and higher than 2500 above sea level). For each city the project will include the stockpiling, storage, transport and destruction of CFCs both concentrated and diluted. With regards to financial incentives for ODS collection to complement the destruction pilot, the following are being considered:

- Identification of national sources, through funds coming from the generation and distribution stages.
- Financial sources have also been identified and there is advance in an investment program with the Clean Technology Fund (through the IDB).
- Clean Development Mechanism, in correspondence with the indirect decrease of GHG as consequence of the Energy Efficiency improvement of the equipments.
- Voluntary carbon markets, (applied to the CFC destruction case).
- Economical instruments being identified as feasible by the Government and that incentive the buyer to change his equipment.
- Payment terms of the equipments, through traders' policies.

ii. An indication whether disposal programmes for chemicals related to other multilateral environmental agreements are presently ongoing in the country or planned for the near future, and whether synergies would be possible;

Completed activities directly related to ODS destruction:

Colombia has been one of the countries leading the discussion on ODS waste management within the Montreal Protocol framework, and has provided inputs to the studies requested by the Executive Committee on the subject. As part of this work, the following activities have been completed at the national level:

- National research on identification of ODS banks (2003, 2004)
- Research on national capacity for ODS destruction (2004)
- Research on energy consumption of national locally used refrigerators and air conditioners (2006)
- Pilot project on refrigerators early retirement and scrap processing (2008) (Explained in detail in numeral v)
- Halon banks management project completed under the NPP with the export of 7,940 kgs for critical uses in other countries (2009)

Related activities that will contribute or that could have synergies with the pilot project:

- National Plan: Though the regional centers created by the NPP the pilot project will operate at the same time in different local markets taking advantage of local expertise built and recovery & reclaiming infrastructure in place to handle CFCs.
- Chillers project: This project which is just starting will generate CFC 11 and CFC 12 that will need to be destroyed.
- National Context on Energy Efficiency: The Ministry of Mining and Energy and its subsidiary bodies have been configuring the national framework on the Policy about Energy's Rational Use. Within this framework, the substitution of domestic refrigerators has been identified as a priority activity, since in a 20-year scenario analysis the savings on consumption would be of about 198 GWH per year. For boosting this work, a Committee has been formed in which the Ministries of Mining and Energy and of Environment participate, as well as the NOU, UPME (electric utility) and the national refrigerators manufacturers.
- National Context on Wastes: Since December 2005, Colombia has a Environmental Policy for the Integral Management of Hazardous Wastes, set out with long term strategies, in the frame of the integrated product life cycle management, which general objective is to prevent the generation of hazardous wastes or residues and to promote the environmentally sound management of those being generated, with the purpose of minimizing the risks. Within the Action Plan of the Policy, it has been established as goal for the period 2006-2018 to achieve 40% elimination of hazardous wastes that are a priority under the international commitments, for the ODS case, expressed in tonnes of phased out ODS wastes, with the intermediate goal for year 2010 of having a program for the management and final disposal of ODS wastes.
- POPs and Hazardous Wastes: Within the development of the Stockholm Convention on POPs, Colombia has managed in the past years the exportation of PCBs for their destruction outside the country. Currently the Ministry of Environment submitted with UNDP to the GEF a project to manage and destroy PCBs, which includes the analysis of alternatives for destruction. There are potential synergies with ODS destruction that should be explored .
- Other initiatives include the national policy of electric and electronic equipment post-consumption and the collection of disused cellular phones and Computers.

iii. An estimate of the amount of each ODS that is meant to be handled within the project;

The current inventory of CFC and HCFC ready for destruction is 10 tonnes. Secondly, there is one tone of ODS retained in customs ready for destruction. Finally and most importantly the ODS destruction pilot will destroy the CFC contained in existing appliances that will be collected through the government collection scheme. The CFC installed banks in domestic refrigerators is 240 tonnes of CFC 12 and 10,200 tonnes of polyurethane foam containing CFC 11. For this particular pilot project the collection scheme will contribute with CFCs from 300,000 domestic refrigerators, 5,000 commercial refrigerators and 5,000 air conditioners that can be collected in one year. Taking into account the average data obtained from the pilot project carried out in year 2008 (80 grams of refrigerant gas and 3,4 kilograms of polyurethane foam recovered per refrigerator), it is expected to recover 24 tonnes of refrigerant gas and 1.020 tonnes of polyurethane foams with CFC-11. In the commercial refrigeration sector it is estimated a removal of 5,000 refrigerators, each one with a recoverable charge of one (1) kilogram of gas and 5,000 domestic air conditioners with a recoverable charge of nearly 0.5 kg of refrigerant.

The table below presents a summary of all the sources of waste ODS to be destroyed:

SOURCE	EQUIPMENT /SUBSTANCE	MATRIX	ODS Amount to be Destroyed
Current inventory of waste ODS from regional centers	Residual CFC coming from servicing and other operations through the R&R centers	CFC-11 and CFC-12	10
CFC extraction from domestic refrigerators	300.000 domestic refrigerators	CFC 12 0.080 kg/unit*	24
CFC extraction from domestic refrigerators	300.000 domestic refrigerators	3.4 kg de PU Foam/unit = 1020 ton of Foams, out o it 10% is CFC 11*	102
CFC extraction from air conditioning units	5.000 air conditioning units	Refrigerant	2,5
CFC extraction from commercial refrigerators	5.000 commercial refrigerators	Refrigerant	5
Current inventory of waste ODS retained in customs	Illegal ODS	Stored ODS	1
TOTAL			**144.5**

** Source: Information obtained from the early retirement project implemented in 2008*

The table above presents the amount of waste ODS that the country can commit to destroy directly through the present project (subject to the level of funding approved). However, it is expected that having resolved the destruction issues through the pilot project, the conditions to destroy additional ODS will be in place.

iv. The basis for the estimate of the amount of ODS; this estimate should be based on known existing stocks already collected, or collection efforts already at a very advanced and well-documented stage of being set up;

Known existing stock: 10 tonnes of CFC and HCFC (source regional centers). One additional tone of ODS waste is retained in customs for destruction (source customs department). The information on the CFCs contained in appliances is a very conservative estimation made based on real data obtained from the information gathered during the collection project on early retirement done in 2008 in Bogota. Details on this initiative can be found in the document submitted by the Government of Colombia, attached to this justification.

v. For collection activities, information regarding existing or near-future, credible collection efforts and programmes that are at an advanced stage of being set up and to which activities under this project would relate;

A pilot initiative on early retirement of domestic refrigerators took place in 2008 during four months in Bogota, with the objective of establishing a scheme by which old CFC based refrigerators of different

sizes and trademarks in the hands of end users (consumers) could be replaced by more energy efficient CFC free refrigerators, and all the materials obtained from the old refrigerators, including the ODS, could be disposed of in an environmentally sound manner. The project was funded by the participants (government, manufacturers and retailers) and a total of 2000 final users were benefited by this initiative as their energy bills were reduced. But most importantly, the project helped to establish the scheme for collection of domestic refrigerators and extraction of the ODS for destruction. Among the results obtained, the project identified all the steps required for this kind of operation (logistical, administrative and financial), identified all the involved stakeholders and engaged them to participate, measured costs, and measured quantities of ODS and other materials recoverable by unit. The main outcome of this pilot is that the conditions and the approach for collection of domestic refrigerators and extraction of ODS were established.

Having progressed on the collection phase, the issues to be tackled now by the present pilot proposal are the ones related to the ODS destruction. The collection scheme is ready to be expanded to the 10 regional centers created by the National Phase Out Plan. With participation of the 3 of the largest retail stores chains and participation of all manufacturers and importers of domestic refrigerators. This will absorb a good portion of the CFC based domestic refrigerators (and other appliances) currently functioning in the country; however, in order to expand this operation a solution has to be found for the ODS destruction. The present proposal aims to find solutions for the ODS destruction in Colombia.

vi. For activities that focus at least partially on CTC or halon, an explanation of how this project might have an important demonstration value;

The present project will focus on CFCs. With regards to halons Colombia has already taken action to manage its banks as part of the National Phase Out Plan. A national inventory of the installed quantities was performed and it was found that the main user was a company that generates and commercializes electric power. With the assistance of the National Ozone Unit this company was able to procure with the company REMTEC INTERNATIONAL the disposal of 7,940 kilograms of Halon-1301, contained in 94 cylinders, which were stored in the Hydroelectic Power Stations of San Carlos and Jaguas located in the eastern part of Antioquia. This substance was acquired by REMTEC as raw material to subsequently commercialize it in the Halon Bank of Critical Uses of the United States of America. At the end of May 2009, the packing activities for Halon-1301 were carried out as well as the container loading, which was exported from the port of Cartagena in mid-June.

DETAILED COUNTRY PROPOSAL COLOMBIA
DEMONSTRATION PROJECT PROPOSAL FOR ODS WASTES MANAGEMENT

1. BACKGROUND AND NATIONAL CONTEXT ON ODS WASTES IN COLOMBIA

Colombia has made efforts to implement a coherent environmental strategy in the management of Ozone Depleting Substances, reason for which notwithstanding the technological and economical limitations, we have tried to generate management alternatives for ODS wastes. Among the main activities where work has been done the following are highlighted: national researches for the identification and quantification of ODS banks, assessment of national management capacities for these wastes, pilot project for the substitution of domestic refrigerators (year 2008), halons management, proposal for ODS wastes management in the Montreal Protocol negotiation scenarios, etc.

1.1. National researches for the identification of ODS banks

During years 2003 and 2004 the TOU (Technical Ozone Unit) coordinated a research project with the support of the domestic refrigerators manufacturers that are part of the National Businessmen Association of Colombia (Asociación Nacional de Empresarios de Colombia - ANDI), the National University of Colombia and University of Los Andes, with the objective of gathering the information on banks of CFC-based domestic refrigerators and on the perspective of building a disassembling plant for domestic refrigerators in Colombia.

1.2. Research on national capacities for CFC destruction

With the support of the National University of Colombia, a research task was carried out for revising the national capacities for ODS destruction in Colombia (2004).

1.3. Research on the energy consumption of domestic refrigerators and air conditioners at national level (2006)

The Unit of Energy and Mining Planning (UPME by its initials in Spanish) of the Ministry of Mining and Energy and the National University performed a research on the energy consumption of air conditioners and domestic refrigerators in 4 Colombian cities. This study was used for the identification of refrigerators substitution as a core program of the national strategy of Energy's Rational Use.

1.4. Pilot project of domestic refrigerators scrap processing (2008).

The project consisted in carrying out a pilot in the city of Bogotá, with a duration of four (4) months, from April 30 to August 31 2008, for the substitution of domestic refrigerators, of different sizes and trademarks, that contained chlorofluorocarbon compounds – CFC and that were still in the hands of the final users (consumers) and the management of the wastes coming from these equipments, which included the use of parts and the destruction of CFC from the refrigeration circuit and of the polyurethane foam used as thermal isolation.

The main participants were: Mabe Colombia S.A., Industrias Haceb S.A., Almacenes Éxito S.A. (13 stores in Bogotá), Ministry of Environment, Housing and Territorial Development (MAVDT per its initial in Spanish), United Nations Development Programme – UNDP. There was also participation from: Home Appliances Chamber of the Asociación Nacional de Empresarios de Colombia – ANDI, COMPRAVENTA DE EXCEDENTES INDUSTRIALES LITO LTDA. (solicitors in charge of the use

of materials and final disposal of the wastes) and Codensa S.A., ESP. (payment financing of new equipments, support in the diffusion of the project).

1.5. Handling of the issue inside the discussion scenarios of the Montreal Protocol (2003-2009)

Colombia has led the discussion on the need of managing ODS wastes, within the framework of the different instances of the Montreal Protocol (Meetings of the Parties, TEAP and EXCOM). Resulting from one of these negotiations, a consultancy at international level was carried out through the company ICF, which comprised an analysis of the "state of the art" of ODS wastes management in seven Article 2 countries and two Article 5 countries (Colombia was one of these two countries). Likewise, several decisions from the Parties related with this issue have been promoted with other countries.

2. ACTUAL STATUS ON ODS WASTES SITUATION

2.1 CFC-INSTALLED BANKS

It is calculated that a total of three million domestic refrigerators are in the hands of the final users in the whole country. Taking into account the average data obtained from the pilot project performed in year 2008 (80 grams of CFC-12 and 3,4 kilos of CFC-11 polyurethane foam recovered per refrigerator), there are approximately 240 tonnes of CFC-12 and 10 200 tonnes of CFC-11 polyurethane foam, regarding domestic refrigeration. Other sectors with CFC-installed banks are the commercial refrigeration and air conditioning.

2.2. CFC RESULTING FROM THE REFRIGERANTS' RECOVERING AND RECYCLING PROJECT.

While developing the National ODS Phase Out Plan, Colombia has improved its environmental management strategy for refrigerants, through a project of activities' regionalization, that has enabled knowing how each region of the country works regarding the maintenance of Refrigeration and Air Conditioning Systems. This has allowed the boost of the tasks related to the Technicians Certification and the commitment on the good handling of refrigerants, specially in the tasks of recovery and recycling of these substances.

As already known, a continuous claim from the technicians is not being able to access the proper mechanisms for handling the wastes of contaminated refrigerant, which causes its venting to the environment, with the negative consequences on the same. For solving this problematic, the TOU has established a complementary strategy, implementing as from the current year five regional Refrigerants reclaiming centers. These centers will improve the available quality of the recovered and recycled refrigerant, but will not be able to meet the needs of refrigerant destruction that is already in a well-advanced contamination state. Nowadays, a complete inventory of these refrigerants does not exist, but there is a deeply-felt demand among the certificated technicians and shops. A preliminary estimated inventory is of 10 tonnes of CFC and HCFC for destruction.

2.3. WASTES OF OTHER ODS

- Halons:

Colombia has stopped importing halons since year 2002. Through the National ODS Phase Out Plan project, a national inventory of the installed quantities was performed.

The main Halon user, ISAGEN S.A. – E.S.P., utilities company that generates and commercializes electric power, was advised by the Technical Ozone Unit and was able to procure with the company REMTEC INTERNATIONAL the disposal of 7940 kilograms of Halon-1301, contained in 94 cylinders, which were stored in the Hydroelectic Power Stations of San Carlos and Jaguas located in the eastern part of Antioquia. This substance was acquired by REMTEC as raw material to subsequently commercialize it in the Halon Bank of Critical Uses of the United States of America. At the end of May 2009, the packing activities for Halon-1301 were carried out as well as the container loading, which was exported from the port of Cartagena in mid-June.

Seizures conducted by Customs (DIAN)

The Direction of National Taxes and Customs – DIAN (as per its initials in Spanish) as part of the trade control activities has seized ozone depleting substances (R-12, R-502, other mixtures of unknown composition) in the cities of Cucuta, Barranquilla and Sincelejo. A preliminary inventory allows estimating the seized ODS stock for destruction in around one (1) tonne.

3. ANALYSIS OF NATIONAL SYNERGIES WITH POLICIES ON WASTES AND ENERGY EFFICIENCY

3.1. National context on wastes

Since December 2005, Colombia has a Environmental Policy for the Integral Management of Hazardous Wastes, set out with long term strategies, in the frame of the integrated product life cycle management, which general objective is to prevent the generation of hazardous wastes or residues – 'Respel' (as known in Spanish) and to promote the environmentally sound management of those being generated, with the purpose of minimizing the risks on human health and on the environment, thus contributing to sustainable development.
The specific objectives of this Policy are: 1) Preventing and minimizing the generation of hazardous wastes; 2) Promoting the environmentally-safe management and handling of hazardous wastes; and 3) Implementing the commitments of the International Conventions ratified by the country, related with hazardous substances and wastes. This third objective refers to the harmonization, cooperation and application of strategies and actions towards complying with the implementation of the National Application Plan of the Stockholm Convention and the Phase Out Plan for Ozone Depleting Substances – ODS and their wastes according to the Montreal Protocol.
Likewise, within the Action Plan of the Policy, it has been established as goal for the period 2006-2018 to achieve 40% elimination of hazardous wastes that are a priority under the international commitments, for the ODS case, expressed in tonnes of phased out ODS wastes, with the intermediate goal for year 2010 of having a program for the management and final disposal of ODS wastes.

3.2. Relation with projects and conventions on management of chemical substances, hazardous wastes and electric and electronic equipment wastes.

- POPs and Hazardous wastes

Within the development of the Stockholm Convention on POPs, Colombia has managed in the past years the exportation of PCBs for their destruction outside the country. Currently the MAVDT is developing the adjustments of the National Adoption Plan (PDA as per its initials in Spanish).

On the other hand, in the national context of the hazardous wastes management, the country has been strengthening its national capacities through the establishment of a specific legislation framework and the development of initiatives for the management of these residues. As consequence, Colombia has a consolidated group of solicitors of this type of substances (See Annex 1).

With FAO's support, the elimination outside the country of obsolete pesticides was procured, resulting from the agriculture programs of the 1970 decade. It was also procured the elimination of DDT's obsolete stock, resulting from the malaria control programs in the 80's and 90's decades.

- National policy of electric and electronic equipment post-consumption

Colombia is currently developing a national policy on post-consumption management, within which a Law in the Republic's Congress is under discussion and process for ruling on the life cycle of these products, with the objective of avoiding their inadequate final disposal. The following activities have been also developed:

- Collection of disused cellular phones

This program has up to date 155 collection points of disused cell phones and accessories, located in 34 cities of the country: Armenia, Barrancabermeja, Barranquilla, Bogotá, Bucaramanga, Buenaventura, Buga, Cali, Cartagena, Cartago, Caucasia, Cúcuta, Florencia, Ibagué, Ipiales, Manizales, Medellín, Montería, Neiva, Palmira, Pasto, Pereira, Popayán, Riohacha, San Andrés, San Gil, Santa Marta, Sincelejo, Tuluá, Tumaco, Tunja, Valledupar, Villavicencio and Yopal. Since the signature of the 'Compromise Agreement' (Convenio de Concertación in Spanish), in April 2007, until June 2009 2 933 010 pieces have been collected, distributed between accessories (1 851 625), cell phones (578 813), Li-on batteries (337 020), boards (68 473), network material (34 954) and other equipment (62 125), from which nearly 90% has been exported for its environmentally sound management outside the country.

- Computers collection

In April 2008, the Ministry of Environment, Housing and Territorial Development (MAVDT), the Ministry of Communications and the program Computers for Education with the support of the Basel Convention Regional Center for South America, EMPA Switzerland and Stores Carrefour, carried out the pilot project “Recycle this Used Computer and Connect with a Renewed World”, with the purpose of inviting homes and the general public to hand over the computers and printers no longer used or that had been discarded by any motive, at the four collection points established to such purpose in the city of Bogotá.

This campaign took place in the city of Bogotá during April 19, 20, 26 and 27 of 2008, in Carrefour stores Calle 80, Cra 30, Calle 170 and Santa Ana, it had the total participation of 626 donors during the two calls, which handed over a total of 2415 pieces distributed in monitors (638), keyboards (558), CPU (549), mouse (423), printers (223), and portables (24); with a larger attendance at the point located in Calle 80 (32%), followed by Carrera 30 (30%), Calle 170 (23%) and Santa Ana (15%).

- Seaflower, San Andrés Biosphere Reserve campaign, free of technological wastes

The Corporation for the Sustainable Development of the Archipelago of San Andrés, Providencia and Santa Catalina - CORALINA and the Ministry of Environment, Housing and Territorial Development launched in November 2008, the first campaign for collecting cell phones and their accessories,

computers, batteries and disused tires, with the purpose of carrying out an environmentally sound management of these wastes jointly with education strategies for residents and tourists on the importance of preserving this environmental treasure.

The results of this campaign are materialized in the collection of 16 398 pieces distributed in disused tires (6 100 units - 39 Ton), computers (3 407 units - 15 Ton), cell phones (1 653 units) and batteries (5 238), which were taken from the island with the support of the National Army Force and of the Colombian Air Force, for their environmentally sound management in the continent by solicitors specialized in the issue.

- Street Lights

On last 20th of November 2008, it was signed the "Compromise Agreement for a environmentally safe management of post-consumption wastes from electrical and electronic lighting devices (light bulbs with mercury and lead) within the integral management framework", between the manufacturers, Stores Éxito, Carrefour Colombia, General Electric, Greenlight, Havells Sylvania Colombia, Mecanelectro-Homesentry, Osram, Philips, Sodimac Colombia- Homecenter, Tronex Battery Company and the Ministry of Environment, Housing and Territorial Development, which objective is the environmentally sound management of post-consumption wastes from electrical and electronic lighting devices (light bulbs with mercury and lead).

3.3. National Context on Energy Efficiency

The Ministry of Mining and Energy and its subsidiary bodies have been configuring the national framework on the Policy about Energy's Rational Use. Within this framework, the substitution of domestic refrigerators has been identified as a priority activity, since in a 20-year scenario analysis the savings on consumption would be of about 198 GWH per year. For boosting this work, a Committee has been formed in which the Ministries of Mining and Energy and of Environment participate, as well as the TOU, UPME and the national refrigerators manufacturers.

4. PROPOSAL FOR THE MPMLF

4.1. Strategy for the substitution of CFC-based refrigeration and air conditioning equipment.

This proposal will cover transport, storage and destruction (or export for destruction) of ODS already in cylinders coming from different sources as presented in the table below. This pilot project does not aim to duplicate what a pilot initiative in collection did. It aims to tackle the areas not covered yet by that pilot. The Government has already tackled and created the partnerships required to work in collection, by having resolved the issues related to destruction through the present proposal; the government will be able to implement in a large scale a complete ODS waste management system including collection, transportation, storage and final destruction of ODS.
Once information on logistics, costs and technical requirements to undertake these 3 categories (transport, storage and actual destruction) is generated, decisions will be made on how each one of them is going to be addressed and all the elements for the ODS waste management and disposal will be in place. At this point the country will be able to combine these steps with the existing collection scheme and expand operations. The collection efforts will provide a portion of the ODS for destruction but as mentioned before, the collection scheme is already tackled and funded by other sources.

By resolving the destruction issue, the collection scheme can be scaled up to a minimum of 10 cities, with three (3) large retail stores chains with national coverage and the participation of all manufacturers and importers of domestic refrigerators. The Project duration will be of one (1) year. It is estimated that in this manner at least 300 000 domestic refrigeration units and 10 000 air conditioners could be changed. Advantage will be taken from the awareness campaign for motivating and performing the substitution of commercial refrigeration equipment and of the air conditioning equipment that still operate with CFC and that are considered to be at least 15% of the total of the installed equipment in the country (information that will be gathered during the project's preparation).

With the project's execution, compliance will be given to objective 7 of the Millennium, of chapter V of the National Development Plan 2006-2011 and to the objectives and goals of the Action Plan of the Environmental Policy on the Integral Management of Hazardous Wastes or Residues.

An important aspect is that Colombia is a country with several climate areas, which turns complex the management of a national project. In this sense, work will be done in 10 cities that include the following climate areas:

- From 0 meters to 1.000 m above sea level
- From 1 000 m to 2 500 m above sea level
- Higher than 2500 meters

The project will include the stockpiling, storage and transport in each identified city. The destruction activity will be developed in the identified plants either at national or international level for such purpose.

4.2. Indication of the categories that will be included in ODS phase out.

The project will include stockpiling, transport, storage and destruction of CFCs both concentrated and diluted.

a) Stockpiling (to be covered by the collection scheme, not paid by the ODS pilot project): the refrigerators and air conditioners that are changed, will be picked up and transported by the manufacturers, importers and traders that are participating in the project. Once placed in the stockpiling plants, the recovery of the refrigerant gas will take place, which will be stored temporarily to check its quality and proceed to give the proper final destination to the same. The isolation foams will also be stored for their subsequent destruction. Further components will be handled according to the possibility of use and in all cases, an environmentally-responsible management will be provided. This activity will be covered by the project's participants (manufacturers – importers – traders)
b) Transport: The foam will be taken to the final disposal sites nationally, to destruction centers having technologies approved by the Montreal Protocol. The refrigerant gas that is in good conditions will be taken to the reclaiming centers established nationally, within the national strategy framework of Refrigerants Recovery and Recycling. The gas that does not meet the specifications will be stores for its subsequent destruction, either in the country or outside of the same.
c) Storage: both foams and gas will be correctly stored by the solicitors of the scrap process, before their final destination.
d) Destruction: the national capacity for foam destruction will be assessed, which will eventually could be eliminated in incineration kilns that meet the requirements established by the Montreal

Protocol and the national legislation. For the destruction of the refrigerant gas that cannot be used again at national level, it will be analyzed the option of acquiring a plasma-technology equipment, of small or medium capacity, that may phase out the amounts generated by the project. Colombia has experience in mobilize hazard wastes to be destroyed in other countries trough enterprises that are established in Colombia. This experience may be used in order to structure a comprehensive strategy to eliminate SAO outside the country.

4.3. Energy framework

The National Program on Energy's Rational Use is being consolidated, which proposes the substitution of domestic refrigerators among its strategic projects. It currently has the participation of national entities (Ministry of Mining and Energy, UPME, participating entities, manufacturing companies, etc.). Amongst the achievements attained at this instance, it has been possible to agree on the minimum environmental characteristics and of energy efficiency that the new refrigerators must have to substitute the old CFC-based equipment, that would participate in the substitution program.

4.4. Financial and incentives framework for the substitution program.

Within the National Program framework on Energy's Rational Use, a consultancy is being developed with Corporación Andina de Fomento that will aid to the restructuring of the Program, which will include the economical and financial analysis, as well as the institutional framework that will enable to incentive the change of refrigeration and air conditioning equipment. Among the issues that have been preliminarily identified are:

- Identification of national sources, through funds coming from the generation and distribution stages.
- Financial sources have also been identified and there is advance in an investment program with the Clean Technology Fund (through the IDB).
- Clean Development Mechanism, in correspondence with the indirect decrease of GHG as consequence of the Energy Efficiency improvement of the equipments.
- Voluntary carbon markets, applied to the CFC destruction case.
- Economical instruments being identified as feasible by the Government and that incentive the buyer to change his equipment.
- Payment terms of the equipments, through traders' policies.

4.5. Calculation base and estimation of ODS amounts that will be managed in the project.

Calculation base: it will be used the value obtained from the pilot project in which 2.000 domestic refrigerators were changes.

It is estimated that a total of three hundred thousand (300.000) domestic refrigerators will be changed by the project in one year. Taking into account the average data obtained from the pilot project carried out in year 2008 (80 grams of refrigerant gas and 3,4 kilograms of polyurethane foam recovered per refrigerator), it is expected to recover 24 tonnes of refrigerant gas and 1.020 tonnes of polyurethane foams with CFC-11.

In the commercial refrigeration sector it is estimated a removal of 5.000 refrigerators, each one with a recoverable charge of one (1) kilogram of gas and 5.000 domestic air conditioners with a recoverable charge of nearly 0,5 kg of refrigerant.

COLOMBIA ODS DESTRUCTION PILOT ANNEX- LEGAL FRAMEWORK

Colombia is a signatory to the Montreal Protocol on Substances that Deplete the Ozone Layer. The status of the ratification of this protocol and its Amendments is as follows:

Instrument	Congress Law
Vienna Convention (1985)	# 30, 5-Mar-90
Montreal Protocol (1987)	# 29, 28-Dec-92
London Amendment (1990)	# 29, 28-Dec-92
Copenhagen Amendment (1992)	# 306, 5-Aug-96
Montreal Amendment (1997)	# 618, 6-Oct-00
Beijing Amendment (1999)	# 960, 28-Jun-05

1. Control Measurements

In chronological order, the regulations that apply to ODSs are:

- **Law 99 of 1993** (Congress): The Secretary of Environment, *Ministerio del Medio Ambiente*, was created, and the National Environmental System was organized. Environmental licenses -issued by the Secretary of Environment- for the importation and production of substances controlled by international treaties were established.
- **Resolution 528 of June 18, 1997** (Secretaries of Environment and Foreign Trade): The use of CFCs (refrigerant and blowing agent) for the production of domestic refrigerators was banned.
- **Resolution 304 of April 16, 2001** (Secretaries of Environment and Foreign Trade): Imports of ODS listed in the Annex A, Group I, were regulated[1]. Annual quotas per company, defined according to the Country Programme and the import history, were established. NOU approval is required for the expedition of the environmental license.
- **Resolution 734 of June 22, 2004** (Secretaries of Environment -now *Ministerio de Ambiente, Vivienda y Desarrollo Territorial*- and Foreign Trade -now called *Ministerio de Comercio, Industria y Turismo*-): Resolution 304 was modified to take into account the adjusted Country Programme.
- **Resolution 874 of July 23, 2004** (Secretaries of Environment and Foreign Trade): Resolution 734 is expanded. Methodology to quotas allocation is defined.
- **Government Decree 423 of February 21, 2005**: Exports of substances listed in Annex A, Groups I and II, Annex B, Groups I, II and III, Annex C, Groups I, II and III, and Annex E, Group I, are regulated. They required the approval of the Secretary of Environment (UTO)[2].
- **External Resolution 21 of April 1, 2005** (Secretary of Commerce, Industry and Tourism): The approval of UTO (Secretary of Environment) for the imports of HCFCs and Halons is established. The duty positions that require NOU approval are listed: Annex A, Groups I and II, Annex B, Groups I, II and III, Annex C, Groups I, II and III, Annex E, Group I, substitutes for HFCs, refrigerant blends containing ODS and HFCs and blends based on Methyl Bromide.
- **External Resolution 22 of April 1, 2005** (Secretary of Commerce, Industry and Tourism): The exports of substances listed in Annex A, Groups I and II, Annex B, Groups I, II and III, Annex C,

[1] Unfortunately, substances listed in Annex A, Group II, were not included.

[2] In 2003 it was estimated that 12 % of the imported ODS were exported.

Groups I, II and III, and Annex E, Group I are regulated. The Secretary of Environment (UTO) should established annual quotas per substance.

- **External Resolution 23 of April 7, 2005** (Secretary of Commerce, Industry and Tourism): The list of duty positions belonging to domestic refrigerators and freezers, whose imports require UTO approval, is updated.
- **Resolution 2188 of December 29, 2005** (Secretary of Environment): Exports are regulated with reference to Decree 423.
- **Resolution 901 of May 23, 2006** (Secretary of Environment): Imports of ODS listed in the Annex A, Group II, Halons, were regulated. Annual quotas per company, defined according to the Country Programme and the import history, were established. The use of halons in new installations was banned.
- **Resolution 902 of May 23, 2006** (Secretary of Environment): Imports of ODS listed in the Annex B, Group I, II and III, were regulated. Annual quotas per company, defined according to the Country Programme and the import history, were established. The use of halons in new installations was banned.
- Since 1999 HCFCs imports require environmental license.
- **Resolutión 2120 of October 31, 2006** (Secretary of Environment): Establish the measurements to control Annex C substances.

Since December 2005 Colombia has an overall policy for the management of hazardous waste, where ODSs are included. This policy is covered in the **Decree 4741 of 2005** based on the implementation of the Basel Convention.

Annex 2(cont). Justification for PRP Requests for Pilot Projects on ODS Disposal/Destruction

CUBA

On behalf of the Government of Cuba UNDP would like to request funding for the preparation of an ODS destruction demonstration project in Cuba. The project complies with the criteria established in decision 58/19. This project will be the first of its kind in the Caribbean region, and it will generate valuable information about possible models to establish a long term self sustained system to collect ODS from the banks and destroy them taking into consideration the specific characteristics and needs of Small Island Development States and in the Caribbean region. Furthermore, this information could also be helpful to Central American countries interested to undertake similar approaches to manage their ODS banks. Taking into consideration the amount of work already done by Cuba on this area (explained below) the pilot project will benefit from already existing data and its burden will be reduced to only the final stages of the establishment of this ODS disposal system.

Several factors make this project unique:

1) Out of the 33 ODS Destruction pilots included in the three agencies and Japan business plans, this is the only one addressing all the aspects of a complete ODS waste management system in a SIDS. Although one of the demonstration projects already approved will explore regional and sub-regional transportation of ODS among countries in Asia (probably including some islands), this is not the case in Cuba where local destruction will be considered part of the strategy. If destroying ODS in Cuba becomes possible, any learning regional transportation could be used by other islands and Central American countries to send their ODS to be destroyed in Cuba. It is important to remember that although there are two countries with operational ODS destruction capacity in the region, none of them is likely to receive ODS from other countries due to their national waste management policies.

2) The demonstration project will create the necessary conditions to set up the proper logistics for transport, storage and destruction of ODS in Cuba and will explore different options in order to assure the long term sustainability of ODS destruction in Cuba. It will build from a remarkable energy efficiency experience being implemented by Cuba during the last 4 years, by which 2.6 million CFC based domestic refrigerators have already been collected and dismantled, and 48.3 tones of CFC have been cumulated for destruction.

3) The project will demonstrate the feasibility of a destruction technology developed by Japan for Cement Kilns that has not previously been tested in the region. The economics and sustainability of ODS destruction in Cuba will be explored in view of the country's replacement programme mentioned above. In 2006 a technical delegation from the government of Cuba was invited by the government of Japan to attend a demonstration of the ODS technology in Japan. Subsequent to the demonstration it was considered that the technology could perfectly fit the needs of Cuba and countries with comparable characteristics and Cuba made a feasibility study to evaluate a possible site. It was determined that the Cement Kiln in "Fabrica de Siguaney" in the Sancti Spiritus Province would be a very good candidate.

4) None of the demonstration projects approved at ExCom 57 deals with the logistical characteristics of SIDS.

5) With regards to the financial sources to maintain the ODS destruction operations in the future, different to other demonstration projects the pilot project in Cuba is not considering a-priori market based mechanisms. The demonstration will focus on alternative solutions to the market based solutions tested in other countries.

6) With the exception of the Destruction technology, Cuba has already developed all the individual components that are needed for a comprehensive ODS destruction system (recollection, transport, storage and Destruction). There is available data that would take years to collect in a pilot where no previous collection efforts undertaken. The challenge is to set up the all the logistics that will bring all the individual pieces together and make it work as a sustainable comprehensive system coordinated by the central government.

7) Cuba has previously explored the possibility of exporting ODS for destruction in Mexico. Many barriers (economic, legal, Basel and Rotterdam conventions stipulations, etc.) finally make it difficult for Cuba to export ODS for destruction. Given the high quantity of Cuba already recollected as well as the perspectives for the future, it is considered of utmost importance to have a national based solution for ODS destruction. Other SIDS in the region could benefit from the destruction facility in Cuba.

8) The Caribbean is underrepresented in the global carbon market, and it would in practical terms be difficult to generate a project for the voluntary market for Cuba. However, the project would explore that as well as other potential co-financing options.

i. An indication of the category or categories of activities for the disposal of ODS (collection, transport, storage, destruction), which will be included in the project proposal;

Cuba introduced in 2006 the energy revolution year to promote the complete substitution of old energy inefficient domestic refrigerators and air-conditioning units. The programme has been actively supported by the National Ozone Unit in order to make sure that ODS have been properly recovered. The programme is aiming at replacing 3 million units of domestic refrigerators and an un-quantified number of old air-conditioning units. So far the ambitious recollection programme has replaced 2.6 million refrigerators and more than 276.000 air-conditioning units. The government of Cuba has funded the complete recollection, substitution and de-manufacturing programme with their own funds. Under the National CFC Phase Out Plan more than 80 Recovery and Recycling centers have been established and they have played an important role in the recovery of refrigerants. The main challenge in Cuba is related to setting up the logistics for transport, storage and destruction of ODS.

The present project will build from the experience gained and propose a sustainable long term collection, transportation, storage, destruction scheme that could expand to ODS extraction from other kind of banks (mostly commercial refrigeration and chillers)

ii. An indication whether disposal programmes for chemicals related to other multilateral environmental agreements are presently ongoing in the country or planned for the near future, and whether synergies would be possible;

There are currently no other ongoing chemical disposal programmes in Cuba.

iii. An estimate of the amount of each ODS that is meant to be handled within the project;

Cuba has under the national recollection programme recovered a total of 133.164 tons of ODS (48.3 tons of CFC and 84.9 tons of HCFC). The estimation is that up to a total of 299 tons of ODS could be recovered before the end of 2010 under the NPP, the Chillers project, and the continuation of the substitution programme of Domestic refrigerators and air-conditioning units.

Description	**Quantity (T)**	**R-12**	**R-11**	**R-22**
National substitution programme of Domestic refrigerators and inefficient air-conditioning units.	**133,1**	**48,3**	**-**	**84,8**
Recovery and Recycling programme in 750 workshops through out the country.	**130**	**129**	**1**	**-**
Chillers Replacement Project	**2,5**	**-**	**2,5**	**-**
Commercial Retrofit Programme under the NPP	**35**	**35**	**-**	**-**
Total	**299,16**	**212,**	**3,5**	**84,8**

iv. The basis for the estimate of the amount of ODS; this estimate should be based on known existing stocks already collected, or collection efforts already at a very advanced and well-documented stage of being set up;

As mentioned in iii) more than 133 tons of SAOs have already been recollected and are currently store in large cylinders in Cuba.

v. For collection activities, information regarding existing or near-future, credible collection efforts and programmes that are at an advanced stage of being set up and to which activities under this project would relate;

The substitution of domestic refrigerators and air-conditioning units programme is under full implementation and has been so for several years. It has been fully funded by the Government of Cuba. The Commercial Retrofit programme under the National Plan as well as the Chillers replacement project will promote additional recovery of CFCs.

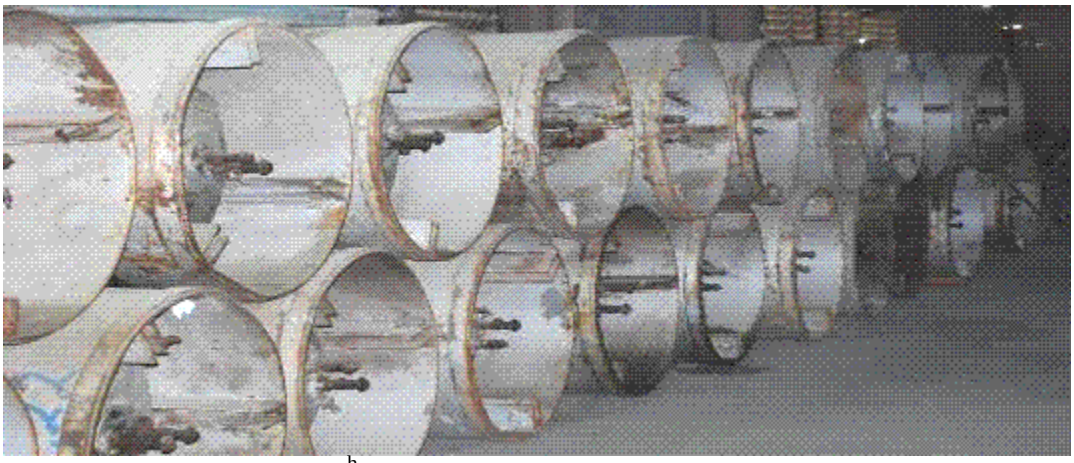
vi. For activities that focus at least partially on CTC or halon, an explanation of how this project might have an important demonstration value;

This project will focus exclusively on the destruction of contaminated CFCs and HCFCs.

Detailed information on the Cuban experience and proposal can be found in the attached document.

59h Executive Committee Meeting

ODS DISPOSAL DEMOSTRATION PROJECTS FOR CUBA



59h Executive Committee Meeting

Proyecto Demostrativo de Destrucción de SAO para Cuba.

ODS DISPOSAL DEMOSTRATION PROJECTS FOR CUBA

Pais: **CUBA**

Región: **CENTROAMÉRICA Y EL CARIBE**

Sector: **DESTRUCCIÓN DE SAO**

PROJECT DURATION:	1 years (Dec 2009 - Nov 2010)
PROJECT IMPACT:	
PROJECT COST:	
AGENCY SUPPORT COST:	
TOTAL COST TO THE MLF:	
SOURCE OF FUNDS:	Multilateral Fund (MLF) for the Implementation of the Montreal Protocol.
NATIONAL IMPLEMENTING AGENCY:	Technical Ozone Office; Ministry of Science, Technology and Environment
IMPLEMENTING AGENCY:	UNDP
SUBMISSION DATE:	November 2009 (59h Executive Committee Meeting)

1. BACK GROUND

La 20 Reunión de las Partes del Protocolo de Montreal aprobó la decisión XX/7 que indica al Excom incluir en sus planes de negocios proyectos Demostrativos de Destrucción de SAO para países articulo 5 y que cubran los aspectos de recolección , transportación, almacenamiento y destrucción de SAO con una muestra representativa regional de países articulo 5.

La 58 reunión del Excom aprobó los lineamientos para la asignación de fondos a los proyectos demostrativos para la destrucción de SAO de acuerdo al párrafo 2 de la decisión XX/7 de la 20 Reunión de las Partes.

Cuba implementa el plan Nacional de eliminación de CFC con PNUD que le permitirá en el 2009 eliminar la importación-consumo total de CFC y prepara su Plan nacional de Eliminación de HCFC que le permite actualmente de disponer de volúmenes importante de SAO que de no ser destruidos de forma acelerada se convertirían en un peligro potencial de emisión a la atmósfera de no acometerse un proyecto de destrucción de forma acelerada.

Cuba tiene un levantamiento de equipos de refrigeración y aire acondicionado que va a ser actualizada y que permite estimar el equipamiento existente, los talleres y el personal técnico existente en Cuba, las importaciones de equipamiento realizada en los últimos años, así como se capacitaron mas de 5,300

técnicos y mecánicos en buenas Practicas de refrigeración que permiten realizar una razonable valoración del Banco de equipos con CFC y SAO y los volúmenes disponibles de SAO a destruir.

Cuba desarrolla un grupo importantes de proyectos nacionales y el Fondo Multilateral del Protocolo de Montreal mediante las agencias PNUD, Canadá y Alemania en su momento que le permiten de disponer de proyectos importantes que garantizan la disponibilidad de tecnología y equipamientos por esta vía.

Se contó con la ayuda de Japón y una visita a ese país que permitió el acceso a varias tecnologías y definir la más conveniente para Cuba así como recibir la tecnología japonesa, definir las bases del proyecto, la tecnología y los equipos y materiales necesarios para utilizar la tecnología de Hornos de cemento desarrollada en Japón.

Por otra parte se valoraron las fábricas de cemento disponibles en Cuba y se determino la Fábrica de Siguaney en la Provincia de Sancti Spiritus como la que más se adecuaba, y realizando un estudio preliminar para realizar el proyecto de la instalación y la adecuación de la tecnología dada por Japón.

2. País y Región

La Republica de Cuba es un país en desarrollo clasificado como articulo 5, situado en la **Región de Centroamérica y el Caribe, país insular**, clasificado como país de no bajo consumo en el Protocolo de Montreal el cual ratifico el Protocolo de Montreal en 1992 así como todas sus enmiendas y cumple todos sus compromisos con el Protocolo de Montreal de forma precisa y completa.

1. CONSUMO DE SAO EN CUBA

Año	Consumo

1993	125	ODP Tonnes
1994	150	ODP Tonnes
1995	546.2	ODP Tonnes
1996	663.8	ODP Tonnes
1997	665.4	ODP Tonnes
1998	531.4	ODP Tonnes
1999	571.4	ODP Tonnes
2000	533.6	ODP Tonnes
2001	504.0	ODP Tonnes
2002	488.8	ODP Tonnes
2003	481	ODP Tonnes
2004	445.1	ODP Tonnes
2005	208,6	ODP Tonnes
2006	239.6	ODP Tonnes
2007	83.5	ODP Tonnes
2008	74.4	ODP Tonnes

Substance	ODS Consumption by Sector in Tons/Year 2008							
	Aerosol	Foam	Fire	Refriger-ation	Solvents	Fumiga-tion of soils	Quarantine and pre-shipment	Total
CFC-11	7.00			0				7.00
CFC-12	55.93			11,49				67,42
CFC-113								0
CFC-114				0				0
CFC-115				0				0
halons				0				0
carbon tetrachloride					0,01			0,01
methyl chloroform					0			0
HCFC-22 HCFC-141b		0 9,19		230,21				230,21 9,19
HCFC-123 HCFC -124				0,54 0,34				0,54 0,34
methyl bromide						0	1,5	1,5

2. ACCIONES QUE SE DESARROLLAN EN CUBA POR EL GOBIERNO DE CUBA Y EL PROTOCOLO DE MONTREAL Y QUE CONTRIBUYEN AL PROYECTO DE DESTRUCCIÓN DE SAO.

Programa de sustitución de refrigeradores y aires acondicionados domésticos ineficientes, altos consumidores de energía y que trabajan con SAO en todo el país.

Como parte del de la Revolución Energética el gobierno de Cuba desarrolla el Programa de sustitución total de refrigeradores y aires acondicionados domésticos ineficientes, altos consumidores de energía y que trabajan con SAO en todo el país, El Programa se encuentra en una etapa muy avanzada prácticamente en la etapa de finalización.

El Programa tiene como objetivos fundamentales

- **El Ahorros de valores importantes de energía eléctrica** mediante la sustitución 3 Millones de los refrigeradores domésticos (prácticamente el total de los existentes) y 300,000 aires acondicionados ineficientes en su gran mayoría de entre 20 y 60 años de uso por equipos nuevos de muy bajo consumo de energía, Estos ahorros posibilitan disminuir la quema de miles de toneladas de combustibles fósiles, y liberar grande capacidades de generación de termoeléctricas evitando la inversión de nuevas capacidades necesarias para el desarrollo del país
- **La Preservar el Medio Ambiente** especialmente la Protección de la Capa de Ozono mediante la recuperación de cientos de toneladas de CFC y HCFC ,

La eliminación definitiva del uso y consumo de CFC en la refrigeración domestica en Cuba y creando las bases para la eliminación de los HCFC cumpliendo los compromisos de Cuba en el Protocolo de Montreal

Evitando la emisión de millones de toneladas de carbono a la atmósfera, potentes gases de efecto invernadero mitigando de forma importante los efectos del cambio climático.

- **Elevación de la calidad de la vida de la población cubana** al sustituir los refrigeradores viejos e ineficientes con tiempo de vida entre 20 y 60 años por nuevos, modernos con mayores prestaciones y eficientes, logrando disminuciones importantes en el pago eléctrico por la población, así como la entrega de los equipos en condiciones muy favorables al suministrarse a precio de costo y facilidades de varios años de pago en correspondencia con el poder adquisitivo de cada uno,

El proyecto beneficia a toda la población del país y no a una parte y se desarrolla con la participación de los organismos del estado, gobiernos provinciales, municipales, locales y la comunidad en cada territorio que permite vincular a toda la población cubana a este programa.

Mediante el Programa se han sustituido ya mas de 2 millones 600,000 refrigeradores y 276 mil aires acondicionados domésticos, altos consumidores de energía y que utilizan SAO como gas refrigerante.

También permite el reciclando y reventa de muchos otros materiales tal como metales, aluminio, vidrio y plásticos

Para su implementación se contó con **una gran inversión de mas de $700,000 millones de dólares realizada por el Estado cubano.**

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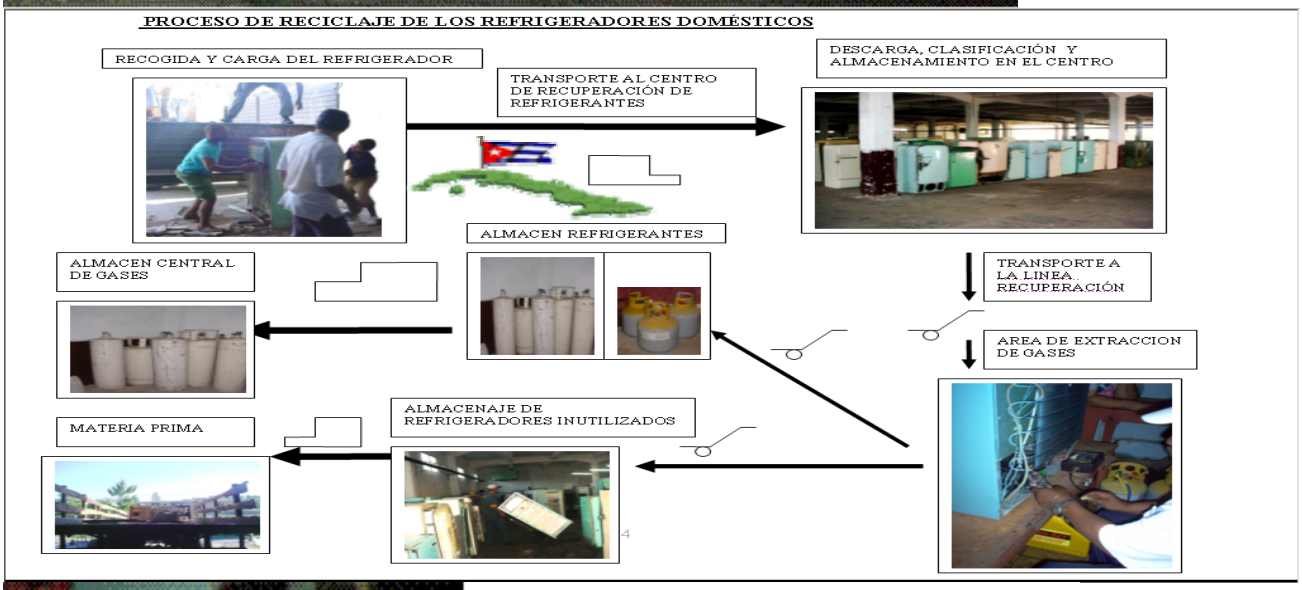
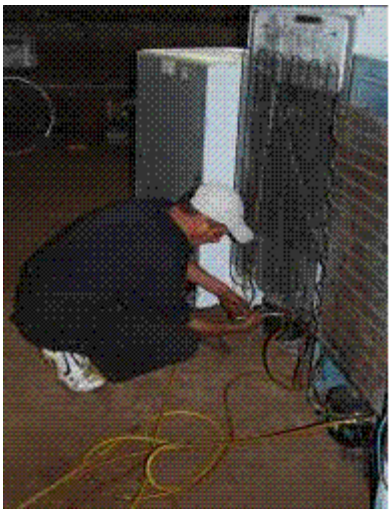
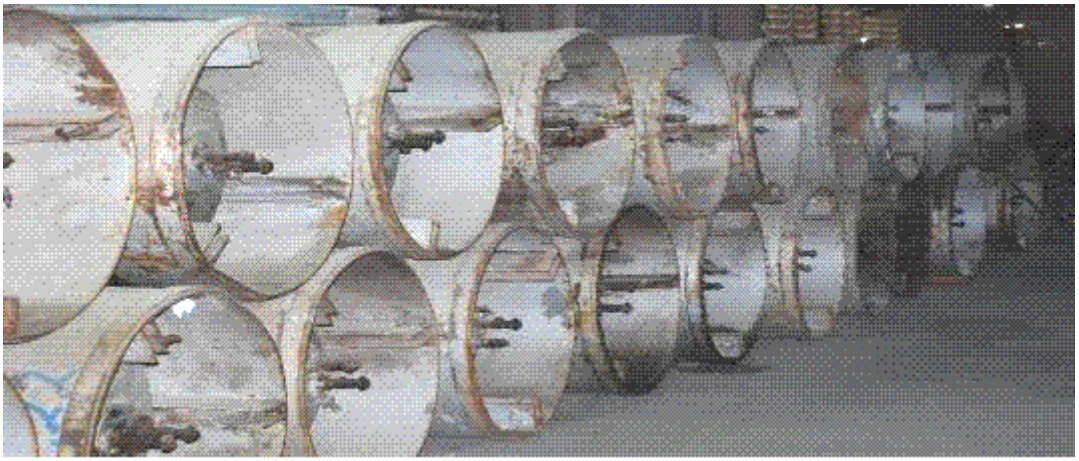

PROCESO DE RECICLAJE DE LOS REFRIGERADORES DOMÉSTICOS
RECOGIDA Y CARGA DEL REFRIGERADOR
TRANSPORTE AL CENTRO DE RECUPERACIÓN DE REFRIGERANTES
DESCARGA, CLASIFICACIÓN Y ALMACENAMIENTO EN EL CENTRO
ALMACEN REFRIGERANTES
ALMACEN CENTRAL DE GASES
TRANSPORTE A LA LINEA RECUPERACIÓN
AREA DE EXTRACCION DE GASES
ALMACENAJE DE REFRIGERADORES INUTILIZADOS
MATERIA PRIMA


Ciudad de La Habana
La Habana
Matanzas
Villa Clara
Sancti Spíritus
Pinar del Río
Camagüey
Las Tunas
Cienfuegos
Isla de la Juventud
Ciego de Avila
Holguín
Granma
Santiago de Cuba
Guantánamo



Se crearon más de 80 centros especializados de Recuperación de Refrigerantes en todo el país donde se han recuperado un total de 133,16 T de SAO, encontrándose almacenadas especializados en almacenes Nacionales, provinciales y de centros) del MINCIN en espera de su destrucción (existe peligro de por el tiempo almacenado se produzcan fugaz a la atmósfera de SAO),



SAO ALMACENADAS PARA DESTRUIR

Refrigerantes Almacenados para destrucción.	TOTAL (Kg)
R-12	48,308.45
R-22	84,855.46
Total	**133,163.91**

AHORROS MÁS IMPORTANTES ALCANZADOS

En un año se logro

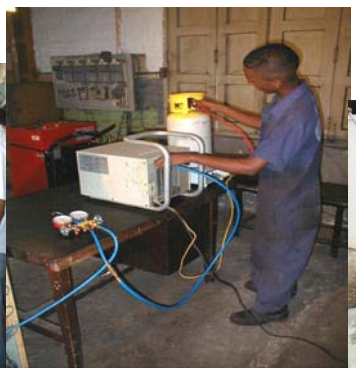
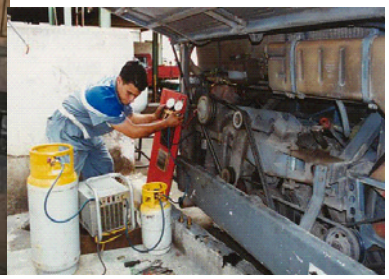
- La Reducción de la demanda máxima en 248,3MW

Equivalente a una inversión de 248 millones de dólares.

- Ahorro de 2 476 GWh en un año equivalente a 705662 toneladas de combustible por la sustitución de refrigeradores,,
- La Sustitución de 270,000 aires acondicionados Ineficientes, altos consumidores de energía se logra un Ahorro de 360 GWh en un año equivalente a 102,572 toneladas de combustible y
- En Total se logra un Ahorro de 2 836 GWh en un año y en 10 años 28,360 GWh
- Equivalente a 808,000 toneladas de combustible en un año, y en 10 años 8,080,000 toneladas de combustible

POR AHORRO DE ENERGÍA ELÉCTRICA Y SAO EN UN AÑO SE DEJARON DE EMITIR UN TOTAL DE 3, 730, 000 TONELADAS DE CO2,
EN 10 AÑOS SE DEJARAN DE EMITIR EN TOTAL 37, 300,000 TONELADAS DE CO2 UNA IMPORTANTE CONTRIBUCIÓN AL CAMBIO CLIMATICO

Programa de Recuperación y Reciclaje en la refrigeración domestica, móvil, comercial e industrial en más de 750 talleres en todo el país. Esto permitirá una recuperación de mas 130 T de refrigerante R-12 y R-11 en mas de 5000 equipos estimados que se encuentran en los en uso en estos momentos. Ello esta vinculado a varios proyectos de Recuperación y reciclaje que se llevan a cabo desde 1995 con el PNUD y Canadá.

Proyecto demostrativo de sustitución de chillers con R-11 CFC en hospitales, centros científicos y culturales.

El Proyecto incluye la sustitución de mas de 10 Chiller de entre 150 y 250 T de refrigeración que utilizan R-11 por nuevos chillers más eficientes con una disminución de un 30-40% del consumo de energía y con refrigerante que no afectan la capa de Ozono, libre de CFC, que se lleva a cabo con PNUD y Canadá. Posteriormente se prevé la sustitución de unos 32 chillers en otras instituciones y áreas como resultado de la extensión de los resultados del proyecto

Esto prevé recuperar más de 2.5 T de refrigerante R/11 que serán llevadas a destruir en el programa de destrucción.

. **Programa de reconversión de equipos de refrigeración y climatización** comerciales e industriales como parte del Proyecto Plan Nacional de eliminación de CFC en Cuba que se lleva a cabo con el PNUD y CANADA. Incluye la reconversión de mas de 800 equipos de diferentes magnitudes con CFC a refrigerantes alternativos. Esto permitirá recuperar más de 35 Toneladas de R-12 en los equipos reconvertidos que posteriormente serán destruidos.

2.5 Proyecto de purificación, separación y obtención de hidrocarburos refrigerantes LB-12, 600ª. Y 290ª mediante la instalación de una nueva planta de separación de gas licuado del petróleo y la obtención de gases puros y mezclas refrigerantes con una capacidad de 60 T por año en la refinería Hermanos Gomes de de Santiago de Cuba.

Con el auspicio de Canadá y Alemania, su principal objetivo es garantizar en el mercado interno un refrigerante de producción nacional con calidad y que no daña la Capa de Ozono, para ser empleado en la refrigeración doméstica y en pequeñas instalaciones de refrigeración comercial sustituyen el uso de los CFC y los HCFC.

Esto tendrá un impacto positivo en el mejoramiento de la eficiencia energética y la disminución de los gases de efecto invernadero.

Vista de la moderna planta para producir el refrigerante cubano LB 12, ubicada dentro de la refinería de petróleo "Hermanos Díaz" de Santiago de Cuba.

3. CANTIDAD DE SAO QUE SERÁN TRATADAS MEDIANTE EL PROYECTO DEMOSTRATIVO DE DESTRUCCIÓN.

RESUMEN DE LAS CANTIDADES A DESTRUIR MEDIANTE EL PROGRAMA DE DESTRUCCION

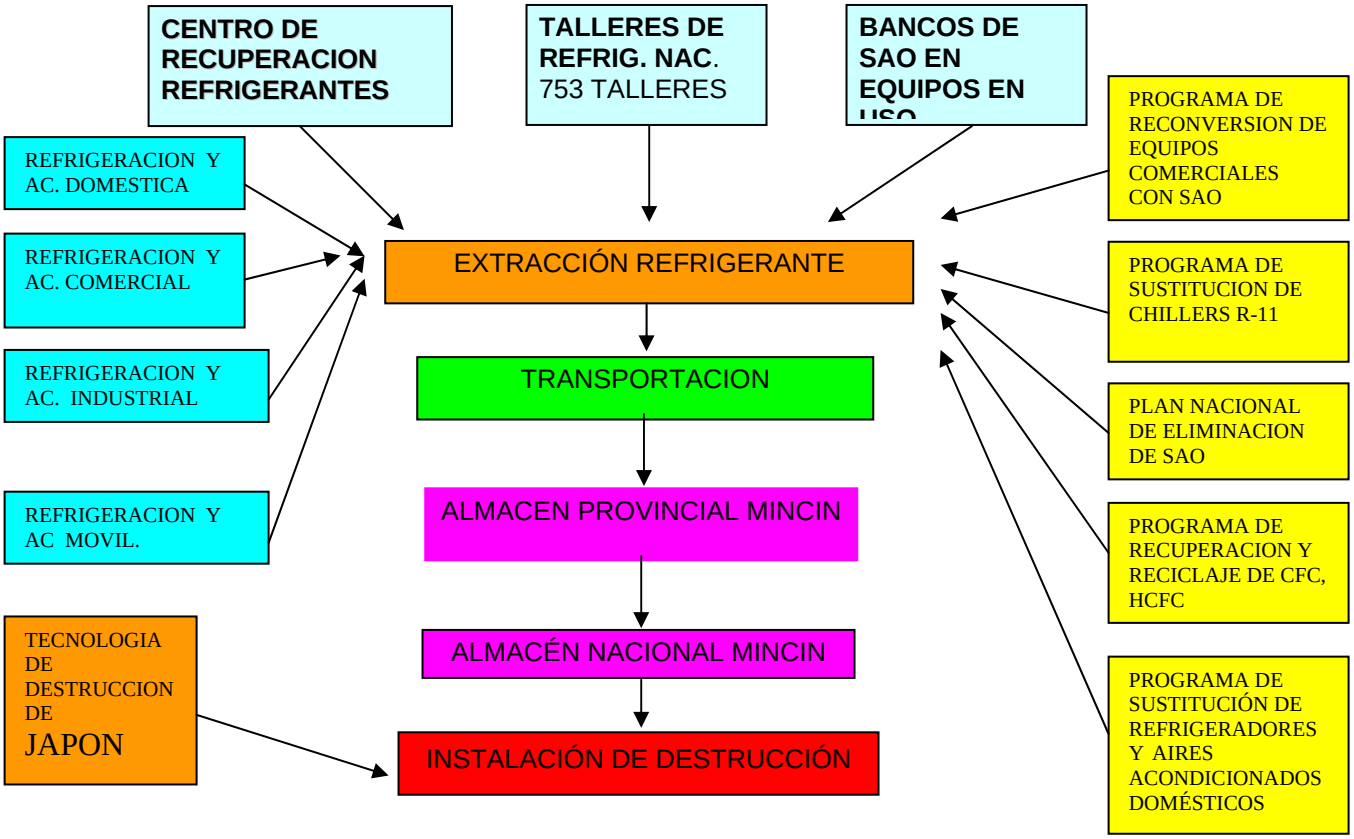
Descripción	Cantidad (T)	R-12	R-11	R-22
Programa de sustitución de refrigeradores y aires acondicionados domésticos ineficientes, altos consumidores de energía y que trabajan con SAO en todo el país	**133,1**	**48,3**	**-**	**84,8**
Programa de Recuperación y Reciclaje en la refrigeración domestica, móvil, comercial e industrial en más de 750 talleres en todo el país	**130**	**129**	**1**	**-**
Proyecto demostrativo de sustitución de chillers con R-11 CFC en hospitales, centros científicos y culturales.	**2,5**	**-**	**2,5**	**-**
Programa de reconversión de equipos de refrigeración y climatización comerciales e industriales como parte del Proyecto Plan Nacional de eliminación de CFC en Cuba.	**35**	**35**	**-**	**-**
Total	**299,16**	**212,**	**3,5**	**84,8**

4. PROGRAMAS PARA LA DESTRUCCION DE QUIMICOS

En Cuba no existen proyectos y programas para la destrucción de químicos relacionados con otros acuerdos ambientales.

5. PROCESO DE RECOLLECCION, RECUPERACION, TRANSPORTACION, ALMACENAMIENTO Y DESTRUCCION

Abarca desde que se le extrae al equipo el refrigerante en el taller, centro de recuperación de refrigerantes o lugar en que se encuentre instalado el equipo, hasta lograr la segura destrucción del refrigerante.



7. Tecnologías de destrucción

En colaboración con el gobierno de Japón se realizo una valoración de las alternativas viables para la destrucción de las SAO bajos las condiciones de Cuba. Se realizó una visita a Japón a la División de Medio Ambiente Global del Ministerio de Medio Ambiente y la Oficina de control de CFC Ministerio del Ambiente de Japón, a la fabrica de cemento “Sumimoto Osaka Cement co ltd en Osaka ciudad de

Ako y a la planta de destrucción de desechos del grupo sanyu situada en la ciudad de YOKOHAMA donde pudimos obtener la tecnología y los posibles insumos necesarios.

Se determino que la tecnología mas factible técnico y económicamente viable era la destrucción en Hornos de fabricas de cemento, gracias al gobierno de Japón se puso la tecnología a disposición de Cuba, incluida el listado de materiales a adquirir (suministrador, precios etc.) para crear las condiciones y facilidades en una fabrica de cemento en Cuba. Quedando pendiente a la creación de lineamientos y aprobaciones de proyectos en el FMPM.

Por otra parte se valoraron las fábricas de cemento disponibles en Cuba y se determino la Fábrica de Siguaney en la Provincia de Sancti Spiritus situada en el centro del país como la que más se adecuaba, realizando un estudio preliminar para realizar el proyecto de la instalación y la adecuación de la tecnología dada por Japón

Los hornos cementeros son una excelente opción técnica para eliminar residuos debido a las características especiales que presentan como son:

- **Altas temperaturas.** Se alcanzan temperaturas en la llama de 1800-2000 Cº y de 1400-1500 Cº en el material, garantizando la destrucción de cualquier sustancia orgánica.
- **Altos tiempos de residencia.** Como consecuencia del tamaño del horno y de los caudales de aire operados, los tiempos de residencia de los gases se encuentran en el orden de 6 segundos en el horno propiamente dicho, sin considerar el tiempo de residencia en las torres de intercambio térmico. Esto permite que todas las sustancias orgánicas en fase gaseosa se oxiden completamente.

- **Ambiente altamente alcalino** en el interior del horno de clinker, lo cual garantiza la neutralización de los compuestos ácidos tales como ácido clorhídrico, fluorhídrico y otros como los compuestos de azufre (SO_2 y SO_3).
- **No se genera ningún residuo**. No se producen escorias ni cenizas. Los metales pesados son incorporados, de forma estable, a la estructura del clinker sin mermar sus propiedades ni su calidad final.

A partir de que las temperaturas en el horno rotatorio de las plantas cementeras alcanza valores superiores a los 1500 ºC y de que el tiempo de permanencia de los gases a esta temperatura excede los 6 segundos, este se comporta como un incinerador ideal para la destrucción de compuestos orgánicos de elevada estabilidad química como los CFC y los HCFC.

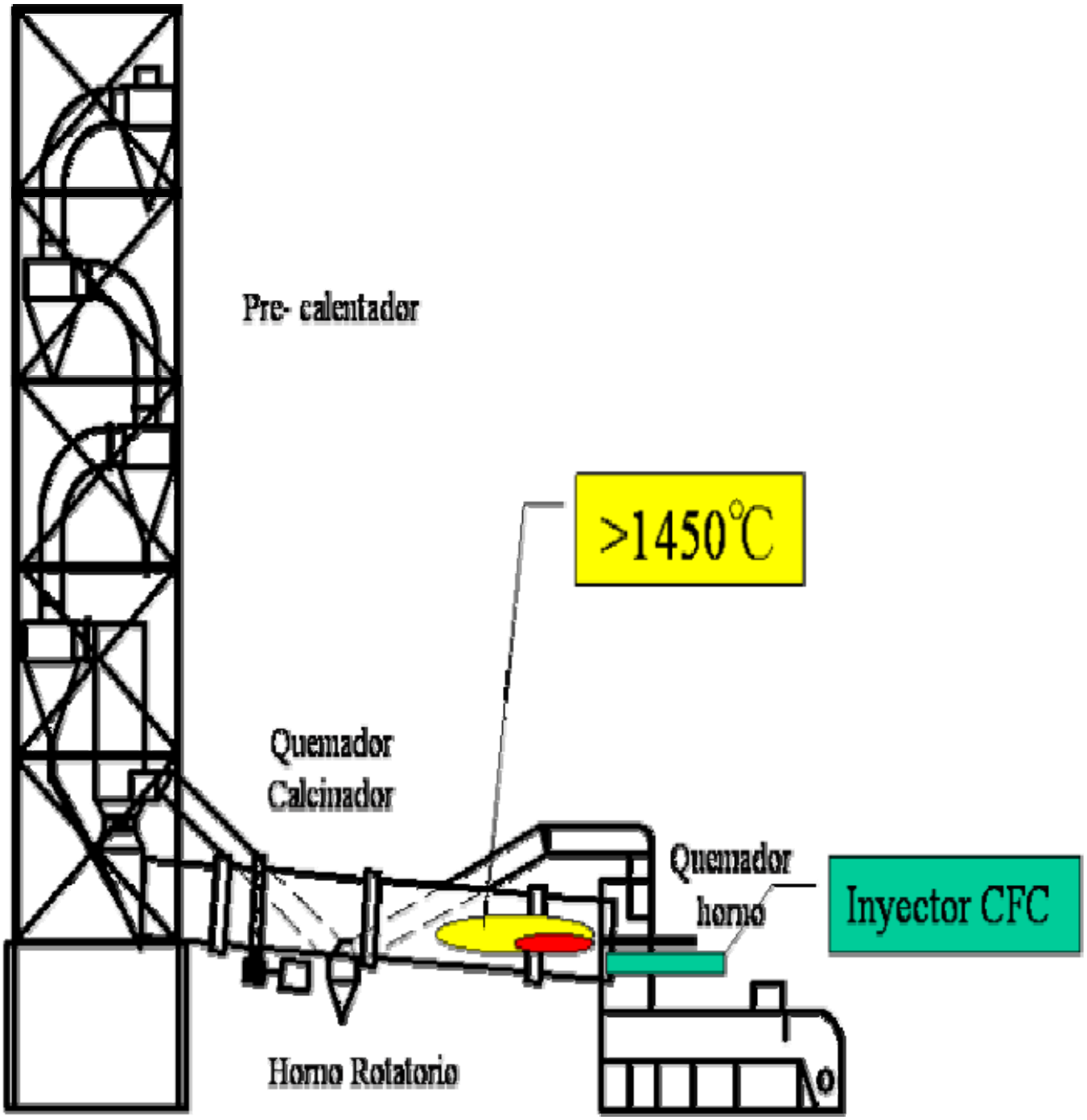
La destrucción de los gases freones en las fábricas de cemento, resuelve uno de los principales problemas que genera la incineración de estas sustancias, la emisión de gases ácidos (HCl y HF), pues estos reaccionan con las sales de calcio presentes en la materia prima, formando $CaCl_2$ y CaF_2, los cuales no se emiten con los gases de salida; si no pasan a formar parte del clínker sin afectar las características del mismo.
Por otra parte el cloro contenido en estos gases constituye el principal problema porque puede afectar la calidad del cemento y la operación del horno. Excesos de cloro (Cl^-) presente en los gases calientes que circulan, contribuyen a desarrollar ilimitadamente el espesor de la costra interior adherida al material refractario que puede llegar a reducir marcadamente el interior del horno afectando el rendimiento productivo del mismo; este efecto se acentúa en los hornos de proceso seco con precalentador de ciclones, donde la concentración de cloro se enriquece en los ciclones inferiores de 100 a 250 veces con relación a la concentración en el clinker; provocando la formación de minerales de bajo punto de fusión en su combinación con los óxidos de calcio, sílice y azufre, lo que origina incrustaciones y tupiciones que impiden la operación del horno.

Por lo anteriormente dicho es de vital importancia el control de la dosificación de los CFCs que se alimentan al horno.

La dosificación de los gases al horno se realizará en función de la concentración de CFC en el flujo alimentado, de modo que no afecte la operación estable de los hornos y la calidad del clínker.

Esquemas de las instalaciones de CFCs

Destrucción en Horno de Cemento



CONCLUSIONES:

1. **En el Fondo Multilateral del Protocolo de Montreal no existen proyectos demostrativos de destrucción de SAO aprobados para la Región de Centro América y el Caribe en países de medio-bajo consumo**, ni para ninguna región insular en el mundo por lo que es un proyecto único.

2. **Cuba dispone de cantidades importante de SAO almacenadas**, más de 133 T de SAO listas para la destrucción inmediata. sin solución en estos momentos y en peligro de escape a la atmósfera por el tiempo almacenadas, lo que constituye una singularidad en el mundo.

3. **Cuba ya no importa CFC** desde el 31 de Diciembre del 2008 y las cantidades almacenadas se incrementan y la necesidad de destrucción se hace imprescindible e inminente darle solución a este grave problema ambiental.

4. **Cuba posee un avanzado Programa de sustitución <u>total</u> de refrigeradores y aires acondicionados domésticos** ineficientes, altos consumidores de energía y que trabajan con SAO en todo el país, destacándose que abarca a toda la población del país y no a una parte del mismo. El Programa se encuentra en una etapa muy avanzada prácticamente en la etapa de finalización no obstante ya mas de 2 millones 600,000 refrigeradores y 276 mil aires acondicionados domésticos, altos consumidores de energía y que utilizan SAO como gas refrigerante se han sustituido

5. **En Cuba no existen proyectos y programas para la destrucción de químicos** relacionados con otros acuerdos ambientales, por lo que esta es la única alternativa viable.

6. **Cuba dispone de una cantidad importante de Programas y proyectos** que le garantizan una continuidad en la disponibilidad de SAO a destruir.

7. **Cuba posee experiencia en la implementación de proyectos de sustitución de refrigeradores AC, recuperación de refrigerantes, instalaciones de recuperación, centros de recuperación**, instalaciones y personal preparado y capacitado listo para iniciar las tareas de recolección y almacenamiento de las SAO a destruir. Lo que constituye un gran adelanto y una singularidad a destacar.

8. **Cuba posee una importante infraestructura y personal capacitado, creados por los proyectos del Fondo Multilateral** del Protocolo de Montreal vinculados al sector de la refrigeración y AC. Así como del gobierno de Cuba en la recuperación de refrigerantes que podrían usarse para el desarrollo del proyecto y acelerar su desarrollo.

9. **Cuba dispone de la tecnología en Hornos de cemento que le fue brindada de forma cooperativa y amable por Japón,** así como los listados de materiales fundamentales que es una base importante para el comienzo de forma inmediata de los trabajos. Lo que constituye un gran adelanto y una singularidad a destacar.

10. **Cuba tiene seleccionada una planta de cemento en SIGUANEY y hecho los estudios iniciales** para comenzar de forma acelerada los trabajos de destrucción de

SAO en esta instalación. Lo que constituye un gran adelanto y una singularidad a destacar.

11. **El gobierno de Cuba posee una fuerte voluntad política y una gran vocación ambiental para impulsar en forma decidida los trabajos de destrucción en forma acelerada** así como asumir la inversión de infraestructura y de personal calificado que se requiera. Ello garantiza la sostenibilidad del proyecto y la garantía de su acelerado desarrollo.

12. **Cuba posee un grado elevado de avance de las actividades a realizar que constituyen una gran fortaleza** y lo ponen en posición única en estos momentos en el mundo y la región.

13. **Todo ello permite reproducir las experiencias con gran rapidez tanto en la región así como en los países insulares de cualquier otra región** Lo que constituye un gran adelanto y una singularidad a destacar

Annex 2(cont). Justification for PRP Requests for Pilot Projects on ODS Disposal/Destruction

INDIA

PROJECT CONCEPT

COUNTRY:	INDIA	**IMPLEMENTING AGENCY:**	UNDP
PROJECT TITLE:	Preparation of a demonstration project for disposal of CTC and other ODS in accordance with MOP Decision XX/7 and ExCom Decision 58/19		
PROJECT IN CURRENT BUSINESS PLAN:	Yes		
SECTOR:	ODS Destruction (DES)		
SUB-SECTOR:	N/A		
ODS USE IN SECTOR:	N/A		
PROJECT IMPACT:	Up to 1,500 ODP tonnes/year (CTC) and up to 100 ODP tonnes (other ODS)* *Preliminary estimates. More accurate estimates would be available in the actual project proposal.		
PROJECT DURATION:	12 months		
PROJECT COST:	US$ 80,000		
REQUESTED GRANT:	US$ **80,000**		
AGENCY SUPPORT COSTS:	US$ 6,000		
TOTAL COST TO MULTILATERAL FUND:	**US$ 86,000**		
PROJECT MONITORING MILESTONES:	Included		
NATIONAL COORDINATING BODY:	Ozone Cell, Ministry of Environment and Forests		

PROJECT SUMMARY

This project will establish facilities for disposal of a variety of ODS in India, using innovative organizational, operational and financial mechanisms, that would ensure sustainability.

India has a robust chloromethane production, of which CTC is a significant co-product. Due to the imminent phase-out of CTC in the consumption sector, and based on industry forecasts of feedstock uses of CTC in the foreseeable future, there is a high likelihood of excess co-production of CTC. Since CTC is a potent ozone depleting substance as well as a greenhouse gas, it is essential to institute facilities and mechanisms to closely monitor CTC co-production and to ensure that unwanted CTC does not enter the consumption market. Preliminary estimates of future CTC co-production and its possible uses, indicate that there is likely to be excess availability of CTCs in the medium-term and it is therefore critical that sustainable destruction facilities are available with appropriate management mechanisms, to address undesirable emissions.

India is also a large producer of ODS-based appliances and equipment. There is a large existing population of CFC-based appliances, such as household refrigerators, freezers as well as commercial and industrial refrigeration equipment containing CFCs. Estimates of the total size of these banks in India are available from many sources and generally range widely from 5,000 to 50,000 metric tonnes, however this needs to be established. It is expected that during the medium to long term, a significant proportion of the population of CFC-based appliances and equipment would need to be replaced due to various reasons such as end of useful life, energy efficiency considerations, consumer preferences, business reorganization, etc., potentially making large quantities of CFCs available for disposal, along with the consequent challenges to minimize emission risks.

The proposed pilot project for ODS disposal in India would:

a) Establish estimated quantities of unwanted CTC and establish sizes of accessible CFC banks
b) Demonstrate disposal technology and its synergies with environmental objectives across conventions, as well as multi-source financial mechanisms
c) Propose policy and regulatory interventions which would support successful scaling up
d) Identify and assess risks associated with the above interventions and propose mechanisms to manage these risks
e) Assess and document the comprehensive environmental impact of the above interventions.

INDIA- PROJECT PROPOSAL

This document presents the project concept relating to a ODS disposal pilot project in India. The proposed project is expected to handle multiple ODSs, namely, CFCs, CTC and HCFCs. The model for operations would involve a combination of cost compensation and profit-sharing mechanisms with relevant stakeholders. ***This proposed project is not expected to address Halon banks.***

Background

1. India was one of the largest ODS producing and consuming countries in the last decade. By 1 January 2010, the country is expected to phase out all CFC consumption except CFC use in MDI applications, halons and CTC. Of these uses, CFCs used in refrigeration applications have been largely replaced with HFCs and this has resulted in an increase in HFC consumption over the last 8 to 10 years It must also be noted that small quantities of HFCs are also used in foam applications as replacement to CFC-11.

2. HCFC consumption is primarily in RAC applications and foam applications. There has been a significant growth in both these applications due to general economic growth due to the expansion of the middle class over the last decade.

3. Keeping in mind decision 58/19, the following ODSs/applications given below are proposed to be addressed through this project.

Substance	**Applications**
CFC-11	Foam products, RAC appliances in chillers
CFC-12	Foam products, RAC appliances in chillers
CTC	Excess CTC
HCFC-22	RAC appliances (in future)
HCFC-141b	Foam appliances

4. The following sections provide a summary of estimated banks/sources of ODS in each of these applications along with method of collection of ODSs in different applications.

CFC Banks including CFC-11 and CFC-12

5. As indicated in the table above, CFC banks are primarily expected in RAC and foam applications. Based on estimated population of CFCs using RAC applications as per National CFC Consumption Strategy adjusted for (a) use of HCs and HCFCs in foam applications and (b) drop-ins used in refrigeration applications, the banks of CFCs in refrigeration and foam applications is about **10,800 MT.**[3]
   Of the above, about **7,800 MT** is estimated to be available in domestic refrigerators (**7,100 MT**) and MACs (**700 MT**).

[3] These are estimates based on secondary data available from National CTC Phase-out Project and would be updated during the actual ODS destruction project preparation activities.

These banks can be accessed through various consumer driven programs in close cooperation with industry and equipment service agencies. Buy-back schemes in refrigeration equipment for conversion of old equipment to new equipment with clearly defined parameters relating to age, equipment condition etc. can help in consolidating collection of CFCs from this equipment. Service agencies can play an important role in collecting CFCs from MAC and this can be promoted through automobile manufacturing enterprises through appropriate collaborations.

CTC for destruction

6. India is one of the producers of carbon tetrachloride (CTC). Currently, in India, there are four manufacturers of CTC as given in the table below.

Name of the manufacturer	Location	Chloromethane Manufacturing capacity in tons per annum*	CTC production levels (% of manufacturing capacity)	
			Maximum	Minimum
Chemplast Sanmar Limited	Southern India	35,500	23	15
Gujarat Alkalies & Chemicals Limited	Western India	25,200	28	25
SRF Limited	Northern India	30,000	57	15
Gujarat Fluorochemicals Limited	Western India	NA	NA	5

** Chloromethane manufacturing capacity. The CTC co-production is a variable percentage of this, broadly within the ranges mentioned in the last two columns.*

This translates to about 18,000 tons of CTC production at minimum capacity. Companies are undertaking steps to minimize CTC production through redesign of plant operations parameters, identifying products where CTC can be used as a chlorinating agent feedstock, etc.

Chloromethane plants produce Chloroform, Methylene Chloride and CTC as co-products. Demand of Methylene chloride is in solvents and process agent applications and this is on the rise. India is import-dependent on Methylene Chloride. Chloroform is used in manufacturing HCFCs and PTFE. While demand for chloroform is expected to fall on account of accelerated phase-out of HCFCs under Montreal Protocol, industry sources believe increase in chloroform demand for PTFE would compensate for the shortfall. Thus, demand for chloroform is expected to increase.

7. Of the listed Chloromethane producers, only CSL and GFL have destruction facilities. While CSL uses the facility for destruction of its Vinyl Chloride Monomer (VCM) plant operating at around 100 Tons per annum, GFL's CTC destruction facility is aimed at destroying minimum quantities of CTC produced in their facility (estimated minimum CTC generation capacity is about 1,500 - 2,000 metric tonnes per annum).

8. CTC is a controlled substance under Montreal Protocol with the following phase-out schedule.

- Consumption (Baseline level – average annual consumption of 1998-2000)

- 85% reduction compared to baseline levels of CTC consumption by 1 January 2005;
- 100% reduction compared to baseline levels of CTC consumption by 1 January 2010;

- Production (Baseline level – average annual production of 1998-2000)
  - 85% reduction compared to baseline levels of CTC production by 1 January 2005;
  - 100% reduction compared to baseline levels of CTC production by 1 January 2010.

While non-feedstock applications of CTC are subject to this control schedule, quantities used for feedstock applications are not subject to this control schedule.

9. As per National CTC phase-out plan of India approved in the 45th Meeting of the Executive Committee, the following is the phase-out schedule of CTC.

Particulars in ODP tons	2005	2006	2007	2008	2009
CTC production control limits	1726	1147	706	268	48
CTC consumption control limits	1726	1147	706	268	48

Source: National CTC phase-out plan approved in the 45th Meeting of the Executive Committee.

CTC phase-out activities in India for non-feedstock applications are almost complete and by 01 January 2010, India is likely to phase-out all its domestic CTC consumption for non-feedstock applications. This has been achieved through a combination of projects whereby companies have eliminated their dependence on CTC in solvent and process agent applications as well as stringent national regulations for controlling and monitoring CTC.

10. CTC use in feedstock applications in India was primarily in CFC manufacturing and CFC use in DV Acid Chloride Manufacturing.

CTC used in CFC production: Over the last 9 years, CFC production decreased from about 22,000 MT to nil after 1 August 2008. This resulted in decrease in CTC demand for CFC use of about 28,600 MT. Since CFC manufacturers were importing CTC and procuring CTC from domestic market for these uses, this decrease in demand reduced CTC import demand for CFC manufacturing and CTC domestic manufacturing demand for CFC manufacturing. The latter required product mix optimisation at CTC production facilities to ensure no excess CTC for sale in the market particularly after CY 2005 and this also resulted in changes in the manufacturing plans for co-products produced in a chloromethane facility namely methylene chloride and chloroform.

CTC used in DVAC production: Currently, CTC is used in manufacturing DV Acid Chloride manufacturing operations and this feedstock demand is about 15,400 MT in the year 2008 as shown below.

Particulars in MT	**2007**	**2008**
CTC use in DVAC production	13,848	15,411

Source: Estimates based on CTC reports. Future projections at an assumed 10% growth rate.

Production growth in DVAC industry is subject to demand of products (namely synthetic pyrethroids) which use DVAC as active ingredient. Synthetic Pyrethroids are used in applications for controlling pests and insects.

Research studies undertaken in the past have indicated that these substances pose health hazards to the users on account of their toxic nature and in the long run may be eliminated from use. This poses a risk to CTC manufacturing industry which would be saddled with excess CTC available over feedstock demand post 2010.

In addition to this, CTC used for manufacturing synthetic pyrethroids can be procured locally and from international markets. Higher procurement from latter would result excess stocks of locally manufactured CTC in the domestic market. This is a function of availability of CTC as well as price of CTC manufactured in domestic market compared to import factory-gate price. In the past, it has been seen that favorable international prices have attracted DV Acid manufacturers to importing CTC rather than procuring from domestic market.

MLFS evaluation report (doc no. 51/12) has requested Executive Committee to consider *"… Recommending to CTC producers in India to use a precautionary approach to CTC management by installing destruction facilities, if not yet available, in case the feedstock outlets – essentially for DVAC – should not grow as expected or would be squeezed by increasing CTC imports"*. Based on this, the Executive Committee as per decision 51/11 para (f) has recommended to *recommend to CTC producers in India that they use a precautionary approach to CTC management by installing destruction facilities, if not yet available, in case the feedstock outlets, essentially for DV acid chloride, should not grow as expected or would be squeezed by increasing CTC imports.*

It must also be recognized that DVAC industry need not use CTC as a raw material for manufacturing. DV ester is also used as a raw material for manufacturing DVAC – particularly manufacturing using this process is undertaken by companies in China. Use of the substitutes to CTC in DVAC manufacturing process can also result in excess CTC.

11. CTC destruction facilities are not currently mandatory in India. It must, however, be noted that the chloromethane manufacturing facility of GFL had a destruction facility in-built into the manufacturing process. This was required for GFL as a safeguard for avoiding any excess CTC production which cannot be sold in the market for feedstock applications. While the CTC destruction capacity of GFL is not published, it is estimated to be about 1,500 - 2000 MT per annum.

It must also be noted here that high-boiler chemicals are produced in chloromethane plants in small quantities (i.e., of the order of about 100 – 150 tons per annum per manufacturing plants). These chemicals have certain proportion of CTC which is very difficult extract in the manufacturing plant. These chemicals are sold in the open market as "solvent chemicals" or sent for destruction.

12. From the above, the following factors pose risks affecting sustainability of CTC demand from domestic manufacturers for feedstock applications and consequent compliance challenges:

- ❖ Sudden decrease in DVAC products on account of substitute input chemicals for manufacturing DVAC (e.g., DV ester) and non-chemical pest control products (which would, in turn, reduce the demand of pesticides manufactured using DVAC) in the different markets.

- ❖ Import of CTC which could cater to domestic manufacturing of DV Acid Chloride driven by favorable import cost economics.

- ❖ Chloromethane plant optimization needs for production of methylene chloride and chloroform which results in consequential CTC production. As explained in earlier, growth in demand for the above two products is expected to result in growth in CTC production. This would also be a factor that would contribute to oversupply of CTC.

13. The following table gives an overview of how the CTC excess supply situation in India would appear under different scenarios.

Scenario	CTC demand in DV Acid Chloride manufacturing falls	Increase in CTC imports to substitute local CTC manufacturing
What if	Demand decreases to 60% of 2008 levels.	Demand from domestic CTC manufacturers decreases by say about 8000 MT.@
CTC minimum capacity	12,000 MT	12,000 MT
Demand of CTC for DVAC manufacturing	Approx 15,000 MT	Approx 15,000 MT
Excess CTC at minimum economic capacity	3,000 MT per annum	5,000 MT per annum
Known destruction capacity*	1,500 MT per annum	1,500 MT per annum
Excess CTC that needs to be destroyed	1,500 MT per annum	3,500 MT per annum

* *This needs to be confirmed / verified as the actual capacity is not known.*
@ Imports of CTC in the past have been of the order of about 15,000 MT. This is purely driven by market factors such as price of CTC in international markets, availability of CTC, duty exemption on CTC which is imported for producing products which are exported and collaboration among different users to import in bulk. It must be noted that this CTC includes both DVAC as well as CFC producers.

The quantities of CTC that would flow into the destruction facility are also dependent on the trend in fall in CTC demand over the years. Also it must be noted that a combination of the factors highlighted above can also affect overall CTC demand.

14. It must be noted here that Decision XVIII/17 indicates that CTC produced in a particular year for use in a future year as a feedstock chemical needs to be reported to the implementation committee. Under the current Montreal Protocol conditions, this excess quantity in one year can result in non-compliance of the producing country in that year. This decision is subject to review in the 21st MOP.

15. In light of these challenges, it becomes imperative that CTC destruction capacities are established to avoid risks of market demand decreases and consequent oversupply of CTC. Further, given the uncertainty in such a situation, it may be prudent to examine a multi-chemical ODS destruction facility which would also address CTC destruction.

Since CTC is manufactured by four established manufacturers as mentioned above, the collection process for destruction is expected to be cost-effective. Except for defining processes for CTC material movement and monitoring for destruction, additional interventions are not envisaged.

HCFCs for destruction (future)

16. The estimated quantity of HCFC-22 in banks, as of 31 December 2009, is about **40,000 + MT**. This includes banks of HCFCs in air-conditioning equipment and water coolers (which have started using HCFCs in the recent past). This bank is expected to grow

17. Estimated quantities of HCFC-141b in foam are also high. Of the banks in foam, rigid foam in applications in refrigeration and air-conditioning applications is estimated at **10,000-11,000 MT** as of 31 December 2009**.** This quantity of foam products is widely distributed and in use in different parts of the country. Over the last 8-10 years, a large number of companies have switched over in foam applications from CFC-11 to HCFC-141b in other rigid foam and integral skin applications. These are estimated to constitute **11,700 MT** and **1,300 MT** of foams, respectively by 31 December 2009.

These banks can be accessed through various consumer driven programs in close cooperation with industry and equipment service agencies. In case of air-conditioning equipment, (a) buy-back schemes, (b) programs focusing on large institutional uses (e.g., Military, Railways, Container Corporation which handles container movements in railways and exports, National Dairy Development Board etc.), (c) recovered unusable gas from service agencies, (d) linked replacement programs for industrial air-conditioning equipment, chillers using HCFCs etc. could be adopted for supply of destroyable HCFC-22. In case of HCFC-141b, the collection process is more complex as the users are widely distributed. As mentioned earlier in the document, the proposed project would target at destruction of HCFC-141b in rigid foam in RAC applications and other foam applications.

Others

18. It must also be noted that ODS destruction needs to be made sustainable through carbon financing and other mechanisms. The following table summarises the GWP of ODSs that are under consideration in the current project.

ODSs	**GWP**	**ODSs**	**GWP**
CFC-11	4,700	CTC	1,400
CFC-12	10,800	HCFC-22	1,700
		HCFC-141b	713

While CCX-based carbon finance can be accessed for CFCs and CTC (which have final phaseout date of 31 December 2009), such mechanisms are not available for HCFCs. In case of HFCs, CDM mechanism can be used for carbon financing under suitable methodologies for the same. It must be noted for access of each of these mechanisms, suitable methodologies may need to be defined and applied to the projects under consideration.

19. HFCs are used in Indian market mainly in refrigeration and air-conditioning and foam applications. However, the quantities of HFCs need to be ascertained in detail and hence, is not included in the present analysis. HFCs are estimated to be used in domestic market in refrigeration appliances, MAC appliances and certain foam appliances.

Objective

To develop and implement ODS destruction facility (ies) at suitable locations in India in a sustainable manner to help avoid emissions of ODSs and HFCs.

Approach

The following approach is proposed to be adopted to undertake this assessment. This defines the approach for undertaking this assessment and does not cover implementation costs which would be undertaken in the next stage.

- Carry out an analysis of potential banks of CFCs, HCFCs and HFCs ("identified chlorofluorochemicals") in the market. This analysis would be done based on expert inputs, already available data for assessing these banks with Ozone Cell and contacts with limited industry experts and technical experts.

- Carryout an analysis of CTC use in DVAC in the future with inputs from industry players and international experts.

- Based on the size of banks available, define quantities of the identified substances that are likely to be accessed for disposal after accounting for potential reuse by substance (e.g., CFC-11, CFC-12 etc.)

- Define process for collection and consolidation of the substances through both centralized and decentralized mechanisms along with players involved (including industry through buy-back schemes) and associated costs. Given the size of the country, it is envisaged that for the identified chlorofluorochemicals would be collected from different end-use applications at different locations in the country. In case of CTC, the supply would flow from the 4 CTC manufacturers.

- Define technical parameters for ODS destruction facility – it is envisaged that this would be a multi-product destruction facility. Since this facility is expected to operate through funding from carbon finance facility, the technical standards of operations is to be defined to conform to CDM, CCX or other VCM market standards.

- Develop a business model addressing:

Investment costs components

- ❖ Levels of funds required for the facility – at centralized level and decentralized levels (if found necessary)
- ❖ Funds flow from different sources – MLF, other donor funding, local enterprises
- ❖ Categories of instruments – grant funds, equity and debt funds
- ❖ Structure of these funds and their linkages to specific operational performance parameter for destruction facility

Operating costs and returns

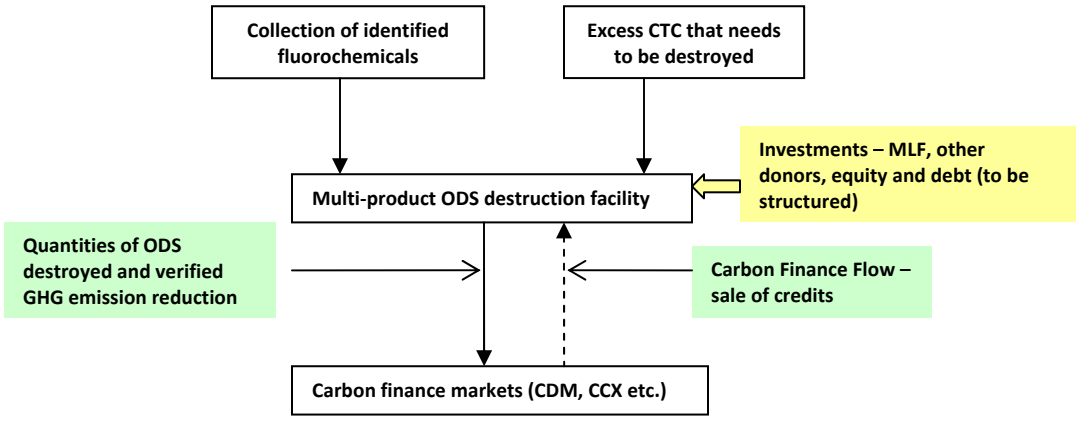
- ❖ Expected returns to ODS destruction facility – voluntary carbon funds and CDM revenues (as found feasible)
- ❖ Assess operating costs of ODS destruction facility
- ❖ Structuring investments to optimize tax impacts
- ❖ Mechanisms of sharing profits among different stakeholders

It is envisaged the operational effectiveness and viability of the business model would be driven by multiple fluorochemicals flow into the facility as well as returns from carbon finance markets. Therefore, the project would focus on structuring a viable proposition to ensure access to (a) all identified fluorochemicals and CTC and (b) carbon finance.

- Agree with national stakeholders including Ozone Cell, other regulatory institutions that may be identified during the course of the study and industry players on the project document and its operational parameters.

Exhibit below provides an overview (illustrative) of how this facility could operate in terms of investments and operations. Details of operational modalities and implementation modalities would be developed at the next stage of this project.

Exhibit – Indicative Structure for Operating this facility



Depending upon return levels for the facility, suitable instruments to "risk-proof" operation costs, return sharing with project participants would be defined. Further, this facility can also be operated for ODS destruction from other countries in the region if necessary.

Benefits

- ✓ Avoiding ODS emissions from accessible banks in India and (if found feasible) from countries in the region.
- ✓ Helping India avoid risks of non-compliance due to excess CTC supply in the domestic market.
- ✓ Development of a model which can be replicated both within the country and outside the country on ODS destruction.

- ✓ Development of infrastructure for access to ODS banks and banks of high-GHG HFC banks. This infrastructure would help in addressing HCFC banks at a future date.

- ✓ Demonstration of effective sustainable operationalizing of ODS banks in conformance with other chemical conventions namely Basel, Stockholm and Rotterdam Convention.

UNDP Response to comments from MLF Secretariat

.India: Project *preparation* of ODS Destruction Pilot

12. In reviewing this submission, the Secretariat notes that there is another request for project preparation for an ODS disposal project for India (and Bangladesh) submitted by UNEP for unwanted ODS in ship breaking yards. Has any discussion taken place between UNEP and UNDP to ensure that there is no overlap in the activities proposed?

UNDP and UNEP have discussed and exchanged notes on the respective proposals. These two proposals would in fact be complementary. As advised by UNEP, their proposed interventions will be cover capacity-building and policy/regulatory support for safe disposal of ODS. UNDP's proposal covers the demonstration of the destruction facility structured within a replicable and sustainable management and financing model. There are existing quantities of ODS already collected and stored at the ship-breaking yards (estimated at about 20 metric tonnes currently in India). Since ship-breaking is a significant business in India, in fact the continuing availability of already collected ODS would contribute to the sustainability of the proposed facility.

13. The Secretariat has the following observations and comments on the submitted proposal:

a. It is understood that on priority, this project would like to look at destruction of excess co-production of CTCs. The Secretariat is concerned that this may not necessarily be something that falls within the guidelines for pilot ODS projects and would like UNDP to reconsider what exactly will be done under the project. In addition, you may wish to also look at the assistance that India has already received for the complete phase out of CTC and determine whether this may be considered double counting.

UNDP's proposal is well aligned to the requirements specified in MOP Decision XX/7. Specifically, the proposal (a) addresses excess stocks of CTC which would be potentially emitted, (b) conceives of an innovative models which would include public-private partnerships and co-financing through appropriate carbon markets (c) would facilitate replication of not only the technology but also of the model (d) will result in a facility for destruction a variety of ozone depleting and global warming chemicals, ensuring the sustainability of the model and the related investments. Based on this UNDP believes that the proposal is consistent with ExCom Decision 58/19 (particularly para a) iv) a i to vi). The proposal goes beyond just destroying collected quantities of ODS, but has an important demonstration value, as well as significant environmental benefits, both for ozone layer protection and global warming.

India has received assistance for phase-out of CTC production and consumption for non-feedstock applications. For feedstock applications, due to market and technology trends, the

demand for CTC is projected to reduce and result in excess CTC. It is critical that this excess CTC would need to be safely disposed otherwise it may enter the consumption market and present consequent emission and non-compliance risks. Thus, it is clear that there is no double-counting involved.

b. We also noted that while the there is an estimate of the possible volume of the excess CTC for the production of chloromethane, decision 58/19 is very clear that there should be an existing amount of ODS that are really identified as waste ODS and need to be phased out.

The project provides details of estimated stocks of ODSs in banks and expected excess quantities of CTC. These are ODSs which have no use or "waste ODS" and need to be destroyed / disposed without being emitted.

Please note that CTC is co-produced in Choromethane production continually and is therefore easily accessible without complex programmes for collection. It is also conveniently measurable. Thus, for practical purposes the CTC quantity mentioned is already available during a given span of time, as long as Chloromethane production continues. It is important that the destruction facility is sustainable. It will not be economically viable for only one-time destruction of a fixed amount of collected ODS. Such sustainability is ensured only when the supply of unwanted ODS is assured on a continuing basis with minimal risks and uncertainties. Further, if such a facility is designed to be versatile for destruction of a range of ODS and other chemicals, this will add to its viability and sustainability.

In this proposal, the banks of CFCs referred, will only add to the sustainability of the facility. The facility will be viable with CTC alone.

c. In looking at the objectives of the pilot project, it is clear that this preparation will still include estimating the quantities of unwanted CTC and other ODS banks. We believe that the intention of the pilot project is for a country to implement a project that could actually destroy a specific amount of ODS already identified for destruction, with the added benefit of understanding the operation of a technology that will allow the eventual continuous destruction of unwanted ODS that are stored in banks, in future.

As mentioned in the proposal and in the earlier paragraph, the quantities of CTC are already identified. With the understanding that this proposal is a request for preparation funding, the actual proposal will indeed provide more accurate information on the quantities. In this regard the information provided in the proposal is consistent with the requirements of ExCom Decision 58/19 (particularly para a) iv) a i to vi) and UNDP believes that the pilot project once prepared, will fulfill the intention behind such pilot projects.

As per the audit report of CTC producers and feedstock users under the National CTC phase-out plan in India, the quantities of CTC stocks available with the CTC producers and feedstock users aggregate to 1,116 MT and 3,600 MT, respectively. A stock increase has been reported in the year 2008 (i.e., between 1 Jan 2008 to 31 Dec 2008) by about 1170 MT. The quantity allowed for consumption in CY 2009 in India is only around 44 MT. Hence, the stocks of CTC with dealers/distributors in the consumption market are negligible.
We would also like to draw your attention to ExCom Decision 58/35 (d), where the risks posed by excess stocks of CTC meant for feedstock use have been acknowledged.

d. The Secretariat also noted that the proposal mentions that two of the four CTC manufacturers in the country already have destruction facilities, with that of GFL specifically being used to destroy CTC. If the destruction technology is already known and available in the country, you may wish to review your proposal in this light to see how this existing technology can be used for other ODS and design your pilot project around aspects for which this existing facility/technology can play a larger role.

The only CTC destruction technology implemented in India which is currently operational is in Chemplast Sanmar Limited (CSL). This facility is of a very small capacity and is integrated into the Vinyl Chloride Monomer (VCM) manufacturing process of CSL. The CTC destruction facility at GFL is not yet operationalized and its capacity is not verified. Furthermore, these facilities are integral to the existing manufacturing process and are not designed for handling multiple ODS and other fluorinated chemicals. We will of course endeavor to examine existing destruction capacities to the extent relevant to the project objective and model.

e. Can you also please describe to us whether there is an existing approach for systematically collecting old equipment and taking out the waste ODS in the country, and what is the progress of this? Would there be any information about a specific amount of already collected waste ODS that may be disposed of in this pilot project?

Currently, there are some pilot schemes for appliance replacements, initiated by private-sector players. Indeed one important result of the present proposal would be to make such schemes more viable and comprehensive; otherwise the waste collected from such appliance replacement programmes will present environmental and occupational risks. UNDP will seek to carefully develop partnerships with such initiatives to enhance the sustainability of programmes on both sides.

f. If the pilot project is for the development of a business model for ODS destruction, then this should be the focus of the submission. It would be interesting to understand how this business model (as shown in the schematic provided in the submission) will work, and how each box will be funded. The Secretariat would like to understand where MF funding will be in this proposed structure.

The proposal indeed aims to develop a project, which will address precisely these issues. As earlier clarified and as mentioned in the proposal, the business model is critical and so is its replicability.

At present, the following funding options/possibilities are being considered. These will be further developed, refined and clarified in the actual project proposal:

- *Destruction facility: Funded with support from MLF, equity investment by private enterprises and debt funds. It is projected that returns on these investments would accrue partially from carbon credits from destruction.*

- *Collection costs: Expected to be borne by the host entity, which at present is conceived as a special purpose vehicle (SPV). This would be further articulated in the actual project proposal. As per decision 58/19, this cost would not be funded by MLF.*

- *Transport, regulatory compliance and monitoring: These costs would be funded partly through MLF and partly through co-financing. The financial structure of the facility will be defined in more clarity in actual project proposal, after consultations with partners and stakeholders.*

Financing from the carbon markets, both voluntary and compliance, will be estimated based on the mix of chemicals that will be processed for destruction and this exercise will be an important element of the actual project proposal.

Ensuring long-term sustainability and replicability would be critical considerations in designing the business model and the actual project proposal.

14. While we acknowledge that one of the objectives why this project is being submitted is to look at setting up a facility that could eventually be done with little assistance from the Multilateral Fund in its operation, this current project preparation submission does not seem to have the information required by decision 58/19. It is therefore our view that we cannot recommend this to the Executive Committee unless some other justification and information can be provided to support this as soon as possible, which is clearly in line with decision 58/19(iv)a.

We trust that the proposal as well as additional clarifications provided in the preceding responses meet the requirements of the ExCom Decision 58/19 (particularly para a) iv) a i to vi). UNDP believes that this proposal brings important value to addressing the issue of ODS disposal and will result in an innovative project, which will provide a replicable and sustainable model for addressing unwanted ODS.

Annex 3. Request for additional preparatory funding for the Philippines (Letter from the Government attached)

PROJECT CONCEPT

COUNTRY:	PHILIPPINES **IMPLEMENTING AGENCY:** UNDP
PROJECT TITLE:	Preparation of investment and associated activities in the Refrigeration and Air Conditioning Sectors (except residential air conditioning)
PROJECT IN CURRENT BUSINESS PLAN:	No
SECTOR(S):	Refrigeration
SUB-SECTOR(S):	All (except residential air conditioning)
ODS USE IN SECTOR:	3,200 metric tonnes (2008)*
PROJECT IMPACT:	To be established*
	* More accurate estimates would be available in the actual project proposal
PROJECT DURATION:	12 months
PROJECT COST:	US$ 65,000
REQUESTED GRANT:	US$ **65,000**
AGENCY SUPPORT COSTS:	US$ 4,875
TOTAL COST TO MULTILATERAL FUND:	**US$ 69,875**
PROJECT MONITORING MILESTONES:	Included
NATIONAL COORDINATING BODY:	Philippines Ozone Desk, Environment Management Bureau, Department of Environment and Natural Resources

PROJECT SUMMARY

Objective:	Preparation of individual projects and/or sub-sector/sector phase-out plan(s) in the Refrigeration Sector (excluding the residential air conditioning sector) in Philippines, for compliance with the 2013/2015 control targets
Sector Background:	The Refrigeration Sector in Philippines (including servicing) consumed about 3,200 metric tonnes of HCFCs in 2008. The survey of this sector is to be ongoing as part of the activities under the overarching HPMP, very little information is currently available on sub-sector-wise consumption patterns. Based on the Article-7F and CP Progress data reporting, HCFC-22 is the predominant substance used with small quantities of HCFC-123 used mainly in servicing of chillers. There is manufacturing activity in the sector that covers domestic and commercial refrigeration and air conditioning equipment, mostly for domestic consumption. Preliminary estimates indicate about 500-600 metric tonnes of HCFC consumed in manufacturing activities.
Funding request:	The present funding request for US$ 65,000 would cover the cost of national and international technical experts, project personnel, and technical workshops for targeted technology information dissemination to support development of proposals for investment and associated activities for individual projects and/or sub-sector/sector phase-out plans, consistent with policy directions from Philippines.
Impact:	The key output of this request would be the development and submission of individual projects and/or sub-sector/sector phase-out plans to facilitate HCFC reductions for compliance with the 2013/2015 control targets.

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Guidance in the Preparation of Sector Investment Proposals for HCFC Phaseout Management in the Philippines

Further to the communication of the Undersecretary Atty. Mary Ann Lucille L. Sering, National Coordinator, Phase out of Ozone Depleting Substances, Department of Environment and Natural Resources (DENR) to the Multilateral Fund Secretariat, the following agencies are requested to include in their business plans for submission to the 59th Meeting of the Executive Committee of the Montreal Protocol appropriation for investment plan preparation for the following sectors:

Sector	Implementing Agency	Indicative Amount for proposal preparation
Foam	United Nations Industrial and Development Organization (UNIDO)	US $ 70,000.00
Refrigeration	United Nations Development Programme (UNDP)	US $ 65,000.00
Total Amount		US $ 135,000.00

Fund summary:

Total amount that the can be availed of (180 ODP tones consumption for 2007)	Amount to be requested by UNIDO and UNDP	Balance
US $ 200,000.00	US $ 135,000.00	US $ 65,000.00

The balance of US $ 65,000.00 is proposed to be requested to cover the additional sector(s) that will be identified upon completion of the sectoral survey to be conducted by the World Bank.

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Annex 4. Resource Mobilization for Climate Co-Benefits

Resource Mobilization to Address Climate Co- Benefits in HCFC Phaseout - UNDP

1. Amended Proposal

1.1 Resubmission of the Amended Proposal

In accordance with ExCom Decision 58/37 (g), UNDP is resubmitting this proposal for consideration at the 59th Meeting. This new version of the proposal has been amended to take recent developments into account and, in particular, to allow for UNDP to proceed in parallel to the ongoing work on a possible Facility for Additional Income (FAI) under the MLF.

As such, in summary, the activities under this amended proposal are now split into two phases:

- *Phase I*, which can commence immediately, will provide concrete, learning-by-doing case studies from four distinct pilot project proposals. These case studies will be of value irrespective of the eventual design of any FAI.
- *Phase II*, which can commence at a later stage, will involve UNDP collectively analyzing these case studies in the context of any MLF mechanism for resource mobilization. The timing of this phase can align with future studies on any FAI.

1.2 Recent Developments

UNDP submitted an earlier version of this proposal prior to the 57th Meeting. In the interim period there have been a number of developments:

- Initial studies on the FAI are now being conducted under the Multilateral Fund. The Secretariat submitted a first report on the FAI at the 58th Meeting of the Executive Committee, focusing on preliminary issues related to legal, structural and administrative issues, as well as potential uses of the FAI. The Committee has now requested a further concept paper for the 59th Meeting to focus on clarifying the definition of the FAI, and has requested that the Secretariat explore the carbon market aspects of any FAI.
- The Workshop on Management and Destruction of ODS Banks and Implications for Climate Change was held in Geneva in July 2009. As part of this workshop, an interim report on the costs of bank management was presented by the TEAP, and a report on funding opportunities was presented by the Ozone Secretariat.
- UNDP presented a side-event at the 57th Meeting on carbon markets as a potential funding source for climate co-benefits. This presentation was intended as a thought-piece and concluded that any move into carbon finance should be conducted in a considered and phased manner, in order to build market credibility, send appropriate forward signals and manage risk. The presentation recommended that any move into carbon finance have 3 phases: commencing with pilot projects, moving to a facility/fund structure, and then finally linking fully to the compliance carbon markets. The presentation also stated that the Montreal Protocol bodies could play an active role in any mechanism.

1.3 Continued Rationale for Exploring Carbon Markets as a Co-Financing Source

UNDP is working on a number of fronts to address the important issue of potential sources of financing to address incremental climate benefits.

In UNDP's view, the carbon markets remain particularly attractive as a medium/long-term funding source. As identified in the recent Interim TEAP report presented in Geneva, the funding requirement for realizing climate co-

benefits from destruction of ODS from banks will be significantly high, in the tens, if not hundreds, of US$ billion[4]. Funding of this magnitude will be difficult, if not impossible, to meet through traditional donor or fund-based sources. On the other hand, carbon markets, given their size (annual investment currently stands at $7bn[5]), rapid growth, and political momentum, could be an interesting financing source with the appropriate scale.

UNDP stands ready to assist the Montreal Protocol community to explore carbon markets as a potential financing source. UNDP believes such an exploration should be carefully pursued, taking into account all risks, but if addressed in a timely fashion can provide valuable early learning experiences and an initial platform which can, if deemed appropriate, be rapidly built upon.

2.1 UNDP's Capabilities in this Field

UNDP is an active participant in the carbon finance arena with established procedures, staff and expertise in place. In terms of direct emission reductions, UNDP is active in the following areas:

- The MDG Carbon Facility, which offers project development services for projects under the Clean Development Mechanism (CDM) and other carbon markets.
- UN REDD, which is pioneering carbon finance in 9 pilot countries in the area of avoided emissions from deforestation. As a new area of carbon finance, there are a number of similarities between avoided deforestation and any possible ODS-related carbon finance.

UNDP is now combining the experience of its carbon finance teams with the long-standing expertise UNDP has as an Implementing Agency for the Multilateral Fund since 1991. UNDP's current role as the Lead Agency for HPMPs in a significant number of key Article-5 countries places it in a unique position to identify and develop appropriate projects.

3. Proposed Activities

3.1. Overview of ODS Project Opportunities

UNDP sees clear opportunities for projects in at least two areas:

1. Bank management and ODS disposal projects – particularly related to the end-of-life management of appliances.
2. Co-financing opportunities in HCFC phase-out where climate co-benefits can be generated and maximized through additional investments for conversion to appropriate technologies.

For example, there are clear possibilities to use linkages with other programmes such as energy efficiency actions under the GEF to develop projects for leveraging access to inefficient ODS-based appliances in order to ensure appropriate end-of-life management, and tap into country specific initiatives towards energy savings gains in appliance replacement programmes.

It is recognized that both project areas would be of interest to the Executive Committee of the Multilateral Fund, since the Committee is mandated by MOP Decision XIX/6 to prioritize funding of cost-effective projects and programmes that maximize climate benefits. The mechanisms for assessing and accounting such benefits are under development, and UNDP will continue to cooperate closely with the MLF Secretariat to ensure that approaches to the subject are consistent.

[4] The interim TEAP report estimated that cost for Low/Medium ODS bank management in developing countries was USD 70-94 billion for a saving of around 5 billion tonnes CO2-eq. of potential GHG emissions.
[5] State of the Carbon Markets 2008, World Bank

3.1. Phase I Activities: Pilot ODS Projects

UNDP has significant experience in the carbon financing sector which it can leverage to assist in the development of a sound approach to the financing of climate co-benefits (whether from the market or on a cost-coverage basis). The Montreal Protocol Unit of UNDP has long experience in implementing ODS phase-out projects and programmes but has no dedicated budget to seek to apply the carbon financing 'best practice' and expertise existing within UNDP via the MDG Carbon Facility.

Under Phase I of the proposed activities, UNDP has identified four different project scenarios, selected for their distinct illustrative value, which could benefit from co-financing of climate co-benefits. For each of these four areas, UNDP will provide technical assistance for translating these concepts into concrete pilot project proposals, addressing each project type's methodological, structural, commercial and legal aspects. UNDP will then seek to work with project entities to implement these projects. Finally, for each project type, UNDP will evaluate its experience in a detailed case-study report.

The activities under Phase I can commence immediately. Phase I will produce concrete, learning-by-doing case studies at the project level which will be useful for the Montreal Protocol bodies irrespective of the final design of any FAI.

The four different project scenarios are:

a. An MLF funded project where climate co-benefits can be realized at a cost exceeding $25 per tonne of CO2 saved
b. An HCFC phase-out project in an Article-5 country, which is not eligible for funding by the MLF but could be funded from the proceeds of realizing climate co-benefits.
c. An Energy Efficiency project (e.g. GEF) in which end-of-life management of ODS would bring incremental ozone and climate benefits.
d. A stand-alone bank management./ODS destruction project which could be based on an existing methodology for funding of climate co-benefits

For each project scenario UNDP will perform the following activities:

1) An analysis of the project type and its potential climate benefits.
2) Identification of potential stakeholders who may act as the project entity.
3) Review of emerging methodologies for assessing CO2 emission reductions in support of the project type and commissioning of new methodologies, where appropriate.
4) Review of financing options, including carbon markets, assessing risks and cost effectiveness of different options, and identifying potential financing partners
5) Preparation of project proposals for each project type
6) Evaluation of experiences and preparation of stand-alone case-study reports for each project type

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3.2 Phase II Activities: Report Analyzing Phase I Pilots in Context of any MLF Mechanism for Resource Mobilization

There are currently a number of ongoing studies into potential frameworks for resource mobilization for financing climate co-benefits, including the ExCom's request to the MLF Secretariat for a concept note to be prepared on the FAI for the 59th Meeting.

In Phase II, UNDP will produce a report analyzing the results of the Phase I pilot projects in the context of any MLF mechanism or framework that may arise from these ongoing studies, including any FAI. This Phase II report will provide inputs to the design of any such mechanism, covering aspects such as identifying how each of the four pilot project types would fit into such a mechanism, and where likely benefits or challenges would be found, particularly in scaling up such activities under a mechanism. The report would leverage the hands-on experience of the Phase I case-studies, as well as the carbon markets expertise of UNDP's carbon finance team which has been involved in establishing a number of carbon finance mechanisms.

4. Resource Requirements

The total costs are estimated as below (all figures in US dollars):

Cost Head	Phase-I	Phase-II	Total
International Consultant for technical coordination	45,000	0	45,000
Four technical experts for analysis/methodologies	169,000	0	169,000
Travel and overhead costs	36,000	0	36,000
Cost recovery for inputs from UNDP	150,000	100,000	250,000
Total	**$400,000**	**$100,000**	**$500,000**
Matching in-kind co-financing from UNDP	(150,000)	(100,000)	(250,000)
Net MLF Funding Requirement	**$250,000**	**0**	**$250,000**

As set out above, UNDP will be making a matching contribution of in-kind services amounting to US$250,000 when considering both phases. The inputs from UNDP will cover staff time and costs of its in-house carbon finance and other teams for providing technical services related to analysis and development of methodologies and for developing the structural, commercial, legal and policy elements.

The Phase-I costs of US$250,000 are being requested for consideration at the 59th ExCom meeting.

Annex 5. Justifications for Preparatory Funding Requests for HCFC pilot/demonstration (China)

Demonstration projects in the Solvents Sector(2) and XPS Sector (1)

Since submission of UNDP's Business Plan and deliberations on HCFC pilot/demonstration projects, China has progressed in the sectoral data collection for the HPMP. Based on the recent survey of the Solvents and XPS Foam Sectors carried out after the 57th ExCom meeting in April 2009, new and additional information has become available.

Demonstration Project in the Solvent Sector

The use of HCFCs in Solvents Sectors is concentrated mainly in the Medical Sector and Electronics Sector and as is well known, solvent uses of HCFCs are 100% emissive. Further, the Medical Sector serves critical social needs and has very specific and imminent challenges for adaptation of low-GWP and safe alternative technologies, which serve the needs of both the organized enterprises and SMEs. Therefore the government and other stakeholders have prioritized this sector for early interventions.

The technologies selected for demonstration are low-GWP and safe. In terms of time, an earliest possible demonstration of the technologies identified is necessary, as the two proposals address the needs of both the organized sector and SMEs. Such demonstration, if moved to the next business planning cycle, will lead to delays in technology selection, which needs to feed into the HPMP for this sector, which is targeted to be finalized by mid-2010. The government and other stakeholders spent the past several months in collecting data for developing these concepts, with the expectation that 7-8 months would be saved if these requests could be considered at the last meeting of 2009. For this reason, China has asked UNDP strongly to include these requests for submission to the 59th ExCom Meeting.

Demonstration Project in the XPS Foam Sector

- The XPS foam sector in China has experienced remarkable growth in the past several years. Due to the steep growth in the construction industry, demand for XPS foam boards for building insulation has increased significantly, ascribed also to enhanced energy-efficiency standards. The 2008 estimated HCFC consumption in the sector in China is about 30,000 metric tonnes.

- Based on information from ongoing surveys, there are about 20 indigenous manufacturers of XPS extrusion lines and an estimated 500 manufacturers of XPS foam in the sector, most of which are small/medium-sized. Another defining characteristic of this sector is that most of the polystyrene raw material used by SMEs in XPS foam manufacturing originates from recycled polystyrene scrap of unknown composition/contaminants.

- Recent zero-ODP XPS foam technologies introduced by multinational corporations are expensive and have been closely guarded in terms of intellectual property. Due to this, these technologies are not cost-effectively accessible for SMEs and may not be compatible to operate with a high proportion of recycled polystyrene scrap. It would be a challenge for the SMEs to comply with the enhanced energy-efficiency standards if they have to convert to non-ODS technologies. There is thus, a clear and present need for a cost-effective and environmentally safe technology alternative

for SMEs, in order to remain sustainable and maintain product quality. At a broader level, this affects an important part of the economy in China.

- The selected technologies are ozone and climate-friendly and potentially cost-effective, as compared to other alternatives. The development and demonstration of the proposed technology would be particularly facilitated cost-effectively due to the unique situation of the enterprise as both a manufacturer of equipment as well as XPS foam. As an equipment manufacturer, this enterprise would be in a position to transfer this technology to a potentially large number of SMEs, who would be able to make XPS foam without using ODS-based blowing agents, while still being able to maintain the quality of products consistent with enhanced standards and remain techno-economically sustainable and viable. The technology will be provided through UNDP by internationally renowned XPS foam experts/firms.

- Much of this information has been available after the 57th ExCom decision referred to by the Secretariat regarding inclusion/exclusion from UNDP's 2009 Business Plan. In all other respects, this proposal will meet or exceed the requirements of ExCom Decision 55/43 for demonstration projects.

- It is critical to have safe and cost-effective technologies developed and demonstrated in this Sector at the earliest possible opportunity, given the size and consumption levels in this sector. In this regard, we would like to emphasize that as per ExCom Decision 56/16 the XPS Foam Sector is a separate and standalone sector and is not considered part of the a foam or polyurethane foam sector.

- Given that very short time is available for preparation and implementation of HPMPs, it is necessary that the results of such a demonstration project are available in a timely manner to feed into the HPMP for this sector which is targeted for finalization by mid-2010.

- Considering this background, the critical situation of this Sector and its importance for 2013/2015 compliance, China has strongly asked UNDP to submit this request to the 59th ExCom meeting itself, so that this request can be considered and deliberated by the Committee.

Concepts for the 3 demonstration projects mentioned can be found below.

PROJECT CONCEPT

COUNTRY:	CHINA **IMPLEMENTING AGENCY:** UNDP
PROJECT TITLE:	Preparation of a demonstration project for conversion from HCFC-141b to a combination of Isopropyl Alcohol and Hydrocarbon-based compounds in solvent cleaning applications at Kandelai Co. Ltd.
PROJECT IN CURRENT BUSINESS PLAN:	Yes
SECTOR:	Solvents (SOL)
SUB-SECTOR:	Medical
ODS USE IN SECTOR:	4,145 metric tonnes (2008)*
PROJECT IMPACT:	100 metric tonnes*
	*Preliminary estimates based on ongoing surveys. More accurate estimates would be available in the actual project proposal
PROJECT DURATION:	12 months
PROJECT COST:	US$ 30,000
REQUESTED GRANT:	US$ **30,000**
AGENCY SUPPORT COSTS:	US$ 2,250
TOTAL COST TO MULTILATERAL FUND:	**US$ 32,250**
PROJECT MONITORING MILESTONES:	Included
NATIONAL COORDINATING BODY:	Foreign Economic Cooperation Office, Ministry of Environment Protection

PROJECT SUMMARY

Objective:	This demonstration project will establish the suitability of a combination of Isopropyl Alcohol (IPA) and Hydrocarbon compounds to replace HCFC-141b in cleaning of disposable syringes, injector needles and other implantable medical devices at Kandelai Co. Ltd.
Sector Background:	The Solvents Sector is characterized by emissive use of HCFCs. The major applications include cleaning in the Medical, Metal (Compressors), Metal (Other), Electronics (LCD), Electronics (Precision), Electronics (Other) and Formulated Solvents sub-sectors. The Medical Applications sub-sector is important from a human health perspective and consumed about 1,120 metric tonnes of HCFCs in 2008. This sub-sector is expected to grow at 10% annually until 2012 and at 5% annually thereafter.
Enterprise Background:	Kandelai Co. Ltd. was established in 1987 and is one of the major manufacturers of a range of medical devices. The enterprise was selected for this demonstration project in view of its technical and managerial capacity and readiness to evaluate a suitable alternative technology to replace HCFC-141b use.
Technology:	Several alternative technologies such as HFE-7100, HFC-365mfc, Hydrocarbons, Alcohols, Low molecular weight halohydrocarbons, etc. are available. But in general, there has to be a trade-off between solvent properties, costs, toxicity issues and flammability issues. The enterprise has selected a combination of Isopropyl Alcohol and Hydrocarbon compounds, in view of its zero ODP, negligible GWP, no toxicity and favorable costs. However, flammability is an issue and will need to be addressed through introduction of appropriate safety measures. This technology has not been applied commercially so far in China and only in limited applications outside China.
Costs:	The preliminary estimate of the cost of the demonstration project is about US$ 300,000. This will include development costs for the appropriate solvent mixture, equipment modifications and additional equipment, safety measures, laboratory testing, product trials, evaluation and testing for biocompatibility, drug compatibility, suitability for radiation sterilization, etc.
Funding request:	The present funding request for US$ 30,000 would cover the cost of technical experts for developing the full-fledged proposal.
Impact:	The successful implementation of this demonstration project will provide a safe and cost-effective alternative for enabling replication of this technology in similar applications and enterprises in the Medical Applications sub-sector in China and facilitate HCFC reductions for compliance with the 2013/2015 control targets.

PROJECT CONCEPT

COUNTRY:	CHINA **IMPLEMENTING AGENCY:** UNDP
PROJECT TITLE:	Preparation of a demonstration project for conversion from HCFC-141b to Hydrocarbon-based compounds in solvent cleaning applications at Sunyun Co. Ltd.
PROJECT IN CURRENT BUSINESS PLAN:	Yes
SECTOR:	Solvents (SOL)
SUB-SECTOR:	Medical
ODS USE IN SECTOR:	4,145 metric tonnes (2008)*
PROJECT IMPACT:	20 metric tonnes*
	*Preliminary estimates based on ongoing surveys. More accurate estimates would be available in the actual project proposal
PROJECT DURATION:	12 months
PROJECT COST:	US$ 30,000
REQUESTED GRANT:	US$ **30,000**
AGENCY SUPPORT COSTS:	US$ 2,250
TOTAL COST TO MULTILATERAL FUND:	**US$ 32,250**
PROJECT MONITORING MILESTONES:	Included
NATIONAL COORDINATING BODY:	Foreign Economic Cooperation Office, Ministry of Environment Protection

PROJECT SUMMARY

Objective:	This demonstration project will establish the suitability of Hydrocarbon compounds to replace HCFC-141b in cleaning of disposable syringes, injector needles and other implantable medical devices at Sunyun Co. Ltd.
Sector Background:	The Solvents Sector is characterized by emissive use of HCFCs. The major applications include cleaning in the Medical, Metal (Compressors), Metal (Other), Electronics (LCD), Electronics (Precision), Electronics (Other) and Formulated Solvents sub-sectors. The Medical Applications sub-sector is important from a human health perspective and consumed about 1,120 metric tonnes of HCFCs in 2008. This sub-sector is expected to grow at 10% annually until 2012 and at 5% annually thereafter.
Enterprise Background:	Sunyun Co. Ltd. was established in 1988 and is one of the major manufacturers of a range of medical devices. The enterprise was selected for this demonstration project in view of its technical and managerial capacity and readiness to evaluate a suitable alternative technology to replace HCFC-141b use.
Technology:	Several alternative technologies such as HFE-7100, HFC-365mfc, Hydrocarbons, Alcohols, Low molecular weight halohydrocarbons, etc. are available. But in general, there has to be a trade-off between solvent properties, costs, toxicity issues and flammability issues. The enterprise has selected Hydrocarbon compounds, in view of its zero ODP, negligible GWP, no toxicity and favorable costs. However, flammability is an issue and will need to be addressed through introduction of appropriate safety measures. This technology has not been applied commercially so far in China and only in limited applications outside China.
Costs:	The preliminary estimate of the cost of the demonstration project is about US$ 150,000. This will include development costs for the appropriate solvent mixture, equipment modifications and additional equipment, safety measures, laboratory testing, product trials and evaluation.
Funding request:	The present funding request for US$ 30,000 would cover the cost of technical experts for developing the full-fledged proposal.
Impact:	The successful implementation of this demonstration project will provide a safe and cost-effective alternative for enabling replication of this technology in similar applications and enterprises in the Medical Applications sub-sector in China and facilitate HCFC reductions for compliance with the 2013/2015 control targets.

PROJECT CONCEPT

COUNTRY:	CHINA	**IMPLEMENTING AGENCY:**	UNDP
PROJECT TITLE:	Preparation of a demonstration project for conversion from HCFC-142b+HCFC-22 technology to Methyl Formate based compounds in the manufacture of XPS Foam at Feininger (Nanjing) Energy Saving Technology Co. Ltd.		
PROJECT IN CURRENT BUSINESS PLAN:	Yes		
SECTOR:	XPS Foams		
SUB-SECTOR:	N/A		
ODS USE IN SECTOR:	30,000 metric tonnes (2008)*		
PROJECT IMPACT:	510 metric tonnes*		
	*Preliminary estimates based on ongoing surveys. More accurate estimates would be available in the actual project proposal		
PROJECT DURATION:	12 months		
PROJECT COST:	US$ 80,000		
REQUESTED GRANT:	US$ **80,000**		
AGENCY SUPPORT COSTS:	US$ 6,000		
TOTAL COST TO MULTILATERAL FUND:	**US$ 86,000**		
PROJECT MONITORING MILESTONES:	Included		
NATIONAL COORDINATING BODY:	Foreign Economic Cooperation Office, Ministry of Environment Protection		

PROJECT SUMMARY

Objective: This demonstration project will establish the suitability of Methyl Formate-based compounds to replace HCFC-142b+HCFC-141b as blowing agent in the manufacture of XPS foam at Feininger (Nanjing) Energy Saving Technology Co. Ltd.

Sector Background: The XPS foam sector in China has experienced remarkable growth in the past several years. Due to the steep growth in the construction industry, demand for XPS foam boards for building insulation has increased significantly, ascribed also to enhanced energy-efficiency standards. The 2008 estimated HCFC consumption in the sector is about 30,000 metric tonnes. Based on information from ongoing surveys, there are about 20 indigenous manufacturers of XPS extrusion lines and an estimated 500 manufacturers of XPS foam in the sector, most of which are small/medium-sized. Another defining characteristic of this sector is that most of the polystyrene raw material used by SMEs in XPS foam manufacturing originates from recycled polystyrene scrap of unknown composition/contaminants. Recent zero-ODP XPS foam technologies introduced by multinational corporations are expensive and have been closely guarded in terms of intellectual property. Due to this, these technologies are not cost-effectively accessible for SMEs and may not be compatible to operate with a high proportion of recycled polystyrene scrap. It would be a challenge for the SMEs to comply with the enhanced energy-efficiency standards if they have to convert to non-ODS technologies. There is thus, a clear and present need for a cost-effective and environmentally safe technology alternative for SMEs, in order to remain sustainable and maintain product quality.

Enterprise Background: Feininger (Nanjing) Energy Saving Technology Co. Ltd. was established in 2002 and is one of the major manufacturers of XPS extrusion lines, XPS foam recycling machines and associated equipment and XPS foam. The enterprise manufactures XPS foam boards of 20 mm to 120 mm thickness. In 2008, the estimated production level of XPS foam was about 140,000 m^3. Due to the diversity of XPS foam-related products, this enterprise is particularly suited to be a conduit for introduction and transfer of technology.

Technology: Several alternative zero-ODP technologies such as HFCs, CO_2, Hydrocarbons, etc. with additives and co-blowing agents are available. However, XPS technologies involve a high level of process optimization and these new technologies are significantly expensive and/or involve intellectual property rights controlled by a small number of multinational corporations. Introduction of these technologies is a difficult challenge for SMEs. The selected technology, namely, Methyl Formate-based compounds, promises to be an optimal solution for SMEs. This technology has not been employed in developed countries or by multinationals elsewhere and is not subject to intellectual property rights limitations. Apart from some flammability issues associated with Methyl Formate, this technology is zero-ODP, negligible GWP, no toxicity and negligible occupational safety issues.

Technology (cont'd):	The enterprise has selected this technology based on the above considerations. Due to the unique situation of the enterprise as a manufacturer of XPS foam as well as processing equipment, the development and demonstration of this technology would be particularly facilitated cost-effectively. As an equipment manufacturer, this enterprise would be in a position to transfer this technology to a potentially large number of SMEs, who would be able to make XPS foam without using ODS-based blowing agents, while still being able to maintain the quality of products consistent with enhanced standards and remain techno-economically sustainable and viable. The technology will be provided through UNDP by internationally renowned XPS foam experts/firms.
Costs:	The preliminary estimate of the cost of this demonstration project is about US$ 450,000 at this enterprise and an additional about US$ 600,000 for technology transfer and conversion at minimum three downstream XPS foam manufacturers. This will include development costs for the appropriate process technology with Methyl Formate-based compounds and co-blowing agents as needed, equipment modifications and additional equipment, safety measures, laboratory testing, product trials, evaluation and in addition, development of extrusion line and related equipment designs and implementation, suited for this technology.
Funding request:	The present funding request for US$ 80,000 would cover the cost of national and international technical experts and related expenses for developing the full-fledged proposal. The final proposal would include at least three downstream XPS foam manufacturers, who would use the technology developed under the project, to effect conversion.
Impact:	The successful implementation of this demonstration project will provide an environmentally safe and cost-effective alternative for enabling replication of this technology in similar applications and SMEs in the XPS foam sector in China and facilitate HCFC reductions for compliance with the 2013/2015 control targets. It will also significantly contribute to the viability of SMEs in this sector, avoid industrial obsolescence and dislocation and maintain sustainable livelihoods dependent on employment in this sector.