EP

LIMITED

Distr.

الأمم المتحدة



UNEP/OzL.Pro/ExCom/41/61 18 November 2003

ARABIC ORIGINAL: ENGLISH

> اللجنة التنفيذية للصندوق المتعدد الأطراف لتنفيذ بروتوكول مونتريال الاجتمــاع الحادي و الأربعــون مونتريال، 17-19 كانون الأول / ديسمبر 2003

مقترح المشروع: تايلند

تتألف هذه الوثيقة من تعليقات وتوصيات أمانة الصندوق بشأن مقترح المشروع التالى :

الإزالة التدريجية

• الخطة الوطنية لإزالة الـCFC: برنامج العمل السنوي 2003

البنك الدولى

وصف المشروع

الخلفية

مادقت اللجنة التنفيذية، في اجتماعها الخامس والثلاثين، على الخطة الوطنية لتايلند من أجل الإزالة التدريجية لل-CFC ووافقت، مبدئيا، على تمويل بمجموع 14,728,626 دولار أمريكي سيتم إنفاقه في الفترة2009-2001 للقضاء على الاستهلاك المتبقى لكمية 3.066 طن ODP من المرفق أ، الـ14,728,626 دولار أمريكي الفترة ODP من 1,1,1 من ODP من رابع كلوريد الكربون. ومنذ الموافقة على ذلك، من المرفق أ، الـ2003 و2005 و2005 TCA 1,1,1 محموع 1، و34 طن ODP من 1,1,1 معرفي 0.057 طن ODP من رابع كلوريد الكربون. ومنذ الموافقة على ذلك، متم دفع مستحقات لمرحلتي 2001 و2025 إلى البنك الدولي، مع إنفاق بمجموع 5,734,380 دولار أمريكي. ونظرا إلى التأخير الذي حصل في إنشاء ودفة مستحقات لمرحلتي 2001 و2025 إلى البنك الدولي، مع إنفاق بمجموع 5,734,380 دولار أمريكي. ونظرا إلى التأخير الذي حصل في إنشاء وحدة لإدارة الشروعات، لم يكن بمقدور البنك الدولي تقديم برنامج العمل لعام 2003 كما كان مقرراً. وتماشيا مع الإتفاق، يطلب برنامج العمل لعام 2003 دولار أمريكي. ونظرا إلى التأخير الذي حصل في إنشاء وحدة لإدارة الشروعات، لم يكن بمقدور البنك الدولي تقديم برنامج العمل لعام 2003 كما كان مقرراً. وتماشيا مع الإتفاق، يطلب برنامج العمل لعام 2003 دولار أمريكي ورابلغ الدولي تقديم برنامج العمل لعام 2003 كما كان مقرراً. وتماشيا مع الإتفاق، يطلب برنامج العمل لعام 2003 دولار أمريكي. وتنطوي عملية التقديم على تقرير مرحلي بشأن 2003 دفع 4,011,846 دولار أمريكي بالإضافة إلى تكلفة المساندة بمبلغ 3,066 دولار أمريكي. وتنطوي عملية التقديم على تقرير مرحلي بشأن 2003 دفع 2003,846 دولار أمريكي وبرامج العمل 2003 دفع 2003، وبرنامج العمل 2003 القترح، وتقرير من مُراجع قانوني فيما يتعلق بواردات الـ2007 في عام 2002. يلخص الجدول 2003 دفع 2003، وبرنامج العمل 2003 القترح، وتقرير من مُراجع قانوني فيما يتعلق بواردات الـ2007 في عام 2002. يلخص الجدول 2003 دفع 2003، وبرنامج العمل 2003 دولار أمريكي وبرامج العمل 2003، وبرامج العمل السنوي 2003 دخط قايلند الوطنية للإزالة التدريجية 2004 دفعة تايلند 2003 دفع 2005 دفع دولي 2005 دفع 2005 دفع 2005 دفع 2005 دفع 2005 دفع 20

| تايلند  | البلد                    |
|---|--------------------------|
| مشروع تايلند للإزالة التدريجية للمواد المستنفدة لطبقة الأوزون                               | عنوان المشروع :          |
| خطة تايلند الوطنية للإزالة التدريجية للـCFC   |                          |
| 2003  | سنة الخطة                |
| 1   | عدد السنوات المتمة       |
| إطار الخطة 7  | عدد السنوات المتبقية في  |
| المواد المستهلكة لطبقة الأوزون لعام 2002 من 3,066 طن ODP من الملحق أ، كيماويات مجموعة CFCs) | الحد الأقصى لاستهلاك     |
| السنوية 2003 34 طن ODP من ZCA السنوية 2003  | (طن ODP)، الخطة          |
| ODP من رابع كلوريد الكربون  |                          |
| المجموع: 3,107.52 طن ODP  |                          |
| اللواد المستهلكة لطبقة الأوزون لعام 2003 2,777 طن ODP من الملحق أ، كيماويات مجموعة I (CFCs) | الحد الأقصى لاستهلاك     |
| السنوية 2003 34 طن ODP من ZCA السنوية 2003  | (طن ODP)، الخطة          |
| ODP من رابع كلوريد الكربون  |                          |
| المجموع: 2,818.52 طن ODP  |                          |
| ادق عليـه مبـدئيا لخطـة الإزالـة التدريجيـة 14,728,626 دولار أمريكي                         | مجمـوع التمويــل المصــا |
|   | للـCFC                   |
| دفعه ابتداء من أكتوبر 2003 5,734,380 دولار أمريكي   | مجموع التمويل الذي تم    |
|   |                          |
| اللخطة السنوية 2003 4,011,846 دولار أمريكي  | مستوى التمويل المطلوب    |

#### UNEP/OzL.Pro/ExCom/41/61

2. بلغ الوقع على تنفيذ برنامج العمل 2002 مجموع استهلاك المواد المستنفدة للأوزون في تايلند في 2002 كما يلي: 2,177.33 طن ODP من الـ ODP من الـ ODP دولاشيء من رابع كلوريد الكربون. وتقع كل هذه الأرقام دون أهداف عام 2002 المن ODP لمن ODP من الـ ODP تراجع كلوريد الكربون. وتقع كل هذه الأرقام دون أهداف عام 2002 للن ODP للمنصوص عليها في الإتفاق: 6.006 طن ODP للـ ODP، 46 طن ODP للـ و2.57 الـ 1,1,1 محمل و2.57 طن ODP لرابع كلوريد الكربون. تم الإبلاغ عن هذا التخفيض في الاستهلاك على أنه نتيجة إنجازات لمشروعات تمت المصادقة عليها قبل الخطة الوطنية للإزالة التدريجية، الكربون. تم الإبلاغ عن هذا التخفيض في الاستهلاك على أنه نتيجة إنجازات لمشروعات تمت المصادقة عليها قبل الخطة الوطنية للإزالة التدريجية، والإجراءات الشديدة المتديدة التخفيض في الاستهلاك على أنه نتيجة إنجازات لمشروعات تمت المصادقة عليها قبل الخطة الوطنية للإزالة التدريجية، والإجراءات الشديدة المنديدة المنعية إلى حاكم، تعرف في الاستهلاك على أنه نتيجة إنجازات لمشروعات تمت المصادقة عليها قبل الخطة الوطنية للإزالة التدريجية، والإجراءات الشديدة المتدينة من الحكومة إلى جانب ضآلة الطلب المحلي على المنتجات المُستعة بالـ OF7 منذ 1997. وتحت فئة المساعدة الفنية، يوجد وصف للأنشطة التي أضطلع بها في 2002، تتراوح بين وضع إستراتجية انتقالية لأجهزة الاستنشاق بالجرعات القننة، وتطبيق الشروط الإجرارية لمعاينة أجهزة تكييف الهواء للسيارات، وبرامج تدريب الدربين والإقرار بتأهيل تقني خدمة أجهزة تكييف الهواء للسيارات، وتدريب موظفي الجمارك، يوجد وصف للأنشطة التي أضطلع بها في 2002، تتراوح بين وضع إستراتجية انتقالية لأجهزة الاستنشاق بالجرعات القننة، وتدريب موظفي الجمارك، يوجد وصف للأنشطة التي أحمل الهدف التنفيذ ومجوعة استهدافاته ووقعه وحالت. إلى إنشاء وحدة لإدارة المروعات. والوصف مزود بعرض جدولي للتقدم المحرز في كل نشاط، شاملا لهدف التنفيذ ومجوعة استهدافاته ووقعه وحالته. ويقدم التقرير المالي يوام قراري المنواق الغطر (2002، تراوع)، غير أنَّ الإنفاق الفعلي الملبغي عنه لكل من الأنشطة التسعة ويقدم التقرير اللالي لعام 2002 بيانات عن الإنفاق الخطط (5,194,380 دولار أمريكي)، غير أنَّ الإنفاق المالي لى ما المروعات. والحن من الأنشطة التسعة ريامان أمريكي)، غير أنَ الإنفاق الماي المان مالأدهاته. يولى الم

#### التدقيق الحسابى لواردات المواد المستنفدة لطبقة الأوزون

3. تم الإضطلاع بالتدقيق الحسابي لواردات الـ1,1,1 CFC وCFC لعام 2002 مراجع قانوني مُرخَص له بموجب قانون المراجع 5. تم الإضطلاع بالتدقيق العتدد في 1962، مستقل تمام الاستقلال عن المحاسب العام لتايلند. وهذا التدقيق يتوافق ومقاييس التدقيق المعتدة في 1962، مستقل تمام الاستقلال عن المحاسب العام لتايلند. وهذا التدقيق يتوافق ومقاييس التدقيق المعتدة في تايلند. وبما أن استيراد/تصدير المواد المستنفذة لطبقة الأوزون يخضعان للمراقبة المشتركة لدائرتي الأعمال الصاعية والجمارك، قام المراجع بفحص ومقارنة ما لا يقل على 65% من مجموعتي السجلات اللتين هما بحوزة الدائرتين. ويتألف تقرير التدقيق على أربعة فصول؛ يقدم الفصلان واحد واثنان بيانات الاستيراد/التصدير المواد، والمستفادة معارك والأعمال الصناعية. ويقدم الفصل الثلث وصفاً مفصلاً للسياسة والإجراء المنبثقين عن وزارة الصناعة بشأن مراقبة استيراد/تصدير المواد المستفادة من دائرتي الجمارك والأعصال الصناعية. ويقدم الفصل الثلث وصفاً مفصلاً للسياسة والإجراء المنبثقين عن وزارة الصناعة بشأن مراقبة استيراد/تصدير المواد المستفدة لطبقة الأوزون، بما في ذلك التأهيل على الترخيص للاستيراد ومعاقبة الاستيراد غير المؤصن له، والإجراء المُتبع من دائرة الأعمال الصناعية الورزان، بما في ذلك التأهيل على الترخيص للاستيراد ومعاقبة الاستيراد غير المؤضى له، والإجراء المُتبع من دائرة الأعمال الصناعية لإصدار الرخص، والإجراء المُتبع من دائرة الأعمال الصناعية لترخيص للاستيراد ومعاقبة الاستيراد غير المؤضى له، والإجراء المُتبع من دائرة الأعمال الصناعية المستورد/التصدير، بالإضافة المُرخص له، والإجراء المُتبع من دائرة الأعمال الصناعية لإصدار الرخص، والإجراء المتبع من دائرة الأعمال الصناعية لإصدان السيراد المؤمن والمورة عند الدائرتين. وبعزو الراجع التناقض إلى التصفير الموادي التصدير، الإرضافة الموردة، حالم فوس المرين المورد المالينات المورد المؤون في مارمين ويوري الموردة، خاصة من بيانات المورد الكرين. وبعزو الراجع التناقض إلى التشفير الخافة الموردة، خاصة من بيانات الموردين، والإجراءات المورد المرينان ومرد وي أولى والمول الميزينان ويوني إلى إجراء التصفيق إلى أن الإجراءات المتوردة، خاصة من بيانات الموردين والمولين الكونين إلى والغيرانان المورد المينون الماون الموليي اليمولييي الوزون ليلينانيان الموردة، خاصة من مالي والغي

#### برنامج العمل السنوي لعام 2003

4. يُسطِر برنامج العمل لعام 2003 أهدافا بخصوص استهلاك الـ 2,777.32 طن ODP)، و الـ 1.1.1 34 (45 طن ODP) ورابع كلوريد الكربون (ODP من ODP)، وهي تتوافق والأهداف المنصوص عليها في الإتفاق. إلا أنّ هذه الأرقام تمثل زيادة ملحوظة في كل من الاستهلاك الكلي وفي كل قطاع على حدة مقارنة بالاستهلاك الفعلي المُسجل في 2002 (للتفاصيل يُرجى الرجوع إلى الجدول أدناه). وتتوقع حكومة من الاستهلاك الكلي وفي كل قطاع على حدة مقارنة بالاستهلاك الفعلي المُسجل في 2002 (للتفاصيل يُرجى الرجوع إلى الجدول أدناه). وتتوقع حكومة من الاستهلاك الكلي وفي كل قطاع على حدة مقارنة بالاستهلاك الفعلي المُسجل في 2002 (للتفاصيل يُرجى الرجوع إلى الجدول أدناه). وتتوقع حكومة تايلند بأن يزيد النمو الأخير للناتج المحلي الإجمالي لعام 2003 من الطلب المحلي على المنتجات المُصنّعة بالـ CFC. ومن جهة أخرى، هنالك علامات بأن الـ 21-212 وغازات تبريد دون قياسية مُهرّبة يجري تسريبها إلى السوق المحلية نتيجة حصص الاستيراد الضئيلة المُرخصة في عام 2002. وهذا ما أفضى بالحكومة إلى اتخاذ قرار لتيسير قليلا بشأن حصص الاستيراد في 2003، دون المساس بتطبيق أهداف الإخفاق. المحلومة في عام 2003.

#### UNEP/OzL.Pro/ExCom/41/61

الفنية التي ستتم في 2003، واستعراضا على شكل جدول للأهداف، ووقع وحالة مثل هذه الأنشطة. وقدمت الميزانية المقترحة لبرنامج العمل السنوي 2003 تقسيماً للنفقات المخططة على 9 بنود من الأنشطة لمجموع متوقع يبلغ 4,011,846 دولار أمريكي.

| الإزالة الدريجية | عـدد الأنشـطة | عــدد المشــروعات | التخفيض في عسام | الاستهلاك المستهدف عام | الاستهلاك الفعلي  | القطاع      |  |  |  |
|------------------|---------------|-------------------|-----------------|------------------------|-------------------|-------------|--|--|--|
| تـــــSODS       | المتصـــلة    | المنجزة           | الخطة           | الخطة (طن ODP)         | للعـــام الســابق |             |  |  |  |
| ( <b>ODP</b> (طن | الخدمة        |                   | (2)-(1)         | (2) 2003               | ( <b>ODP</b> (طن  |             |  |  |  |
|                  |               |                   |                 |                        | (1) 2002          |             |  |  |  |
|                  |               |                   | الصناعة         |                        |                   |             |  |  |  |
|                  |               |                   | _               |                        |                   |             |  |  |  |
| 0                |               | 0                 | 0               | 30                     | 30                | الأيروسولات |  |  |  |
| 83.64-           |               | 5                 | 83.64-          | 668                    | 584.36            | الرغاوي     |  |  |  |
| 106-             |               | 0                 | 106-            | 203                    | 97                | التبريد     |  |  |  |
| 105.39-          |               | 0                 | 105.39-         | 108.35                 | 2.96              | المذيبات    |  |  |  |
| 4.01-            |               | 0                 | 4.01-           | 4.01                   | 0                 | غير ذلك     |  |  |  |
|                  | 299.04-       | 5                 | 299.04-         | 1,013.36               | 714.32            | المجموع     |  |  |  |
|                  | الخدمة        |                   |                 |                        |                   |             |  |  |  |
| 339.52-          | 6             | 1                 | 339.52-         | 1,805.49               | 1,465.97          | التبريد     |  |  |  |
| 339.52-          | 6             | 1                 | 339.52-         | 1,805.49               | 1,465.97          | المجموع     |  |  |  |
| 638.56-          | 6             | 6                 | 638.56-         | 2.818.85               | 2,180.29          | المجمـــوع  |  |  |  |
|                  |               |                   |                 |                        |                   | الكبير      |  |  |  |

## تعليقات وتوصيات الأمانة

#### التعليقات

5. تم إعداد التقرير المرحلي وبرنامج العمل 2003 وفقا للمبادئ التوجيهية لإعداد، وتنفيذ، وإدارة قطاع المعتمد على الأداء والخطة الوطنية للقضاء على المواد المستنفدة لطبقة الأوزون (UNEP/OzL.Pro/ExCom/38/57) المصادق عليهما في الاجتماع الثامن والثلاثين.

6. نظرا لتحسن أداء الاقتصاد التايلندي، فمن المنتظر أن يزداد استهلاك الـCFC في 2003 بأكثر من 600 طن ODP مقارنة بأرقام 2002، بالرغم من أن ذلك يبقى في إطار أهداف الاتفاق بين اللجنة التنفيذية وتايلند. وتهدف الزيادة في التزويد إلى إعاقة تزايد حوادث الاستيراد غير المشروع للـCFC إلى البلد. فقد قامت الحكومة بوضع نظام صارم جدا لمراقبة حصص استيراد الـCFC في 2003 وفرضت وزارة المالية ضريبة نشاط بشأن الـCFC للعدول عن استهلاكها.

#### UNEP/OzL.Pro/ExCom/41/61

7. وضعت حكومة تايلند نظام وظيفي لمراقبة حصص استيراد الـCFC تحت مسؤولية مشتركة لعدة دوائر. وقد تم فحص واردات 2002 بشكل رسمي من طرف مراجع مُرخص الذي فحص توافق السياسات والإجراءات بشأن مراقبة الواردات التي سنتها الحكومة والسجلات التي تحتفظ بها دوائر الحكومات المعنية باستيراد الـCFC في 2002. وقد رضي المُراجع بالتوضيحات عن التناقضات التي عثر عنها عند تدقيقه وأعطى استنتاجاته وتوصياته.

8. و تُعد نتيجة التدقيق تأكيداً لتوريد الـCFC إلى تايلند عام 2002 ولا تنطوي على فحص الاستخدامات الفعلية للـCFC في البلد. وضمت الحكومة الآن إجراء في إطار نظام مراقبة استيراد الـCFC بحيث ستقوم إدارة الأعمال الصناعية بتفتيش الجمارك الذين ابتاع لهم المستوردون الـCFCS. وكان من شأن هذا التفتيش أن يقدم بيانات استيراد مطابقة إلا أنها لم تنفذ في الوقت للتفتيش لبرنامج العمل لعام 2002.

#### التوصيات

توصى الأمانة اللجنة التنفيذية على:

- مصادقة برنامج العمل 2003 للخطة الوطنية لتايلند من أجل الإزالة التدريجية للـCFC في مستوى التمويل المطلوب البالغ 4,011,846 دولار أمريكي وتكلفة المساندة المتصلة البالغة 353,066 دولار أمريكي للبنك الدولي.
- مطالبة البنك الدولي والحكومة التايلندية تنفيذ عملية تفتيش لعينة من مستهلين النهائيين للـCFC الذين ابتاعهم المستوردون الـCFC، كجزء من عملية التفتيش من برنامج العمل لعام 2003 لتوطيد بيانات الاستيراد.
- 3. مطالبة البنك الدولي إسراع تنفيذ أنشطة التحويل لما تبقى من الصناعات المستهلكة للـCFC في تايلند بغية تقليص الطلب على الـ CFC.

# THAILAND ODS PHASE-OUT PROJECT NATIONAL CFC PHASE-OUT PLAN (NCFCP)

## 2003 ANNUAL PROGRAM

## PROJECT MANAGEMENT UNIT DEPARTMENT OF INDUSTRIAL WORKS (diw) MINISTRY OF INDUSTRY AND

THE WORLD BANK

November 23, 2003

## 1. DATA

| Country  | THAILAND  |
|--|---|
| Year of plan   | 2003  |
| No. of years completed                                       | 1   |
| No. of years remaining under the plan                        | 7   |
| Target ODS Consumption of the preceding year ( <b>2002</b> ) | • 3,066 ODP Tonnes of Annex A, Group I Chemicals (CFCs) |
|  | • 34 ODP Tonnes of TCA                                  |
|  | • 7.52 ODP Tonnes of CTC                                |
| Total  | 3,107.52 ODP Tonnes                                     |
| Target ODS Consumption of the year of plan (2003)            | • 2,777 ODP Tonnes of Annex A, Group I Chemicals (CFCs) |
|  | • 34 ODP Tonnes of TCA                                  |
|  | • 7.52 ODP Tonnes of CTC                                |
| Total ODS  | 2,818.52 ODP Tonnes                                     |
| Level of funding requested                                   | USD 4,011,846   |
| Lead implementing agency                                     | The World Bank  |
| Co-operating agency (ies)                                    | Nil   |

#### 2. TARGETS

| Targets:   |               |           |                          |                        |                   |
|------------|---------------|-----------|--------------------------|------------------------|-------------------|
| Indicators |               | Chemicals | Preceding Year<br>(2002) | Year of Plan<br>(2003) | Reduction         |
|            |               | CFCs      | 3,066<br>ODP Tonnes      | 2,777<br>ODP Tonnes    | 289<br>ODP Tonnes |
|            | Import        | TCA       | 34<br>ODP Tonnes         | 34<br>ODP Tonnes       | 0<br>ODP Tonnes   |
|            |               | СТС       | 7.52<br>ODP Tonnes       | 7.52<br>ODP Tonnes     | 0<br>ODP Tonnes   |
| Supply of  | Production    |           |                          |                        |                   |
| ODS        |               | CFCs      | 3,066<br>ODP Tonnes      | 2,777<br>ODP Tonnes    | 289<br>ODP Tonnes |
|            | Total (1)     | TCA       | 34<br>ODP Tonnes         | 34<br>ODP Tonnes       | 0<br>ODP Tonnes   |
|            |               | CTC       | 7.52<br>ODP Tonnes       | 7.52<br>ODP Tonnes     | 0<br>ODP Tonnes   |
|            |               |           |                          |                        |                   |
|            | Manufacturing | CFCs      | 1,070<br>ODP Tonnes      | 972<br>ODP Tonnes      | 98<br>ODP Tonnes  |
|            | Manufacturing | TCA       | 34<br>ODP Tonnes         | 34<br>ODP Tonnes       | 0<br>ODP Tonnes   |
|            |               | CTC       | 7.52<br>ODP Tonnes       | 7.52<br>ODP Tonnes     | 0<br>ODP Tonnes   |
| Demand of  | Servicing     | CFCs      | 1,996<br>ODP Tonnes      | 1,805<br>ODP Tonnes    | 191<br>ODP Tonnes |
| ODS        | Stockpiles    |           |                          |                        |                   |
|            |               | CFCs      | 3,066<br>ODP Tonnes      | 2,777<br>ODP Tonnes    | 289<br>ODP Tonnes |
|            | Total (2)     | TCA       | 34<br>ODP Tonnes         | 34<br>ODP Tonnes       | 0<br>ODP Tonnes   |
|            |               | CTC       | 7.52<br>ODP Tonnes       | 7.52<br>ODP Tonnes     | 0<br>ODP Tonnes   |

#### 3. INDUSTRY ACTION

| Sector         | Actual<br>Consumption<br>Preceding Year<br>(ODP Tonnes)<br>2002 <sup>1</sup><br>(1) | Target<br>Consumption<br>Year of Plan<br>(ODP Tonnes)<br>2003 <sup>2</sup><br>(2) | Reduction<br>Within<br>Year of<br>Plan<br>(1)-(2) | Number of<br>Projects<br>Completed | Number<br>of<br>Servicing<br>Related<br>Activities | ODS<br>Phase-out<br>(in ODP<br>tonnes) |
|----------------|---|---|---|------------------------------------|--|--|
|                |   | Manufa  | cturing   |                                    |  |  |
| Aerosol        | 30  | 30  | 0   | 0                                  |  | 0                                      |
| Foam           | 584.36  | 668   | -83.64  | 5                                  |  | -83.64                                 |
| Refrigeration  | 97  | 203   | -106  | 0                                  |  | -106                                   |
| Solvents       | 2.96  | 108.35  | -105.39   | 0                                  |  | -105.39                                |
| Other          | 0   | 4.01  | -4.01   | 0                                  |  | -4.01                                  |
| Total          | 714.32  | 1,013.36  | -299.04   | 5                                  |  | -299.04                                |
|                | -   | Servi   | cing  |                                    |  |  |
| Refrigeration  | 1,465.97  | 1,805.49  | -339.52   | 1                                  | 6  | -339.52                                |
| Total          | 1,465.97  | 1,805.49  | -339.52   | 1                                  | 6  | -339.52                                |
| GRAND<br>TOTAL | 2,180.29  | 2,818.85  | -638.56   | 6                                  | 6 <sup>3</sup>                                     | -638.56                                |

<sup>&</sup>lt;sup>1</sup> The figure of ODS consumption shown for each sub-sector in year "2002" is lower than the respective target because of early phase-out of CFC from on-going sub-projects, the aggressive actions taken by the Government, and the weak domestic demand for products manufactured with CFCs experiencing since 1997. However, given the recent growth of GDP in 2003 which is expected to continue into 2004 - 2005, it is expected that annual production in each sub-sector will improve as the local demand for these products is rising in the coming years. Due to DIW's proactive policy, import quotas of the controlled chemicals were further reduced in 2002. In addition, the Ministry of Finance has imposed an excise tax on CFCs based on the recommendation of DIW. These two policy measures led a large number of enterprises to convert their processes to non-CFC alternatives.

 $<sup>^2</sup>$  Because of the significant reduction of import quota in 2002, there were signals that smuggling of CFCs, particularly CFC-12, started to emerge. Moreover, more and more sub-standard blended refrigerants were introduced in the market. To preempt the illegal import of CFCs and sub-standard blended refrigerants to grow, DIW decided to revise its 2003 import quotas of some CFCs and made in more in line with the phase-out targets in the agreement between the Government of Thailand and the ExCom. Therefore, ODS consumption shown for each sub-sector in the year "2003" column above is set in accordance with the Agreement. However, actual consumption in 2003 cannot be determined before the year ends;

<sup>&</sup>lt;sup>3</sup> Six activities are (i) Chiller Replacement/Retirement, (ii) Retirement of CFC-12 Domestic Refrigerators, (iii) Retirement of CFC-12 Refrigerator Containers, (iv) New Vehicle Inspection Requirement Upgrading Capacity of Inspection Stations, (v) Train-the-Trainer Program and Certification of MAC Service Technicians, and (vi) Financial Subsidy for R&R Machines.

| Sector         | Actual   | Actual Consumption Preceding Year<br>(ODP Tonnes)<br>2002 |     |            |          | Target Consumption Year of Plan<br>(ODP Tonnes)<br>2003 |      |          |  |
|----------------|----------|---|-----|------------|----------|---|------|----------|--|
|                | CFCs     | 1,1,1-<br>TCA   | СТС | Total      | CFCs     | 1,1,1-<br>TCA   | СТС  | Total    |  |
|                |          |   | Mar | ufacturing |          |   |      |          |  |
| Aerosol        | 30       | -   | -   | 30         | 30       | -   | -    | 30       |  |
| Foam           | 584.36   | -   | -   | 584.36     | 668      | -   | -    | 668      |  |
| Refrigeration  | 97       | -   | -   | 97         | 203      | -   | -    | 203      |  |
| Solvents       | -        | 2.96  | -   | 2.96       | 70.4     | 34  | 3.95 | 108.35   |  |
| Other          | -        | -   | -   | 0          | 0.43     | -   | 3.58 | 4.01     |  |
|                |          |   | S   | ervicing   |          |   |      |          |  |
| Refrigeration  | 1,465.97 | -   | -   | 1,465.97   | 1,805.49 | 0   | 0    | 1,805.49 |  |
| GRAND<br>TOTAL | 2,177.33 | 2.96  | 0   | 2,180.29   | 2,777.32 | 34  | 7.52 | 2,818.85 |  |

Breakdown of actual consumption of CFCs, 1,1,1-TCA, and CTC in 2002 and target consumption of CFCs, 1,1,1-TCA, and CTC in 2003

With regard to 6 activities resulting in consumption reduction within year of plan (2003), the Government of Thailand recognized that certain activities in the service sector are experiencing delays. However, given flexibility provided to the Government of Thailand to manage the implementation of this plan in order to achieve the agreed target, the Government of Thailand has stepped up its implementation of the import quotas, strengthening of the enforcement of the import control system, and introducing the excise tax on CFCs.

#### 4. TECHNICAL ASSISTANCE --- CY 2002 [Preceding Year]

DIW initiated formal discussions with concerned agencies in order to establish working groups to formulate appropriate policies and action plans for effectively phase-out CFC, 1,1,1-TCA and CTC. A joint workshop on implementation of National CFC Phase-out Plans was held by the Bank in late 2002. Brief description of additional sector-specific activities undertaken in 2002 is listed below.

<u>MDI</u>: A series of discussions with Food and Drug Administration (FDA) on the need to develop a MDI transition strategy and action plans were held. Among others, DIW launched a workshop on CFC MDI Transition Strategy in October 2002. An expert from a MDI manufacturer and representatives from relevant agencies such as FDA, the Allergy and Immunology Society of Thailand, MDI importers participated in this workshop. The workshop agreed on the scope of the strategy. The outcome of this workshop is being used as a basis for development of a detailed TOR for developing the strategy.

<u>Technical Assistance for Textile and Garment Industry</u>: DIW discussed with Thailand Textile Institute (TTI) on implementation strategies for relevant measures to ensure the phase-out of 1,1,1-TCA be sustainable, environmental friendly and without comprising human safety. TTI showed its interest in taking the lead in managing the environmentally sound and safe phaseout of 1,1,1-TCA in the textile and garment industry. In addition, DIW also developed a detailed terms of reference describing the objectives and scope of work for this activity.

<u>Mandatory Requirement for MAC Inspection</u>: Consultation with the Land Transportation Department (LTD) on action regarding regulatory requirements and scope of works was held in 2002. As a result, a Steering Committee comprising of representatives from LTD and DIW was established in late 2002. The mandate of this Steering Committee is to provide guidance and required supervision to ensure successful implementation of this component of the National CFC Phase-out Plan. In addition, a draft Memorandum of Agreement between DIW and LTD was developed in order to formalize the cooperation of the two agencies in jointly implementing this most critical component of the Plan.

Train-the-Trainer Program for MAC Service Technicians and Certification of MAC Service <u>Technicians</u>: As a follow-up to the National CFC Phase-out Workshop held in December 2001, a series of consultations were held to define the role and responsibility of the Department of Skill Development (DSD) in relation to this component of the Plan. In this regard, DSD agreed to use its existing network of training institutes and training centers across the country as authorized training centers for training and certifying MAC service technicians. In August 2002, a MOA stipulating the cooperation framework between DIW and DSD was signed.

<u>Customs Training:</u> Discussions with the Customs Department on project implementation and scope of works were held in 2002 as part of DIW's follow-up from its National CFC Phase-out Plan workshop in 2001. The Steering Committee comprising of representatives from the Customs Department and DIW was established in mid 2002. The tasks of this Committee, among others, are to define the scope of the cooperation between the two agencies. A number of technical discussions pertaining to inspection techniques and procedures were held. A MOA between the Customs Department and DIW was signed in December 2002. In addition, a representative of the Customs Department also attended a workshop on the National CFC Phase-out Plan held by the Bank in December 2002.

<u>Project Management Unit</u>: DIW completed the design of the structure of the Project Management Unit (PMU). DIW emphasized the need for giving full autonomy for PMU to undertake all activities proposed by the Plan. This is to ensure that PMU will be able to function in an efficient and expeditious manner. Based on the agreed structure, PMU will be manned by 6 members: one Chief of Project Management Unit, two Technical Officers, one Public Outreach Officer, one Financial Officer, and one General Administrative staff. TORs for these staffs were finalized in 2002. It was agreed that the position of a Chief of PMU should be filled first and the Chief of PMU would then select remaining staffs by himself. The Chief of PMU is fully responsible for the performance of his unit. In late 2002, the selection process of the Chief of Project Management Unit was completed. DIW submitted its request for Bank's clearance on the selection process of the Chief of PMU to the Bank before the end of 2002.

With regard to public awareness activities, DIW organized an International Ozone Day Ceremony aiming to disseminate information on the Montreal protocol, the NCFCP strategies and the government policy to relevant stakeholders in the government sector and the general public. In addition, DIW participated in a number of training and/or workshops in the country to disseminate information regarding the NCFCP.

| No. | Proposed Activity  | Objective   | Target<br>Group  | Impact   | Status/Remarks   |
|-----|--|---|--|--|--|
|     | Technical<br>Assistance for MDI<br>Sector                      | To increase<br>awareness on<br>CFC MDI<br>transition plan                         | Pharmaceutical<br>Association,<br>Doctors, MDI<br>Importers, and<br>Patients | To promote<br>the use of<br>non-CFC<br>MDI                         |  |
| 1   | Selection of consultant  |   |  |  | * Selection of consultant was<br>delayed due to the lack of<br>PMU in 2002.  |
|     |  |   |  |  | * However, draft TOR for the consultant was prepared.  |
|     |  |   |  |  | * Final TOR for consultant would be finalized in 2003.   |
| 2   | Consultation process   |   |  |  | * Consultation process by the consultant did not take place as the consultant was not on board.                                    |
|     |  |   |  |  | * Internal consultation<br>process among relevant<br>agencies was carried out by<br>DIW in October 2002 through<br>a MDI workshop. |
|     | Technical<br>Assistance for<br>Textile and<br>Garment Industry | To develop<br>local exposure<br>limit and<br>proper<br>ventilation<br>system, and | 1,400 Garment<br>and Textile<br>factories                                    | Reduction of<br>1,1,1-TCA in<br>Textile and<br>Garment<br>Industry |  |

Technical assistance carried out in CY 2002 is summarized below:

|   |   | carry out   |  |   |  |
|---|---|---|--|---|--|
|   |   | information   |  |   |  |
|   |   | dissemination   |  |   |  |
| 1 | Appointment of the<br>Consultant                              |   |  |   | * DIW initiated discussion<br>with Thailand Textile<br>Industry (TTI).   |
|   |   |   |  |   | * TTI was willing to carry out<br>the program. Preparation of a<br>detailed project proposal for<br>this assignment was being<br>developed.  |
| 2 | Development of Local  |   |  |   | <ul><li>* Project proposal will be<br/>completed in 2003.</li><li>* Activity will be proceeded</li></ul>   |
| 2 | Exposure Limit  |   |  |   | soon after consultant is on board.   |
| 3 | Development of<br>Guidelines for Proper<br>Ventilation System |   |  |   | * Activity will proceed when<br>the consultant is on board in<br>2003.   |
| 4 | Information<br>Dissemination                                  |   |  |   | * DIW launched information<br>dissemination program<br>through its 2002 public<br>awareness campaign.  |
|   | Mandatory<br>Requirement for<br>MAC Inspection                | To prevent<br>HFC MAC<br>system from<br>any backward<br>retrofit that<br>will be used | LTD's vehicle<br>inspection<br>stations and<br>private vehicle<br>inspection | Reduction of<br>CFC-12<br>consumption<br>in MAC<br>service sector<br>and increase<br>awareness of |  |
|   |   | with CFC-12   | stations   | vehicle's<br>owners   |  |
| 1 | Development of a<br>Standard Inspection<br>Manual             |   |  |   | * Selection of consultant to<br>develop the manual was<br>delayed due to lack of PMU<br>in 2002.   |
|   |   |   |  |   | * However, the Steering<br>Committee comprising of<br>representatives from DIW and<br>LTD was established in late<br>2002.   |
|   |   |   |  |   | * Development of a Standard<br>Inspection Manual will be<br>initiated in 2003.   |
|   |   |   |  |   | * Actions regarding<br>regulatory requirements with<br>Land Transportation<br>Department (LTD) were<br>discussed. A draft MOA<br>established formal<br>cooperation between DIW<br>and LTD on the |

|   | Train-the-Trainer<br>Program for MAC<br>Service Technicians<br>and Certification of<br>MAC Service<br>Technicians | Strengthen<br>technical<br>capacity of the<br>MAC service<br>shops   | Authorized<br>Training<br>Centers and<br>MAC service<br>shops | Reduction of<br>CFC-12<br>consumption<br>in MAC<br>service from<br>repairing<br>MAC system<br>properly | implementation of the<br>activities in the NCFCP and<br>the cooperation in<br>development of a regulatory<br>framework to support<br>sustainable phase-out of CFC<br>in the MAC sector, was<br>finalized.   |
|---|---|--|---|--|---|
| 1 | Train-the-Trainer<br>programme  |  |   |  | <ul> <li>* DIW initiated discussion<br/>with Department of Skill<br/>Development (DSD) to act as<br/>authorized training centers.</li> <li>* Scope of works for the<br/>authorized training centers<br/>was discussed and agreed<br/>between DIW and DSD.</li> </ul>  |
|   |   |  |   |  | <ul> <li>* DSD agreed to act as<br/>authorized training centers<br/>and was in process of seeking<br/>endorsement from its Director<br/>General.</li> <li>* MOA between DIW and<br/>DSD was signed in August<br/>2002.</li> </ul>   |
|   | Customs Training<br>Program   | Strengthen<br>capacity of the<br>Customs<br>Department to<br>inspect import<br>of controlled<br>substances | Customs<br>Department '<br>officials                          | Increase<br>effectiveness<br>of import<br>control<br>system of<br>controlled<br>substances             |   |
| 1 | Development of a<br>Training Course   |  |   |  | <ul> <li>* Selection of consultant to<br/>develop the Customs Training<br/>Manual was delayed due to<br/>lack of PMU in 2002.</li> <li>* However, discussion with<br/>the Customs Department was<br/>initiated and the Steering<br/>Committee comprising of<br/>representatives from the<br/>Customs Department and<br/>DIW was established in mid<br/>2002. A MOA between the<br/>two agencies was signed in<br/>December 2002.</li> </ul> |

|   |                              |  |     |   | <ul> <li>* Scope of works for the<br/>training course was agreed<br/>between DIW and the<br/>Customs Department.</li> <li>* Draft TOR for the<br/>consultant to develop<br/>Customs Training Manual<br/>was developed.</li> </ul>   |
|---|------------------------------|--|-----|---|---|
|   | Project<br>Management Unit   | To provide<br>Government<br>with necessary<br>support to<br>carry out all<br>activities<br>proposed<br>under this plan | DIW | Strengthen<br>capacity of<br>Government<br>to carry out<br>the NCFCP<br>to ensure<br>timely and<br>effective<br>preparation<br>and<br>execution of<br>the project<br>activities |   |
| 1 | Set up of PMU                |  |     |   | <ul> <li>* Structure of PMU was<br/>finalized. The PMU will be<br/>manned by one Chief of<br/>PMU, two Technical Officers,<br/>one Public Outreach officer,<br/>one Financial Officer, and<br/>one General Administrative<br/>staff member.</li> <li>* TORs for these staffs were<br/>finalized.</li> <li>* Selection of Chief of PMU<br/>was in the process of seeking</li> </ul>                                    |
|   |                              |  |     |   | the Bank no objection.<br>* It was planed that selection<br>of other staffs members<br>would be carried out in 2003<br>after the Chief of PMU was<br>appointed.   |
| 2 | Implementation<br>Assistance |  |     |   | <ul> <li>* DIW proceeded with<br/>preparation of foam, aerosol,<br/>and solvent sub-project.</li> <li>* For the foam sector, a series<br/>of meetings with polyol<br/>suppliers were held. The<br/>objective of these meetings<br/>was to finalize an<br/>implementation framework<br/>for phasing out CFCs in large<br/>and small foam enterprises.<br/>The implementation<br/>framework was concluded in</li> </ul> |

|   |                                | 2002.   |
|---|--------------------------------|---|
|   |                                | * For the aerosol and solvent<br>sectors, DIW already<br>contacted enterprises to<br>confirm as to whether they<br>would like to participate in<br>the project and to collect<br>additional and updated<br>baseline information<br>necessary for preparation of<br>project proposals. |
| 3 | Public Awareness<br>Activities | * DIW organized an<br>International Ozone Day<br>Ceremony aiming to<br>disseminate information on<br>the Montreal protocol, the<br>NCFCP strategies and the<br>Government policy to<br>relevant stakeholders in the<br>government sector and the<br>general public.                   |
|   |                                | * In addition, DIW also<br>participated in a number of<br>training and/or workshops in<br>the country to disseminate<br>information regarding the<br>NCFCP.   |
| 4 | Regulatory Support             | Actions regarding regulatory<br>requirements were discussed<br>among relevant agencies.   |

# 4. TECHNICAL ASSISTANCE --- CY 2003 [Year of Annual Work Program] – as of October 10, 2003

<u>MDI</u>: TOR for the consultant to develop CFC MDI transition strategy will be finalized in 2003. The Allergy and Immunology Society of Thailand has confirmed its interest to undertake the assignment. DIW sent the final TOR to the Allergy and Immunology Society of Thailand and request it to prepare a project proposal. It is anticipated that the project proposal will be submitted to DIW by no later than the end of 2003. DIW will secure no objection from the Bank to appoint the Allergy and Immunology Society of Thailand as the consultant for this activity by the end of 2003 in order to allow the appointment of the consultant to begin in early January 2004.

<u>Technical Assistance for Textile and Garment Industry:</u> The Thailand Textile Industry has submitted project proposal for DIW for consideration in April 2003. However, due to a change of its Director in Mid 2003, implementation of activities was postponed because it is essential to seek endorsement from its new Director. From the discussion with the TTI, the TTI has confirmed its interest to perform the assignment as proposed in the proposal and also interested in undertaking the roles of coordinator for the investment component for acquisition of proper ventilation systems. The TTI is modifying project proposal to cover investment component and will submit to DIW in order to secure no objection from the Bank. Contract signing is expected by the end of December 2003.

<u>Mandatory Requirement for MAC Inspection</u>: Discussion with the Land Transportation Department (LTD) to include MAC inspection as part of vehicle inspection is in progress. The LTD agreed to have MAC inspection requirement as a part of vehicle inspections. In was agreed that MAC inspection requirements will be introduced initially in the inspection stations owned by LTD, which are located throughout the country. The coverage of the inspection stations will include the private vehicle inspection stations after the effectiveness of the inspection program is confirmed. Results from the initial MAC inspection program will be used as supporting information to issue necessary regulations. Specification of refrigerant identifiers and TOR for consultant are being drafted.

Train-the-Trainer Program for MAC Service Technicians and Certification of MAC Service Technicians: The Department of Skill Development has proceeded with the implementation by sending program details to all training centers located throughout the country. In mid 2003, representatives from DIW and the Bank participated in a meeting established by DSD. The objective of this project was to provide clarifications with regard to project implementation to Directors of these training centers. It was agreed in the meeting that a technical working group would be established in order to develop a training course for the train-the-trainer program. As of September 2003, the technical working group comprising of representatives from DIW, DSD, MAC manufacturers, and UNEP has been established by the DSD. The Scope of the training course has been developed and is reviewed by the technical working group. The development of the training course and the training manual will be completed by the end of 2003. The train-the-trainer program will start in early 2004.

With regard to training equipment for authorized training centers, equipment specifications have been developed. In the meantime, DIW has coordinated with MAC manufacturers to include this training program as part of MAC manufacturers' routine training programs for their customers. It was found that one MAC manufacturer is currently launching series of 16 training workshops. The scope of the training being offered is similar to the training course developed by DSD. Therefore, DIW will participate in these workshops in order to use the network of this MAC manufacturer to distribute service tools to the MAC service shops.

In addition, with regard to provision of financial incentives for certified MAC service shops under the program to procure servicing tools and recovery and recycling machines, procurement of these equipment items will be carried out through a voucher scheme. Qualification of equipment suppliers and technical specifications of equipment being sought under the program were developed. DIW is now undertaking selection of qualified equipment suppliers that will be listed in the voucher.

<u>Customs Training:</u> Scope of training course has been prepared and endorsed by the Steering Committee. In the meantime, DIW carried out the selection process to appoint a consultant to assist in developing the Customs training manual. A consultant has already been selected and it is anticipated that the contract will be signed by end of October 2003. It is expected that development of training manual will be completed by the end of January 2004 so the train-the-trainer program could be carried out immediately.

<u>Project Implementation and Monitoring:</u> The Chief of PMU was appointed on May 1, 2003. For other staff members, they have joined the unit since July 2003 and the last position was filled on September 1, 2003. PMU is now fully functional and has proceeded with the implementation of the activities as proposed in the NCFCP.

For public awareness activities, DIW participated in an exhibition established for automobile industry in early September 2003. At the exhibition, DIW in close cooperation with MAC manufacturers conducted a theoretical presentation and a hand-on demonstration on how to repair MAC system properly. A number of brochures describing the government policies in relation to the NCFCP and the proposed activities in the MAC service sector have been distributed to participants. In addition, on an International Ozone Day, DIW undertook a workshop aiming to disseminate the Montreal Protocol and the NCFCP to government agencies and the private sector.

DIW is in the process of requesting the Ministry of Finance to exempt import duties of equipment that will be procured and provide to related government agencies such as (i) refrigerant identifiers for the Customs Department and LTD, and (ii) service tools and recovery & recycling machines for DSD. Decisions on tax exemption are expected to be made by the end of November 2003 so DIW could proceed with procurement of these equipment items shortly.

| No. | Proposed Activity  | Objective   | Target<br>Group  | Impact   | Status  |
|-----|--|---|--|--|---|
|     | Technical<br>Assistance for MDI<br>Sector                      | To increase<br>awareness on<br>CFC MDI<br>transition<br>plan                                      | Pharmaceutical<br>Association,<br>Doctors, MDI<br>Importers, and<br>Patients | To promote<br>the use of<br>non-CFC<br>MDI                         |   |
| 1   | Selection of consultant  |   |  |  | * TOR for a consultant has been finalized.  |
|     |  |   |  |  | * The Allergy and<br>Immunology Society of<br>Thailand is preparing project<br>proposal for the assignment<br>and will submit to DIW by<br>the end of 2003. |
|     |  |   |  |  | * Contract signing is expected<br>by the end of November<br>2003.   |
| 2   | Consultation process   |   |  |  | * Will proceed after contract signing.  |
| 3   | Development of MDI<br>Strategy                                 |   |  |  | *Development of CFC MDI<br>Transition strategy will be<br>completed by the end of 2004.   |
|     | Technical<br>Assistance for<br>Textile and<br>Garment Industry | To develop<br>local<br>exposure<br>limit and<br>proper<br>ventilation<br>system, and<br>carry out | 1,400 Garment<br>and Textile<br>factories                                    | Reduction of<br>1,1,1-TCA in<br>Textile and<br>Garment<br>Industry |   |

|   |   | information   |  |   |  |
|---|---|---|--|---|--|
|   |   | dissemination   |  |   |  |
| 1 | Appointment of the<br>Consultant                              |   |  |   | <ul> <li>* Project proposal was<br/>submitted to DIW in April<br/>2003.</li> <li>* Change of the top</li> </ul>  |
|   |   |   |  |   | management of the Thailand<br>Textile Institutes resulted in<br>project implementation delays<br>as DIW had to seek<br>reconfirmation from the TTI.  |
|   |   |   |  |   | * TTI has confirmed its<br>interest to act as the<br>consultant and also interested<br>in undertaking the role of a<br>coordinator for the investment<br>component for acquisition of<br>proper ventilation systems. |
|   |   |   |  |   | * TTI is modifying project<br>proposal to cover investment<br>component and will submit to<br>DIW to secure Bank no<br>objection.  |
|   |   |   |  |   | * Contract signing is expected<br>by the end of December 2003.   |
| 2 | Development of Local<br>Exposure Limit                        |   |  |   | * Activity will proceed when<br>the consultant is appointed.   |
| 3 | Development of<br>Guidelines for Proper<br>Ventilation System |   |  |   | * Activity will proceed in 2004.   |
| 4 | Information<br>Dissemination                                  |   |  |   | * DIW has launched<br>information dissemination<br>program through its 2003<br>public awareness campaign.  |
| 5 | Processing of<br>Applications from<br>Garment Factories       |   |  |   | * Activity will start in 2004.   |
| 6 | Safety Audit  |   |  |   | * Activity will start and complete in 2004.  |
|   | Mandatory<br>Requirement for<br>MAC Inspection                | To prevent<br>HFC MAC<br>system from<br>being<br>reverse-<br>retrofitted to | LTD's vehicle<br>inspection<br>stations and<br>private vehicle<br>inspection | Reduction of<br>CFC-12<br>consumption<br>in MAC<br>service sector<br>and increase<br>awareness of |  |
|   |   | CFC-12  | stations   | vehicle's<br>owners   |  |
| 1 | Development of a<br>Standard Inspection<br>Manual             |   |  |   | *TOR for consultant will be finalized in 2003.   |
|   | Triuliuui   |   |  |   | * DIW and the Land   |

| 2 | Training for Vehicle<br>Inspection Technician<br>Procurement of   |  |   |  | Transportation Department<br>will work closely with the<br>relevant industry in<br>determining a standard for a<br>minimum content of R-12 in<br>R-134a MAC systems.<br>* Inspection manual is<br>expected to be completed in<br>early 2004.<br>* Training will be carried out<br>in 2004<br>* Specification of refrigerant |
|---|---|--|---|--|---|
|   | Equipment   |  |   |  | identifiers is being prepared.<br>* DIW is requesting the<br>Ministry of Finance to exempt<br>import duty of refrigerant<br>identifiers. Final conclusion<br>for tax exemption is expected<br>by the end of November 2003<br>so DIW can proceed with<br>procurement of this<br>equipment in 2004.                           |
| 4 | Equipment Delivered   |  |   |  | * 2004  |
|   | Train-the-Trainer<br>Program for MAC<br>Service Technicians<br>and Certification of<br>MAC Service<br>Technicians | Increase<br>technical<br>capacity of<br>the MAC<br>service shops | Authorized<br>Training<br>centers and<br>MAC service<br>shops | Reduction of<br>CFC-12<br>consumption<br>in MAC<br>service from<br>repairing<br>MAC system<br>properly |   |
| 1 | Train-the-Trainer<br>programme  |  |   |  | * Scope of Training Course<br>was developed. The Steering<br>Committee established by the<br>Department of Skill<br>Development (DSD) is<br>reviewing scope of training.  |
|   |   |  |   |  | * Development of a training<br>manual will be completed by<br>the end of 2003.  |
|   |   |  |   |  | * Training of the trainers will be carried out in early 2004.   |
|   |   |  |   |  | * Specification of equipment<br>for authorized training centers<br>has been developed.<br>Procurement process will start<br>in 2003.  |
| 2 | Certification of Service<br>Technicians   |  |   |  | * Will be implemented in<br>2004 after the train-the-trainer<br>program is completed.   |
|   |   |  |   |  | * However, in the mean time,  |

|   |                                     |   |                      |  | DIW will participate in 16<br>training workshops organized<br>by one of the MAC<br>component manufacturer to<br>launch this activity.  |
|---|-------------------------------------|---|----------------------|--|--|
| 3 | Procurement of MAC<br>Service Tools |   |                      |  | * To be executed through a voucher scheme.   |
|   |                                     |   |                      |  | * Specification of equipment has been developed.   |
| 4 | Procurement of MAC<br>R&R Machines  |   |                      |  | <ul> <li>* Selection of qualified<br/>suppliers to be listed in the<br/>voucher is in the process and<br/>will be completed by<br/>November 2003.</li> <li>* To be executed through<br/>voucher scheme.</li> </ul>     |
|   |                                     |   |                      |  | <ul> <li>* Specification of equipment<br/>has been developed.</li> <li>* Selection of qualified<br/>suppliers to be listed in<br/>voucher is in the process and<br/>will be completed by<br/>November 2003.</li> </ul> |
|   |                                     | Build<br>technical<br>capacity of               |                      | Strengthen<br>effectiveness              |  |
|   | Customs Training<br>Program         | custom<br>officials to<br>inspect the<br>import | Customs<br>Officials | of import<br>control<br>system of<br>CFC |  |
| 1 | Development of a                    | chemicals                                       |                      |  | * A representative from  |
|   | Training Course                     |   |                      |  | Thailand participated in the<br>Customs workshop in the<br>Philippines in February 2003.   |
|   |                                     |   |                      |  | * Scope of the training course<br>has been developed and<br>endorsed by the Steering<br>Committee.   |
|   |                                     |   |                      |  | * Consultant to develop a<br>training manual has been<br>selected and contract will be<br>signed in end of October<br>2003.  |
|   |                                     |   |                      |  | * Development of a training<br>manual will be completed by<br>the end of January 2004  |
| 2 | Train-the-trainer                   |   |                      |  | the end of January 2004.<br>* Training for the trainer will  |
|   | Program                             |   |                      |  | be implemented in early 2004.  |

| 3 | Procurement of<br>Equipment  |  |     |   | <ul> <li>* Specification of refrigerant<br/>identifier is being prepared.</li> <li>* DIW is requesting the<br/>Ministry of Finance to exempt<br/>import duty of refrigerant<br/>identifiers. Final conclusion<br/>for tax exemption is expected<br/>by the end of November 2003<br/>so DIW can proceed with<br/>procurement of this<br/>equipment item immediately.</li> </ul>   |
|---|------------------------------|--|-----|---|--|
|   | Project<br>Management Unit   | To provide<br>Government<br>with<br>necessary<br>support to<br>carry out all<br>activities<br>proposed<br>under this<br>plan | DIW | Strengthen<br>capacity of<br>Government<br>to carry out<br>the NCFCP<br>to ensure<br>timely and<br>effective<br>preparation<br>and<br>execution of<br>the project<br>activities |  |
| 1 | Set up of PMU                |  |     |   | * Appointment of 6 PMU<br>staffs was completed and<br>PMU is fully operational.  |
| 2 | Implementation<br>Assistance |  |     |   | <ul> <li>PMO is fully operational.</li> <li>* Consultant for preparation<br/>of project proposals in the<br/>aerosol will be on board by<br/>the end of November 2003.</li> <li>* The Working Group for<br/>project preparation in foam<br/>sector has been established.</li> <li>* DIW obtains additional and<br/>updated baseline information<br/>of foam enterprises from<br/>polyol suppliers.</li> <li>Classification of large and<br/>small scale enterprises was<br/>completed.</li> <li>* First batch of project<br/>proposals for foam sector will<br/>be submitted to the Bank by<br/>the end of November of 2003.</li> <li>* 2 of the remaining 3<br/>aerosol enterprises have<br/>converted to alternative<br/>technology. Project proposals<br/>for the aerosol sector will be<br/>completed by the end of</li> </ul> |

|   |                                |  | December 2003.   |
|---|--------------------------------|--|--|
|   |                                |  | <ul> <li>* 3 of the 4 remaining<br/>enterprises in the solvent<br/>sector have converted to<br/>alternative technology.</li> <li>Project proposals for the<br/>solvent sector (CFC-113) will<br/>be completed by the end of<br/>December 2003.</li> </ul>                                      |
|   |                                |  | * Summit Footwear & Seat<br>has stopped using 1,1,1-TCA<br>and convert to 1,1,2-TCE.<br>Project will be implemented<br>retroactively. A sub-grant<br>will be signed by the end of<br>2003.   |
|   |                                |  | * DIW has approached the<br>Electrical Government<br>Authority of Thailand<br>(EGAT) with regard to the<br>phase-out of its use of 1,1,1-<br>TCA as a cleaning solvent.<br>EGAT is developing a phase-<br>out strategy and will revert to<br>PMU in 2003.                                      |
|   |                                |  | * DIW has approached the<br>Government Pharmaceutical<br>Organization (GPO). A<br>project proposal will be<br>submitted to PMU by the end<br>of 2003.  |
| 3 | Public Awareness<br>Activities |  | * DIW participated in<br>exhibition for automobile<br>industry to demonstrate the<br>hand-on implementation of<br>the code of good practice for<br>MAC servicing. A number of<br>brochures regarding NCFCP<br>and MAC service sector were<br>distributed to participants in<br>the exhibition. |
|   |                                |  | * DIW organized a workshop<br>on International Ozone Day to<br>disseminate information<br>regarding Montreal Protocol<br>and NCFCP to government<br>agencies and private sectors.  |
|   |                                |  | * Series of official<br>announcements and/or public<br>relations to inform the public<br>and end-users of NCFCP have<br>already been carried out.  |

| 4 | Regulatory Support | *Discussion on actions      |
|---|--------------------|-----------------------------|
|   |                    | regarding regulatory        |
|   |                    | requirements among relevant |
|   |                    | agencies has started.       |

#### 5. GOVERNMENT ACTION

#### CY 2002 [Preceding Year]

Based on the National CFC Phase-out proposal, the Government proposes to undertake a number of regulatory actions as part of the NCFCP. These actions include (a) control of CFCs, 1,1,1-TCA, and CTC consumption as stipulated in the Agreement of NCFCP; (b) monitoring compliance of those enterprises that previously received funding from MLF in all the sectors (aerosol, foam, refrigeration, solvent, MAC), (c) prohibit the use of CFC in the foam and aerosol sectors from 2005 onwards, and (d) prohibit the use of 111-TCA and CTC in the solvent sector from 2005.

Procedures for monitoring and enforcement will be established and training workshops will be provided to Government officials to carry out the tasks. The activities carried out in CY02 are summarized below.

| NO. | POLICY/ACTIVITY                      | SCHEDULE OF       | STATUS                       |
|-----|--------------------------------------|-------------------|------------------------------|
|     | PLANNED                              | IMPLEMENTATION    |                              |
| 1.  | Control of import/export quota       | January -December | Import/export control policy |
|     | through Hazardous Substances         | 2002              | in place and in operation    |
|     | Act <sup>1</sup>                     |                   |                              |
| 2.  | Workshop on NCFCP                    | December 2001     | Completed                    |
| 3.  | Announcement of Import Quotas        | December 2001     | Announcement of import       |
|     | for CFCs from 2002-2010 <sup>2</sup> |                   | quotas for 2002 was done     |
|     |                                      |                   | through the workshop in      |
|     |                                      |                   | December 2001                |
| 4.  | Criteria and procedures for          | January-December  | Completed for aerosol and    |
|     | financial support for investment     | 2002              | solvent sector               |
|     | projects <sup>2</sup>                |                   |                              |
| 5.  | Information dissemination on         | January-December  | Completed in 2002 and to     |
|     | CFC Replacement program and          | 2002              | be continued in 2003         |
|     | advantage from replacement           |                   |                              |
| 6.  | Implementation of Halon              | January-December  | On-going                     |
|     | Management and Banking               | 2002              |                              |
|     | Program                              |                   |                              |
| 7.  | Follow-up and Monitoring             | January-December  | Completed in 2002 and to     |
|     | completed sub-projects               | 2002              | be continued in 2003         |
| 8.  | International Ozone Day              | 16 September 2002 | Completed                    |
|     | Ceremony                             |                   |                              |

<sup>&</sup>lt;sup>1</sup> 2002 Performance Target

<sup>&</sup>lt;sup>2</sup> 2003 Performance Target

#### 5. GOVERNMENT ACTION – (as of 30 September 2003)

#### CY 2003 [Year of Annual Work Program]

<u>Verification of the consumption level.</u> The Government has taken initiatives in the preparation of a consumption verification arrangement for CY 2002. The exercise was carried out during March to September 2003. A verification report for CY 2002 along with the 2003 Annual Work Plan was submitted to the Bank in October 2003. In addition, to facilitate the verification process in the future, DIW and the Customs Department have also discussed recommendations made by the independent auditor to improve the data collection process.

<u>Other Activities.</u> With regard to achievement of phaseout activities, DIW was informed that universities have decided to remove sugar coating manufacturing technology for medicine tablets, which requires CTC in the process, from their curriculum. In addition, regulatory to ban the use of CFCs, 1,1,1-TCA and CTC in manufacturing sector has been re-announced to importers of these chemicals in the September 2003 meeting. In addition, the regulatory to ban the use of CFCs in foam manufacturing sector has been announced again to all polyol suppliers.

DIW also plans to carry out a number of regulatory actions related to ODS and to carry out public awareness activities. This is to increase knowledge and awareness of the enterprises and the public of the government policies pertaining to complete phaseout of CFCs, TCA, and CTC as per the Agreement of the NCFCP between the Government of Thailand and the Executive Committee.

In addition, DIW is in a process of requesting the Ministry of Finance to exempt import duties of equipment that will be procured and provide to related government agencies such as (i) refrigerant identifiers for the Customs Department and LTD, and (ii) service tools and recovery & recycling machines for DSD. Decisions on tax exemption are expected by the end of November 2003.

| NO. | POLICY/ACTIVITY PLANNED  | SCHEDULE OF<br>IMPLEMENTATION | STATUS  |
|-----|--|-------------------------------|---|
| 1.  | Control import quota for CY2003<br>through Hazardous Substances Act <sup>1</sup> | January-December<br>2003      | Import control policy in place<br>and in operation and quota<br>was issued in December 2002 |
| 2.  | Verification of CFCs, 1,1,1-TCA, and CTC consumption for CY 2002                 | March-September<br>2003       | Completed   |
| 3.  | Announcement of Import Quotas for CFCs from 2002-2010 <sup>2</sup>               | September 2003                | Announcement of import<br>quotas was re-informed to<br>importers in 2003                    |
| 4.  | Announcement of ban on the use of CFCs, 1,1,1-TCA, and CTC in                    | September 2003                | Announcement of ban was re-<br>informed to importers in 2003                                |

Key activities for the Government actions are summarized in table below.

<sup>1</sup> 2002 Performance Target

<sup>2</sup> 2003 Performance Target

|     | manufacturing sector                         |                     |                              |
|-----|--|---------------------|------------------------------|
| 5.  | Announcement of ban on the use of            | June - September    | Announcement of ban was re-  |
|     | CFCs in foam sector                          | 2003                | informed to polyol suppliers |
| 6.  | Criteria and procedures for financial        | June-September 2003 | Completed for foam sub-      |
|     | support for investment projects <sup>2</sup> |                     | sector                       |
| 7.  | Announcement of Mandatory MAC                | January-December    | On-going (In process of      |
|     | Inspection Requirement <sup>3</sup>          | 2003                | discussion with LTD)         |
|     |  |                     |                              |
| 8.  | Develop Strategy – Ban the Use of            | January-December    | On-going                     |
|     | CFCs in aerosol, foam, and                   | 2003                |                              |
|     | commercial refrigeration                     |                     |                              |
|     | manufacturing sector <sup>3</sup>            |                     |                              |
| 9.  | Information dissemination on CFC             | January-December    | Completed in 2003 and to be  |
|     | Replacement program and advantage            | 2003                | continued in 2004            |
|     | from replacement                             |                     |                              |
| 10. | Establishment of Project                     | January–August 2003 | Completed and PMU is fully   |
|     | Management Unit (PMU)                        |                     | operational                  |
| 11. | Import Duty Exemption                        | August-December     | On-going                     |
|     |  | 2003                |                              |
| 12. | Follow-up and Monitoring completed           | January-December    | Completed in 2003 and to be  |
|     | sub-projects                                 | 2003                | continued in 2004            |
| 13. | International Ozone Day Ceremony             | 16 September 2003   | Completed                    |

<sup>3</sup> 2004 Performance Target

#### 6. ANNUAL BUDGET

In line with the activities described above, the annual budget is summarized below.

| No. | Activity                           | Planned<br>Expenditure<br>(USD) | Actual<br>Expenditure<br>(USD) <sup>1</sup> | Remarks |
|-----|------------------------------------|---------------------------------|---|---------|
| 1   | Investment Projects -<br>Aerosols  | 102,960                         | 0   |         |
| 2.  | TA for MDIs                        | 57,200                          | 0   |         |
| 3.  | Investment Projects -<br>CFC-113   | 965,120                         | 0   |         |
| 4.  | Investment Projects -<br>1,1,1-TCA | 440,500                         | 0   |         |
| 5.  | Technical Assistance:<br>Garment   | 166,100                         | 0   |         |
| 6.  | Investment Projects -<br>Foam      | 2,200,000                       | 0   |         |
| 7.  | MAC Inspection<br>Requirement      | 800,000                         | 0   |         |
| 8.  | Train-the-Trainer -<br>MAC         | 180,000                         | 0   |         |
| 9.  | Project Management<br>Unit         | 200,000*                        | 0   |         |
| 10. | Custom Training                    | 82,500                          | 0   |         |
|     | Total                              | 5,194,380                       | 0   |         |

#### CY 2002 [Preceding Year]

\*Unused funds will be reallocated to support increasing activities of PMU in 2004 and 2005.

<sup>&</sup>lt;sup>1</sup> Disbursement cannot be made as the Grant Agreement was being amended in 2002. Unless the Grant Agreement is amended, the Government of Thailand cannot disburse funding for project activities. The amendment was effective on December 27, 2002.

| Table 1: Database as Reported in 2002 Progress Report |  |
|---|--|
|   |  |

| Status | Agency | -   | Multi-Year/Multi-Year<br>Partial Phase-out/One-<br>off Phase-<br>Out/Individual/RMP/RMP<br>Update/RMP for Non-<br>LVC/Halon Banking | Region | Country | Sector | Mtg | Туре | Num | A/N | 0/Т | IRD | Chemical |   |   | ODP to be | Production<br>ODP<br>Phased Out |
|--------|--------|---|---|--------|---------|--------|-----|------|-----|-----|-----|-----|----------|---|---|-----------|---------------------------------|
| СОМ    |        | National CFC<br>phaseout plan:<br>2002 Annual<br>Programme  | Multiyear   | ASP    | THA     | PHA    | 35  | INV  | 137 | N   | 0   | I   |          | 0 | 0 | 0         | 0                               |
| ONG    |        | National CFC<br>phase-out plan<br>release of<br>second tranche<br>for<br>implementation<br>of the 2002<br>annual plan |   | ASP    | ТНА     | РНА    | 37  | INV  | 138 | Ν   | 0   | I   |          | 0 | 0 | 0         | 0                               |

| Project Title   | Date<br>Approved | First<br>Disbursment<br>Date | Date of Compl<br>per Proposal | Planned Date<br>of<br>Completion | Date<br>Completed<br>(Actual) | Date of<br>Financial<br>Completion | Approved<br>Funding (US\$) | Adjustment<br>(US\$) | Approved<br>Funding plus<br>Adjustments<br>(US\$) | Funds<br>Disbursed<br>(US\$) | Per Cent of<br>Funds<br>Disbursed | Balance (US\$) |
|---|------------------|------------------------------|-------------------------------|----------------------------------|-------------------------------|------------------------------------|----------------------------|----------------------|---|------------------------------|-----------------------------------|----------------|
| National CFC<br>phaseout plan:<br>2002 Annual<br>Programme  | 1/12/2001        |                              | 1/12/2002                     |                                  | 1/12/2002                     |                                    | 540,000.00                 | 0                    | 540,000.00  | 0                            | 0                                 | 540,000.00     |
| National CFC<br>phase-out<br>plan: release<br>of second<br>tranche for<br>implementation<br>of the 2002 |                  |                              |                               |                                  |                               |                                    |                            |                      |   |                              |                                   |                |
| annual plan   | 1/7/2002         |                              | 1/8/2003                      | 1/8/2003                         |                               |                                    | 5,194,380.00               | 0                    | 5,194,380.00                                      | 0                            | 0                                 | 5,194,380.00   |

| Project Title  | Funds<br>Obligated (US\$) |            |            | Support<br>Cost<br>Adjustment<br>(US\$) | Support Cost<br>Disbursed<br>(US\$) | Support Cost<br>Balance<br>(US\$) |            | Approved | Months from<br>Approval to<br>First<br>Disbursement | per Proposal |    | Months<br>from<br>Approval to<br>Completion |
|--|---------------------------|------------|------------|---|-------------------------------------|-----------------------------------|------------|----------|---|--------------|----|---|
| National CFC<br>phaseout plan: 2002<br>Annual Programme  | 540,000.00                | 150,000.00 | 27,000.00  | 0                                       | 0                                   | 27,000.00                         | 27,000.00  | 2001     | 0   | 12           | 0  | 12  |
| National CFC phase-<br>out plan: release of<br>second tranche for<br>implementation of the<br>2002 annual plan | 5,194,380.00              | 500,000.00 | 459,494.00 | 0                                       | 0                                   | 459,494.00                        | 459,494.00 | 2002     | 0   | 13           | 13 | 0   |

| Project Title  | Remarks (Specify milestone achieved, remedial actions, and issues of relevance to ExCom   | Remarks (continued)<br>(for Multi-Year, One-<br>off address<br>provisions of<br>agreement, RMPs;<br>and implementation<br>of conditions of<br>agreements). |   |    | СОМ АМ |   | Sum of AO<br>and AP for<br>CPG,TAS,TRA |
|--|---|--|---|----|--------|---|--|
| National CFC   | Country/Bank amended grant agreement signed Dec. 02. TOR for Project  |  | 0 | 12 | 0      | 0 | 0                                      |
| phaseout plan:<br>2002 Annual  | Managment Unit chief done and advertisement will be done by Mar. 03. Roles and responsibilities of other staff in PMU have been decided upon and TOR being  |  |   |    |        |   |  |
| Programme  | prepared. Second tranche for 2002 AP approved at the 37th ExCom.  |  |   |    |        |   |  |
| National CFC<br>phase-out plan:<br>release of<br>second tranche<br>for<br>implementation<br>of the 2002<br>annual plan | NCFCP Regional Workshop conducted Dec. 02. NCPP activities conducted are, (1)<br>Aerosol: Enterprise contacted and supporting documents being prepared. (2)<br>Solvents: Thai Textile Institute preparing proposal. (3) Foam: Series of meetings with<br>polyol suppliers held. (4) Training-the-Trainer for MAC: MOA between DIW and<br>Department of Skill Development (DSD) signed. (5) MAC Inspection: Steering<br>Committee was established and MOA between LTD and DIW was being reviewed.(6)<br>MDI: Discussion with Food and Drug Administration initiated and FDA preparing<br>consultant TOR. (7) Customs Training: Discussion with Customs Department initiated<br>and MOA signed. |  | 0 | 13 | 0      | 0 | 0                                      |

| Project Title               | Year of<br>Business<br>Plan | Business Plan<br>Allocation<br>(Investment/Non-<br>Investment) | Multi-Year Current<br>Tranche -<br>Consumption<br>Performance Target<br>(ODP Tonnes) | - Actual | Multi-Year<br>Current Tranche -<br>Production<br>Performance<br>Target (Odp<br>Tonnes) | Multi-Year<br>Current<br>Tranche -<br>Actual<br>Production<br>(ODP Tonnes) | Multi-Year Current<br>Tranche Confirmation<br>of Annual Performance<br>Target - Annual Target<br>Met as Reported by<br>Country (Yes/No) | of Annual<br>Performance Target - | of Annual |
|-----------------------------|-----------------------------|--|--|----------|--|--|---|-----------------------------------|-----------|
| National CFC phaseout plan: | 2001                        | INV  | 0  | 0        | 0  | 0  |   |                                   |           |

| 2002 Annual<br>Programme   |      |     |         |         |   |   |     |    |    |
|--|------|-----|---------|---------|---|---|-----|----|----|
| National CFC<br>phase-out<br>plan: release<br>of second<br>tranche for<br>implementation<br>of the 2002<br>annual plan | 2002 | INV | 3107.52 | 3102.77 | 0 | 0 | Yes | No | No |

## Table 2: Multi-year Agreement Summary

| Country  | Sector<br>Plan/National<br>ODS Phase-<br>Out Plan          | Planned Date<br>of<br>Completion | Committed<br>by ExCom | Funds<br>Released<br>including<br>Present Year<br>by ExCom<br>(US\$) | Funds<br>Disbursed to the<br>Country (US\$) | to be Phase- | ODP<br>Consumption<br>Allowed for<br>the Reporting<br>Year | Consumpt<br>ion for | Production<br>Allowed for<br>the |  |
|----------|--|----------------------------------|-----------------------|--|---|--------------|--|---------------------|----------------------------------|--|
| Malaysia | National CFC<br>phaseout plan:<br>2002 Annual<br>Programme | Dec-09                           | 14,728,626            | 5,734,380  |   | 3,108        | 3,108  | 3,103               |                                  | New PMU chief hired and staff<br>recruitment will now<br>commence. |

| No. | Activity   | Planned<br>Expenditure<br>(USD) | Actual<br>Expenditure<br>(USD) | Remarks |
|-----|--|---------------------------------|--------------------------------|---------|
| 1.  | Investment Projects -<br>1,1,1-TCA                             | 440,500                         | 0                              |         |
| 2.  | TA for contact cleaners  | 23,100                          | 0                              |         |
| 3.  | Investment Projects -<br>Foam                                  | 1,419,846                       | 0                              |         |
| 4.  | MAC Inspection<br>Requirement                                  | 437,500                         | 0                              |         |
| 5.  | Train-the-Trainer -<br>MAC                                     | 139,000                         | 0                              |         |
| 6.  | Financial Subsidy for<br>Purchasing MAC<br>Servicing Equipment | 990,000                         | 0                              |         |
| 7.  | Financial Subsidy for<br>Purchasing MAC<br>R&R Machines        | 279,400                         | 0                              |         |
| 8.  | Project Management<br>Unit                                     | 200,000                         | 67,076                         |         |
| 9.  | Custom Training  | 82,500                          | 0                              |         |
|     | Total  | 4,011,846                       |                                |         |

## CY 2003 [Year of Annual Work Program] – As of October 10, 2003