



联合国
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多边基金执行委员会
第三十八次会议
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国家方案：约旦

本文件载有：

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- 约旦政府的送文函
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国家方案评价表

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第 1 节： ODS 消费情况、政策和法规

ODS 消费情况

2. 根据估计，约旦在 1991 年的 ODS 消费量为 712 长吨。然而，自从核准了原国家方案以来，约旦一共得到了 18,988,968 美元的援助（包括适用的机构支助费用），以总共淘汰 1,753 ODP 吨受控物质的消费量。在这个数量中，已在气雾剂、泡沫塑料和制冷行业淘汰了 748.6 ODP 吨。附件一开列了执行委员会已经为约旦核准的所有项目和活动。

3. 由于这些项目和活动，约旦已经达到了 1999 年各类 CFC 的冻结水平。在 2000 年，家用制冷行业的 CFC 消费量已经被彻底淘汰，泡沫塑料和商用制冷行业的消费量也已大幅度减少。除了医药用途之外，将在 2003 年彻底淘汰用作气雾剂产品推动剂的 CFC。在 2001 年，已把哈龙消费量减少到 90 ODP 吨，相比之下，计算得出的基准消费量为 210 ODP 吨；此外，约旦政府还得到多边基金的援助，以便在 2003 年彻底淘汰哈龙。尽管在 1990 年代涌入了大量难民，使用 ODS 的行业在 1990 年代的增长率超过预期，而且 ODS 淘汰活动遇到了一些复杂情况，约旦仍然取得了如此的进展。

4. 约旦还能够实现 2005 年的把 CFC 消费量削减 50% 的目标，预测的消费量为 62 ODP 吨（相当于基准消费量的 18%）。约旦要求在 2005 年之后通过约旦哈龙管理方案来满足关键/必要用途的需要。

ODS 政策和法规

5. 约旦政府采取了下列具体的政策和法规措施：

- (a) 于 1993 年把 ODS 列入需要进口许可证的物品清单；
- (b) 1994 年，政府通过市政、农村事务和环境部禁止建立使用 ODS 的新企业；
- (c) 1999 年，政府颁布了禁止进口二手冰箱和 ODS 设备的法规；和
- (d) 2000 年，政府颁布了对 ODS 进行控制和监测的法规。

臭氧机构

6. 约旦政府于 1991 年建立了臭氧机构。从那时以来，执行委员会已经为该机构核准了 530,000 美元的业务经费。臭氧机构负责在约旦对 ODS 淘汰方案进行全面协调。根据约旦政府与世界银行之间的赠款协定，还建立了一个项目执行机构。这个机构是作为世界银行的财务机构运作（在实践中，臭氧机构和项目执行机构是同一个机构）。

关于 ODS 消费数据的分析和报告

7. 在编制国家方案修订稿期间查明，泡沫塑料和制冷设备维修行业的实际消费量高于以前上报的水平。2002 年初，环境保护总公司（GCEP）对上报的 1997 至 2001 年消费数据进行了一次详细分析。以下开列了分析的结果：

行业	1997	1998	1999	2000	2001
泡沫塑料	379.4	387.4	317.4	157.5	106.0
家用制冷	52.0				
商用制冷	367.1	352.5	323.2	166.0	92.0
气雾剂	327.0	327.0	63.0	63.0	45.0
汽车空调机					
冷藏运输	3.0	3.0	3.0	3.0	3.0
维修	93.0	93.0	93.0	88.0	74.0
共计	1,221.5	1,162.9	799.6	477.5	320.0
以前上报的数字	858.0	649.0	399.0	275.0	251.0

维修行业的消费量是以运行中的 CFC 制冷设备和 CFC 汽车空调机为依据计算。

8. 根据这次分析，环境保护总公司确定了导致数据出入的主要原因如下：

- (a) 在泡沫塑料中使用的 CFC 经常是作为混合配方进口，在海关数据中没有被记录为进口的 CFC（随着淘汰工作取得进展，这个行业的上报数字过低的情况已经好转）；

- (b) 缺乏一个准确的系统来对很多小型维修厂在制冷设备维修行业使用的 CFC 数量进行估算；
- (c) 直接用户在没有进口许可证的情况下进口了大量 CFC（通常没有通过进口代理商）。与此同时，约旦尚未实施一项全面的进口控制政策；
- (d) 某些多边基金项目的消费量可能计算得不准确。

9. 作为政府于 2000 年所颁布法规的一部分，实行了进口控制政策，这一政策将改进进口数据的收集和上报工作，并减少在没有许可的情况下进入约旦的 CFC 数量。环境保护总公司目前正对消费量数据进行分析，以便在这些数据中包括所估算的未经许可的进口数量和像泡沫塑料这样的用途间接使用的数量，并考虑到在企业内部对实际消费量进行的审查。在就制冷设备维修行业的实际消费量提出更准确的报告方面，在制冷剂管理计划项目和拟议的汽车空调机维修行业项目下进行的工作将有所帮助。

第 2 节：符合资助条件的剩余 CFC 消费量

10. 根据约旦政府在第 7 条下向臭氧秘书处报告的数据，执行委员会第 35/57 号决定所界定的符合资助条件的剩余 CFC 消费量为零。根据备选办法 1 和 2 所确定起点的数量分别为 -279.9 和 -72.1。然而，根据在国家方案修订稿中上报的经过订正的数据，约旦政府计算得出的有待淘汰的剩余 ODS 消费量为 183 ODP 吨 CFC 和 7.7 ODP 吨 CTC。CFC 消费量的分布情况如下：清洗行业 22 吨、泡沫塑料行业 90 吨，制冷设备制造行业 18 吨，制冷设备维修行业 55 吨。

第 3 节：全国 ODS 淘汰计划

11. 约旦政府希望通过一项全国 ODS 淘汰计划来淘汰该国的 ODS 消费量。该计划的执行时间将持续 7 年，在 2009 年彻底淘汰 ODS，只有通过 CFC 再循环和哈龙库方案供应的用途除外。根据估计，该淘汰计划的总费用为 360 万美元，按行业和年度分配如下：

行业	ODP 吨数	共计(美元)	2003	2004	2005	2006	2007	2008	2009
气雾剂	20.0	200,000	100,000	100,000					
泡沫塑料	90.0	704,700	340,000	364,700					
商用制冷	15.0	228,450	228,450						
冷藏运输	3.0	90,000		90,000					
维修	23.0	300,000		200,000	100,000				
汽车空调再循环	32.0	240,000		120,000	120,000				
冷风机	9.7	1,545,000		-	545,000	500,000	500,000		
CTC	7.7	140,000		70,000	70,000				
技术援助		160,000	40,000	30,000	20,000	20,000	20,000	20,000	10,000
共计	200.4	3,608,150	708,450	974,700	855,000	520,000	520,000	20,000	10,000

第 4 节：基金秘书处的评论

12. 基金秘书处确定了 3 个与国家方案修订稿和结束性淘汰计划有关的主要政策问题。这些问题是：改变约旦政府以前在第 7 条下向臭氧秘书处报告的 ODS 消费量数据；符合资助条件的剩余 CFC 消费量；为硬泡沫塑料次级行业提供更多的资金。

最近的 ODS 消费量

13. 新的 1997—2001 年消费量数据与约旦政府以前根据第 7 条所上报的数据有很大出入。如果根据第 7 条上报，这些新的数据将改变臭氧秘书处原来计算的 CFC 基准数量。根据蒙特利尔议定书缔约方大会第 XIII/15 号决定，应该把对上报的基准数据进行的改动提交实施委员会审议。实施委员会然后将同臭氧秘书处和执行委员会合作，以确认改动数据的理由。然后将把确认的理由提交缔约方大会审批。因此，秘书处建议世界银行请约旦政府向实施委员会提交改变该国所上报的 CFC 基准数据的申请。

14. 世界银行报告说，由于掌握关于 ODS 消费量的正确信息非常重要，为了解决剩余消费量问题并保证履行《蒙特利尔议定书》中规定的义务，约旦政府进行了详细的普查，以确定该国剩余的 ODS 消费量和用户。普查结果显示，并没有把全部 ODS 消费量都上报给该国臭氧机构。此外，该国政府充分了解改变以前根据第 7 条上报臭氧秘书处的 ODS 消费量数据的程序。

符合资助条件的剩余 CFC 消费量

15. 秘书处向世界银行指出，符合资助条件的剩余 ODS 消费量（根据第 35/57 号决定）是零。世界银行报告说，约旦已经采取步骤来请求改动为 2000 和 2001 年上报的数据，因为这两个年度的数据不影响对基准消费量的计算。世界银行表示，由于 2000 和 2001 年的数据是备选办法 2 的基础，为这两年度上报的任何新的数据都应该成为计算剩余的合格淘汰费用的基础。

16. 应该指出，根据第 35/57 号决定的规定 B，计算得出的淘汰全国总消费量的起点数字是多边基金将资助淘汰的剩余消费量的上限，将在所有方面遵守多边基金现行的与项目资格有关的指导意见。

17. 应该指出，自从执行委员会通过第 35/57 号决定以来，约旦政府和基金秘书处已经就该国剩余的 CFC 消费量进行了若干次通信。约旦政府指出，秘书处计算的剩余 CFC 消费量中存在数据出入，原因是把实际上已经完成的项目当成执行中的项目，并将其所涉 CFC 消费量计算在内。基金秘书处通知约旦政府，秘书处使用的是各执行机构向执行委员会第三十一、三十四和三十七次会议提交的进度报告所载数据。根据这些数据计算，约旦的剩余消费量为负数（备选办法 1 和 2 分别为 -279.9 和 -72.1 ODP 吨）。

泡沫塑料行业

18. 秘书处通知世界银行，执行委员会第二十三次会议核准提供经费，为 Fathei Abu Arja

公司（约旦唯一的硬泡沫塑料制造厂家）举办 CFC 淘汰项目，并有一项谅解是，这个项目将在硬泡沫塑料行业彻底淘汰 CFC，约旦政府将不为这个行业的任何其他企业请求多边基金提供援助（根据关于结束性淘汰计划的第 19/32 号决定）。此外，约旦政府虽然曾为硬泡沫塑料行业的 9 家企业向执行委员会第三十三次会议提交过一个项目提案，但该项目提案后来被撤回，原因是约旦已经同意不提交这个行业的任何进一步经费申请，致使该项目不符合资助条件。因此，本提案所列入的关于在硬泡沫塑料行业进一步淘汰 78 ODP 吨 CFC 的经费申请不符合条件。

19. 世界银行指出，约旦政府已经核查并确认了约旦剩余的消耗 CFC 的泡沫塑料公司及其 CFC 消费量。执行委员会第二十三次会议为约旦核准的总体项目并不是作为结束性淘汰计划提交的，而是作为一个常规的总体项目提交。会议文件确认，约旦已经没有任何消耗 CFC 的泡沫塑料公司。同样明显的是，约旦从未确认，该国同意在该次会议之前作出的决定，按照规定也无法在该次会议期间就本国的项目发言。看来在关于该项目的讨论和谈判期间显然犯了一个错误，事实是，约旦依然有符合资助条件的企业，而来自多边基金的资助对于约旦非常重要。

20. 应该指出，尽管约旦根据执行委员会的规则，没有在第二十三次会议上就本国项目发言，但该国确实是在该次会议之前收到了项目文件，所有执行机构也都收到了这些文件。约旦和世界银行（约旦为该项目挑选的执行机构）都没有对以下说明提出任何异议：该项目是硬泡沫塑料行业最后一个项目，约旦今后将不寻求为硬泡沫塑料行业提供任何进一步经费。

冷风机

21. 淘汰计划包括请求在 2010 年之前用使用 HFC-134a 制冷剂的冷风机取代 CFC 冷风机，估计的费用为 154.5 万美元。执行委员会第三十七次会议决定，请秘书处重新检查冷风机次级行业的问题，并向将来某次会议报告修订政策性指导意见的可能性，澄清由于提高能源效率可能导致的节省的性质，并说明这些能源节省能够以多快的速度实现（第 37/21 号决定）。

其他问题

22. 秘书处暂不对约旦政府提交的全国 ODS 淘汰计划所载淘汰项目和活动进行审查，以待澄清上述政策性问题。因此，没有把约旦全国 ODS 淘汰计划中的投资组成部分列入提交第三十八次会议的文件。一旦解决了这些问题，秘书处和世界银行将完成其讨论。

第 5 节：建议

23. 谨提议执行委员会根据以上评论审议约旦的国家方案修订稿。



عمان

Ref

الرقم ٢٥٦٩/٥/٢

Date

التاريخ

الموافق ١٢/٨/٢٠٠٢



سعادة الدكتور عمر العريني
كبير موظفي الصندوق

تحية طيبة وبعد ،،،

كما تعلمون سعادتكم ، فإن الأردن قد وقع على اتفاقية فيينا وبروتوكول مونتريال منذ عام 1989 وهو الآن طرف في كافة التعديلات التي تم إدخالها على البروتوكول . وقد تمكن الأردن بفضل جهودكم وجهود اللجنة التنفيذية ومساعدة الوكالات المنفذة من تنفيذ متطلبات بروتوكول مونتريال . وعلى ضوء موافقة اللجنة التنفيذية للصندوق على تحديث البرنامج القطري الأردني ، فقد قامت وحدة الأوزون في الأردن بالتعاون مع الجهات الوطنية المعنية وخبراء البنك الدولي بإعداد وثيقة "تحديث البرنامج القطري الأردني والخطة الوطنية للتخلص من المواد المستترفة لطبقة الأوزون" وذلك من خلال مراجعة شاملة وتقييم لما تم تنفيذه من نشاطات متعددة ساهمت في التخلص من استخدام المواد المستترفة لطبقة الأوزون في العديد من القطاعات الصناعية ، وكذلك تحديد مختلف القطاعات المتبقية والتي لم يشملها التمويل لغاية الآن وما تحتاجه من مشاريع وبرامج ونشاطات ينبغي تنفيذها للتخلص من استخدام المواد المستترفة لطبقة الأوزون في تلك القطاعات من خلال تنفيذ "الخطة الوطنية للإزالة النهائية للمواد المستترفة لطبقة الأوزون" والتي ستساهم بعون الله في جعل الأردن بلداً خالياً من المواد المستترفة لطبقة الأوزون وبكلفة تقدر بحوالي 3.6 مليون دولار أمريكي .



عمان

Ref

الرقم ٢٥٦٩ / ٥ / ٢

Date



التاريخ الموافق ٢٥٦٩ / ٥ / ٢

Amman 2002 عاصمة الثقافة العربية The Arab Cultural Capital

لذا يسرني إن أرفع إليكم وثيقة " تحديث البرنامج القطري الأردني والخطة الوطنية للتخلص من المواد المستترفة لطبقة الأوزون " بعد أن تم إقرارها من قبل مجلس الوزراء في المملكة الأردنية الهاشمية راجيا التكرم بعرضها على اجتماع اللجنة التنفيذية للصندوق المزمع عقده في شهر تشرين ثاني (نوفمبر) القادم. وبهذه المناسبة فإننا نعبر عن شكرنا وتقديرنا للجهود التي بذلها البنك الدولي في المساعدة في إعداد هذه الوثيقة.

ونحن إذ نرفع إلى سعادتكم هذه الوثيقة، نرجو من اللجنة التنفيذية التكرم بالموافقة على مستوى التمويل المبين فيها لتمكين الأردن من الوفاء بكامل التزاماته وفقاً لبروتوكول مونتريال .

شاكرين لسعادتكم جهودكم الخيرة في إدارة الصندوق ، مع تمنياتنا لكم بالتوفيق والنجاح ،،،،،

واقبلوا فائق الاحترام ،،،،،

الدكتور عبد الرزاق طبيشات

وزير الشؤون البلدية والقروية والبيئة

رئيس مجلس حماية البيئة

OFFICIAL TRANSLATION

The Hashemite Kingdom of Jordan
**The General Corporation for
The Environment Protection**
Amman

In the Name of God the Merciful the Compassionate

No. 2/5/2569
Date: 27/08/2002

Amman 2002
The Arab Cultural Capital

H.E. Dr. Omar El Arini
The Fund Chief Executive Officer

Dear Sir :

As you know, Jordan has ratified Vienna Agreement and Montreal Protocol since 1989, and it is now a party in all its amendments that were entered to this Protocol. Through your efforts and the efforts of the Executive Committee as well as the assistance of the Executing Agencies, Jordan was able to implement the requirements of Montreal Protocol. In the light of the Fund Executive Committee Approval for updating the Jordanian Country Program, the Ozone Unit in Jordan, in cooperation with the National Authorities concerned and the World Bank experts, has prepared a document "**Updating the Jordanian Country Program and the National Plan for the Elimination of the Ozone Layer Depleting Substances**". This was carried out through a comprehensive review and assessment of the various activities that were implemented and helped in the elimination of the use of the ozone layer depleting substances in the various industrial sectors, as well as through identifying the various remaining sectors that were not included, so far, in the financing, and their needs for projects, programs and activities that should be implemented in order to eliminate the use of the ozone layer depleting substances in those sectors, through the implementation of "**The National Plan for the Final Elimination of the Ozone Layer Depleting Substances**", which, with the help of God, will help make Jordan a country free from ozone layer depleting substances with a cost estimated at approximately 3.6 million US\$.

Therefore, I am pleased to submit to you the document: **“Updating the Jordanian Country Program and the National Plan for the Elimination of the Ozone Layer Depleting Substances”**, after it has been approved by the Council of Ministers in The Hashemite Kingdom of Jordan, hoping that you kindly present it to the Fund Executive Committee Meeting expected to be held next November.

We seize this opportunity to express our gratefulness and appreciation for the efforts exerted by the World Bank in the assistance for preparing this document.

While we submit to your Excellency this document, we hope that the Executive Committee would be so kind as to approve the financing level shown therein, in order to enable Jordan to fulfill all its obligations in accordance with the Montreal Protocol.

We thank your Excellency for the good efforts in the management of the Fund, and wish you prosperity and success.

Very truly yours,

Dr. Abdel Razzak Tbeishat,

((Signature))

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Executive Summary

This Country Program Update (CPU) for Jordan provides an overview of activities implemented under the Montreal Protocol on Substances that Deplete the Ozone Layer (MP) in Jordan. This overview includes an assessment provided by the Multilateral Fund for the Implementation of the Montreal Protocol (MLF) for supporting Jordan's effort in meeting its obligations under the MP as given in the initial Country Program. It also includes an analysis of remaining ODS phase out that is required in the country and presents a strategy, action plan and cost estimate to complete phase out.

Jordan is committed to the complete ODS phase out in accordance with the timetable set by the MP. In 1989 Jordan ratified the MP, committing to phase out ODS and therefore became eligible to receive grants from the MLF which was established to provide financial support to developing countries in meeting their obligations under the MP. Jordan was one of the first countries to receive financial assistance from the MLF for the development of a CP and the development of a national strategy for phasing out of the use of ODS in accordance with the milestones given for Article 5(1) countries by the MP. Jordan's CP was completed with the assistance of the World Bank in 1991. The Executive Committee (ExCom) to the Multilateral Fund (MLF) subsequently approved the Jordan CP at its 10th meeting in June 1993.

Jordan's total ODP consumption in 1991 was estimated at about 789 tons ODP. The CP identified the aerosol sector and the foam sector as the two key areas in which ODS was used. Hence developing a national capacity for managing the ODS phase out program and addressing those two main ODS consuming sectors were seen as essential. Through a grant from the MLF channelled through the World Bank, Jordan started its phase out program by ensuring supply of substitute - purified Liquid Petroleum Gas - for the conversion of the aerosol sector. In addition, conversion of aerosol fillers and conversion of some ODS-consuming foam enterprises were undertaken.

The National Ozone Unit (NOU) of Jordan, set up within the General Corporation for the Environment Protection (GCEP), has played a key role in developing and implementing the ODS phase out program. When the program started in 1991, GCEP was also selected as the financial agent for the World Bank and has undertaken the role of financial agent for projects implemented through the World Bank. The role as financial agent has given GCEP the opportunity of very close involvement in implementing and monitoring ODS phase out projects and allowed development of its management capability to complete the phase out task.

At the time of preparation of the CP, the MP had set a phase out date of Annex A, Group 1 substances (CFCs) for Article 5 countries of 2010 with immediate targets of 50 percent reduction in 2005 (from the average consumption for 1995-97) with a further reduction to 85 percent by 2007. The CP stated "the phase out will be mostly completed by 2000, while some ODS uses will continue until 2010."

Jordan has made substantial progress in ODS phase out over the past decade. The original CP did not set quantitative intermediate targets for ODS phase out, therefore the best way to assess progress has been to compare recent results with the MP targets set after the Jordan CP was approved. Jordan has met the first MP milestone: the 1999 freeze level for Annex A Group A substances (CFCs). In 1999, CFC consumption was 399 tons CFC, or 59 percent of the freeze level for CFC consumption. Jordan will also be well below the 50 percent reduction target in 2005. For halons, Jordan has received support that will allow for a complete halon phase out¹ by 2005. Future demand for critical/essential uses will be met through the Jordan halon management program.

¹ Complete phase out is defined by the MP as zero consumption. Consumption is defined as production plus import minus export. Jordan is not a producer of halons, therefore the consumption is import minus export.

Jordan has decided to base the remaining phase out of ODS on a National ODS Phase out Plan (NOPP) where GCEP will assume the leading role managing the ODS phase out plan. The plan will be implemented with both UNIDO and World Bank as implementing agencies and with the Bank as the lead agency. This Plan will include all remaining CFC, CTC and TCA consumption.

The CPU was prepared on the basis of a review of the current results under the original CP and the added action programs for halon and methyl bromide in addition to a critical assessment of needed policy, strategy and actions to complete phase out of remaining ODS in the country. Ongoing actions will continue as individual projects as shown below:

- Completion of ongoing aerosol, halon, solvent and refrigeration projects; and
- Completion of the ongoing methyl bromide project.

All remaining phase out actions will be included in a National ODS Phase out Program. The overall targets for all sectors will be as follows:

- Phase out of halons by 2005 (already agreed program);
- Phase out of methyl bromide by 2015 (already agreed program);
- Phase out of solvents by 2006 (program partially agreed);
- A complete phase out of remaining CFCs (except service requirements) by 2005; and
- Phase out of CFC service requirements by 2010.

The components of the NOPP will consist of:

- Remaining CFCs in commercial refrigeration sector;
- Remaining CFCs in refrigeration service sector;
- CFCs in Mobile Air Conditioning (MAC) service sector;
- CFCs in chiller sector;
- Remaining solvent (CTC) sector;
- Remaining CFCs in foam sector; and
- Remaining CFCs in aerosol (pharmaceutical) sector.

The estimated cost of a NOPP is about US\$3,608,150 for funding of the remaining consumption of 320 tons ODP. This translates into a costs effectiveness of US\$11.27/kg ODP. The cost-effectiveness excluding the funding requested for the chiller sector is US\$6.47/kg ODP.

GCEP will also be in charge of the technical support and technical assistance program to ensure that the obligations under the MP are met and residual consumption by a large number of very small workshops are addressed through a combination of awareness, training and financial support. UNIDO will be the implementing agency for the commercial refrigeration sector, (including refrigeration service sector) and the solvent sector. The World Bank will be the lead agency and the implementing agency for other remaining activities, including aerosol and foam sectors, as well as MAC service sector and chiller sectors.

GTZ will continue implementing methyl bromide phase out and the World Bank will continue implementing the halon phase out. UNIDO will continue implementing ongoing commercial refrigeration projects and ongoing solvent project. The program will lead to a complete phase out of consumption of Annex A, Annex B and Annex E chemicals in Jordan and will assure that future need for servicing of all remaining ODS containing equipment can be met through recycled ODS after 2009. The proposed Action Plan is presented in Chapter III.

The NOPP will be implemented through a series of annual action programs covering each concerned sector that will be prepared by GCEP in co-operation with the Implementing Agencies.

Annex I
List of projects and activities approved by the Executive Committee for Jordan

Projects and activities	Agency	ODP funded	ODP phasedout	US\$ approved	US\$ disbursed
Aerosol sector					
Aerosol conversion at Jordan Chemical Products Co. Ltd. (JCPCO)	IBRD	61.0	61.0	229,761	229,761
Technical assistance and pre-feasibility study in aerosol sector	UNDP	-	-	32,770	32,770
Phase-out of CFC-12 in the manufacture of hair lacquers by conversion to hydrocarbon propellant at Jordan Tunisian Chemical Company	UNIDO	12.0	-	59,664	9,184
Substitution of CFC-12 for HAPs at the aerosol plant of Arab Chemical Industries	IBRD	13.0	-	55,979	-
Substitution of CFC-12 for HAPs for perfumes and cosmetics at the aerosol plant Abu Shakra Factory	IBRD	18.0	-	86,644	-
Project preparation in the aerosol sector	UNIDO	-	-	14,201	14,201
Aerosol conversion at Jordan Antiseptics and Detergents Ind. Co. Ltd. (JADICO)	IBRD	20.0	20.0	74,264	74,264
Aerosol conversion at Jordan Industrial Petrochemical Co. Ltd. (JIPCO)	IBRD	98.0	-	116,226	-
Phase out of CFC use in aerosol at Haddad and Sons Inc.	IBRD	85.0	85.0	250,000	214,200
Phase out of CFC use in aerosol at Household and Toiletries	IBRD	30.0	30.0	135,000	119,282
LPG purification at Jordan Refinery Company	IBRD	-	-	700,000	799,341
Feasibility study on deodorization of local gas as a CFC substitute in cosmetics	UNDP	-	-	13,560	13,560
Project preparation of projects in the aerosol sector	IBRD	-	-	11,300	11,300
Foam sector					
Conversion to CFC-free technology in the manufacture of extruded polystyrene at Al Hussam	IBRD	50.0	-	393,076	318,544
Conversion to CFC-free technology in the manufacture of flexible slabstock PUF (box foam) at Baybars	IBRD	30.0	-	127,125	114,413
Project preparation in the foam general sector	IBRD	-	-	11,300	11,300
Phase out of CFC use in flexible foam at Kolaghassi Foam and Mattress Factory Co.	IBRD	40.0	40.0	142,000	120,272
Umbrella project for conversion to CFC-free technology at three flexible polyurethane foam factories at Arab Foam, Jordan Plastics, National Foam	IBRD	114.0	114.0	368,500	254,600
Conversion to CFC-free technology in the manufacture of rigid polyurethane foam (miscellaneous applications) at Fathei Abu Arja	IBRD	105.4	105.4	932,102	794,843
Technology transfer and engineering support	IBRD	-	-	73,000	73,000
Umbrella project for conversion to CFC-free technology at Five Star Polyurethane Foam Factory	IBRD	20.0	20.0	74,580	74,580
Fumigant sector					
Preparation of a demonstration project in the methyl bromide sector	UNIDO	-	-	26,005	26,005

Projects and activities	Agency	ODP funded	ODP phased out	US\$ approved	US\$ disbursed
Three alternatives to the use of methyl bromide: steam pasteurization, non-soil cultivation and optimal use of soil fumigants in combination with an integrated pest management	UNIDO	-	-	435,050	260,178
Comprehensive approach to disseminate soil solarization technology for methyl bromide substitution	Germany	-	-	232,789	232,798
Complete phase-out of the use of methyl bromide in Jordan	Germany	180.0	-	3,399,930	1,078,261
Halon sector					
Halon management programme, halon recovery, recycling and banking	IBRD	-	-	431,943	-
Project preparation in the halon non-recycling	IBRD	-	-	16,950	16,950
Terminal halon-1211 and halon-1301 phaseout umbrella project for fire equipment manufacturers and suppliers in Jordan converting to ABC powder, CO ₂ , HFC-227ea and inert gases as substitutes	IBRD	421.8	-	634,930	-
Refrigeration sector					
Preparation of refrigerant management plan	UNIDO	-	-	29,999	29,999
Preparation of investment projects in air conditioning, commercial and domestic refrigeration (1992)	IBRD	-	-	500,000	54,861
Preparation of investment projects for phasing-out CFC in the refrigeration sector	UNIDO	-	-	84,695	84,695
ODS phase-out at National Refrigeration Co. (NRC)	UNIDO	14.3	19.3	918,202	918,202
ODS phase-out at Household Appliance Manufacturing Co. (Hamco)	UNIDO	21.2	21.2	876,266	876,266
ODS phase-out at Middle East Electrical Industries Co. Ltd.	UNIDO	16.6	23.0	996,323	996,323
Phasing out CFC at Abdin Industrial Est. Co.	UNIDO	10.4	21.5	131,202	131,202
Replacement of CFC-11 foam blowing agent with HCFC-141b and CFC-12 refrigerant with HFC-134a in manufacture of commercial refrigeration equipment at six Jordanian companies	UNIDO	25.1	25.1	345,513	339,524
Replacement of CFC-11 and CFC-12 with HCFC-141b and HFC-134a in production commercial refrigeration equipment at the medium size commercial refrigerator manufacturers (Jordan Catering Supplies, El-Shami, and Nedal Raja Al-Dwaik companies) in Jordan	UNIDO	34.7	-	530,563	421,927
Phasing out CFCs at the Ihsan & Tahseen Baalbaki Co.	UNIDO	66.5	66.5	608,981	608,981
Phasing out of CFC-11 by conversion to HCFC-141b and CFC-12 to HFC-134a in manufacturing commercial refrigeration equipment at 5th group of SMEs (Abdoulah Factory, Emad Addin Al-Sareegy, Ma-nna, Al-Mansour, Al-Ostath, Raed)	UNIDO	26.0	-	276,798	3,390
Phasing out of CFC-11 by conversion to HCFC-141b and CFC-12 to HFC-134a in manufacture of commercial refrigeration equipment at 6th group of SMEs (Abu-Khalaf, Al-Taghwa, Farough Refrigeration, Dawudiah Workshop, Makka	UNIDO	24.4	-	323,771	3,390

Projects and activities	Agency	ODP funded	ODP phased out	US\$ approved	US\$ disbursed
Refrigeration and Teck-Tack Workshop)					
Replacement of CFC-11 and CFC-12 with HCFC-141b and HFC-134a in the production of commercial refrigeration equipment at the second medium size commercial refrigerator manufacturers group (Abu Azmi, Hasouni Refrigeration and Majdi)	UNIDO	26.4	-	387,197	2,260
Phasing out of CFC-11 by conversion to HCFC-141b and CFC-12 to HFC-134a in manufacture of commercial refrigeration equipment at Fourth Group of small size commercial refrigerator manufacturers	UNIDO	23.1	-	305,138	220,698
Preparation of investment projects in the commercial refrigeration sector	UNIDO	-	-	22,600	14,441
Phasing out of CFC-11 by conversion to HCFC-141b and CFC-12 to HFC-134a in manufacture of commercial refrigeration equipment at Al-Arghawi Commercial Manufacturing Company and Marka Industries Worksho	UNIDO	27.4	27.4	288,379	246,308
Technical assistance in air-conditioning	France	-	-	42,000	10,425
Replacement of CFC-11 foam blowing agent with HCFC-141b and CFC-12 refrigerant with HFC-134a in manufacture of commercial refrigeration equipment at Maurice al-Deek Co.	UNIDO	25.7	25.7	371,396	371,396
Project preparation in the commercial refrigeration (umbrella project) sector	UNIDO	-	-	22,600	14,841
Preparation of investment projects in the commercial refrigeration sector	UNIDO	-	-	4,859	4,859
Implementation of the RMP: customs training	UNIDO	-	-	43,223	39,506
Phasing out CFC-11 by conversion to HCFC-141b and CFC-12 to HFC-134a in manufacture of commercial refrigerators, Second Group of Jordanian Commercial Refrigerator Manufacturers (Jamal Yussef, Al-Amal, Emad Hdjawi, Al-Besani, Aqaba Al-Eslah, and Lebanon)	UNIDO	25.8	25.8	315,214	305,690
Implementation of the RMP: technical assistance and support to develop regulations for ODS to implement the Environment Law of 1995	UNIDO	-	-	22,600	17,508
Implementation of the RMP: national recovery and recycling project	UNIDO	19.1	-	352,504	502
Implementation of the RMP: training of trainers in good refrigerant management practices, and national technicians training	UNIDO	-	-	79,100	48,121
Solvent sector					
Conversion of metal cleaning processes from TCA solvent to TCE degreasing at the Royal Jordanian Air Force	UNIDO	45.0	-	387,315	-
Project preparation in the solvent (CFC-113) sector	UNIDO	-	-	28,250	18,856
Conversion of metal cleaning processes from TCA solvent to TCE degreasing at the King Hussein Workshop, Zarqa	UNIDO	6.4	-	216,187	-
Several sector					
Renewal of institutional strengthening	IBRD	-	-	128,066	128,066

Projects and activities	Agency	ODP funded	ODP phasedout	US\$ approved	US\$ disbursed
Preparation of investment projects (1991)	IBRD	-	-	24,464	3,412
Country programme update	IBRD	-	-	56,500	-
Renewal of institutional strengthening (phase II)	IBRD	-	-	128,066	128,066
Preparation of project in the aerosol and halon recycling sectors	IBRD	-	-	5,650	5,650
Project preparation in the foam and halon recycling sectors	IBRD	-	-	33,900	33,900
Project preparation to phase out CFC consumption that is not accounted for in the original country programme	IBRD	-	-	33,900	33,900
Renewal of the institutional strengthening project	IBRD	-	-	150,666	-
Project preparation	IBRD	-	-	45,200	45,200
Preparation/supervision of investment projects (1995)	IBRD	-	-	64,680	64,680
Preparatory assistance for investment projects in commercial refrigeration, air conditioning, foam and halon sectors	UNIDO	-	-	55,477	55,477
Supervision of project implementation (1994)	IBRD	-	-	34,253	79,479
Preparation of investment projects (1993)	IBRD	-	-	130,249	84,553
Policy and monitoring measures	IBRD	-	-	179,100	179,100
Country programme preparation	IBRD	-	-	25,079	72,275
Country programme preparation	IBRD	-	-	111,654	52,995
Total		1,736.2	730.9	18,796,428	11,644,531
