为节省经费起见，本文件印数有限。请各代表携带文件到会，不索取更多副本。
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附件一 统计概览
附件二 甲基溴履约分析
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附件四 多年协定概述
附件五 投资项目的成本效益
一、背景

1. 甲基溴评估项目是 2004 年监测和评估工作方案的一部分。现已编写了一份案头研究报告，报告详细审议了第 5 条国家的四大消费部门：园艺（包括草莓和香蕉）、花艺、烟草和收割后的利用。继本案头研究报告之后，将在各个国家的实地考察和个案研究的基础上编写一份全面评估报告，评估报告定于 2005 年 3 月提交给执行委员会第四十五次会议。本案头研究报告的主要宗旨是确定进行全面评估所需解决的各种问题。审定本文件时，考虑到了环境规划署、工发组织和加拿大环境组织收到的有关草案的各种评论。

2. 多边基金早就认识到了逐步淘汰甲基溴的重要性并已开始资助非投资项目，自 1994 年以来，它资助的主要是示范和技术援助项目，自 1998 年，核准的项目数量显著增加。继许多示范项目之后开展了投资项目，近年来，投资项目越来越多地采取提前淘汰甲基溴（早于为第 5 条国家确定的 2015 年的最终期限）的多年协定形式。根据这些协定，每年要以已实现预计淘汰目标的证据为基础发放资助额。有关投资和非投资项目的统计概要（按核准年、执行机构、区域、分部门等开列）附于附件一。

3. 甲基溴项目复杂而独特，因为它们的成功与否取决于许多利益相关者和因素。与工业部门相比，甲基溴项目的可持续性并不仅因为改变所使用的设备而得到很大保障，它所依赖的是替代品的技术和商业可行性以及生产、进口和使用限制的实施。如果农民认为使用甲基溴对他们的更有利，那么他们在任何时候都可以恢复甲基溴的使用，哪怕只使用一个季节。情况往往是，用户人数众多，决策采取的是分散形式，这意味着研究和推广部门应充分参与甲基溴替代品的宣传。推广部门应开展培训和提高认识方案，与研究部门合作进行技术的开发和展示，并承担起技术的传播和使用责任。如果不向农民清楚地展示新方法对他们的优越性和安全利用，农民一般是不会愿意改变既有的做法。此外，一些甲基溴生产商、进口商或大规模用户也会不断向他们游说，质疑有关这一问题的科学研究的可靠性并反对《蒙特利尔议定书》的减少使用时间表。

4. 确定最适当的替代品，需要对每个国家的特殊性、每个国家的需要和计划进行认真评估，因为替代品要因气候和土壤而异。现在，随着涉及所有部门和区域的示范项目的完成，适当替代品的技术分析和确定工作也已基本完成。除了少数例外（人参和鲜枣），替代品的技术可行性已世界各地得到证明和证实（见 2002 年甲基溴技术选择委员会评估报告）。要在全国建立对参与性战略的共识及说服大多数利益相关者和用户并非易事，但却是成功淘汰甲基溴并根据当地具体情况用甲基溴替代品替代甲基溴的正确道路。
二、甲基溴消费趋向和各国的履约情况


图 1. 1991-2002 年非第 5 (1) 条和第 5 (1) 条区域甲基溴消费量基线和报告的消费量发展趋势 (公吨)

资料来源：甲基溴技术选择委员会根据 2004 年 4 月臭氧秘书处的数据计算得出的估计数。

7. 59 个国家，包括尚未批准《哥本哈根修正案》的四个国家，已实现 2002 年的冻结目标，43 个国家没有进行消费，因此不构成问题。58 个国家已实现 2005 年减少 20%的目标，其中包括尚未批准《哥本哈根修正案》因此也没有法律义务淘汰甲基溴的一些国家。
八个国家可能通过实施核准项目，实现冻结水平和 20%的减少；其中四个为大型用户（埃及、危地马拉、洪都拉斯和黎巴嫩）。另有 10 个国家（除泰国、乌拉圭和也门外，它们大多为小型消费量）需要另外核准 89.3 ODP 吨才能实现冻结目标。这些国家以及另外六个已遵守冻结要求的国家需要核准增加 108 ODP 吨才能实现在 2005 年减少 20%的目标（见下文表 1，详见附件二）。减少 20%之后的剩余消费量中有很大一部分已通过原则核准大部分消费大国的多年协定加以解决。尚未批准《哥本哈根修正案》的 20 个国家的合并报告消费量仅为 103.3 ODP 吨（2002 年或 2003 年，使用的是最新现有数字）。这一总体上积极和令人鼓舞的形势，是许多核准项目开展的活动以及在没有多边基金资助的情况下开展的替代努力的结果。

表 1：甲基溴履约概况

<table>
<thead>
<tr>
<th></th>
<th>已批准《哥本哈根修正案》的国家</th>
<th>尚未批准《哥本哈根修正案》的国家</th>
<th>共计</th>
</tr>
</thead>
<tbody>
<tr>
<td>似乎履约的国家</td>
<td>55</td>
<td>4</td>
<td>59</td>
</tr>
<tr>
<td>能够履约，执行核准项目的国家</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>需要通过增加行动来实现履约的国家</td>
<td>10</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>没有消费的国家</td>
<td>33</td>
<td>10</td>
<td>43</td>
</tr>
<tr>
<td>数据不充分的国家</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>共计</td>
<td>111</td>
<td>20</td>
<td>131</td>
</tr>
</tbody>
</table>

资料来源：国家方案和第 7 条数据、清单和进度报告，履约模式。

8. 尽管如此，到 2015 年实现彻底淘汰和确保业已实现的淘汰量的可持续性，仍任重道远。2002 年，第 5 条国家的消费总量为 7,584.8 ODP 吨。其余消费量的最大部分（81%）发生在以下表 2 所列的 16 个国家。它们都已批准《哥本哈根修正案》，但有些国家报告的消费量在 2002 年（泰国、土耳其）或 2003 年（阿根廷、摩洛哥，但泰国大幅减少）出现了显著增加。尚未为核准项目涵盖、但在很大程度上已为原则核准的多年协定涵盖的这些国家的最新消费量共计 3,946.0 ODP 吨；所有第 5 条国家的消费量为 4,192.9 ODP 吨。
### 表 2：甲基溴消费量最大的国家

<table>
<thead>
<tr>
<th>国家</th>
<th>甲基溴基线</th>
<th>报告消费量</th>
<th>多年协定国家的总消费量</th>
<th>核准资助的多年协定国家的甲基溴总消费量</th>
<th>多年协定国家未获得资助的剩余消费量</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001年 (第7条数据)</td>
<td>2002年 (第7条数据)</td>
<td>2003年 (第7条或CP数据) *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>阿根廷</td>
<td>411.3</td>
<td>358.8</td>
<td>168.6</td>
<td>325.8</td>
<td>527.8</td>
</tr>
<tr>
<td>巴西</td>
<td>711.6</td>
<td>257.6</td>
<td>238.5</td>
<td>248.4</td>
<td></td>
</tr>
<tr>
<td>智利</td>
<td>212.5</td>
<td>239.0</td>
<td>165.2</td>
<td>不适用</td>
<td>198.0</td>
</tr>
<tr>
<td>中国</td>
<td>1,102.1</td>
<td>1,567.8</td>
<td>1,087.8</td>
<td>不适用</td>
<td></td>
</tr>
<tr>
<td>哥斯达黎加</td>
<td>342.5</td>
<td>390.0</td>
<td>280.0</td>
<td>不适用</td>
<td>426.9</td>
</tr>
<tr>
<td>厄瓜多尔</td>
<td>66.2</td>
<td>369.8</td>
<td>40.8</td>
<td>不适用</td>
<td></td>
</tr>
<tr>
<td>埃及</td>
<td>238.1</td>
<td>432.0</td>
<td>270.0</td>
<td>238.2</td>
<td></td>
</tr>
<tr>
<td>危地马拉</td>
<td>400.7</td>
<td>786.6</td>
<td>709.4</td>
<td>546.6</td>
<td></td>
</tr>
<tr>
<td>洪都拉斯</td>
<td>259.4</td>
<td>510.9</td>
<td>412.5</td>
<td>309.6</td>
<td></td>
</tr>
<tr>
<td>黎巴嫩</td>
<td>152.4</td>
<td>219.0</td>
<td>197.3</td>
<td>不适用</td>
<td>236.5</td>
</tr>
<tr>
<td>墨西哥</td>
<td>1,130.8</td>
<td>1,100.1</td>
<td>1,067.5</td>
<td>不适用</td>
<td></td>
</tr>
<tr>
<td>摩洛哥</td>
<td>697.1</td>
<td>1,621.4</td>
<td>387.0</td>
<td>697.2</td>
<td>767.4</td>
</tr>
<tr>
<td>叙利亚</td>
<td>188.6</td>
<td>165.1</td>
<td>152.7</td>
<td>129.0</td>
<td>113.0</td>
</tr>
<tr>
<td>泰国</td>
<td>164.9</td>
<td>291.2</td>
<td>470.5</td>
<td>178.0</td>
<td></td>
</tr>
<tr>
<td>土耳其</td>
<td>479.7</td>
<td>43.8</td>
<td>280.8</td>
<td>不适用</td>
<td>342.6</td>
</tr>
<tr>
<td>津巴布韦</td>
<td>557.0</td>
<td>544.2</td>
<td>250.2</td>
<td>97.4</td>
<td>598.0</td>
</tr>
</tbody>
</table>

* 按照有关国家政府和执行委员会之间的议定条件确定。

### 三、执行委员会的战略和准则

9. 在实行甲基溴控制以后，并考虑到对甲基溴示范和投资项目的现有资助水平，执行委员会召开了一次关于为这一部门的项目制订战略和准则的专家会议（第二十三次会议，1997年11月）。在 1998年3月的第二十四次会议上，执行委员会通过了一项协助甲基溴项目资源分配的战略（为期18个月）。

10. 随后，在2000年12月的第三十二次会议上，执行委员会对战略和准则进行了审查和修正（第32/80号决定）。战略和准则涵盖了甲基溴淘汰的所有方面：甲基溴消费数据的确定，主要用途类型和多边基金项目的优先领域的界定，项目准备的说明，增量成本的类型，以及资格标准。

11. 或许可视情况，根据第二阶段的评估结果提出准则修正建议。
四、案头审查结果

12. 为应对甲基溴用户的不同性质，聘请了四位顾问，由他们对四个分部门的项目作出审查，这些分部门基本上涵盖了甲基溴的所有应用（见附件三的统计）：

   (a) 园艺（蔬菜、草莓、香蕉）
   (b) 鲜花
   (c) 烟苗
   (d) 收割后，储存和结构

13. 在本次案头审查过程中，顾问们分析了现有的所有项目文件以及进度和完成报告。主要审查结果载于以下部分。针对分部门的审查结果、建议和提议的后续行动载于分部门研究报告，这些报告可以索取，也可在秘书处网站上的执行委员会部分找到。由于案头研究的性质，研究结果只是初步性的，还需要与执行机构和其他利益相关者进行进一步的确证和讨论。

四.1 项目进度和完成报告中的信息提供情况和信息质量

14. 在 2003 年底完成的 80 个非投资项目中，除 10 个项目外，已收到其余所有项目的完成报告。根据 2003 年进度报告，另有 25 个非投资项目仍在进行之中。41 个非投资项目为示范项目，对于它们，执行机构也会编写关于所开展试验的结果的最后报告，报告重点是试验的各种替代品的技术可行性。有些技术报告会提交给秘书处。另一方面，到 2003 年底，47 个核准投资项目中只有七个完成，而这七个中只有三个提交了完成报告。对于 10 项正在进行之中的多年协定，执行机构提交了关于每个阶段取得的结果的报告，同时也提出了为随后的年度阶段供资的请求。还有 13 个进行之中的投资项目，它们也制定了议定淘汰时间表，但付款时间表由各执行机构管理。对于其中的一些项目，除每个执行机构的一般年度进度报告中所载数据外，还提交了年度进度报告。

15. 尽管拥有各种报告，对于许多项目，顾问们还是难以清楚地掌握它们业已取得的结果、面临和解决的问题以及在执行过程中获得的经验教训。虽然关于示范项目的最后报告一般都相当详细地讲述试验结果，但它们大多缺少关于非技术方面的信息，特别是关于各种已试验替代品的经济可行性和可持续性，以及体制结构、技术转让活动及为实现最终淘汰已经采取和需要采取的措施的信息。在示范和投资项目的完成报告和进度报告中，对有关这些问题的信息进行归纳总结将是有益的；报告应提供关键指标，如各种处理办法之间的成本比较、影响商业采用的可能障碍，以及为确保项目提供的设备的维护而作出的规定。
16. 执行机构编写的有关多年协定的定期进度报告，在信息数量和分析质量上差异很大。例如，有些报告详细地介绍了举办的培训课程和会议，甚至还列有针对种植者的问卷，其目的是描绘出有关部门的特征；而有些报告极少涉及这类活动（尽管可能开展了这类活动），其重点主要是建议的替代品的技术可能性。有时，也不清楚从示范项目中获得了哪些经验教训，而这些经验教训正在被用作于投资阶段。

17. 近来的一些执行委员会会议收到了关于某些甲基溴淘汰多年协定的报告摘要，例如，包括几份报告在内的第 38/37 号文件、关于危地马拉和洪都拉斯项目（这两个项目都是由工发组织实施的）的第 42/14 号文件，它们建议对第 42/14 号决定核准的议定淘汰时间表进行修改。马其顿、马拉维和乌拉圭政府向第四十一次会议和开发计划署非洲区域方案提交了进度报告，请执行委员会注意这些报告。乌干达和津巴布韦政府也提交了进度报告，并向环境规划署全球培训方案提交了报告，以寻求委员会对某些问题的指导，这已由第 41/78 号决定作出。上述报告将在本研究的第二阶段审议。本报告最后的附件四载有多年协定的归纳总结。

18. 基金秘书处在 2002 年为执行机构的一般进度报告编制了新的汇总表，用以归纳在执行多年协定方面取得的进展。由于对这些协定的供资是在清单中每个阶段的不同项目编号下核准和登记的，所以要监测它们的全面进展情况比较困难。通过新格式，可以在一个表格中看到所有有关项目的数字，还能向执行机构收集补充信息。秘书处提出的问题和执行机构作出的答复对于案头研究起到了作用，因为它们提供了最新的反馈，特别是关于协定的反馈。对于协定，尚未收到任何年度报告。

19. 基金秘书处目前正在为包括甲基溴项目在内的多年项目的年度报告编制一种标准格式。提案将提交给执行委员会第四十三次会议。在后续行动中，可能会利用本报告第三节所述第二阶段评估的结果，制订关于甲基溴项目运作情况的具体指标。

四.2 甲基溴的使用和淘汰方式

20. 对于四个已完成的个别投资项目和三个已完成的多年协定阶段，2003 年年度进度报告确认，已按计划实现甲基溴的逐步淘汰（四个个别项目为 183.1 ODP 吨，三个阶段为 45.3 ODP 吨）。此外，一个非投资项目（开发计划署在马拉维执行的一个示范项目）也报告说，它已按计划淘汰 19.3 ODP 吨。这些项目的成本效益和使用的各种替代品的成本相差很大：尽管近来出现了共同标准，但并未确定一个阈值。迄今为止，所有核准投资项目项目的平均成本效益为 13.4 美元/ODP 吨，这得益与一些成本效益值较低的大型项目（见附件五）。

21. 尽管大多数国家的甲基溴配方和使用方法都相似，但它们之间在剂量等级和实地施用做法上却存在着很大差异。一些项目报告说，它们在使用甲基溴时使用可减少排放的有效不渗透膜，而有些项目则没有这样的报告。
22. 投资项目的目的是让它们的目标群体完全替代甲基溴的使用。大多数项目都希望政府在项目完成前的最后一年中颁布条例，禁止甲基溴的使用。然而，中间却没有过渡战略，即通过条例更多地限制甲基溴的使用，使甲基溴的使用更安全和/或更昂贵，只有危地马拉实行了这种战略，它增加了甲基溴的进口税，将甲基溴的成本从2.6美元/公斤提高到了3.1美元/公斤（2004年4月）。

23. 在许多项目文件中，替代甲基溴的战略的核心是转让替代技术（购置投入，培训种植者或工人，进行投资等）。大多数项目都作了类似这样的引述：“在项目完成时，政府将颁布条例，禁止甲基溴的使用……”因此，可以假设，它们将成功地向种植者转让替代技术，最后，而且也只有到那时，它们才会禁止甲基溴的使用。这是一个有风险的假设。如果在项目的最后，相当比例的种植者不采用替代技术，那怎么办？在项目执行阶段，应将甲基溴供应的明确停止日期提前通知种植者。但现有报告很少谈及政策条例，在这方面似乎没有什么进展。

24. 尽管投资项目必然要求制定政策措施，以强制甲基溴的逐步淘汰，但实行其他措施的可能性也非常大，特别是在彻底淘汰前的过渡阶段。这可包括限制最高甲基溴等级/剂量及达成区域协定，以便使条例标准化和避免或至少最大限度地减少非法交易。对这类条例的影响应进行评估。

25. 许多非投资项目（示范、技术援助和培训项目）都或多或少地没有按最初的预计完成日期完成。附件一第二部分的表6和表7对此作了综述。在80个已完成非投资项目中，有43个延后12个月以下，22个延后一年以上。与多边基金在其他部门的项目相比，这并不比它们差，但仍是一个显著问题。七个已完成的投资项目来说，有三个项目延后7至12个月，两个项目按计划完成，另两个提前完成。

26. 在许多情况下，延后发生是由于行政管理或组织原因而造成的，其中包括难以确定适当的对等机构，反馈或沟通缓慢，人事变动等。在一些情况下，气候条件或耕作季也对替代品的成功实施产生了影响。技术变化在一些个案中可能也有影响，但这需要进一步的探讨。

27. 示范项目在减少甲基溴的使用和促进各国遵守《蒙特利尔议定书》规定上发挥了重要的奠基作用。因此，在根据从示范项目中获得的经验教训筹备投资项目建设和彻底淘汰规定目标群体使用的甲基溴时，完善的项目设计和适当的替代品选择与适当的技术转让措施（如工作场所以、培训班和实地咨询活动）至关重要。
28. 示范项目为促进非化学的但在商业上可以接受的甲基溴替代品作出了重要贡献。私营部门既支持替代化学品，也支持可销售的非替代化学品，如生物控制、嫁接、气蒸、无土栽培和抗污染栽培，而示范项目不仅进行这类试验，还涉及轮作、卫生、生物熏蒸和日晒等做法。这些做法只能由公共资金进行支持，由公共部门进行研究和推广。

29. 是否需要示范项目，取决于每个国家的具体情况和试验的技术种类。对所有技术和情况来说，需要在各种地点进行试验。例如，日晒的结果和适用性取决于当地各种因素的综合（日照、云量、温度、有利条件的持续时间、作物周期、土壤类型、病原体种群等）。另一方面，就人工种植植物的手段——水栽法而言，当地环境可能并不那么重要，但在这两种尚属较新的方法被转让给种植者之前，当地技术人员学会如何管理这种方法，也是非常重要的。在这种情况下，示范项目发挥的正是这种作用。

30. 区域和当地的特殊情况对收割后的应用似乎不像对大田作物那样重要。因此，来自第2条国家的经验更容易转让。设计周密的示范项目可为投资项目的成功创造理想条件，但前提是它们的重点应是对奠定这一基础最为关键的那些方面。就收割后的分部门而言，这些方面是经济学、虫害治理和利益相关者的关注。在示范项目中，与技术问题相比，这些方面引起的关注似乎较少。

31. 示范项目一个重要但往往报告较少的方面，是许多当地利益相关者参与各种替代品的规划和实施的情况。根据甲基溴项目的准则（见以上第三节），这种参与可为在以后的投资项目期间使认可替代品得到更快采用并实现可持续利用，奠定政治与体制基础。

四.5 选定的替代品

32. 各示范项目对许多不同的替代品进行了试验。但国家当地的实际情况和经验（土壤、气候、作物等）并不总是在项目提案中得到反映，至少在示范阶段是如此。有时，为示范项目提名的替代品和说明似乎是同一个。虽然在不同地点对同一替代品进行的试验可提供一些教训，但从事后看，一些工作可能发生了重复。

33. 评估示范甲基溴替代品的实地性能及其对土栽病原体、线虫类、害虫和杂草的影响的方法各式各样。尽管许多项目为开展这类评估进行了大量的专业努力，但它们并不计算甲基溴替代品对患病植物实际速率的直接影响，而是对样本进行分析。对园艺参数也不进行定期评估。

34. 对投资项目来说，选定的替代技术种类也仍然很多。这些项目在大多数情况下使用好几种替代品（见附件一第1部分表6-7）。人们现在公认，对于大多数应用来说，都有好几种替代品，而且往往是化学和非化学方法的结合，如果应用于虫害综合防冶，结果甚至会更好。就烟草而言，水栽法是为大小农户最广泛接受的替代技术。
35. 如果没有根据部门和地点对替代品进行专门微调，商业采用就会不足。从这个意义上讲，正如多年协定预计的那样，投资项目应保持一定程度的灵活性，以便在项目执行期间视情况需要进行替代品选择。

36. 事实证明，主要利益相关者和受益者参与项目规划程序，特别是参与确定替代品，会对所有权、改变习惯和态度的意愿以及目标明确的项目设计的进行产生积极影响。

四.6 经济可行性/可持续性

37. 大多数示范项目都把重点放在了选定的替代品的技术方面。对于在项目概念中以及在项目执行期间纳入经济方面、提高认识和培训的问题，也应给予更多关注。

38. 除了极少的例外，关于示范项目的这些报告没有对经济可行性进行充分评估，而只是对一些替代品（主要是化学品）的成本进行了某些计算。但这种信息对任何种植者都极其重要，并直接涉及到商业采用。限制采用的一些因素已经确定，但这些因素在许多时候并没有为项目所涉及。这些障碍的解决程度与人们对替代品的接受成正比。监测最终用户一级的采用障碍，是一种延伸职责。

39. 一些替代做法，如烟草的水栽法或花卉（有时还有蔬菜）的熏蒸杀菌法，需要使用价格昂贵的设备或投入以及进口品。除非它们的供应价格合理，否则会妨碍替代品的采用。虽然水栽法有多种优点，理应实行，并且已为世界各地的大小农户所采用，但蒸汽机的维护似乎是一个更为严重的问题，基金秘书处已对一些项目提案中对其可持续性提出质疑。对于另外寻找当地材料或设备供应商的问题，始终没有进行系统探讨。能否节约运作费用，对确定采用的替代品是否具有商业可行性并因而可能具有长期可持续性，具有重要作用。

四.7 培训和技术转让

40. 适当的培训和技术转让是所有项目的重要组成部分。“训练培训员”模式正在许多项目实行。还时常提到手册和提高法律材料的编制，以支持项目。众多出版物、讲习班、田野学校、讨论、区域网络、环境规划署/工发组织联合网站以及其他措施，都促进了信息的传播。但对于培训方案及其结果，还应进行进一步的记录和评估，这些预计将在评估的第二阶段进行。

41. 项目提案应制定详细计划，特别是有关技术传播和采用部分的计划。在这种情况下，应以客户为目标并进行调查；应运用种类更多的推广－咨询方法，以满足客户的具体需要；还应为技术采用过程制定监测和评估制度。项目提案和进行之中的项目的技术传播部分应探索各种实用模式，以便加快注册甲基溴替代品的农场试验和交付速度，加快向
种植者提出建议的速度。通过推广方案，可将监测最终用户采用甲基溴替代品的速度和采用障碍的工作，纳入到新的和进行之中的项目中去。

42. 特别是在花卉部门，一些项目提到了项目参加者的考察旅行。考察旅行的确是获得有关替代品实际使用情况的第一手经验的有用途径，但这些项目却没有说明，这类旅行包括的内容或者获得的信息或培训如何传递或提供给其他有关的利益相关者。

四.8 获得的经验教训

43. 尽管专门涉及这一点的项目报告不是很多，所有项目显然都有些经验教训，特别是那些目前已完成的项目。这些经验教训有：

（a） 对于几乎所有的害虫和疾病，现已找到了在技术上有效的甲基溴替代品。但它们的经济可行性和总体可持续性尚未得到定期验证。

（b） 适应具体地点的条件的能力对任何替代品的成功至关重要。

（c） 成功评估的替代品可在未来三至五年内引入发展中国家。事实上，与示范项目有关的活动已引导较大的或技术准备较充分的种植者主动采用了替代品。

（d） 如果有种植者协会、种植者合作者或大型企业的参与，项目执行和后续行动会更好。

五、所确定的评估问题

44. 本案头研究确定了在第二阶段评估期间应予以进一步分析的以下主要问题。

五.1 已实现的淘汰和遵守议定时间表的情况

45. 在第二阶段进行的实地考察和数据收集应有助于证实已实现的淘汰情况和遵守议定淘汰时间表的情况，特别是对多年项目来说，因为有些项目近来发生了延期，又重新制定了淘汰目标。实地考察和数据收集要包括核对以往的和最新的甲基溴消费数字的可靠性和进口数据的来源。

五.2 已实现的淘汰的可持续性和限制商业采用的因素

46. 这是实地考察的关键问题，因为现有的进度和完成报告没有提供足够的有关可持续性的各个方面的信息：

（a） 技术上的：尽管已确定的技术替代办法似乎公认具有很大的可行性，但它们的大规模应用可能会暴露未曾预料的困难。一些替代办法（如蒸汽机）还可能出现维护问题。投资项目也应考虑可供使用的新的替代办法或能够提高其表现的
新的应用方法——即使是在项目执行期间。协定的灵活条款为项目执行提供了适当基础。

(b) 经济/商业上的：只有在替代品既具有技术可行性又具有商业可行性时，农民和其他用户才会维持对它们的应用。一方面，应努力进一步找出各种限制因素，如额外的资本和业务费用及维护要求，另一方面，还应找出各种激励因素，如业务费用的节省和质量的提高。鉴于许多国家缺乏外汇并因而导致进口替代品和材料的价格高于当地而且不如当地具有可持续性，所以查验当地材料和供应的来源情况也是一个重要方面。对于提高认识和培训活动对替代品的商业采用的促进作用，也应进行分析。

(c) 体制上的：这涉及到为项目执行作出的体制安排的可行性，如成立农民合作社，达成销售协议，以及开展推广服务和政府资助的研究，开展培训及提高公众认识支持活动。要解决的问题包括利益相关者在项目筹备，替代品的选择、试验、展示和确认方面的作用，以及有关结果与经验的信息的传播。主要的利益相关者可包括农民协会、合作社、商业公司、推广工作者和各个政府当局。

(d) 政治上的：如不通过有效的进口管制和在全世界减少甲基溴的生产来限制甲基溴的供应，一旦出现什么困难，用户就有可能恢复甲基溴的使用。这包括分析区域贸易政策和非法交易。大多数项目都没有报告它们在控制甲基溴的使用和进口及登记替代化学品方面取得了进展。商业界/官方通过绿色标签确认花卉和烟草等产品的无 ODS 状况，可能也有助于甲基溴的替代。

五.3 示范项目对有效的技术转让的影响

47. 从技术研究-转让过程推断，示范项目期间试验的成功替代品将被选择用于淘汰项目。实际上，情况一般也正是这样，示范阶段确定的成功替代品获选，而似乎没有效用的替代品则受到淘汰。但有些获得良好的试验和示范结果的国家并没有在以后提交投资项目。对于其原因，应予以澄清，以便评估示范阶段的功效。

48. 评估还将研究国家的技术传播（研究和推广服务、它们的能力、合作、参与和对项目的支助）和技术采用（目标客户、它们的能力、教育和专长、组织）系统。这些方面在现有项目文件中似乎没有得到所需的关注。

五.4 报告的格式/结构

49. 本案研究期间遇到的主要问题之一是项目的评价、报告的监测制度较为薄弱。因此建议实行一种能够定期和及时跟踪每一个项目的报告办法。基金秘书处目前正在编制的进行多年协定报告的格式将有助于实现这一目的，评估工作也将努力为甲基溴项目制订具体
指标，例如，关于用替代品生产的产品的产量和质量的指标和随着时间的推移，替代品的成本效益指标。

六、评估方法和工作计划

50. 评估的重点将是甲基溴淘汰项目（即完成的和进行之中的投资）和一些技术援助项目。对于示范项目，将分析它们在何种程度上奠定了基础和证明了替代技术，以及它们的结果是否还被用于有着类似条件和作物的其他国家。对于培训、公众认识和政策咨询活动，将评估它们对执行淘汰项目的支持程度。

51. 在实地考察中，还应与种植者和种植者代表，以及参与项目开发和甲基溴淘汰的推广、研究和管理机构的人员开展讨论。

52. 给评估顾问将要访问的国家的建议载于为本案头研究编写的分部门报告。将与有关国家的臭氧股、选定项目的执行机构和各区域履约协助方案小组甲基溴问题区域干事协商制定一个 10 至 12 个国家的清单。

53. 将在分析所有现有文件（项目文件、进度报告、项目完成报告、和技术报告）的基础上，并通过与臭氧干事和执行机构在 2004 年 7 月在日内瓦举行的执行委员会和不限成员名额工作组会议空余时间的讨论，针对将要考察的每个项目提出具体问题。最后的实地考察清单将在上述讨论后拟订。

54. 记录成功和不成功的个案研究都是有用的，这可成为有价值的信息和培训/推广材料。哪些因素影响了成功？或失败？如果是后者，可采取哪些纠正行动？

55. 实地考察期间获得的信息将在项目和/或国家评估报告中针对每个项目提出。将分析有关政策条例的作用以及这一部门在实现彻底淘汰中的剩余任务。对于项目和政策的共同特点，将同执行委员会第四十五次会议的结论和建议一起汇总在一份综合报告中。
ANNEX I: STATISTICAL OVERVIEW

PART I: INVESTMENT PROJECTS

Table 1: Investment Projects Overview
(According to the Inventory)

<table>
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</thead>
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<td>10</td>
<td>2</td>
<td>47</td>
</tr>
<tr>
<td>Approved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Funds Approved</td>
<td>1,730,002</td>
<td>7,017,574</td>
<td>8,846,336</td>
<td>7,087,873</td>
<td>12,758,874</td>
<td>8,471,572</td>
<td>394,557</td>
<td>46,306,788</td>
</tr>
<tr>
<td>Average Size of</td>
<td>865,001</td>
<td>1,403,515</td>
<td>1,263,762</td>
<td>590,656</td>
<td>1,417,653</td>
<td>847,157</td>
<td>197,279</td>
<td>985,251</td>
</tr>
<tr>
<td>Projects Approved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Completed Investment Projects By Region
(According to the 2003 Progress Reports)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Africa</th>
<th>Asia and the Pacific</th>
<th>Europe</th>
<th>Latin America and the Caribbean</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBRD</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>UNIDO</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 3: Investment Projects Completed up to December 2003

<table>
<thead>
<tr>
<th>Agency</th>
<th>Projects Approved</th>
<th>Projects Completed</th>
<th>PCR Received</th>
<th>PCR Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>France</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Germany</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>IBRD</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Italy</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UNDP</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>UNIDO</td>
<td>26</td>
<td>6</td>
<td>3</td>
<td>0*</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>7</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

* No PCR required for three completed tranches of multi-year projects by UNIDO.

Table 4: Approved Investment Projects by Category and IA
(According to the Inventory)

<table>
<thead>
<tr>
<th>Category</th>
<th>Canada</th>
<th>France</th>
<th>Germany</th>
<th>IBRD</th>
<th>Italy</th>
<th>UNDP</th>
<th>UNIDO</th>
<th>Total # of Projects Approved</th>
<th>Total # of Projects Completed</th>
<th>Total Funds Approved (US$)</th>
<th>Average Size of Project (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>18</td>
<td>28</td>
<td>4</td>
<td>34,014,542</td>
<td>1,214,805</td>
<td>985,251</td>
</tr>
<tr>
<td>Multi-Year*</td>
<td>2</td>
<td>3</td>
<td>9</td>
<td>8</td>
<td>19</td>
<td>3</td>
<td>47</td>
<td>7</td>
<td>46,306,788</td>
<td>646,960</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>12</td>
<td>26</td>
<td>47</td>
<td>7</td>
<td>46,306,788</td>
<td>985,251</td>
<td></td>
</tr>
</tbody>
</table>

* Tranches approved for projects in 10 countries (for details see Annex IV)
Table 5: Preparation Projects Approved
(According to the Inventory)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Number of Projects Approved</th>
<th>Total Funds Approved (US$)</th>
<th>Average Size of Project (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>1</td>
<td>30,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Germany</td>
<td>5</td>
<td>145,560</td>
<td>29,112</td>
</tr>
<tr>
<td>IBRD</td>
<td>10</td>
<td>310,000</td>
<td>31,000</td>
</tr>
<tr>
<td>UNDP</td>
<td>23</td>
<td>550,202</td>
<td>23,922</td>
</tr>
<tr>
<td>UNIDO</td>
<td>56</td>
<td>1,355,420</td>
<td>24,204</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>95</strong></td>
<td><strong>2,391,182</strong></td>
<td><strong>25,170</strong></td>
</tr>
</tbody>
</table>

Note: This table excludes 8 Cancelled Projects

Table 6: Technology Choice For Approved Investment Projects By Agency
(According to the Inventory)

<table>
<thead>
<tr>
<th>ODS Replacement</th>
<th>Canada</th>
<th>France</th>
<th>Germany</th>
<th>IBRD</th>
<th>Italy</th>
<th>UNDP</th>
<th>UNIDO</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB to Alternative chemicals</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MB to Biofumigation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>MB to Carbon dioxide under pressure</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>MB to Floating tray system</td>
<td></td>
<td></td>
<td>2</td>
<td>7</td>
<td>9</td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>MB to Grafting</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>MB to Negative pressure steam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>MB to Phosphine</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>MB to Solarization</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>MB to Solarization with chemicals</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>MB to Steam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>6</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>MB to Steam pasteurization</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>MB to Various alternative technologies</td>
<td></td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>11</td>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1</strong></td>
<td><strong>2</strong></td>
<td><strong>3</strong></td>
<td><strong>3</strong></td>
<td><strong>2</strong></td>
<td><strong>12</strong></td>
<td><strong>40</strong></td>
<td><strong>63</strong></td>
</tr>
</tbody>
</table>
### Table 7: Technology Choice For Approved Investment Projects by Country

(According to the Inventory)

<table>
<thead>
<tr>
<th>Country</th>
<th>ODS Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MB to Alternative chemicals</td>
</tr>
<tr>
<td>Argentina</td>
<td>1</td>
</tr>
<tr>
<td>Bolivia</td>
<td></td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>1</td>
</tr>
<tr>
<td>Brazil</td>
<td>1</td>
</tr>
<tr>
<td>Chile</td>
<td>1</td>
</tr>
<tr>
<td>China</td>
<td>1</td>
</tr>
<tr>
<td>Costa Rica</td>
<td></td>
</tr>
<tr>
<td>Cote D'Ivoire</td>
<td>1</td>
</tr>
<tr>
<td>Croatia</td>
<td>1</td>
</tr>
<tr>
<td>Cuba</td>
<td>1</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>1</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1</td>
</tr>
<tr>
<td>Egypt</td>
<td></td>
</tr>
<tr>
<td>Guatemala</td>
<td>1</td>
</tr>
<tr>
<td>Honduras</td>
<td>1</td>
</tr>
<tr>
<td>Indonesia</td>
<td></td>
</tr>
<tr>
<td>Iran</td>
<td>1</td>
</tr>
<tr>
<td>Jordan</td>
<td></td>
</tr>
<tr>
<td>Kenya</td>
<td>2</td>
</tr>
<tr>
<td>Lebanon</td>
<td></td>
</tr>
<tr>
<td>Macedonia</td>
<td>1</td>
</tr>
<tr>
<td>Malawi</td>
<td>2</td>
</tr>
<tr>
<td>Morocco</td>
<td>1</td>
</tr>
<tr>
<td>Peru</td>
<td></td>
</tr>
<tr>
<td>Romania</td>
<td>1</td>
</tr>
<tr>
<td>Senegal</td>
<td></td>
</tr>
<tr>
<td>Syria</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>1</td>
</tr>
<tr>
<td>Uganda</td>
<td></td>
</tr>
<tr>
<td>Uruguay</td>
<td></td>
</tr>
<tr>
<td>Zimbabwe</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>
Table 8: Approved Duration of Investment Projects  
(According to the Inventory)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Duration in Months</th>
<th>1-12</th>
<th>13-24</th>
<th>25-36</th>
<th>37-48</th>
<th>49 and More</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>France</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>IBRD</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>UNDP</td>
<td></td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>26</td>
</tr>
<tr>
<td>UNIDO</td>
<td></td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>11</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>8</td>
<td>11</td>
<td>5</td>
<td>6</td>
<td>17</td>
<td>47</td>
</tr>
</tbody>
</table>

Table 9: Completed Investment Projects with Implementation Delays  
(According to the 2003 Progress Report)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Delays in Months</th>
<th>Early Completion</th>
<th>On Time</th>
<th>7-12</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBRD</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>UNIDO</td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 10: ODS Phase-Out For Completed Investment Projects  
(According to the 2003 Progress Report)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Type</th>
<th>Number of Projects Completed</th>
<th>Total ODS phase-out approved (ODP tonnes)</th>
<th>Total ODS phase-out Reported (ODP tonnes)</th>
<th>Planned average cost per kg of ODP phase-out (US$/kg)</th>
<th>Actual average cost per kg of ODP phase-out (US$/kg)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBRD</td>
<td>Individual</td>
<td>1</td>
<td>50.0</td>
<td>50.0</td>
<td>7.33</td>
<td>7.33</td>
</tr>
<tr>
<td>UNIDO</td>
<td>Individual</td>
<td>3</td>
<td>133.1</td>
<td>133.1</td>
<td>30.43</td>
<td>30.14</td>
</tr>
<tr>
<td></td>
<td>Multi-Year</td>
<td>3</td>
<td>45.3</td>
<td>45.3</td>
<td>39.12</td>
<td>9.31</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>7</td>
<td>228.4</td>
<td>228.4</td>
<td>27.10</td>
<td>21.02</td>
</tr>
</tbody>
</table>

* Differences between planned and actual cost per kg of ODP phased-out (US$/kg) result from less disbursements than planned, given that the planned phase-out was reported as fully achieved.
ANNEX I

PART II: NON-INVESTMENT PROJECTS

Table 1: Non-Investment Projects Overview
(According to the Inventory)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projects</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>10</td>
<td>34</td>
<td>14</td>
<td>14</td>
<td>9</td>
<td>8</td>
<td>2</td>
<td>3</td>
<td>105</td>
</tr>
<tr>
<td>Approved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Funds</td>
<td>402,234</td>
<td>615,972</td>
<td>95,000</td>
<td>3,089,397</td>
<td>8,491,131</td>
<td>2,081,712</td>
<td>905,064</td>
<td>517,467</td>
<td>1,130,290</td>
<td>550,000</td>
<td>1,105,000</td>
<td>18,983,267</td>
</tr>
<tr>
<td>Approved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Size</td>
<td>201,117</td>
<td>87,996</td>
<td>47,500</td>
<td>308,940</td>
<td>249,739</td>
<td>148,694</td>
<td>64,647</td>
<td>57,496</td>
<td>141,286</td>
<td>275,000</td>
<td>368,333</td>
<td>180,793</td>
</tr>
<tr>
<td>of Projects</td>
<td>Approved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: This table excludes 2 Cancelled Projects

Table 2: Completed Non-Investment Projects by Region and IA
(According to the 2003 Progress Reports)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Africa</th>
<th>Asia and the Pacific</th>
<th>Europe</th>
<th>Global</th>
<th>Latin America and the Caribbean</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Germany</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Israel</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>UNDP</td>
<td>3</td>
<td>4</td>
<td></td>
<td>4</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>UNEP</td>
<td>12</td>
<td>5</td>
<td>12</td>
<td>6</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>UNIDO</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>18</td>
<td>4</td>
<td>14</td>
<td>19</td>
<td>80</td>
</tr>
</tbody>
</table>

Table 3: Size Distribution of Completed Non-Investment Projects
(According to the Inventory and the 2003 Progress Reports)

<table>
<thead>
<tr>
<th>Agency</th>
<th>0-50,000</th>
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<th>100,001-250,000</th>
<th>250,001-500,000</th>
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</tr>
<tr>
<td>Canada</td>
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<tr>
<td>Germany</td>
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<tr>
<td>Israel</td>
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<td>3</td>
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<tr>
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<td>1</td>
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<td>Total</td>
<td>28</td>
<td>13</td>
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<td>24</td>
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Table 4: Approved Non-Investment Projects By Type
(According to the Inventory)

<table>
<thead>
<tr>
<th>Type</th>
<th>Australia</th>
<th>Canada</th>
<th>Germany</th>
<th>IBRD</th>
<th>Israel</th>
<th>Spain</th>
<th>UNDP</th>
<th>UNEP</th>
<th>UNIDO</th>
<th>Total # of Projects</th>
<th>Total Funds Approved (US$)</th>
<th>Average Size of Project (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstration</td>
<td>3</td>
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<td>10</td>
<td>22</td>
<td>41</td>
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<td>25</td>
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<td>44</td>
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<td>1</td>
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<td>38</td>
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Table 5: Approved Duration of Non-Investment Projects
(According to the Inventory)

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<tr>
<th>Agency</th>
<th>1-12</th>
<th>13-24</th>
<th>25-36</th>
<th>37-48</th>
<th>49 and More</th>
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</tr>
<tr>
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<td>1</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td>6</td>
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<tr>
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<td>Spain</td>
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<td>1</td>
<td></td>
<td></td>
<td></td>
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</tr>
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<td>3</td>
<td>1</td>
<td>18</td>
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<tr>
<td>UNEP</td>
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<td>4</td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>UNIDO</td>
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<td>21</td>
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<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
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<td>14</td>
<td>39</td>
<td>5</td>
<td>3</td>
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### Table 6a: Completed Non-Investment Projects with Implementation Delays  
(Using original planned completion dates, according to the 2003 Progress Reports)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Early Completion</th>
<th>On Time</th>
<th>1-6</th>
<th>7-12</th>
<th>13-24</th>
<th>25 and More</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Germany</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<td></td>
<td>5</td>
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<tr>
<td>Israel</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
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<td>UNDP</td>
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<td>3</td>
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<td>2</td>
<td>3</td>
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<td>11</td>
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<td>35</td>
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<td>5</td>
<td>8</td>
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<td>18</td>
<td>24</td>
<td>17</td>
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### Table 6b: Completed Non-Investment Project with Implementation Delays  
(Using revised planned completion dates according to the 2003 Progress Reports)

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<th>1-6</th>
<th>7-12</th>
<th>13-24</th>
<th>25 and More</th>
<th>Total</th>
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<td>1</td>
</tr>
<tr>
<td>Canada</td>
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<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Germany</td>
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<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Israel</td>
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<td></td>
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<td>2</td>
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<td>11</td>
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<td>8</td>
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<td>35</td>
</tr>
<tr>
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<td>6</td>
<td>5</td>
<td>9</td>
<td>2</td>
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<td>3</td>
<td>19</td>
<td>24</td>
<td>16</td>
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Table 7: Delays in Completed Non-Investment Projects  
(According to PCRs)

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</tr>
<tr>
<td>ASP/FUM/17/TRA/18</td>
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</tr>
<tr>
<td>CRO/FUM/25/DEM/08</td>
<td>X</td>
</tr>
<tr>
<td>GLO/FUM/24/TAS/157</td>
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</tr>
<tr>
<td>GLO/FUM/37/TRA/240</td>
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</tr>
<tr>
<td>LAC/FUM/17/TRA/13</td>
<td>X</td>
</tr>
<tr>
<td>PAN/FUM/36/TRA/16</td>
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</tr>
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</tr>
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</tr>
<tr>
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</tr>
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</tr>
<tr>
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<td>LAC/FUM/27/TRA/30</td>
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<tr>
<td>Code</td>
<td>Delays in Months</td>
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<td>------------------</td>
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<td>Early Completion</td>
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<td>DOM/FUM/30/TAS/25</td>
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<tr>
<td>ETH/FUM/30/TAS/08</td>
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<td>GLO/FUM/24/TAS/156</td>
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<td>GLO/FUM/25/TRA/161</td>
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<td>GLO/FUM/27/TRA/179</td>
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<td>IDS/FUM/26/DEM/94</td>
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<tr>
<td>JOR/FUM/26/DEM/41</td>
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</tr>
<tr>
<td>KEN/FUM/30/TAS/22</td>
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<td>MDN/FUM/26/DEM/09</td>
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<tr>
<td>KEN/FUM/24/DEM/17</td>
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</table>
### Table 8: Budget and Phase-Out for Completed Non-Investment Projects

(According to PCRs)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Approved Budget and Expenditure (US$)</th>
<th>Actual Budget and Expenditure (US$)</th>
<th>Actual as Percentage (%) of Approved</th>
<th>Approved Phase-Out (ODP Tonnes)</th>
<th>Actual Phase-Out (ODP Tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>462,000</td>
<td>462,000</td>
<td>100%</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Germany</td>
<td>1,100,312</td>
<td>1,019,312</td>
<td>93%</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Israel</td>
<td>108,130</td>
<td>38,106</td>
<td>35%</td>
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<td>0.0</td>
</tr>
<tr>
<td>UNDP</td>
<td>2,014,950</td>
<td>1,865,936</td>
<td>93%</td>
<td>19.3</td>
<td>19.3</td>
</tr>
<tr>
<td>UNEP</td>
<td>2,202,500</td>
<td>2,173,100</td>
<td>99%</td>
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<td>0.0</td>
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<tr>
<td>UNIDO</td>
<td>6,211,380</td>
<td>5,978,114</td>
<td>96%</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>12,099,272</strong></td>
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<td><strong>95%</strong></td>
<td><strong>19.3</strong></td>
<td><strong>19.3</strong></td>
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</table>

Note: This table excludes one cancellation report submitted by Australia.

### Table 9: Non-Investment Projects Completed up to December 2003

<table>
<thead>
<tr>
<th>Agency</th>
<th>Projects Approved</th>
<th>Project Completed</th>
<th>PCR Received*</th>
<th>PCRs Due</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Canada</td>
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<tr>
<td>Germany</td>
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<td>5</td>
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</tr>
<tr>
<td>IBRD</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Israel</td>
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<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Spain</td>
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<td>1</td>
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<tr>
<td>UNEP</td>
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<td>4</td>
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<tr>
<td>UNIDO</td>
<td>30</td>
<td>24</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>105</strong></td>
<td><strong>80</strong></td>
<td><strong>70</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

* Excludes one cancellation report submitted by Australia.

### Table 10: Overall Assessment of Completed Non-Investment Projects by the Implementing Agencies

(According to PCRs)

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Canada</th>
<th>Germany</th>
<th>Israel</th>
<th>UNDP</th>
<th>UNEP</th>
<th>UNIDO</th>
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*Methyl Bromide Demonstration Projects

Note: This table excludes one cancellation report submitted by Australia.
## METHYL BROMIDE COMPLIANCE ANALYSIS
### (in ODP tonnes)

#### As at May 15, 2004

| Column Number | Region          | Status          | Latest Consumption (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|---------------|-----------------|-----------------|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
|               |                 | Country         | Year | Source | Methyl bromide baseline | Latest consumption | Amount needed to meet the freeze | Phase-out approved but not yet implemented (as of May 2004) | Date for completion of approved projects | Future phase-out in Final 2004 business plan | Allowable consumption in 2005 after 20% reduction | Balance from approved projects | Additional phase-out needed to meet 20% methyl bromide reduction | Received assistance from Fund | Methyl Bromide Agreement Phase-out or Project |
| (2) - (1)     | (3)-(4)         | (1)*.80         | (2)-(4) | (9)-(8) | (11)*.80 | (2)-(4) | (9)-(8) | (11) | (2)-(4) | (9)-(8) | (11) | (2)-(4) | (9)-(8) | (11) | (2)-(4) | (9)-(8) |

### COUNTRIES THAT HAVE RATIFIED THE COPENHAGEN AMENDMENT

Countries that appear to be in compliance:

- Algeria
- Argentina
- Bahama
- Bolivia
- Brazil
- Cameroon
- Chile
- China
- Colombia
- Congo, DR
- Costa Rica
- Croatia
- Cuba
- Dominican Republic
- Ecuador
- El Salvador
- Fiji
- Georgia
- Guyana
- Indonesia
- Iran
- Jamaica
- Jordan
- Korea, DPR
- Kyrgyzstan
- Macedonia
- Madagascar
- Malawi
- Malaysia
- Mauritania
- Mexico
- Moldova
- Namibia
- Nicaragua
- Nigeria
- Oman
- Pakistan
- Paraguay
- Peru
- Philippines
- Romania
- Saint Kitts and Nevis
- Senegal
- Sierra Leone
- Somalia
- Sudan

-**Agreement**
-**Partial/Project**
-**Partial/Agreement**
-**Project**
-**Yes/Agreement**
-**Yes/Project**
-**Yes**
-**No**
## METHYL BROMIDE COMPLIANCE ANALYSIS

**(in ODP tonnes)**

### Annex II

As at May 15, 2004

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<th>Column Number</th>
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<th>Status</th>
<th>Latest Consumption</th>
<th>Source</th>
<th>Methy bromide baseline</th>
<th>Latest consumption</th>
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<th>Date for completion of approved projects</th>
<th>Future phase-out needed to meet the freeze</th>
<th>ODS phase-out in Final 2004 business plan</th>
<th>Allowable consumption in 2005 after 20% reduction</th>
<th>Balance from approved projects</th>
<th>Additional phase-out needed to meet 20% methyl bromide reduction</th>
<th>Received assistance from Fund</th>
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### Countries that could achieve compliance with implementation of approved projects

| Country       | Year   | Source | Methyl bromide     |        |                        |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|---------------|--------|--------|-------------------|--------|-----------------------|--------------------|-----------------------------------|------------------------------------------------------------|                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |
|               |        |        | baseline          |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (1)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (2)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (3)-(4)          |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (5)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (6)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (7)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (8)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (9)-(10)         |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (11)             |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |

### Countries that may need additional actions to achieve compliance

| Country       | Year   | Source | Methyl bromide     |        |                        |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|---------------|--------|--------|-------------------|--------|-----------------------|--------------------|-----------------------------------|------------------------------------------------------------|                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |
|               |        |        | baseline          |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (1)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (2)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (3)-(4)          |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (5)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (6)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (7)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (8)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (9)-(10)         |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (11)             |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |

### Countries with No Consumption

| Country       | Year   | Source | Methyl bromide     |        |                        |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|---------------|--------|--------|-------------------|--------|-----------------------|--------------------|-----------------------------------|------------------------------------------------------------|                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |
|               |        |        | baseline          |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (1)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (2)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (3)-(4)          |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (5)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (6)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (7)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (8)               |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (9)-(10)         |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |
|               |        |        | (11)             |        |                       |                    |                                   |                                                             |                                                             |                                                             |                               |                             |                             |                             |                             |                             |                             |                             |                             |
### Methyl Bromide Compliance Analysis

#### (in ODP tonnes)

**UNEP/OzL.Pro/ExCom/43/8**

**Annex II**

As at May 15, 2004

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<th>Latest Consumption</th>
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<th>(2)</th>
<th>(3)</th>
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<th>(5)</th>
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<tbody>
<tr>
<td>Country</td>
<td></td>
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<td>Year</td>
<td>Source</td>
<td>Methyl bromide baseline</td>
<td>Latest consumption</td>
<td>Amount needed to meet the freeze</td>
<td>Phase-out approved but not yet implemented (as of May 2004)</td>
<td>Date for completion of approved projects</td>
<td>Future phase-out needed to meet the freeze</td>
<td>ODS phase-out in Final 2004 business plan</td>
<td>Allowable consumption in 2005 after 20% reduction</td>
<td>Balance from approved projects</td>
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- Lebanon: ASP Non-LVC 2003 C 152.9 NDR 0.0 100% by 2005 38.3 Yes Yes/Agreement*
- Mali: AFR LVC 2002 A7 NDR 0.0 0.0 N/A Yes No
- Sao Tome and Principe: AFR NDR NDR NDR 0.0 N/A Yes No

**COUNTRIES THAT HAVE NOT RATIFIED THE COPENHAGEN AMENDMENT**

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*Countries with approved projects for complete Methyl Bromide phase-out.
Annex III

SECTORAL AND REGIONAL CONSUMPTION OF METHYL BROMIDE IN ARTICLE 5 COUNTRIES

Major crops using MB in developing countries

1. According to a survey conducted by MBTOC and Ozone Secretariat data of 2000, and appearing in the MBTOC Assessment of 2002 Article 5(1) countries were estimated to use approximately 22% MB for QPS and 78% for controlled uses. The survey indicated that controlled uses comprised about 87% MB for soil fumigation, approximately 12% for durable products and 1-2% for structures. Figure 1 summarises the survey results for the soil sector, indicating the major crops that utilise MB. Figure 2 presents the breakdown for the durables/structures sector.

**Fig. 1: Major crops using MB in Art. 5(1) countries (soil sector)**

![Pie chart showing major crops using MB in Art. 5(1) countries (soil sector) with % values for each crop such as tobacco 20%, strawberry 15%, flowers 9%, peppers 3%, tomato 23%, and other 7%]

Source: MBTOC Assessment 2002
Figure 2. Major MB uses for stored durable products and structures – non-QPS applications in Article 5(1)

Figure 3: MB Consumption by region (Article (5) countries)

Source: MBTOC Assessment Report 2002
## Country | Agency | Sector Plan/National ODS Phase Out Plan | Date Approved | Planned Date of Completion | Number of Tranches Approved | Number of Tranches Completed | Funds Committed to ExCom (US$) | Funds Released including Present Year by ExCom (US$) | Funds Distributed to the Country (US$) | Total ODP Phase-Out Approved for the Plan (ODP Tonnes) | ODP Phase-Out Approved for Tranches (ODP Tonnes) | ODP Phase-Out Reported in Progress Report (ODP Tonnes) | ODP Allowed for the Reporting Year (ODP Tonnes) | ODP Phase-out Reported by Project (ODP Tonnes) | Remarks (Achievement of Conditions of Approval, Milestones, Relevant Issues concerning next Targets)
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
**Argentina** | UNDP | Methyl bromide phase-out in tobacco and non-protected vegetable seedbeds | Mar-02 Dec-06 | 2 | 0 | 3,588,000 | 2,187,000 | 1,547,846 | 156.0 | 50.0 | 29.0 | 256.4 | N.A. | In 2003, the project succeeded in eliminating 39.05 ODP T consumption (details presented in PR being submitted to ExCom 43). Training was provided to 1,810 growers and 65 agricultural technicians, and 18,000 growers received inputs and technical assistance. Detailed workplans were prepared for each tobacco-producing region. Additional in-kind contributions were received, an awareness-raising media campaign was launched, and a second national forum was hosted with tobacco producers to discuss national policy development. Procurement for the 2004 season began. Project is meeting targets and is on schedule.
**Costa Rica** | UNDP | Total methyl bromide phase-out used as a fumigant in melons, cut flowers, bananas, tobacco seedbeds and nurseries, excluding QPS applications | Dec-01 Dec-08 | 1 | 0 | 4,845,283 | 1,211,321 | 64,752 | 426.9 | 84.4 | 0.0 | 342.5 | N.A. | Project launched in mid-03 after delays due to concerns of private sector participants overcome. A national Project Manager (former Minister of Agriculture, indicative of high-level commitment by Government and stakeholders to the process) was appointed and the project team was organized. A work plan was approved by the National Steering Committee and the procurement process was launched. After initial delays, the project is now on track.
**Kenya** | UNDP | Technology transfer leading to methyl bromide phase-out in soil fumigation in cut flower component | Nov-02 Dec-09 | 1 | 0 | 1,021,319 | 510,660 | 0 | 63.0 | 10.0 | 0.0 | 111.0 | N.A. | Project approved in Nov. 02. Project implementation delays were incurred in 2003 due to delays in project signature that resulted from a consolidated negotiation process amongst the different national stakeholders. UNDP reminded the Gov’t of the performance-based nature of the project & the need to reach specific phaseout levels of MB in order to secure additional funding in future. Interest generated amongst growers at national level during the preparatory phase of the project has nevertheless kept momentum high and growers will be ready to launch project activities as soon as ProDoc signed. Signature & activities launch expected early 2004.
**Kenya** | Germany | Methyl Bromide (Horticulture) | Apr-03 Apr-06 | 2 | 0 | 514,492 | 495,594 | 5,651 | 34.0 | 17.0 | 7.0 | 34.0 | Est. 30.1 | No reduction was required for 2003. The actual reduction of consumption in 2003 was estimated to be 7.0 ODP tons reduced through both GTZ and UNDP project components.
**Lebanon** | UNDP | Sectors phase-out of methyl bromide in vegetable, cut flower and tobacco production | Jul-01 Dec-06 | 3 | 0 | 2,600,000 | 1,900,000 | 302,468 | 186.1 | 111.6 | 26.0 | 158.6 | N.A. | In 2003, a total of 1,742.5 dunums converted to the use of alternatives resulting in a phaseout of 39.76 ODP T MeBr, exceeding the year’s target by 10.44 %. The balance of funds at December 2003 have been committed to procurement activities early 2004. Elimination of consumption was achieved through an active train the trainers programme and farmers training sessions coordinated with distribution of alternatives (see PR submitted to ExCom 41 for detailed overview). Monitoring and evaluation of results continuous. The 2004 Work Plan was formulated at the end of 2003 UNIDO implements associated project in strawberries.
**Lebanon** | UNIDO | Phase-out of methyl bromide for soil fumigation in strawberry production | Jul-01 Dec-04 | 3 | 2 | 1,821,946 | 1,221,946 | 358,169 | 50.4 | 30.3 | 16.1 | 54.3 | 34.3 | Additional equipment and training expected in 2004 with a phase out of 14.20 tonnes.
**Malawi** | UNDP | National programme for the phaseout of all non-essential and non-quarantine and pre-shipment applications of methyl bromide | Dec-00 Dec-04 | 3 | 1 | 2,999,824 | 2,150,000 | 1,259,844 | 129.0 | 81.3 | 40.0 | 49.3 | N.A. | Total of 78 ODP T MeBr were phased out as at December 2003, with 33 ODP T remaining to be phased out in order to meet terms of the Agreement and the accelerated phaseout schedule. In mid-2003, a new Project Manager was engaged. The National Steering Committee met on a regular basis to review project status. Further to the approval of tranche 3 funding by the ExCom in July 2003, the Gov’t of Malawi submitted a supplemental report under Decision 40-45 for the consideration of ExCom 41. Momentum remains strong and project activities are on track despite continued lobbying of tobacco producers by MB lobby.
**Morocco** | UNIDO | Phase-out of methyl bromide for soil fumigation in tomato production | Jul-01 Dec-04 | 1 | 0 | 3,957,844 | 400,000 | 4,282 | 389.9 | 109.0 | 0.0 | 227.2 | 389.9 | Government is expecting restructuring of the project.
**Syria** | UNIDO | Phase-out of the use of methyl bromide in grain storage | Jul-01 Dec-03 | 2 | 0 | 1,084,139 | 651,725 | 41,759 | 103.0 | 34.8 | 5.0 | 78.2 | 108.0 | Training is going on. Equipment will be delivered by the end of Apr 2004 and the project is expected to be completed in Dec 2004.Equipment for phase II will be delivered in Jun 2004. Additional training planned.
**Turkey** | UNIDO | Phase-out of methyl bromide in protected tomato, cucumber and carnation crops | Dec-01 Dec-05 | 2 | 1 | 3,488,844 | 2,000,000 | 63,778 | 292.2 | 87.2 | 29.2 | 203.0 | 263.0 | Additional equipment expected for April and June 2004. Training programme will continue.
**ARGEN**tina ARG/FUM/30/INV/105 UNIDO ONG INV FUM Phase-out of methyl bromide in strawberry, protected vegetables and cut flower production 331.0 224.4 3,183,390 3,183,390 1,878,661 9.62 8.37
Argentina ARG/FUM/36/INV/129 UNDP ONG INV FUM Methyl bromide phase-out in tobacco and non-protected vegetable seedbeds (2001 and 2002 tranches) 29.0 29.0 1,720,000 1,720,000 1,547,846 59.31 53.37

**Argentina ARG/FUM/40/INV/136 UNDP ONG INV FUM Methyl bromide phase-out in tobacco and non-protected vegetable seedbeds (third tranche) 21.0 0.0 467,000 467,000 0 22.24

**Argentina ARG/FUM/40/INV/136 UNDP ONG INV FUM Methyl bromide phase-out in tobacco and non-protected vegetable seedbeds (third tranche) 21.0 0.0 467,000 467,000 0 22.24

**Bosnia and Herzegovina BHE/FUM/41/INV/17 UNIDO ONG INV FUM Phase-out of methyl bromide in tobacco seedling vegetables and flower production sector 11.8 0.0 229,000 229,000 0 19.41

**Bolivia BOL/FUM/35/INV/16 UNDP ONG INV FUM Terminal methyl bromide phase-out, excluding QPS applications 1.5 0.0 221,032 221,032 44,730 147.35

**Brazil BRA/FUM/28/INV/142 UNINO ONG INV FUM Phasing out methyl bromide in the entire tobacco sector 84.4 84.4 2,344,440 2,320,784 2,320,784 27.78 27.50

**Chile CHI/FUM/32/INV/143 UNDP ONG INV FUM Demonstration and phase-out project for methyl bromide soil fumigation for fruit tree production and replant 76.2 14.0 805,000 805,000 492,245 10.56 35.16

**Cape Verde COS/FUM/35/INV/25 UNDP ONG INV FUM Total methyl bromide phase-out used as a fumigant in melons, cut flowers, bananas, tobacco seedbeds and nurseries, excluding QPS applications (first tranche) 84.4 0.0 1,211,321 1,211,321 64,752 14.35

**China CHN/FUM/34/INV/407 UNIDO ONG INV FUM National phase-out of methyl bromide (first phase) 389.0 0.0 4,086,600 4,086,600 0 10.51

**China CHN/FUM/34/INV/407 UNIDO ONG INV FUM National phase-out of methyl bromide (first phase) 389.0 0.0 4,086,600 4,086,600 0 10.51

**Chile CHI/FUM/32/INV/143 UNDP ONG INV FUM Demonstration and phase-out project for methyl bromide soil fumigation for fruit tree production and replant 76.2 14.0 805,000 805,000 492,245 10.56 35.16

**China CHN/FUM/34/INV/407 UNIDO ONG INV FUM National phase-out of methyl bromide (first phase) 389.0 0.0 4,086,600 4,086,600 0 10.51

**Croatia CRO/FUM/35/INV/14 UNIDO ONG INV FUM Phase-out of methyl bromide in tobacco seedlings 16.2 9.4 476,833 476,833 112,142 29.43 11.93

**Cuba CUB/FUM/26/INV/11 UNINO ONG INV FUM Phase-out methyl bromide in the tobacco sector 48.0 48.0 1,673,324 1,673,324 1,631,484 34.86 33.99

**Dominican Republic DOM/FUM/33/INV/33 UNIDO ONG INV FUM Phase-out of methyl bromide in melon, flowers and tobacco 141.0 40.0 922,900 922,900 1,769 6.55 0.04

**Ecuador ECU/FUM/38/INV/31 IBRD ONG INV FUM Technology change for the phase-out of methyl bromide in the rose plant nursery sector 37.2 0.0 597,945 597,945 59,795 16.07

**Egypt EGY/FUM/38/INV/36 UNINO ONG INV FUM National phase-out of methyl bromide in horticulture and commodities fumigation 185.0 0.0 2,750,592 2,750,592 3,209 14.82

**Ghana GHA/FUM/38/INV/29 UNIDO ONG INV FUM National phase-out of methyl bromide 502.6 260.6 3,257,377 3,257,377 1,036,125 6.48 3.90

**Honduras HON/FUM/37/INV/10 UNIDO ONG INV FUM Phase-out of methyl bromide in melon and banana production sector and tobacco seedbeds 213.0 102.9 1,977,454 1,977,454 1,327,126 9.28 12.90

**Indonesia IND/FUM/41/INV/158 Canada ONG INV FUM Phase-out of the use of methyl bromide in grain storage 37.8 0.0 350,000 350,000 0 9.26

**Iran IRN/FUM/39/INV/57 UNIDO ONG INV FUM Phasing out of the important non critical, non essential use of methyl bromide for post-harvest treatment 12.4 0.0 260,698 260,698 167,702 21.02

**Jordan JOR/FUM/38/INV/24 Germany ONG INV FUM Complete phase-out of the use of methyl bromide in Jordan 180.0 3,063,000 3,063,000 1,584,300 17.02

**Kenya KEN/FUM/38/INV/31 UNIDO ONG INV FUM Technology transfer leading to methyl bromide phase-out in soil fumigation in cut flower component (first tranche) 10.0 0.0 510,660 510,660 0 51.07

**Kenya KEN/FUM/39/INV/33 Germany ONG INV FUM Technology transfer leading to methyl bromide phase-out in soil fumigation in all other horticulture (first tranche) 5.0 7.8 287,247 287,247 3,651 57.49 0.47

**Kenya KEN/FUM/42/INV/35 Germany ONG INV FUM Technology transfer leading to methyl bromide phase-out in soil fumigation in all other horticulture (second tranche) 12.0 172,347 172,347 14.36

**Liberia LIB/FUM/34/INV/44 UNIDO ONG INV FUM Phase-out of methyl bromide for soil fumigation in strawberry production (first tranche) 6.0 6.0 350,000 350,000 350,000 58.33 58.33

**Liberia LIB/FUM/34/INV/46 UNIDO ONG INV FUM Sectors phase-out of methyl bromide in vegetable, cut flower and tobacco production (first tranche) 25.8 26.0 800,000 800,000 702,468 31.01 27.02

**Liberia LIB/FUM/38/INV/51 UNIDO ONG INV FUM Sectors phase-out of methyl bromide in vegetable, cut flower and tobacco production (second tranche) 31.8 0.0 600,000 600,000 0 18.87

**Liberia LIB/FUM/38/INV/52 UNIDO ONG INV FUM Phase-out of methyl bromide for soil fumigation in strawberry production (second tranche) 10.1 10.1 421,946 421,946 8,169 41.78 0.81

**Liberia LIB/FUM/41/INV/53 UNIDO ONG INV FUM Sector phase-out of methyl bromide in vegetable, cut flower and tobacco production (third tranche) 54.0 0.0 500,000 500,000 0 9.26

**Lebanon LEB/FUM/34/INV/44 UNIDO ONG INV FUM Phase-out of methyl bromide for soil fumigation in strawberry production (first tranche) 14.2 0.0 450,000 450,000 0 31.69

**Macedonia MDA/FUM/32/INV/16 UNIDO ONG INV FUM Phase-out of methyl bromide in tobacco seedling and horticulture production sector 27.2 19.4 1,075,207 1,075,207 971,750 39.53 50.09

**Malawi MAL/FUM/34/INV/51 UNIDO ONG INV FUM Second payment under the national programme for the phase out of all non-essential and non-quarantine and pre-shipment applications of methyl bromide 20.9 21.0 1,000,000 1,000,000 859,884 47.85 40.95
## Methyl Bromide

### Cost-Effectiveness of Investment Projects

(According to the Inventory and the 2003 Progress Reports)

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<td>Phase-out of all non-essential and non-QPS methyl bromide (release of third tranche)</td>
<td>41.1</td>
<td>0.0</td>
<td>750,000</td>
<td>750,000</td>
<td>0</td>
<td>18.25</td>
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<td>MOR/FUM/29/INV/37</td>
<td>France</td>
<td>ONG</td>
<td>INV</td>
<td>FUM</td>
<td>Phase-out of methyl bromide use in the cut flower and banana production</td>
<td>61.0</td>
<td>0.0</td>
<td>1,006,652</td>
<td>1,006,652</td>
<td>928,063</td>
<td>16.50</td>
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<td>MOR/FUM/32/INV/41</td>
<td>UNIDO</td>
<td>ONG</td>
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<td>FUM</td>
<td>Phase-out of methyl bromide for soil fumigation in strawberry production</td>
<td>155.0</td>
<td>79.4</td>
<td>2,189,729</td>
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<td>888,372</td>
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<td>UNIDO</td>
<td>ONG</td>
<td>INV</td>
<td>FUM</td>
<td>Phase-out of methyl bromide for soil fumigation in tomato production (first tranche)</td>
<td>109.8</td>
<td>0.0</td>
<td>400,000</td>
<td>400,000</td>
<td>4,262</td>
<td>3.64</td>
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<td>Peru</td>
<td>PER/FUM/31/INV/28</td>
<td>UNDP</td>
<td>ONG</td>
<td>INV</td>
<td>FUM</td>
<td>Phase-out of methyl bromide in soil fumigation</td>
<td>4.0</td>
<td>4.0</td>
<td>299,770</td>
<td>299,770</td>
<td>206,275</td>
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<td>51.57</td>
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<td>ROM/FUM/34/INV/19</td>
<td>Italy</td>
<td>ONG</td>
<td>INV</td>
<td>FUM</td>
<td>Phase-out of methyl bromide in horticulture</td>
<td>93.9</td>
<td>36.1</td>
<td>630,517</td>
<td>630,517</td>
<td>165,804</td>
<td>6.71</td>
<td>4.60</td>
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<td>SEN/FUM/26/INV/12</td>
<td>UNIDO</td>
<td>ONG</td>
<td>INV</td>
<td>FUM</td>
<td>Phase-out of methyl bromide used in peanut seed fumigation in Novasen Ltd.</td>
<td>0.7</td>
<td>0.7</td>
<td>62,945</td>
<td>59,624</td>
<td>59,624</td>
<td>89.92</td>
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<td>UNIDO</td>
<td>ONG</td>
<td>INV</td>
<td>FUM</td>
<td>Phase-out of the use of methyl bromide in grain storage (first tranche)</td>
<td>5.0</td>
<td>5.0</td>
<td>300,000</td>
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<td>41,759</td>
<td>60.00</td>
<td>8.35</td>
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<td>IBRD</td>
<td>ONG</td>
<td>INV</td>
<td>FUM</td>
<td>Introduction of alternatives to methyl bromide in protected strawberry, pepper and eggplant in East Mediterranean region and in strawberry in Aydm province of Turkey</td>
<td>50.0</td>
<td>50.0</td>
<td>366,440</td>
<td>366,440</td>
<td>366,440</td>
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<td>UNIDO</td>
<td>COM</td>
<td>INV</td>
<td>FUM</td>
<td>Phase-out of methyl bromide in protected tomato, cucumber and carnation crops (first tranche)</td>
<td>29.2</td>
<td>29.2</td>
<td>1,000,000</td>
<td>1,000,000</td>
<td>63,778</td>
<td>34.25</td>
<td>2.18</td>
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<td>ONG</td>
<td>INV</td>
<td>FUM</td>
<td>Phase-out of methyl bromide in protected tomato, cucumber and carnation crops (second tranche)</td>
<td>58.0</td>
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<td>FUM</td>
<td>Phase-out of methyl bromide in cut flowers</td>
<td>12.0</td>
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<td>228,800</td>
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<td>19,694</td>
<td>19.07</td>
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<td>UNIDO</td>
<td>ONG</td>
<td>INV</td>
<td>FUM</td>
<td>Phase-out of methyl bromide in horticulture (tomatoes and cut flowers)</td>
<td>24.0</td>
<td>13.0</td>
<td>469,370</td>
<td>469,370</td>
<td>256,239</td>
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<td>19.71</td>
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<td>ONG</td>
<td>INV</td>
<td>FUM</td>
<td>Phase-out of methyl bromide in cut flowers</td>
<td>132.0</td>
<td>80.0</td>
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<td>904,200</td>
<td>818,834</td>
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Total: 3,463.1, 1,201.0, 46,336,711, 46,306,788, 19,345,056, 13.38, 16.11