



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

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COMITÉ EJECUTIVO DEL FONDO MULTILATERAL
PARA LA APLICACIÓN DEL
PROTOCOLO DE MONTREAL
Cuadragésima primera reunión
Montreal, 17 al 19 de diciembre de 2003

PROPUESTAS DE PROYECTOS: INDONESIA

Este documento consta de los comentarios y recomendaciones de la Secretaría del Fondo sobre las siguientes propuestas de proyectos:

Fumigantes

- Eliminación del uso de metilbromuro en almacenamiento de granos Canadá

Refrigeración

- Plan de eliminación sectorial de CFC en el sector de refrigeración (fabricación) (saldo de la segunda partida) PNUD
- Plan de eliminación sectorial de CFC en el sector de refrigeración (servicio de Aire Acondicionado de vehículos): programa anual de 2004 Banco Mundial
- Plan de eliminación sectorial de CFC en el sector de refrigeración (servicio) (segunda partida) PNUD

HOJA DE EVALUACIÓN DE PROYECTO INDONESIA

SECTOR: Fumigantes

Uso de SAO en el sector (excluyendo QPS): 37,8 toneladas PAO

Umbrales de relación de costo
a eficacia en el subsector:

n/d

Título del proyecto:

- a) Eliminación del uso de metilbromuro en almacenamiento de granos

Datos del proyecto	Sector fumigantes
Consumo de la empresa (toneladas PAO)	37,80
Impacto del proyecto (toneladas PAO)	37,80
Duración del proyecto (meses)	
Suma inicial solicitada (\$EUA)	433.620
Costo final del proyecto (\$EUA):	
Costo adicional de capital (a)	394.200
Costo de imprevistos (b)	39.420
Costo adicionales de explotación (c)	
Costo total del proyecto (a+b+c)	433.620
Propiedad local (%)	
Componente de exportación (%)	
Monto solicitado (\$EUA)	433.620
Costo a eficacia (\$EUA/kg.)	11,47
¿Financiación de contraparte confirmada?	
Organismo nacional de coordinación	Ministerio de Medio Ambiente
Organismo de ejecución	Canadá

Recomendaciones de la Secretaría	
Monto recomendado (\$EUA)	
Impacto del proyecto (toneladas PAO)	
Costo a eficacia (\$EUA/kg)	
Gastos de apoyo del organismo de ejecución (\$EUA)	
Costo total del Fondo Multilateral (\$EUA)	

DESCRIPCIÓN DEL PROYECTO

1. El Gobierno de Canadá ha presentado, a título de cooperación bilateral, un proyecto de eliminación de 37,8 toneladas PAO de metilbromuro (MB) utilizado para fumigación de arroz almacenado en Indonesia. Esto representa el consumo total de usos controlados de MB en el país. La línea de base para cumplimiento de MB es de 135,6 toneladas PAO.
2. Indonesia produce aproximadamente 30 millones de toneladas de arroz anuales. Parte de estos granos (1,23 millones de toneladas) son almacenados por el Organismo Nacional de Logística (BULOG) hasta por unos 9 meses. BULOG fumiga los granos con MB y fosfina (los granos almacenados) además de diez fumigadores privados. Solamente se realizan las fumigaciones si se detecta infestación de los granos.
3. MB es casi el único fumigante utilizado por las empresas privadas de fumigación. El uso escaso de fosfina parece que se debe al elevado precio de fosfato de aluminio en Indonesia, así como a la longitud de la fumigación y a la gestión de los polvos residuales.
4. En el proyecto se propone sustituir todos los usos controlados de MB en aplicaciones de almacenamiento por la aplicación de fosfina y mediante un sistema integrado de gestión de plagas para almacenamiento (ISPM).
5. En el proyecto se incluye la aplicación de un sistema ISPM, la capacitación de fumigadores en el uso de tabletas de fosfina y el suministro de herramientas básicas y equipo para la aplicación adecuada de fosfina (tales como medidores de fosfina, líneas de muestreo de gas y máscaras de gas).
6. En el proyecto se incluye también un programa de capacitación (seis instructores) sobre biología de insectos relacionada con la higiene y el uso apropiado de equipo y métodos de aplicación de fosfina. Los instructores capacitarán a su vez a determinadas personas en las empresas de fumigación. Se aplicará el sistema ISPM mediante talleres y manuales explicando lo relativo a las cantidades de arroz que se pierden debido a los insectos. BULOG será el organismo de coordinación para la capacitación en ISPM y proporcionará los materiales y el equipo requeridos para este fin.
7. En el programa se incluirá también la redacción e imposición de medidas de política, legislativas y normativas respecto a la importación y uso de MB. Estas políticas son prerequisites para la eliminación con éxito de MB y estarán establecidas para asegurar que no se retorne al uso de MB una vez hayan sido introducidas con éxito las medidas de alternativa.
8. Se ha estimado que el costo total del proyecto será de \$EUA 433 620. El proyecto se completará en un plazo de cuatro años.

COMENTARIOS Y RECOMENDACIÓN DE LA SECRETARÍA

COMENTARIOS

9. El Gobierno de Canadá presentó por primera vez la propuesta de proyecto para someterla a la consideración del Comité Ejecutivo en su 40ª reunión (UNEP/OzL.Pro/ExCom/40/37). En esa ocasión, se informó al Comité Ejecutivo que el consumo de MB notificado a la Secretaría del Ozono para 2001 (75,6 toneladas PAO) era inferior a la línea de cumplimiento para 2005 de Indonesia (108,5 toneladas PAO). Además, el Gobierno de Canadá informó que en el consumo de MB utilizado en el cálculo de la línea de base para Indonesia se incluían usos para aplicaciones QPS. Puesto que no se había recibido la comunicación oficial del Gobierno de Indonesia confirmando que los datos corregidos habían sido notificados a la Secretaría del Ozono, el Gobierno de Canadá retiró el proyecto.

10. El 23 de septiembre de 2003, el Gobierno de Indonesia envió una comunicación a la Secretaría del Ozono indicando que en el consumo de MB notificado para los años 1995-1998 se incluía el consumo para aplicaciones QPS y no-QPS. Respecto a ese período, el consumo de MB en usos controlados era de 40,7 toneladas PAO. En base a esta comunicación, el Gobierno de Canadá somete a la consideración de la 41ª reunión del Comité Ejecutivo una propuesta revisada de proyecto.

11. Más tarde, el Gobierno de Canadá informó a la Secretaría que el Comité de Aplicación en su 31ª reunión de noviembre de 2003, había considerado la solicitud del Gobierno de Indonesia, junto con solicitudes más complejas de otros países del Artículo 5, de aumentar el consumo de línea de base. El Comité de Aplicación no presentó ninguna recomendación acerca de la solicitud de Indonesia. El Gobierno de Canadá “opina que el hecho de que el Comité de Aplicación no pudiera aprobar este año la solicitud de un cambio en los datos de línea de base de Indonesia no impediría que el Comité Ejecutivo considerara este proyecto, dado que Indonesia tendrá que reducir su consumo de MB para aplicaciones no-QPS por lo menos en el 20 por ciento al 2005. Si el Comité de Aplicación aprobara la solicitud de Indonesia de cambiar su línea de base de MB a 40,7 toneladas PAO, sería demasiado tarde para ejecutar en esa fecha el proyecto con suficiente antelación para que Indonesia cumpla con la reducción del 20 por ciento. Puesto que obviamente la línea de base anteriormente notificada para Indonesia incluye, por error, el consumo para aplicaciones QPS y que Indonesia ha proporcionado ahora oficialmente la línea de base correcta, restando tal consumo del período 1995-1998, Indonesia necesita un proyecto de eliminación. Por consiguiente, Canadá agradecería que la Secretaría sometiera esta propuesta de proyecto a la consideración del Comité Ejecutivo”.

12. La tecnología de alternativa propuesta en el proyecto presentado a la 40ª reunión, era con gas de fosfina en bombonas, junto con un sistema ISPM. La relación de costo a eficacia del proyecto era de \$EUA 22,21/kg. A este respecto, la Secretaría ponía en duda la sostenibilidad a largo plazo y la relación de costo a eficacia de la tecnología seleccionada comparándola con el uso de fosfina en tabletas (una tecnología de sustitución demostrada para fumigación de MB, fácil de aplicar y que no requiere piezas importantes de equipo).

13. Después de la 40ª reunión, el Gobierno de Canadá revisó la propuesta de proyecto teniendo en cuenta los comentarios y observaciones de la Secretaría del Fondo. Se preparó el proyecto revisado, que se presenta a la 41ª reunión, como programa de asistencia técnica en lugar de ser un proyecto de inversión, a fin de sustituir el uso de MB por tabletas de fosfina (en lugar de gas de fosfina en bombonas) y un sistema ISPM.

RECOMENDACIÓN

14. La Secretaría del Fondo y el Gobierno de Canadá han convenido en el costo total del proyecto (\$EUA 350 000). En base a las consideraciones mencionadas, el Comité Ejecutivo pudiera considerar la aprobación del proyecto para Indonesia.

HOJA DE EVALUACIÓN DE PROYECTOS INDONESIA

SECTOR: Refrigeración Uso de SAO en el sector (2002): 3 402,0 toneladas PAO

Umbrales de relación de costo
a eficacia en el subsector: N/D

Título de los proyectos:

- a) Plan de eliminación sectorial de CFC en el sector de refrigeración (fabricación) (saldo de la segunda partida)
- b) Plan de eliminación sectorial de CFC en el sector de refrigeración (servicio Aire acondicionado de vehículos): programa anual de 2004
- c) Plan de eliminación sectorial de CFC en el sector de refrigeración (sector de servicio) (segunda partida)

Datos del proyecto	Fabricación	Aire Acondicionado de vehículos	Servicio
Consumo de la empresa (toneladas PAO)		3.218*	
Impacto del proyecto (toneladas PAO)	300	200	110
Duración del proyecto (meses)	12	12	12
Suma inicial solicitada (\$EUA)	1.600.000	1.347.300	1.805.987
Costo final del proyecto (\$EUA):			
Costo adicional de capital a)			
Costo de imprevistos b)			
Costo adicionales de explotación c)			
Costo total del proyecto (a+b+c)	1.600.000	1.347.300	1.805.987
Propiedad local (%)			
Componente de exportación (%)			
Monto solicitado (\$EUA)	1.600.000	1.347.300	1.805.987
Costo a eficacia (\$EUA/kg.)			
¿Financiación de contraparte confirmada?			
Organismo nacional de coordinación		Ministerio de Medio Ambiente	
Organismo de ejecución	PNUD	Banco Mundial	PNUD

Recomendaciones de la Secretaría	
Monto recomendado (\$EUA)	
Impacto del proyecto (toneladas PAO)	
Costo a eficacia (\$EUA/kg)	
Gastos de apoyo del organismo de ejecución (\$EUA)	
Costo total del Fondo Multilateral (\$EUA)	

* En el límite de consumo de CFC para 2003 del sector de refrigeración se combinan los subsectores de fabricación, equipo de aire acondicionado de vehículos (Aire acondicionado de vehículos) y servicio.

DESCRIPCIÓN DEL PROYECTO

Antecedentes

15. En nombre del Gobierno de Indonesia, el PNUD y el Banco Mundial someten a la consideración del Comité Ejecutivo los informes anuales sobre la marcha de las actividades de 2003 en la ejecución del Plan sectorial de fabricación de refrigeración comercial y el Plan sectorial de servicio de refrigeración (PNUD) así como el Plan sectorial de servicio de aire acondicionado de vehículos (Banco Mundial) conducentes a la eliminación de SAO en el sector de refrigeración de Indonesia, junto con los programas de ejecución propuestos para 2004. En los informes sobre la marcha de las actividades se incluye una reseña del progreso logrado desde julio de 2002 hasta 2004. En los informes sobre la marcha de las actividades se incluye una reseña del progreso logrado desde julio de 2002 en el plan sectorial de fabricación de refrigeración comercial y desde diciembre de 2002 para los planes sectoriales de servicio de refrigeración y de servicio a Aire acondicionado de vehículos, un resumen de las actividades realizadas hasta la fecha en el marco del plan de ejecución para 2003 y los tres programas de ejecución anuales correspondientes a 2004 junto con las solicitudes de entrega de las partidas respectivas de fondos.

16. El Comité Ejecutivo en su 37^a reunión aprobó un plan sectorial de eliminación de CFC en el subsector de fabricación de refrigeración de Indonesia por ejecutar por el PNUD. En la misma reunión, se aprobó la primera partida de fondos por un valor de \$EUA 1 288 000. El Comité Ejecutivo aprobó en la 38^a reunión un nuevo acuerdo que se extiende a la eliminación total de CFC en el sector de refrigeración de Indonesia a un nivel de financiación de \$EUA 15 627 300. Al nuevo acuerdo se incorporaba el ya aprobado en la 37^a reunión al cual se añadieron los planes sectoriales para los subsectores de servicio de refrigeración y Aire Acondicionado de vehículos.

17. En la 40^a reunión, el Comité Ejecutivo aprobó un adelanto de la segunda partida para que el PNUD continuara con la ejecución del programa anual, correspondiente a 2002-2003, del plan sectorial de fabricación de refrigeración comercial. Se requerían estos fondos para suplir la primera partida recibida por el PNUD en 2002 que ya había sido plenamente comprometida. El adelanto estaba compensado frente a la partida correspondiente a 2003.

Informe sobre la marcha de las actividades

18. Se adjuntan al presente documento los informes sobre la marcha de las actividades correspondientes a 2002. Se muestra a continuación, en relación con los tres planes de eliminación, un resumen del progreso logrado hasta la fecha.

Plan sectorial de fabricación de refrigeración comercial (PNUD)

Total de fondos recibidos: \$EUA 1 888 000;

Objetivo de eliminación para 2002: 0,0 toneladas PAO;

Objetivo de eliminación para 2003: 90 toneladas PAO.

- El PNUD y el Ministerio de Medio Ambiente se pusieron de acuerdo sobre el mecanismo operacional para la ejecución en el que se esbozaban las funciones y responsabilidades de

los diversos interesados directos; todas las Partes firmaron por completo el documento de proyecto en primera fase del PNUD en mayo de 2003;

- El PNUD preparó las especificaciones técnicas del equipo por adquirir para el primer grupo de empresas en febrero de 2003.
- Se completó en septiembre de 2003 el proceso de finalizar los pedidos para los vendedores y la compra. El total de fondos comprometidos para la adquisición correspondiente al primer grupo de empresas participantes se elevaba a una suma aproximada de \$EUA 1,6 millones. La instalación y la puesta en servicio del equipo a principios de 2004 llevarán al logro de los objetivos de eliminación de aproximadamente 300 toneladas PAO a finales de 2004.
- Se concluyó en 2003 la verificación de las líneas de base en la primera serie de empresas. Se ha iniciado y está continuando la verificación de las empresas correspondientes a los grupos futuros para participación y adquisición.
- El Ministerio de Medio Ambiente ha continuado la aplicación e imposición de la reglamentación del Gobierno de Indonesia relacionada con el uso de SAO.
- Se celebraron dos cursos prácticos en enero de 2003 para empresas destinatarias, interesados directos del Gobierno e instituciones y encargados de la adopción de decisiones.
- Mediante la terminación de los seis proyectos en curso al mes de noviembre de 2003, se lograría el objetivo de eliminación anual de CFC para 2003 de 90 toneladas PAO.

Plan sectorial de servicio de refrigeración (PNUD)

Total de fondos recibidos: \$EUA 2 196 758;

Objetivo de eliminación para 2002: 0,0 toneladas PAO;

Objetivo de eliminación para 2003: 0,0 toneladas PAO.

- El PNUD recibió en diciembre de 2002 la primera partida de los \$EUA 2 196 758. El PNUD y el Ministerio de Medio Ambiente se pusieron de acuerdo sobre el mecanismo operativo para la ejecución en el que se esbozaban las funciones y responsabilidades de los diversos interesados directos. Todas las Partes firmaron plenamente en agosto de 2003 el documento de proyecto en primera fase del PNUD.
- El programa de recuperación y reciclaje estaba destinado y fue iniciado para una participación de aproximadamente 385 establecimientos de servicio durante 2003. La primera lista de aproximadamente 170 establecimientos de servicio fue aprobada provisionalmente por el Ministerio de Medio Ambiente en septiembre de 2003 respecto de la participación en el programa de recuperación y reciclaje.
- Se realizó en el período de mayo-julio de 2003 un estudio de los establecimientos de capacitación. Se identificaron aproximadamente 134 establecimientos de capacitación que participarían en el programa de recuperación y reciclaje mediante el suministro de equipo de demostración para recuperación y reciclaje.
- El PNUD preparó las especificaciones técnicas del equipo por adquirir para el primer grupo de empresas en octubre de 2003. Se prevé completar en noviembre de 2003 las primeras etapas de adquisición, tales como evaluación de licitaciones, aprobaciones del Comité de adquisición del PNUD y terminación de la lista de vendedores.

- Una vez completadas todas las actividades en el primero y segundo grupos de establecimientos de servicio y capacitación, que se extiende a un total de 920 talleres de servicio, se prevé que la reducción de consumo de CFC para servicio será aproximadamente de 220 toneladas PAO en 2004 y 2005.

Plan sectorial de servicio de aire acondicionado de vehículos

Total de fondos recibidos: \$EUA 1 369 800;

Objetivo de eliminación para 2002: 0,0 toneladas PAO;

Objetivo de eliminación para 2003: 220 toneladas PAO.

- Se organizó la gestión del subsector de servicio Aire acondicionado de vehículos junto con los subsectores de fabricación y de servicio de refrigeración mediante la formulación de un plan de gestión del sector y una dependencia de coordinación (SPMCU) constituida por un gestor de programa y tres asistentes de operaciones, cada uno de los cuales supervisaría la ejecución del sector correspondiente, a saber, fabricación de refrigeración, servicio de refrigeración y Aire acondicionado de vehículos. Se contrató al personal de la dependencia SPMCU y esta dependencia entró en funciones en esa fecha.
- Las actividades a nivel de empresas: hasta la fecha, se han visitado y examinado 260 establecimientos de talleres y se firmaron contratos con 216 de ellos. En estas 216 empresas el consumo acumulado se eleva a 254,5 toneladas PAO.
- Hubo demoras en la aprobación del presupuesto por parte del Ministerio de Medio Ambiente. Después de resolverse lo relativo a las demoras, está en la actualidad realizándose la adquisición del equipo de reciclaje.
- Se fusionaron las actividades de ejecución de políticas y reglamentación con las de los otros subsectores de refrigeración puesto que las políticas y la reglamentación han de integrarse a la totalidad del programa. El Ministerio de Medio Ambiente continuó la ejecución e imposición de la reglamentación del Gobierno de Indonesia relativa a la utilización de SAO.
- La mejora del sistema de supervisión y control de importación y de exportación de SAO en Indonesia es el instrumento principal para satisfacer los acuerdos de desempeño en relación con los planes sectoriales y esto asegurará que Indonesia satisfará sus obligaciones de notificación en virtud del Protocolo de Montreal. Indonesia está en trámites de establecer un sistema de cuotas realista que corresponda a los actuales importadores oficiosos y a la demanda de SAO en el mercado que no excede del consumo total de SAO permitido en virtud de los planes sectoriales.

Objetivos de reducción de CFC

19. Los objetivos de reducción de CFC para 2003, según lo indicado en los tres planes sectoriales, se reproducen en la tabla siguiente:

	2002	2003
Límite de consumo anual de CFC en el subsector de fabricación de refrigeración	1.231	1.231
Objetivo anual de eliminación en el subsector de fabricación de refrigeración (PNUD): reducción con los proyectos en curso	0	90
Objetivo anual de eliminación en el subsector de fabricación de refrigeración (PNUD): reducción en el plan	0	0
El límite anual de consumo de CFC en el subsector de servicio Aire acondicionado de vehículos	915	915
Objetivo anual de eliminación en el subsector de servicio de Aire acondicionado de vehículos (Banco Mundial): reducción en el plan	0	220
Límite de consumo anual de CFC en el subsector de servicio de refrigeración	1.072	1.072
Objetivo anual de eliminación en el subsector de fabricación de refrigeración (PNUD): reducción en el plan	0	0
Total de límite de consumo de CFC anual en el sector de refrigeración	3.218	3.218
Total de eliminación de PAO en el sector de refrigeración	0	310

20. La reducción del límite anual de consumo establecido para 2003 de 3 218 toneladas PAO, mediante la eliminación total de 310 toneladas PAO, asegurará que el límite de consumo de CFC en 2004 no excedería de 2 908 toneladas PAO.

Programas anuales de ejecución para 2004 y fondos solicitados

21. Se incluyen en los informes de los organismos, adjuntos al presente documento, los programas anuales de ejecución para 2004 y los correspondientes presupuestos.

Plan sectorial de fabricación de refrigeración

- El programa anual de ejecución para 2004 asegurará la eliminación de aproximadamente 300 toneladas PAO de CFC una vez completado en el año 2004 y de aproximadamente 150 toneladas PAO en el año 2005.
- Se aprobó en la 40ª reunión del Comité Ejecutivo en julio de 2003 un adelanto de \$EUA 600 000 de la segunda partida de \$EUA 2 200 000 y se entregaron al PNUD en agosto de 2003. Según el calendario de desembolsos de la tabla 1 del Acuerdo concertado entre el Comité Ejecutivo y el Gobierno de Indonesia, se solicita que el Comité Ejecutivo

apruebe el programa anual de ejecución para 2004 y entregue los fondos remanentes para 2003 de \$EUA 1 600 000 con los correspondientes gastos de apoyo del organismo de \$EUA 141 100.

Plan sectorial para servicios de refrigeración

- El programa anual de ejecución para 2004 asegurará la eliminación de aproximadamente 200 toneladas PAO de CFC
- En función del calendario de desembolsos que figura en la tabla 1 del Acuerdo concertado entre el Comité Ejecutivo y el Gobierno de Indonesia, se solicita que el Comité Ejecutivo apruebe el programa anual de ejecución para 2004 y la entrega de los fondos para 2003 de \$EUA 1 805 987 con los correspondientes gastos de apoyo del organismo de \$EUA 160 939.

Plan sectorial del servicio Aire Acondicionado de vehículos

- El programa anual de ejecución para 2004 asegurará la eliminación de 110 toneladas PAO.
- En función del calendario de desembolsos que figura en al tabla 1 del Acuerdo concertado entre el Comité Ejecutivo y el Gobierno de Indonesia, se solicita que el Comité Ejecutivo apruebe el programa anual de ejecución para 2004 y la entrega de los fondos para 2003 de \$EUA 1 347 300 con los correspondientes gastos de apoyo del organismo de \$EUA 119 937.

22. La ejecución de los tres programas anuales de ejecución llevarán a una eliminación total de CFC de 610 toneladas PAO que se restarán del límite de consumo anual para 2004.

COMENTARIOS Y RECOMENDACIONES DE LA SECRETARÍA

COMENTARIOS

Plan sectorial de fabricación de refrigeración comercial

23. La Secretaría pidió al PNUD que confirmara lo relativo a la fecha de terminación de seis proyectos de refrigeración comercial en curso que han de contribuir a la reducción del consumo de CFC de 90 toneladas PAO. El PNUD confirmó que estos proyectos habían sido completados a principios de noviembre de 2003 y se proporcionará, según corresponda, la documentación pertinente.

Plan sectorial para servicio de refrigeración

24. Se estableció el objetivo de eliminación de CFC para 2004 por un valor de 200 toneladas PAO en el plan sectorial para servicio. La mayor parte de esta reducción (140 toneladas PAO) se supone que ha de lograrse mediante la adquisición e instalación de 435 conjuntos de equipo de recuperación y reciclaje. Se logrará la reducción restante de CFC mediante el cambio de equipo (40 toneladas PAO) y capacitación (20 toneladas PAO). Se estimaba que el impacto total de la

introducción del sistema de recuperación y reciclaje en Indonesia sería de 213 toneladas PAO (Sección 4.1.1 del Plan). La mayoría de esta suma evaluada de refrigerante correspondía al subsector de refrigeración doméstica (145 toneladas PAO). El PNUD proyecta utilizar aproximadamente \$EUA 3,0 millones de la primera entrega aprobada y de la partida solicitada para 2004 para la adquisición de 435 conjuntos de equipo de recuperación y reciclaje. Esto representa aproximadamente el 63% del costo total del plan.

25. Se informó al PNUD que la Secretaría había estado recibiendo continuamente datos mediante los informes sobre la marcha de las actividades, los informes de terminación de proyectos, los informes y presentaciones de las dependencias nacionales del ozono (NOU) en las reuniones de red y de otras fuentes, indicando que eran limitados las posibilidades y los resultados de las operaciones de recuperación y reciclaje. Las cantidades de CFC recuperadas parecen estar uniformemente por debajo de los pronósticos que figuran en los correspondientes documentos de proyectos. Es muy pequeña la cantidad de CFC, procesados en los centros de reciclaje, para reutilización.

26. La Secretaría señaló al PNUD que se había realizado una misión de comprobación de hechos a Indonesia como parte de un estudio en los sectores de refrigeración doméstica y comercial a cargo del PNUMA. En cuanto a la recuperación y reciclaje, el informe indicaba que “la recuperación de CFC a partir, por ejemplo, de los sistemas de refrigeradores domésticos no se consideraba ser un negocio muy rentable. La carga del sistema es tan escasa que la mayoría del refrigerante queda en los tubos y nunca llega a la bombona de almacenamiento. La mayoría del equipo que se presenta para servicio ya está vacío, por razón de las fugas. La recuperación y reciclaje no es una cuestión y de momento tampoco se estimula ni alienta por parte del gobierno.”

27. En vista de esta información, la Secretaría indicó al PNUD que fuera precavido en el sentido de que si la financiación comprometida para equipo y actividades de recuperación y reciclaje y la eliminación pronosticada no se lograran, podrían ponerse en peligro los objetivos de cumplimiento del país. Sería beneficiosa una evaluación más completa y realista de los depósitos de refrigerantes en el equipo de refrigeración con refrigerantes disponibles para recuperación y reciclaje y de la puesta en práctica de las operaciones de recuperación y reciclaje. Pudiera ser necesario incorporar a la ejecución un enfoque más flexible.

28. La Secretaría señaló que en su Decisión 22/23, el Comité Ejecutivo decidió “Instar a los Organismos de ejecución a que colaboraran con los países interesados para asegurarse de que existían los prerequisites de éxito antes de que se llevaran a la practica proyectos de recuperación y de reciclaje.”

29. El PNUD respondió que era necesario examinar la cuestión de recuperación y reciclaje desde la perspectiva de la disponibilidad de CFC a costos razonables. Se preveía que la disponibilidad de CFC disminuirá progresivamente y que aumentarán progresivamente los precios de CFC. La disponibilidad reducida de CFC y el control de utilización de CFC mediante diversos instrumentos de política y reglamentación mejorarán el éxito de la recuperación y reciclaje en Indonesia. El Gobierno examinará esta cuestión antes de expedir los pedidos de compra que se prevé tengan lugar a finales de 2003, y realizará los ajustes necesarios según lo justifiquen la situación y las condiciones. En cuanto al sistema de otorgamiento de licencias de

importación, el PNUD informó que el Ministerio de Medio Ambiente de Indonesia promulgó un decreto en 2002 por el que solamente se permite que “los importadores registrados” importen CFC. Se prevé que estén establecidas en un plazo de 1 a 2 años las demás políticas y reglamentaciones auxiliares.

Plan sectorial de servicio de aire acondicionado de vehículos

30. El objetivo de eliminación anual para 2003 en el sector Aire acondicionado de vehículos estableció por un valor de 220 toneladas PAO. La Secretaría señaló que se había demorado en 2003 la adquisición de equipo de recuperación y reciclaje. Dado el tiempo necesario para la instalación y capacitación del personal, se prevé que el equipo entre en funciones en 2004. La Secretaría indicó al Banco Mundial que en tales circunstancias, está en riesgo el logro del objetivo establecido de eliminación para 2003. El Banco Mundial notificó que la reducción de consumo de CFC en el sector de aire acondicionado de vehículos representa solamente una parte del objetivo total de reducción en todo el sector de refrigeración y que el consumo de CFC de 2003 en el sector solamente puede ser verificado en 2004.

Límite de consumo de CFC

31. El Gobierno de Indonesia informó a la Secretaría que el consumo correspondiente a 2002 en el sector de la refrigeración era de 3 402 toneladas PAO. Según el Acuerdo, no hay ningún límite de consumo de CFC en 2002 en el sector de refrigeración de Indonesia. El primer objetivo de control es el límite de consumo de CFC correspondiente a 2003 establecido al nivel de 3 218 toneladas PAO. Se notificó y verificó en 2004 este consumo. El objetivo total de reducción correspondiente a los tres planes sectoriales es de 310 toneladas PAO en 2003. El logro de este objetivo hará que el límite de consumo de CFC llegue a 2 908 toneladas PAO en 2004.

Auditoría anual independiente

32. En las modalidades de ejecución esbozadas en los planes sectoriales se estipula que los organismos de ejecución realizarían una auditoría anual independiente para verificar los niveles de consumo de CFC, incluidas verificaciones puntuales y visitas aleatorias. En el componente de apoyo a políticas y gestión se incluye además el establecimiento y funcionamiento de un mecanismo descentralizado para supervisar y evaluar los resultados de los planes, junto con órganos provinciales normativos de medio ambiente para asegurar la sostenibilidad. La Secretaría señaló a la atención del PNUD y del Banco Mundial la importancia de establecer oportunamente en Indonesia un sistema independiente de auditorías y que en los programas anuales de ejecución correspondientes a 2004 no se incluían las medidas necesarias. El PNUD respondió que para poder verificar el límite de consumo de CFC establecido para 2003 y para asegurar que se habían realizado las correspondientes actividades, el PNUD y el Ministerio de Medio Ambiente subcontratarán a una entidad independiente que realice la verificación del nivel de consumo nacional en el sector de la refrigeración por conducto de auditorías de los datos de producción, importación y exportación en 2004. Se verificará si se han realizado las actividades estipuladas en el programa anual para 2003. El Banco Mundial indicó también que el consumo de CFC 12 en el sector de Aire acondicionado de vehículos a nivel nacional sería verificado independiente mediante un sistema mejorado de supervisión y control de la importación y

exportación de SAO en Indonesia. Aunque los organismos habían proporcionado un esbozo general de su intención de emprender auditorías independientes, la Secretaría considera que los informes futuros deberían proporcionar una explicación más completa de las modalidades por establecer para verificar los niveles de consumo.

RECOMENDACIÓN

33. El Comité Ejecutivo pudiera considerar la aprobación de las partidas de financiación para la ejecución de los programas anuales para 2004 en el marco de los planes sectoriales para fabricación de refrigeración, servicio de refrigeración y servicio de Aire acondicionado de vehículos que figuran en el Acuerdo concertado en la 38^a reunión. Se presentan a continuación las cantidades solicitadas junto con los correspondientes costos de apoyo de los organismos.

Proyecto	Financiación de proyectos (\$EUA)	Costos de apoyo (\$EUA)
Plan sectorial de fabricación de refrigeración (PNUD)	1.600.000	141.100
Plan sectorial para servicio de aire acondicionado de vehículos (Banco Mundial)	1.347.300	119.937
Plan sectorial para servicio de refrigeración (PNUD)	1.805.987	160.939

**SECTOR PHASE-OUT PLAN FOR ELIMINATION OF CFCs IN THE REFRIGERATION
(MANUFACTURING) SECTOR IN INDONESIA**

**REPORT ON THE IMPLEMENTATION OF CY 2002 - 2003 ANNUAL PROGRAMME AND
REQUEST FOR THE RELEASE OF THE SECOND FUNDING TRANCHE**

Prepared By

**SECTOR PHASE-OUT PLAN MANAGEMENT & COORDINATION UNIT (SPMCU),
KEMENTERIAN LINGKUNGAN HIDUP (LH)**

AND

UNDP

**SECTOR PHASE-OUT PLAN FOR ELIMINATION OF CFCs IN THE REFRIGERATION
(MANUFACTURING) SECTOR IN INDONESIA**

Report on CY 2002-2003 Implementation Programme and Request for Release of Second Tranche
(As of 15 October 2003)

1. Background

The Sector Phase-out Plan for Elimination of CFCs in the Refrigeration (Manufacturing) Sector in Indonesia was approved at the 37th Meeting of the Executive Committee of MLF, at a total funding level of US\$ 6,398,000, to be provided in five annual tranches, leading up to the complete phase-out of CFCs in the Refrigeration (Mfg) Sector in Indonesia by 01 January 2008.

The Phase-out Plan will be implemented through five annual implementation programmes and together with the implementation of the approved ongoing projects, will result in the complete phase-out of CFCs in the Refrigeration (Mfg) Sector in Indonesia in four years. The Phase-out Plan will cover the technology conversions in all the remaining eligible enterprises in the Refrigeration (Mfg) Sector and also ensure timely, sustainable and cost-effective phase-out in the Refrigeration (Mfg) Sector through a combination of investment, technical support and management components.

The breakdown of the approved overall funding was as below:

Investment Component:	US\$ 6,123,000 (including contingencies)
Policy/Management Component:	US\$ 275,000
Total:	US\$ 6,398,000

The extract of the agreement between Government of Indonesia and the Executive Committee of the Multilateral Fund (Document UNEP/OzL.Pro/ExCom/38/70, Annex-XI) covering the disbursement schedule and annual CFC consumption and phase-out control targets, pertaining to the Refrigeration (Mfg) Sector in Indonesia, is reproduced below:

Parameter	2002	2003	2004	2005	2006	2007	2008	Total
Annual CFC Consumption limit in the Refrigeration Sector (ODP MT)	NA	3,218	3,018	2,408	1,698	966	0	N/A
Annual CFC phase-out target in the Refrigeration (Mfg) Sector (ODP MT)	0	90	300	300	300	241	0	1,231
Annual Funding Installment * (US\$)	1,288,000	2,200,000	1,762,000	750,000	217,000	181,000	0	6,398,000
Agency Support Costs* (US\$)	111,920	194,000	156,900	67,500	19,530	16,290		566,140

* An advance of US\$ 600,000 was released from the second tranche of US\$ 2,200,000 in July 2003

The annual implementation programme for CY 2002-2003 was submitted to MLF in November 2002 (attached as Annex-1 to this document).

2. Preparatory Activities

- The first tranche of US\$ 1,288,000 was received by UNDP in August 2002. An additional US\$ 600,000 was approved at the 40th ExCom Meeting and was released as advance from the second tranche, in August 2003.
- It was agreed by UNDP and KLH that the project would be implemented through the NEX (National Execution) modality.
- The UNDP first-phase project document covering the first tranche was prepared and submitted to KLH in December 2002.
- UNDP and KLH agreed on the Operational Mechanism for Implementation (OMI), which delineated the roles and responsibilities of the various stakeholders, in January 2003.
- The first phase project document was signed by Government in April 2003.
- The UNDP first-phase project document was fully signed for all parties in May 2003.

3. Investment Component

3.1 Enterprise Participation

The first list of participating enterprises was provisionally endorsed by KLH in April/May 2003. Upon verification of the enterprise baselines by KLH and UNDP, the final endorsement of the 40 enterprises for participation in the first batch for implementation, was provided by KLH to UNDP in August 2003. Upon completion of all activities in these enterprises (targeted in CY 2004 and 2005), the CFC phase-out that would be achieved, would contribute 443 MT to the CY 2004 and CY 2005 annual CFC phase-out target.

3.2 Procurement

- UNDP notified the invitations for Expressions of Interest for prospective suppliers of the equipment to be procured under this project in January 2003. The invitations for Expressions of Interest were posted in the websites of UN Development Business, UNDP's Inter-Agency Procurement Services Office (IAPSO) and UNDP-Jakarta for one month.
- UNDP prepared the technical specifications for the equipment to be procured for the first batch of enterprises, in February 2003. UNDP also finalized the short list of vendors for the international competitive bidding exercise, based on the roster of existing suppliers and based on the evaluation of responses to the Expressions of Interest.
- The Invitations to Bid (ITB) for the equipment to be procured for the first batch of enterprises, based on the above, were issued by UNDP in February 2003. Four different invitations to bid, covering the different types of equipment required were issued to a total of 6-8 vendors for each type of equipment.

- The bids received were evaluated in March 2003. The process of approval from UNDP's procurement committees was completed in August 2003.
- The process of finalization of the vendors and issuance of purchase orders was completed in September 2003. The total funds committed for the procurement for the first batch of participating enterprises, amount to about US\$ 1.6 million. Installation and commissioning of the equipment in early 2004 will lead to achieving the phase-out targets of about 300 ODP tonnes at the end of 2004.

4. Non-Investment (Policy and Management Support) Component

4.1 Sector Phase-out Plan Management and Coordination Unit (SPMCU)

A National Programme Manager and two staff for the SPMCU were recruited and the Unit became fully operational in June 2003.

4.2 Enterprise Participation

- The operational mechanism for enterprise participation in the Sector Phase-out Plan was finalized by KLH in consultation with UNDP.
- The verification of baseline at the first batch of enterprises was concluded in July 2003. This included plant visits by KLH/SPMCU and UNDP, and collection of participation documentation and commitments from the enterprises in line with KLH regulations.
- The verification of enterprises in future batches of participation/procurement has been initiated and would be an ongoing exercise.

4.3 Other Policy, Regulatory and Awareness Actions

- KLH continued the implementation and enforcement of the Government of Indonesia regulations related to ODS use.
- Two workshops were held in January 2003. The first workshop targeted prospective recipient enterprises under the Plan, for introducing the Plan and for briefing them on the roles, responsibilities, mechanism, procedures, terms and commitments for participation. About 70 enterprises attended the workshop. The second workshop targeted government and institutional stakeholders and decision makers, for briefing them on the government level policy and regulatory actions to be taken as a part of Plan implementation. About 50 persons attended. The workshop highlighted the roles of various line ministries and departments in the Plan implementation, reinforcing the need for coordinated actions and included panel discussions on experiences of policy measures in other Article 5 countries.

5. CFC Phase-out and Results

The annual CFC phase-out target for CY 2003 is 90 MT, to be achieved through the completion of ongoing projects. Through the completion of six ongoing projects by November 2003, the CY 2003 annual CFC phase-out target would be achieved (see Annex-2).

The completion of the enterprise-level activities in the enterprises included in the first batch is envisaged during 2004. This would lead to the phase-out of at least 300 MT, which is the CFC phase-out target for that year.

6. 2004 Annual Implementation Programme

The 2004 Annual Implementation Programme is submitted for the review and approval of the Executive Committee. The 2004 Annual Implementation Programme will phase out about 150 ODP MT of CFC upon completion in CY 2004 and about 150 ODP MT in CY 2005.

As per disbursement schedule in Table 1 of the Agreement between the MLF and the Government of Indonesia, \$600,000 advance against the second tranche of \$2,200,000 was approved at the 40th Executive Committee Meeting in July 2003 and released to UNDP in August 2003. The Executive Committee is requested to approve the 2004 Annual Implementation Programme and the release of the remaining 2003 funding level of \$1,600,000 and the corresponding support fees of \$141,100.

INDONESIA
Refrigeration (Manufacturing) Sector Phase-out Plan
Annual Implementation Program (Tranche 1) for CY 2003

1. Data

Country	Indonesia
Year of plan	2003
Number of years completed	0
Number of years remaining under the plan	5
Target ODS consumption in Sector for the preceding year (ODP MT)	1,231
Target ODS consumption in the Sector for the year of plan (ODP MT)	1,231
Level of funding requested (US\$)	1,600,000
Lead implementing agency	UNDP
Co-operating agency (ies)	N/A

2. Targets

Target:	Preparatory technical assistance and policy/management support activities			
Indicators		Preceding Year	Year of Plan	Reduction
Supply of ODS (ODP MT)	Import	5,585	5,585	0
	Production	0	0	0
	Total (1)	5,585	5,585	0
Demand of ODS (ODP MT)	Manufacturing	1,231	1,231	0
	Servicing	N/A	N/A	N/A
	Stock piling	N/A	N/A	N/A
	Total (2)	1,231	1,231	0

3. Industry Action

Sector	Consumption Preceding Year (1)	Consumption Year of Plan (2)	Reduction within Year of Plan (1) - (2)	No. of Projects Complete	Number of Servicing Related Activities	ODS Phase-Out (ODP MT)
Refrigeration (Mfg) Sector	1,231	1,231	0	0	0	0

It is envisaged that the phase-out of CFCs in ongoing projects in the Refrigeration (Manufacturing) Sector amounting to 90 MT, will be accomplished during 2003.

4. Technical Assistance

Activity	Description	
Workshop for user industry	Objective	Initiating enterprise participation and phase-out activities
	Target group	Prospective recipient enterprises
	Impact	Obtaining enterprise commitments for time-bound phase-out
Technical Assistance for procurement of equipment	Objective	Initiate procurement procedures for equipment to be provided to recipient enterprises for conversion to non-CFC technology
	Target group	Recipient enterprises
	Impact	Finalization of specifications and vendor shortlists, international competitive bidding and issuance of purchase orders/contracts

The technical assistance activities would be initiated through sub-projects for about 30 enterprises, leading to an elimination of about 170 MT of CFCs upon completion, envisaged for 2004. It is foreseen that the durations for the sub-projects for these 20 enterprises would be set in such a way as to ensure that their completion would contribute to about 57% of the verifiable annual performance target for CY 2004 (300 MT) leading to a minimum phase-out of about 170 MT CFCs through the Sector Phase-out Plan. The balance of the 2004 target would be met through the second funding tranche to be obtained in 2003.

5. Government Action

Policy/Activity Planned	Schedule of Implementation
Type of Policy Control on ODS Import	Continuing enforcement of existing controls
Public Awareness	N/A
Others	See below

The following activities are proposed for 2002, under the Policy and Management Support component:

- a) Completing recruitment and allocation of coordinating personnel within the ozone unit for plan management
- b) Continuing implementation of the operational mechanism for participation by enterprises in the Sector Phase-out Plan and for obtaining phase-out commitments from enterprises.
- c) Organization of one awareness workshop for the sector.
- d) Initiating establishment of product and practices standards for the sector
- e) Preparation of annual implementation programme

6. Annual Budget

Activity	Planned Expenditures (US \$)
Operation of Sector Plan Management and Coordination unit (SPMCU)	60,000
Technical Assistance	90,000
Workshops and awareness	20,000
Equipment	1,300,000
Contingencies	130,000
TOTAL	1,600,000

7. Administrative Fees

The administrative fees will be utilized by UNDP throughout the implementation of this tranche.

INDONESIA
Refrigeration (Mfg) Sector Phase-out Plan

Projects in the Refrigeration (Mfg) Sector (to be) Completed during CY 2003

UNDP Project Number	MLF Project Number	Project Name	Approved Grant (US\$)	ODS (MT/y)	ODP (MT/y)	Remark
INS/01/G67	IDS/REF/35/INV/131	PT Nikoteknik	238,903	29.73	27.90	Target 11/2003
INS/01/G66	IDS/REF/35/INV/132	PT Sapporo Mestika	153,768	11.58	11.18	Target 11/2003
INS/01/G61	IDS/REF/35/INV/133	PT Hatindo Metal Utama	145,894	10.15	9.59	Target 11/2003
INS/01/G63	IDS/REF/35/INV/134	PT Leoindo Kreasi	119,394	16.81	15.74	Target 11/2003
INS/01/G65	IDS/REF/35/INV/135	PT Alfa Metalindo Agra	146,960	10.23	9.66	Target 11/2003
INS/01/G62	IDS/REF/35/INV/136	PT Gastro Gizi Sarana	221,049	16.49	15.50	Target 11/2003
TOTAL			1,025,968	94.99	89.57	

Notes:

1. All enterprises would achieve all project objectives and meet all project obligations, such as phase-out of CFCs, phase-in of CFC-free production, depletion of CFC stocks, destruction of redundant and replaced baseline equipment, etc. upon completion targeted for November 2003.
2. HOPs for these projects are targeted to be issued and signed before December 2003.
3. The annual **CFC phase-out target for CY 2003**, in accordance with the schedule agreed in the Indonesia Refrigeration (Mfg) Sector Phase-out Plan is **90 MT**.

**SECTOR PHASE-OUT PLAN FOR ELIMINATION OF CFCs IN THE REFRIGERATION
(MANUFACTURING) SECTOR IN INDONESIA**

Annual Implementation Program (Tranche 2) for CY 2004

1. Data

Country	Indonesia
Year of plan	2004
Number of years completed	1
Number of years remaining under the plan	4
Target ODS consumption in Sector for 2003 (ODP MT)	1,231
Target ODS consumption in Sector for 2004 (ODP MT)	1,141
Level of funding requested (US\$)*	1,600,000*
Lead implementing agency	UNDP
Co-operating agency (ies)	N/A

* Represents the net funding request. The original tranche amount was US\$ 2,200,000, of which, US\$ 600,000 was released in advance in July 2003, in accordance with the provisions of the Agreement between Indonesia and the Executive Committee.

2. Targets

Target:	CFC phase-out target for 2004 in the Refrigeration (Mfg) Sector: 300 MT			
Indicators		Preceding Year	Year of Plan	Reduction
Supply of ODS (ODP MT)	Import	5,585		0
	Production	0	0	0
	Total (1)	5,585		0
Demand of ODS (ODP MT)	Manufacturing	1,231	1,141	90
	Servicing	N/A	N/A	N/A
	Stock piling	N/A	N/A	N/A
	Total (2)	1,231	1,141	90

3. Industry Action

Sector	Consumption Preceding Year (1)	Consumption Year of Plan (2)	Reduction within Year of Plan (1) - (2)	No. of Projects Complete	Number of Servicing Related Activities	ODS Phase-Out (ODP MT)
Refrigeration (Mfg) Sector	1,231	1,141	90	6	0	90

It is envisaged that the phase-out of CFCs through completion of enterprise-level activities for the first batch of enterprises in the Refrigeration (Manufacturing) Sector would contribute 300 MT to the CFC phase-out target for CY 2004.

4. Technical Assistance

Activity	Description	
Workshop for user industry	Objective	Initiating enterprise participation and phase-out activities for the second batch of participating enterprises
	Target group	Prospective recipient enterprises
	Impact	Obtaining enterprise commitments for time-bound phase-out
Technical Assistance for procurement of equipment	Objective	Initiate procurement procedures for equipment to be provided to recipient enterprises for conversion to non-CFC technology for the second batch of participating enterprises
	Target group	Second batch of recipient enterprises
	Impact	Finalization of specifications and vendor shortlists, international competitive bidding and issuance of purchase orders/contracts

The technical assistance activities would be initiated through sub-projects for about 30 enterprises, leading to an elimination of about 150 MT of CFCs upon completion in 2004 and about 150 MT of CFCs in 2005. It is foreseen that the durations for the sub-projects for these 30 enterprises would be set in such a way as to ensure that their completion would contribute to about 50% of the verifiable annual performance target for CY 2005 (300 MT) leading to a minimum phase-out of about 150 MT CFCs through the Sector Phase-out Plan. The balance of the 2005 target would be met through the third funding tranche to be obtained in 2004.

5. Government Action

Policy/Activity Planned	Schedule of Implementation
Type of Policy Control on ODS Import	Continuing enforcement of existing controls
Public Awareness	N/A
Others	See below

The following activities are proposed for 2004, under the Policy and Management Support component:

- a) Continuing monitoring of Plan implementation activities, continuing implementation of the operational mechanism for participation by enterprises and obtaining phase-out commitments from enterprises.
- b) Organization of one user industry workshop.
- c) Organization of one awareness workshop.
- d) Initiating establishment of product and practices standards for the sector
- e) Preparation of annual implementation programme

6. Annual Budget

Activity	Planned Expenditures (US \$)
Operation of Sector Plan Management and Coordination unit (SPMCU)	60,000
Technical Assistance	90,000
Workshops and awareness	20,000
Equipment	1,300,000
Contingencies	130,000
TOTAL	1,600,000

7. Administrative Fees

The administrative fees will be utilized by UNDP throughout the implementation of this tranche.

**REFRIGERATION SECTOR PHASE-OUT PLAN:
MOBILE AIR CONDITIONER (MAC)
SERVICING SECTOR
2004 ANNUAL PROGRAM**

**SECTOR PLAN MANAGEMENT AND
COORDINATION UNIT
MINISTRY OF ENVIRONMENT**

AND

THE WORLD BANK

October 22, 2003

Data Sheet

Country	Indonesia
Year of plan	2004
Number of years completed	1
Number of years remaining under the plan	4
Ceiling of ODS consumption of the preceding year (ODP MT)	695
Target ODS consumption of the year of plan (ODP MT)	585
Total MLF funding approved in principle (38th Excom Meeting) (US\$)	4,317,000
Total MLF funding released to the Bank by Oct 2003 (US\$)	1,369,800
Level of funding requested for the 2004 Annual Plan (US\$)	1,347,300
National Implementing operating agency	Ministry of Environment
Implementing agency	World Bank

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The MAC Sector Plan

BACKGROUND

1. In accordance with the Executive Committee's approval of the Sector Plan for the Phaseout of the use of CFC-12 in the Mobile Air Conditioning Sector in Indonesia (IDS/REF/38/INV/153), Indonesia is hereby requesting release of the second tranche of US\$1,347,300 for implementation of the year 2004 Annual Program. With this funding, Indonesia's CFC-12 consumption for servicing in the MAC sector will be reduced to a maximum of 695 MT in 2004. Details of the annual program are in Part B.
2. After the approval of the Indonesia MAC Sector Plan at the 38th meeting of the ExCom and release of funds for the first (2003) Annual Program, Indonesia began implementation of the MAC Sector Strategy. The national consumption level of CFC-12 allowed for 2003 in the MAC sector is 805 MT. A detailed implementation status is provided in Part A.
3. This phaseout result have been achieved through close cooperation between the Ministry of Environment (KLH), Group Coordinating agency (Dasa Windu Agung) and the concerned enterprises. The experience from the implementation has confirmed the necessity of strong policy enforcement and monitoring of the MAC phaseout program. Training and public awareness are key elements in the MAC sector plan implementation due to the number and geographical distribution of the enterprises involved.

This MAC servicing sub-sector will facilitate elimination of all the remaining eligible CFC consumption in the mobile air conditioning sub-sector in Indonesia, upon completion. The MAC will be implemented through five annual implementation programs and together with the implementation of the approved ongoing projects in the Refrigeration Sector, is expected to result in the complete phase-out of CFCs in the Refrigeration Sector in Indonesia in five years. The MAC will address the conversion requirements in the mobile air conditioning sub-sector for ensuring a timely, sustainable and cost-effective phase-out, through a combination of policies and technical assistance components. investment, technical support and policy/management support components.

4. The extract of the Agreement between Government of Indonesia and the Executive Committee of the Multilateral Fund (Document UNEP/OzL.Pro/ExCom/38/70, Annex-XI) covering the disbursement schedule and annual CFC consumption and phase-out control targets, pertaining to the MAC Servicing sub-Sector in Indonesia, is reproduced below:

Year	National CFC consumption limit		Annual CFC Consumption limit in the Refrigeration Sector (ODP MT)		Annual CFC consumption limit in the MAC Servicing sub-sector (ODP MT)		MLF funding for the MAC sector annual programs**
	Planned *	Actual	Planned	Actual	Planned	Actual	
2002		5,585	NA		915	915	
2003	NA		3,218		805		1,369,800
2004	NA		3,018		695		1,347,300
2005	NA		2,408		585		1,347,300
2006	NA		1,698		475		126,800
2007	NA		966		365		125,800
2008	0*		0		0		0
2009	0*		0		0		0
2010	0		0		0		0

* As per Country Program Update.

** To be released with the approval of the annual program at the last meeting of the preceding year

Part A

Implementation Status Of 2003 Annual Program

Background

1. The National Plan for Phasing Out the Use of CFC-12 in the Mobile Air Conditioning Sector through a Combination of Policies; Technical Assistance Program and CFC-12 Recycling and Recovery was approved at the 38th Meeting of the Executive Committee of MLF, at a total funding level of US\$ 4,317,000, to be provided in five tranches, facilitating the complete phase-out of CFC-12 in the Mobile Air Conditioning (MAC Servicing) Sub-Sector in Indonesia by 01 January 2008. The first tranche of US\$ 1,369,800 for implementation of the 2003 annual program was released with the approval of the sector plan at the 38th meeting of the ExCom in November 2002.

2. This MAC servicing sub-sector will facilitate elimination of all the remaining eligible CFC consumption in the mobile air conditioning sub-sector in Indonesia, upon completion. The MAC will be implemented through five annual implementation programs and together with the implementation of the approved ongoing projects in the Refrigeration Sector, is expected to result in the complete phase-out of CFCs in the Refrigeration Sector in Indonesia in five years. The MAC will address the conversion requirements in the mobile air conditioning sub-sector for ensuring a timely, sustainable and cost-effective phase-out, through a combination of policies and technical assistance components. investment, technical support and policy/management support components.

Progress in Project Preparation

3. The management of the MAC servicing sub-sector was organized along with Refrigeration Manufacturing and Servicing sub-sectors by the formation of Sector Plan Management and Coordination Unit (SPMCU) consisting of a Programme Manager and three Operation Assistants each overseeing the implementation of corresponding sector, namely Refrigeration Manufacturing, Refrigeration Servicing and MAC. The personnel of SPMCU was recruited in June 2003 and this unit became operational on that date.

4. SPMCU has completed office establishment in the LH building, which also facilitated the renovation of the overall office space for the staff of Assistant Deputy 3 overseeing atmosphere and climate change. SPMCU office is equipped with adequate furniture, computers and telecommunication lines allowing SPMCU to work independently.

5. **Policy Action and Regulation.** The implementation of this activity is merged with that of the other refrigeration Sub-Sector as the whole program needs an integrated policy and regulation. KLH continued the implementation and enforcement of the Government of Indonesia regulations related to ODS use. Interaction meetings were held with major distributors and traders of CFCs and with representatives of industry

associations related to refrigeration and MAC servicing. This is expected to lead to the institutionalizing these contacts and result in formation of a core group of industry stakeholders, to increase involvement and ensure commitments to cooperation for the successful achievement of the phase-out targets and control measures under the Plan.

Import and Export Monitoring and Control System for ODS

Improving the Import and Export Monitoring and Control System for ODS in Indonesia is essential to Indonesia, as this is the main tool for meeting the performance agreements under the sector plans and will ensure that Indonesia will meet its reporting obligations under the Montreal Protocol. Indonesia is in the process of setting up a realistic quota system reflecting the actual informal importers and the ODS demand in the market which is within the aggregate ODS consumption allowed under the sector plans. The national coordinating agency (ITB) will conduct a training workshop for customs agencies and 55 informal importers. It is envisaged that quotas will be issued to eligible importers on an annual basis, and that each importer will be entitled to a quota based on historical imports and adjusted so the aggregate import is within the allowed annual consumption. The import quota system will allow control of import of each ODS substance in accordance with the overall agreements. It is under research if it is possible to develop a system where the consumption in each ODS consuming sector can effectively be monitored.

2. Enterprise level activities: This component focuses on enabling the MAC servicing enterprises to physically reduce CFC-12 usage in their servicing activities, thereby reduces the import need for CFC in the country. The main activity of this component is to assist the participant enterprises to build their capacity in best practice in MAC servicing by improving their knowledge and technique on managing CFC-12 in the air conditioning system by providing training in and equipment for recovery and recycling program. This program will target a total CFC-12 consumption of 220 MT ODP by the end of 2003.

6. The implementation of the recovery and recycling program has been carried out by PT Dasa Windu Agung (DWA), the Group Coordinator of MAC Sector Plan as signified under the Sub-grant Agreement Document of July 17, 2003. DWA has initiated the activity with surveying and registering potential recipient establishments. So far, 260 workshop establishments have been visited and surveyed, and 216 of them have responded by submitting their application to participate in the program. These 216 enterprises carry a cumulative ODP of 254.5 MT which is over the 2003 phase-out target of 220 MT ODP.

7. **Technical Assistance: Training of trainers.** The distribution of servicing equipment would only be beneficial if the operators of such equipment were provided with the necessary skill and knowledge. It was understood that most of MAC technicians in Indonesia never had a proper training, gaining their skill only by working in the workshops. The activity of Training of Trainers was designed to create a pool of trainers that will train MAC technicians in their respected areas. The activity consists of development of curriculum, recruiting instructors, identifying candidates for trainees and collaborate with training establishment already identified in the preliminary stage.

8. **Public Awareness.** This activity has been integrated with the other

Refrigeration sub-sectors i.e. manufacturing and servicing whenever appropriate, such as in the workshops for stakeholders.

9. **CFC Phase-out and Results:** The target of CFC-12 phase-out under the Mobile Air Conditioning (MAC) for 2003 is 220 MT. The completion of activities in recovery and recycling involving 216 enterprises recommended by DWA would phase out some 254,5 MT ODP and the target would have been reached.

PART B

2004 ANNUAL PROGRAM

Objectives

1. The phaseout objective of the 2004 annual program is to ensure that: (i) the national CFC-12 consumption limit of 695 MT will not be exceeded in 2004. Indonesia is requesting the release of the approved amount of US\$ 1,347,300 for the 2004 annual program as agreed in the overall MAC Sector Phaseout Plan. can be met.

Phaseout Targets

Target:		Procurement actions, training actions, technical assistance and policy/management support activities		
Indicators		Preceding Year	Year of Plan	Reduction
Supply of ODS (ODP MT)	Import	5,585	5,585	0
	Production	0	0	0
	Total (1)	5,585	5,585	0
Demand of ODS (ODP MT)	Manufacturing	N/A	N/A	N/A
	MAC Servicing	805	695	0
	Stock piling	N/A	N/A	N/A
	Total (2)	805	695	110

Policy Actions. The following activities will be continued and/or promulgated to support implementation of the 2004 Annual Program

- (i) *Discussion with other related government agencies* - to develop possible measures/regulations such as: a) ban on new MAC installations with CFC, b) venting ban, c) compulsory use of recovery until when the system is serviced or decommission; d) prohibition of mislabeling containers, e) training for proper method in MAC servicing sector, procurement of around of refrigerant identifiers, in supports to policy action, will be concluded based on recommended actions with the government agencies.
- (ii) *Issuance of certification* –Certification will be provided to MAC service shops that have joined and passed technical examination of technicians

Enterprise-level activities

The 2004 Annual Program aims to eliminate the consumption of 110 MT of CFC-12 by installing about 100 recycling machines. Due to a geographical spread of service shops in the country, the program divides its distribution into eight regions;

1. Jakarta
2. West Java
3. Central Java
4. East Java

5. Bali & Nusa Tenggara
6. Sumatra
7. Kalimantan
8. Sulawesi & east Indonesia

Considering a large number of service shops that are mainly concentrated in Java Island, the first two implementation programs will be concentrated in cities in Java particularly in Jakarta, West Java & East Java.

All contracts for conversion projects are expected to be signed in the early 2004 and implementation may take one and half years. In addition, during the period of the 2004 Annual Program, service shops' identification will be carried out in several ways, in cooperation with MAC distributors, Ministry of Industry, Provincial bodies, upstream suppliers of CFC-12, MAC service shops, car manufacturers, and car associations.

Technical assistance (TA) Activities

TA activities under the MAC Sector Plan's 2004 Annual Program concentrate on the following: (a) strengthening the overall institutional framework for phase-out; (b) provides regulatory support; (c) public awareness, (d) management, monitoring and evaluation of the project and enhancement of capabilities of participating institutions under the PMU; (e) project implementation that will be subcontracted to an independent institution, and; (f) information exchange. The main TA activities proposed for the First Implementation Program include the following:

- (i) *Workshops to MAC service shop personnel involved in implementation of phase-out activities* – workshops to MAC service shops' owners and technicians is needed initially for them to prepare commitment participation and other terms set forth, to monitor and report CFC-12 consumption, , and to learn operating procedures in MAC sector phase-out approach. The workshop will need to be repeated every year in the first few years of implementation;
- (ii) *National workshops* - to introduce and promote (a) MAC sector phase-out strategy, (b) policies already promulgated and new policies to be introduced for MAC sector phase-out, (d) government commitment to CFC-12 phase-out, and (e) alternative technology. Proposed participants include national, provincial, and local level policy makers, sector ministries related to MAC industries, MAC professional associations and related industry; Public awareness of the environmental and economic impact of ozone layer depletion via newspapers, seminar and/or electronic media;
- (iii) Launch promotional program to encourage public to have MAC systems repaired by certified technicians.
- (iv) **Train the Trainer Program.** The program will continue from the first implementation period into the 2004 Annual Plan period. This program is organized to minimize (a) current practice of topping up refrigerant without fixing leaks; (b) education for proper service method. At the end, technicians who have attended the training and passed technical tests shall receive certification. Under the planned duration, the program will concentrate on the following:

- Develop and upgrade, if possible the existing training requirements and materials used for MAC training offered by training centers/technical institutes assisted by international and/or local experts appointed by NOU;
 - Invite potential training center and technical institutes; including the regional and provincial training centers for accreditation for respective courses.
- (v) **Development of Standard Inspection Manual** – An inspection Manual shall be developed within the first implementation period to equip MAC distributors and service shops identifying different types of refrigerants contained in MAC system;
- (vi) **Development and Printing of pamphlets** - stickers shall be produced for car owners to identify refrigerant type in the MAC unit, name of the shop that last worked on the system, date of last serviced, and type of service made;
- (vii) **Trainings** - Training sessions shall be held to empower voluntary agreements with MAC service shops and components suppliers. Training about usage and function of refrigerant identifier will be a part of the session. Training of technicians shall be conducted by the appointed training centers and subsequently will issue certifications to technicians who participate in the program;

The above policy initiatives, enterprise-level and technical assistance activities are summarized in the Tables below.

**Phase-out Targets and Policy Instruments
(January 2004 – December 2004)**

	2004	Key actions required	Key dates
Phase-out target (MT)	110	Signing of commitment participation	March 04
	183	Singing of commitment participation	July 04
	Actions Required		By Whom
			Key Dates
1. Commitment Letter of service shop	1. Commitment participation finalized;	SPMCU	February 04
	2. Commitment participation finalized;	SPMCU	June 04
2. Policy action	3. Development of standard inspection manual;	SPMCU	January 04
	4. Development & printing of pamphlets;	SPMCU	February 04
	5. Procurement of 20 units refrigerant identifier	SPMCU	July 04
	6. Trainings of MAC focal points & distribution of identifiers	SPMCU	March 04
3. Train the trainers	7. Set-up the program;	SPMCU	November 03
	8. Invitation and appointment potential training center;	SPMCU	January 04
	9. Procurement of basic MAC units;	SPMCU	February 04
	10. Train the trainers including distr. of basic equipment.	SPMCU	August 04
4. Technical assistance activities	11. Trainings, workshops, certification, awareness and promotion program.	SPMCU	On-going

2004 Annual Program

	<i># of enterprises targeted</i>	<i>Key Actions Required</i>	<i>Key Dates</i>
1. Elimination of CFC-12 in MAC service shops	~100	Survey and selection of participating MAC service shops	1. March 04 – Commitment participation collected 2. April 04 – Procurement of Investment 3. Oct. 04 – Completion of distribution & hands-on training of equipment to service shops
1. Elimination of CFC-12 in MAC service shops	~180	Survey and selection of participating MAC service shops	1. June 04 – Commitment participation collected 2. July 04 – Procurement of Investment 3. March 05 – Completion of distribution & hands-on training of equipment to service shops
<i>Activities</i>	<i>Actions Required</i>		<i>Key Dates</i>
1. MAC SPMCU	Set up SPMCU (completed) Ongoing monitoring and operations of SPMCU		Ongoing
2. Selection of consultant/independent verification	Selection of qualified consultant/institution to carry out independent verification of the project		Will be carried out in 1Q 2004-activities completed
4. Training	Training activities for: (a) trainer at training centers (b) Training of MAC service shops technicians		Will be carried out in: (a) 1Q 2004-activities completed (b) 2Q 2004- activities completed
5. Workshops	Workshops for: (a) potential service shops (b) National workshops for policy makers to introduce implementation of the program (c) policy makers to develop measures/regulation of MAC		Will be carried out in 1Q 2004-activities completed
6. Regulatory and supports	Funds to support costs for setting up MAC regulation through workshops/seminars and trainings for NOU and related government agencies and MAC focal points		Will support for actions taken by NOU through out the first implementation program
7. Awareness & Promotional program	(a) Public awareness for environmental and economic impact of ozone layer program thru; newspapers, seminars, electronic media etc. (b) Promo program to encourage public to have MAC system repaired by certified technicians		(a) 4Q 2003 to end of 2004 - will be executed (b) 4Q 2003 to end of 2004 – will be executed
8. Establishment of standard & technical program	(a) Selection of qualified consultants/institutions to develop inspection manual (b) Selection of qualified consultants/institutions to develop training materials & requirements, including training manual and Certification schemes under Train the trainer program		Will be carried out in 4Q 2003 to end of 2004

Annual Budget

Activity	Planned Expenditures (US \$)
Ongoing monitoring and operations of SPMCU	30,000
Technical Assistance	60,000
Workshops, Training and awareness	50,000
Recovery/recycling equipment	1,207,300
TOTAL	1,347,300

**PHASE-OUT MANAGEMENT PLAN FOR CFCs IN THE REFRIGERATION (SERVICING)
SECTOR IN INDONESIA**

**REPORT ON THE IMPLEMENTATION OF CY 2003 ANNUAL PROGRAMME AND
REQUEST FOR RELEASE OF SECOND FUNDING TRANCHE**

Prepared By

**SECTOR PLAN MANAGEMENT & COORDINATION UNIT (SPMCU),
KEMENTERIAN LINGKUNGAN HIDUP (LH)**

AND

UNDP

**PHASE-OUT MANAGEMENT PLAN FOR CFCs IN THE REFRIGERATION (SERVICING)
SECTOR IN INDONESIA**

Report on CY 2003 Implementation Programme and Request for Release of Second Tranche
(As of 15 October 2003)

1. Background

The Phase-out Management Plan for CFCs in the Refrigeration (Servicing) Sector in Indonesia was approved at the 38th Meeting of the Executive Committee of MLF, at a total funding level of US\$ 4,912,300, to be provided in five tranches, facilitating the complete phase-out of CFCs in the Refrigeration (Servicing) Sector in Indonesia by 01 January 2008.

This Phase-out Management Plan will facilitate elimination of all the remaining eligible CFC consumption in the Refrigeration (Servicing) Sector in Indonesia, except in the MAC and Chiller sub-sectors, upon completion. The Phase-out Management Plan will be implemented through five annual implementation programmes and together with the implementation of the approved ongoing projects in the Refrigeration Sector, is expected to result in the complete phase-out of CFCs in the Refrigeration Sector in Indonesia in five years. The Phase-out Management Plan will address the conversion requirements in the Refrigeration (Servicing) Sector for ensuring a timely, sustainable and cost-effective phase-out, through a combination of investment, technical support and policy/management support components. The breakdown of the approved overall funding was as below:

Investment Component:	US\$ 4,149,300 (including contingencies and technical support)
Training Component:	US\$ 573,000
Policy/Management Component:	US\$ 190,000
Total:	US\$ 4,912,300

The extract of the Agreement between Government of Indonesia and the Executive Committee of the Multilateral Fund (Document UNEP/OzL.Pro/ExCom/38/70, Annex-XI) covering the disbursement schedule and annual CFC consumption and phase-out control targets, pertaining to the Refrigeration (Servicing) Sector in Indonesia, is reproduced below:

Parameter	2002	2003	2004	2005	2006	2007	2008	Total
Annual CFC Consumption limit in the Refrigeration Sector (ODP MT)	NA	3,218	3,018	2,408	1,698	966	0	N/A
Annual CFC phase-out target in the Refrigeration (Servicing) Sector (ODP MT)	0	0	200	300	322	250	0	1,072
Annual Funding Installment (US\$)	2,196,758	1,805,987	500,000	250,000	159,555	0	0	4,912,300
Agency Support Costs* (US\$)	195,708	160,939	43,400	21,300	13,160	0		434,507

The annual implementation programme for CY 2003 was submitted to MLF in November 2002 (attached as Annex-1 to this document).

2. Preparatory Activities

- The first tranche of US\$ 2,196,758 was received by UNDP in December 2002.
- It was agreed by UNDP and KLH that the project would be implemented through the NEX (National Execution) modality.
- The UNDP first-phase project document covering the first tranche was prepared and submitted to KLH in February 2003.
- UNDP and KLH agreed that the Operational Mechanism for Implementation (OMI), which delineated the roles and responsibilities of the various stakeholders and was earlier designed for implementing the INS/02/G68 – Sector Phase-out Plan for Elimination of CFCs in the Refrigeration (Manufacturing) Sector in Indonesia would be also followed for implementation of the IND/03/G61 – Phase-out Management Plan for CFCs in the Refrigeration (Servicing) Sector in Indonesia
- The first phase project document was signed by Government in August 2003.
- The UNDP first-phase project document was fully signed for all parties in August 2003.

3. Investment Component

3.1 Recovery/Recycling Programme

Enterprise Participation

The recovery/recycling programme targeted initiating participation of about 385 servicing establishments during 2003. About 170 larger-sized service establishments were identified by SPMCU in collaboration with *Asosiasi Bengkel Elektronik Indonesia* (Indonesia Electronic Service Association). The first list of about 170 servicing establishments was provisionally endorsed by KLH in September 2003 for participating in the recovery/recycling programme.

A survey of training establishments was carried out during May-July 2003 by KLH/SPMCU with assistance from *Institut Teknologi Bandung* (ITB). About 134 training establishments were identified, for participation in the recovery/recycling programme, through the provision of demonstration recovery/recycling equipment.

Procurement

- UNDP notified the invitations for Expressions of Interest for prospective suppliers of the recovery/recycling equipment to be procured under this project in April 2003. The invitations for Expressions of Interest were posted in the websites of UN Development Business, UNDP's Inter-Agency Procurement Services Office (IAPSO) and UNDP-Jakarta for one month.
- UNDP prepared the technical specifications for the equipment to be procured for the first batch of enterprises, in October 2003. UNDP also finalized the short list of vendors for

the international competitive bidding exercise, based on the roster of existing suppliers and based on the evaluation of responses to the Expressions of Interest.

- The Invitations to Bid (ITB) for the equipment to be procured for the first batch of participating servicing and training establishments, based on the above, were issued by UNDP in October 2003.
- The further procurement steps, such as evaluation of bids, UNDP procurement committee approvals and finalization of vendors are expected to be completed in November 2003.

Upon completion of all activities in the first batch of servicing and training establishments (targeted in CY 2004 and 2005), the CFC reduction in servicing that would be facilitated, would contribute about 100 MT to the CY 2004 and CY 2005 annual CFC phase-out targets. The funds committed for procurement of equipment for the first batch of participating establishments, is expected to amount to about US\$ 1.5 million.

The second batch of participating service establishment, estimated at about 250 medium-sized servicing establishments and about 500 small-sized establishments, is expected to be finalized by end-2003. The completion of all activities in this second batch of participating servicing establishments is expected to result in an additional 120 MT in reduction of CFC usage in servicing during 2004 and 2005, thus contributing to CFC reduction targets for 2004 and 2005.

3.2 Pilot Retrofitting/Replacement Demonstration Programme

The process of identifying about 70 representative end-users to participate in the retrofitting/replacement demonstration programme has been initiated. Preliminary screening of about 28 supermarkets, 13 hotels, 7 hospitals, 5 restaurants, 5 marine installations and 10 industrial installations (total 68) has been completed. The mechanism of participation in the Plan and for providing assistance to these end-users is being finalized. The demonstration retrofitting/replacement activities are expected to be completed at these end-users by mid-2004, which in turn is expected to accelerate retrofitting/replacement actions in the end-user sector, leading to a reduction in CFC usage in servicing by about 40 MT during 2004.

4. Training Component

The Master Trainers programme under this component has been initiated. About 150 potential master trainers have been identified and the activities leading to the training of these master trainers are expected to be completed in November 2003. The delivery of this capacity-building training to the Master Trainers, would in turn facilitate the initiation of the subsequent technician training program, leading to the introduction of good practices and efficiencies in servicing, is expected to lead to the reduction of CFC usage in servicing by about 20 MT during 2004.

5. Non-Investment (Policy and Management Support) Component

5.1 Sector Phase-out Plan Management and Coordination Unit (SPMCU)

The SPMCU including the national programme manager and staff, set up under the Indonesia Refrigeration (Mfg) Sector Plan, has been also assigned the task of supporting the implementation activities of the Refrigeration (Servicing) Sector Plan and the SPMCU is fully functional.

5.2 Enterprise Participation

- The operational mechanism for enterprise participation in the Sector Phase-out Plan was finalized by KLH in consultation with UNDP.
- The verification of baseline at the first batch of participating servicing and training establishment was concluded in September 2003.
- The verification of enterprises in future batches of participation/procurement has been initiated and would be an ongoing exercise.

5.3 Other Policy, Regulatory and Awareness Actions

- KLH continued the implementation and enforcement of the Government of Indonesia regulations related to ODS use.
- Two workshops were held in 2003. The first workshop, held in March 2003, targeted prospective participating servicing establishments under the Plan, for introducing the Plan and for briefing them on the roles, responsibilities, mechanism, procedures, terms and commitments for participation. About 50 servicing establishments attended the workshop. The workshop also targeted government and institutional stakeholders and decision makers, for briefing them on the government level policy and regulatory actions to be taken as a part of Plan implementation. About 30 persons attended. The workshop highlighted the roles of various line ministries and departments in the Plan implementation, reinforcing the need for coordinated actions and included panel discussions on experiences of policy measures in other Article 5 countries. The second workshop held in October 2003, was intended to operationalize the participation of service establishments and training establishments and aimed at finalizing the participation agreements and also at identification of service establishments for participating in future batches.
- Interaction meetings were held with major distributors and traders of CFCs and with representatives of industry associations related to refrigeration servicing. This is expected to lead to the institutionalizing these contacts and result in formation of a core group of industry stakeholders, to increase involvement and ensure commitments to cooperation for the successful achievement of the phase-out targets and control measures under the Plan.

5. CFC Phase-out and Results

There was no CFC phase-out target under the Indonesia Refrigeration (Servicing) Sector Phase-out Management Plan for 2003. The completion of activities in recovery/recycling, retrofitting/replacement demonstration and training initiated in 2003 would lead to the reduction of

CFC usage in servicing by at least 200 MT in 2004, which is the CFC phase-out target for that year under this plan.

6. 2004 Annual Implementation Programme

The 2004 Annual Implementation Programme is submitted for the review and approval of the Executive Committee. The 2004 Annual Implementation Programme will phase out about 200 ODP MT of CFC upon completion in CY 2004.

As per disbursement schedule in Table 1 of the Agreement between the MLF and the Government of Indonesia, the Executive Committee is requested to approve the 2004 Annual Implementation Programme and the release of the 2003 funding level of \$1,805,987 and the corresponding support fees of \$160,939.

INDONESIA
Refrigeration (Servicing) Sector Phase-out Plan

Annual Implementation Program (Tranche 1 & 2) for CY 2002 and CY 2003

1. Data

Country	Indonesia
Year of plan	2002 and 2003
Number of years completed	0
Number of years remaining under the plan	5
Target ODS consumption of the preceding year (ODP MT)	1,072
Target ODS consumption of the year of plan (ODP MT)	1,072
Level of funding requested (US\$)	2,196,758 (1,002,745 + 1,194,013)
Lead implementing agency	UNDP
Co-operating agency (ies)	None

2. Targets

Target:	Procurement actions, training actions, technical assistance and policy/management support activities			
Indicators		Preceding Year	Year of Plan	Reduction
Supply of ODS (ODP MT)	Import	5,585	5,585	0
	Production	0	0	0
	Total (1)	5,585	5,585	0
Demand of ODS (ODP MT)	Manufacturing	N/A	N/A	N/A
	Servicing	1,072	1,072	0
	Stock piling	N/A	N/A	N/A
	Total (2)	1,072	1,072	0

3. Industry Actions

3.1 Sector-level Actions

Sector	Consumption Preceding Year (1)	Consumption Year of Plan (2)	Reduction within Year of Plan (1) - (2)	No. of Projects Complete	Number of Servicing Related Activities	ODS Phase-Out (ODP MT)
Refrigeration (Servicing) Sector	1,072	1,072	0	0	2	0

3.2 Recipient-level Actions

Out of the total of 885 service establishments estimated to participate in the recovery & recycling program (as mentioned in the approved project proposal) it is planned that about 385 service establishments (about 44% of the total) will commence participation during 2002-2003. In addition, out of the total of 100 training establishments estimated to be recipients of the recovery/recycling demonstration program, it is planned that about 50 training establishments (about 50% of the total) would commence participation during 2002-2003.

It is proposed to initiate procurement of recovery/recycling and charging/evacuation equipment for these servicing and training establishments (amounting to 435 sets or nearly 50% of the total). The estimated cost is about 50% of the budget in the approved project proposal or about US\$ 1.62 million. It is foreseen that the duration of implementation of this program for these establishments would be set in such a way as to ensure that their completion would contribute to about 70% of the verifiable annual performance target for CY 2004 (200 MT) leading to reductions in CFC consumption in servicing at these establishments of about 140 MT upon completion.

About 70 representative end-users would be identified for the retrofitting demonstration program. The end-users would be so selected as to be representative of various end-use applications. Agreements with the selected end-users are expected to be in place, for demonstrating the retrofitting technologies within a predefined time frame. This action is expected to accelerate retrofitting/replacement decisions for CFC-based refrigeration equipment by the user industry, leading to a reduction of about 40 MT by 2004.

4. Technical Assistance and Training

Activity	Description	
Workshops for government policymakers and decision-makers	Objective	Ensuring high-level commitment for meeting Plan obligations by government policy-makers and decision-makers
	Target group	Responsible officials from associated line ministries. It is proposed to organize two one-day workshops, each for up to 50 persons in late 2002 and mid-2003.
	Impact	Reinforcing commitment to plan obligations from government and ensuring that the various policy and regulatory actions are taken in accordance with the Plan.
Workshops for Servicing and Training establishments	Objective	Initiating participation and phase-out activities and commitments from service establishments. Initiating the appropriate curricula in the training establishments for disseminating technologies and practices in refrigeration servicing to ensure sustainable reductions in CFC usage.
	Target group	Prospective recipient service establishments and training establishments. It is proposed to organize two one-day workshops, each for about 70 major servicing establishments and about 50 training establishments in the first and second quarters of 2003
	Impact	Participation agreements with servicing establishments in place for the recovery/recycling program. Appropriate curricula in place in the training establishments
Technical Assistance for procurement of equipment	Objective	Initiate procurement procedures for equipment to be provided to recipient servicing establishments for recovery/recycling and training establishments for demonstration
	Target group	Service establishments
	Impact	Finalization of specifications and vendor shortlists, international competitive bidding and issuance of purchase orders/contracts
Technical Assistance for retrofitting demonstration	Objective	Demonstration of retrofitting technologies
	Target group	About 70 end-users would be identified and selected for participation in the program.
	Impact	Facilitating early retrofitting/replacement decisions for CFC-based equipment by end-users, thereby reducing dependence on CFCs for servicing and leading to reductions of about 40 MT in servicing by 2004
Training	Objective	Capacity-building for training of technicians
	Target group	About 150 master trainers will be selected and provided with training and capacity-building inputs through one two-day workshop
	Impact	Delivery of training inputs to master trainers, in preparation for the subsequent technician training program, in order to introduce good practices and awareness thereby facilitating initial emission reductions amounting to about 20 MT during servicing by 2004.

5. Government Action

Policy/Activity Planned	Schedule of Implementation
Type of Policy Control on ODS Import	Continuing enforcement of existing controls
Awareness	See below
Others	See below

Activities for 2002:

- a) Establishment of the Sector Plan Management and Coordination Unit (SPMCU) for facilitating the management of the Sector Phase-out Plan:
 - Determination of personnel and logistics requirements
 - Finalizing terms of reference for personnel
 - Initiation of recruitment of personnel
- b) Formulation of detailed terms of reference and work plans for various activities under the Policy & Management Support component.
- c) Establishment of an operational mechanism for Plan implementation and for participation by servicing and training establishments in the Plan and for obtaining phase-out commitments.
- d) One workshop for institutional and government stakeholders/decision-makers.

Activities for 2003:

- a) Completing recruitment and allocation of coordinating personnel within the ozone unit for plan management
- b) One workshop for institutional and government stakeholders/decision-makers.
- c) Organization of two workshops for servicing and training establishments.
- d) Reaching agreements with the selected servicing establishments for participation in the recovery and recycling program and with the training establishments for incorporating appropriate provisions in their curricula to ensure sustainable dissemination of servicing technologies and practices.
- e) Selection of about 150 master trainers and organization of one workshop for master trainers.
- f) Preparation of Annual Implementation Program

It is expected that the Government of Indonesia may set the time table of the activities mentioned above in a manner that they consider will best assist the industry and ensure the Government's compliance with the performance agreement.

6. Annual Budget

Activity	Planned Expenditures (US \$)
Establishment of, recruitment of staff for and operation of Sector Plan Management and Coordination unit (SPMCU)	40,000
Technical Assistance	100,000
Workshops and awareness	25,000
Training	50,000
Retrofitting demonstration equipment	210,000
Recovery/recycling equipment	1,611,000
Contingencies	161,069
TOTAL	2,196,758

7. Administrative Fees

The administrative fees will be utilized by UNDP throughout the implementation of this tranche.

**PHASE-OUT MANAGEMENT PLAN FOR CFCs IN THE REFRIGERATION (SERVICING) SECTOR
IN INDONESIA**

Annual Implementation Program (Tranche 2) for CY 2004 and Request for Release of Second Tranche

1. Data

Country	Indonesia
Year of plan	2004
Number of years completed	1
Number of years remaining under the plan	4
Target ODS consumption of the preceding year (ODP MT)	1,072
Target ODS consumption of the year of plan (ODP MT)	872
Level of funding requested (US\$)	1,805,987
Lead implementing agency	UNDP
Co-operating agency (ies)	World Bank

2. Targets

Target:	Procurement actions, training actions, technical assistance and policy/management support activities			
Indicators		Preceding Year	Year of Plan	Reduction
Supply of ODS (ODP MT)	Import	5,585	5,585	0
	Production	0	0	0
	Total (1)	5,585	5,585	0
Demand of ODS (ODP MT)	Manufacturing	N/A	N/A	N/A
	Servicing	1,072	1,072	0
	Stock piling	N/A	N/A	N/A
	Total (2)	1,072	872	200

3. Industry Actions

3.1 Sector-level Actions

Sector	Consumption Preceding Year (1)	Consumption Year of Plan (2)	Reduction within Year of Plan (1) - (2)	No. of Projects Complete	Number of Servicing Related Activities	ODS Phase-Out (ODP MT)
Refrigeration (Servicing) Sector	1,072	872	200	0	3	200

3.2 Recipient-level Actions

Out of the total of 885 service establishments estimated to participate in the recovery & recycling program (as mentioned in the approved project proposal) it is planned that enterprise-level activities at about 150 large-sized service establishments, which commenced participation during 2002-2003, would be completed, through the provision of recovery/recycling equipment.

In addition, the activities at 134 training establishments who are recipients of the recovery/recycling demonstration program and had commenced participation during 2002-2003 would be completed.

It is planned to initiate/complete procurement of recovery/recycling and/or charging/evacuation equipment for the 250 medium-sized service establishments and 500 small-sized service establishments, constituting the second batch of participating service establishments in the recovery/recycling program. The estimated cost of procuring this equipment would be about US\$ 1.5 million.

It is foreseen that the implementation of the recovery/recycling program for these establishments would be set in such a way as to ensure that the completion of activities would lead to a reduction of 140 MT in CFC usage in servicing, which is 70% of the annual phase-out target for CY 2004 (200 MT). An additional about 75 MT would be reduced by 2005, thus contributing to the phase-out target for 2005.

It is planned that the activities at about 70 representative end-users, which were identified for the retrofitting/replacement demonstration program would be completed. This action is expected to accelerate retrofitting/replacement decisions for CFC-based refrigeration equipment by the user industry, leading to a reduction of CFC usage of about 40 MT during 2004. An additional reduction of 80 MT is expected to take place by 2005, thus contributing to the phase-out target for 2005.

Thus, the total reduction in CFC usage in servicing, resulting from completion of enterprise-level activities as described above, would be about 180 MT during 2004 and about 155 MT during 2005.

4. Technical Assistance and Training

Activity	Description	
Workshops for Servicing establishments	Objective	Continued participation, commitments and phase-out activities from service establishments and for disseminating technologies and practices in refrigeration servicing to ensure sustainable reductions in CFC usage.
	Target group	Prospective recipient service establishments. It is proposed to organize two one-day workshops, each for about 250 servicing establishments in the first and third quarters of 2004
	Impact	Participation agreements with servicing establishments in place for the second and subsequent batches of the recovery/recycling program.
Technical Assistance for procurement of equipment	Objective	Initiate procurement procedures for equipment to be provided to the second batch of recipient servicing establishments for recovery/recycling
	Target group	Service establishments (second batch)
	Impact	Finalization of specifications and vendor shortlists, international competitive bidding and issuance of purchase orders/contracts
Technical Assistance for retrofitting/replacement demonstration	Objective	Completion of activities for retrofitting/replacement of CFC-based equipment and demonstration of retrofitting/replacement technologies.
	Target group	About 70 end-users identified and selected for participation in the program during 2003.
	Impact	Facilitating early retrofitting/replacement decisions for CFC-based equipment by end-users, thereby reducing dependence on CFCs for servicing and leading to reductions of about 40 MT in servicing by 2004
Training	Objective	Training of technicians
	Target group	Refrigeration servicing technicians (about 6,000 in the first batch)
	Impact	Delivery of training inputs to technicians, in order to introduce good practices and awareness thereby facilitating initial emission reductions amounting to about 20 MT during servicing by 2004.

The impact of training activities would be improved practices and efficiencies in refrigeration equipment servicing, leading to emission reductions during servicing amounting to about 20 MT during 2004.

5. Government Action

Policy/Activity Planned	Schedule of Implementation
Type of Policy Control on ODS Import	Continuing enforcement of existing controls
Awareness	See below
Others	See below

Activities for 2004:

- a) One workshop for institutional and government stakeholders/decision-makers.
- b) Organization of two workshops for selected servicing establishments and industry stakeholders.
- c) Continuation of agreements with selected servicing establishments for participation in the recovery and recycling program.
- d) Initiation, management and monitoring of the technician training programme
- e) Preparation of Annual Implementation Program

It is expected that the Government of Indonesia may set the time table of the activities mentioned above in a manner that they consider will best assist the industry and ensure the Government's compliance with the performance agreement.

6. Annual Budget

Activity	Planned Expenditures (US \$)
Ongoing monitoring and operations of SPMCU	40,000
Technical Assistance	90,000
Workshops and awareness	20,000
Training	100,000
Recovery/recycling equipment	1,450,000
Contingencies	105,987
TOTAL	1,805,987

7. Administrative Fees

The administrative fees will be utilized by UNDP throughout the implementation of this tranche.