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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-eighth Meeting
Rome, 20-22 November 2002

COUNTRY PROGRAMME UPDATE: JORDAN

This document consists of:

- Country Programme Evaluation Sheet (prepared by the Fund Secretariat)
- Comments and Recommendations of the Fund Secretariat
- Transmittal Letter from the Government of Jordan
- Country Programme (Executive Summary)

COUNTRY PROGRAMME EVALUATION SHEET

1. The country programme update consists of the following sections:

Section 1: ODS consumption, policies and regulations
Section 2: Remaining CFC eligible for funding
Section 3: National ODS Phase-out Plan
Section 4: Comments of the Fund Secretariat on:
- Recent ODS consumption
- Remaining CFC eligible for funding
- Foam sector
- Other issues

Section 5: Recommendation
Executive Summary (prepared by the World Bank)
Annex I: List of Multilateral Fund projects and activities approved for Jordan

Section 1: ODS consumption, policies and regulations

ODS consumption

2. In 1991, ODS consumption in Jordan was estimated at 712 metric tonnes. However, since the approval of the original country programme, Jordan has received a total of US $18,988,968 (including agency support cost, where applicable), to phase out a total consumption of 1,753 ODP of controlled substances. Of this amount, 748.6 ODP tonnes have already been phased out in the aerosol, foam and refrigeration sectors. Annex I lists all projects and activities that have been approved by the Executive Committee for Jordan.

3. As a result, Jordan has met the 1999 freeze level for CFCs. By 2000, CFC consumption in the domestic refrigeration sector had been completely phased out and major reductions had also been achieved in the foam and commercial refrigeration sectors. With the exception of pharmaceutical uses, CFC will be completely phased out by 2003 as propellant used for the manufacturing of aerosols products. Halon consumption has been reduced to 90 ODP tonnes in 2001 compared to the calculated baseline of 210 ODP tonnes; furthermore, the Government has received assistance from the Multilateral Fund to achieve a complete phase out of halons by 2003. This progress was achieved in spite of the large influx of refugees during the 1990s; the larger than expected growth rate in the sectors using ODSs experienced in 1990s; and the complexity of ODS phase out experienced.

4. Jordan will also be able to achieve the 50 per cent CFC reduction target in 2005, with a forecast consumption of 62 ODP (or 18 per cent of the baseline). Halon demand for critical/essential uses after 2005 will be met through the Jordan halon management programme.

ODS policies and regulation

5. The specific policy and regulatory actions taken by the Government of Jordan are as follows:

(a) In 1993, ODS was included in the list of items requiring an import license;

(b) In 1994, the Government through the Ministry of Municipal, Rural Affairs and Environment banned the establishment of new enterprises using ODS;

(c) In 1999, the Government enacted regulations to ban imports of used refrigerators, and ODS-based equipment; and

(d) In 2000, the Government enacted regulation to control and monitor ODSs.

Ozone Unit

6. The Government of Jordan established the Ozone Unit in 1991. Since then, the Executive Committee has approved US $530,000 for its operation. The Ozone Unit is responsible for the overall co-ordination of the ODS phase-out programme in Jordan. Under the grant agreement between the Government of Jordan and the World Bank, a Project Implementation Unit has also been established. This operates as the financial institution for the World Bank (in practice, the Ozone Unit and the Project Implementation Unit are the same).

Analysis of ODS consumption data and reporting

7. Actual consumption levels identified during the country programme update were higher than the levels previously reported in the foam and refrigeration-servicing sectors. In early 2002, the General Corporation for the Environment Protection (GCEP) undertook a detailed analysis of the consumption data reported for the period 1997-2001. The results of the analysis are presented below:

Sector	**1997**	**1998**	**1999**	**2000**	**2001**
Foam	379.4	387.4	317.4	157.5	106.0
Domestic refrigeration	52.0				
Commercial refrigeration	367.1	352.5	323.2	166.0	92.0
Aerosol	327.0	327.0	63.0	63.0	45.0
MAC					
Refrigeration transportation	3.0	3.0	3.0	3.0	3.0
Servicing	93.0	93.0	93.0	88.0	74.0
Total	1,221.5	1,162.9	799.6	477.5	320.0
Previously reported	858.0	649.0	399.0	275.0	251.0

The consumption in the servicing sector is based on number of CFC based refrigeration and CFC based MAC units in operation.

8. Based on the analysis, GCEP identified the main reasons for data discrepancies:

(a) CFC used in foam was often imported as a blended formulation and was not recorded in customs data as CFC imports (the under reporting in this sector decreased as the phase-out process progressed);

(b) Lack of an accurate system for assessing the level of CFC used in the refrigeration service sector by the many small workshops;

(c) Direct users imported significant amounts of CFCs without an import license (typically without going through an import agent). At that time, Jordan did not have a comprehensive import control policy in place;

(d) Consumption in some Multilateral Fund projects might have been miscalculated.

9. The import control policy introduced as part of Government enacted regulations in 2000 will improve import data collection and reporting and diminish the amounts of CFCs that enter into the country without a license. GCEP is now analysing consumption data to include assessment of unlicensed imports and indirect users such as foam, and internal reviews at the enterprise level on actual consumption. Work under the RMP project and the proposed MAC service sector project will assist in better reporting on the actual consumption in the refrigeration service sector.

Section 2: Remaining CFC consumption eligible for funding

10. Based on the data reported by the Government of Jordan to the Ozone Secretariat under Article 7, the remaining CFC consumption eligible for funding, as adopted by the Executive Committee under Decision 35/57, is nil. The values under Starting Point Options 1 and 2 are -279.9 and –72.1, respectively. However, on the basis of the revised data reported in the country programme update, the ODS consumption remaining to be addressed has been calculated by the Government of Jordan at 183 ODP tonnes of CFCs and 7.7 ODP tonnes of CTC. CFCs included 20 tonnes in the aerosol sector, 90 tonnes in the foam sector, 18 tonnes in the refrigeration manufacturing sector, and 55 tonnes in the refrigeration-servicing sector.

Section 3: National ODS Phase-out Plan

11. The Government of Jordan wishes to phase out its ODS consumption through a National ODS Phase-out Plan. The plan will be implemented over a seven-year period, with a complete phase out of ODSs by 2009 except for applications to be provided through the CFC recycling and halon banking programmes. The total cost of the phase-out plan has been estimated at US $3.6 million, with the following sectoral and annual distribution:

Sector	ODP tonnes	Total (US$)	2003	2004	2005	2006	2007	2008	2009
Aerosol	20.0	200,000	100,000	100,000					
Foam	90.0	704,700	340,000	364,700					
Commercial ref.	15.0	228,450	228,450						
Transport ref.	3.0	90,000		90,000					
Servicing	23.0	300,000		200,000	100,000				
MAC recycling	32.0	240,000		120,000	120,000				
Chiller	9.7	1,545,000		-	545,000	500,000	500,000		
CTC	7.7	140,000		70,000	70,000				
Technical assistance		160,000	40,000	30,000	20,000	20,000	20,000	20,000	10,000
Total	200.4	3,608,150	708,450	974,700	855,000	520,000	520,000	20,000	10,000

Section 4: Comments of the Fund Secretariat

12. The Secretariat identified three major policy issues related to the country programme update and the terminal phase-out plan. These are changes to ODS consumption data previously reported by the Government of Jordan to the Ozone Secretariat under Article 7; the remaining CFC consumption eligible for funding; and additional funding for the rigid foam sub-sector. .

Recent ODS consumption

13. The new consumption data for the years 1997-2001 is significantly different from the data previously reported by the Government under Article 7. If reported under Article 7, this new data would change the CFC baseline originally calculated by the Ozone Secretariat. Pursuant to Decision XIII/15 of the Parties to the Montreal Protocol, changes in reported baseline should be presented to the Implementation Committee. The Implementation Committee will then work with the Ozone Secretariat and the Executive Committee to confirm the justification for the changes. These will then be presented to the Meeting of the Parties for approval. Accordingly, the Secretariat advised the World Bank that the Government of Jordan should submit its request for changing its reported CFC baseline to the Implementation Committee.

14. The World Bank reported that due to the importance of having the correct information on ODS consumption, in order to address the remaining consumption and ensure compliance with the Montreal Protocol's obligations, the Government of Jordan carried out detailed surveys to identify the remaining ODS consumption and users in the country. The outcome has revealed that not all ODS consumption had been reported to the Ozone Unit. Furthermore, the Government is fully aware of the procedures for changing ODS consumption data as previously reported to the Ozone Secretariat in accordance with Article 7.

Remaining CFC consumption eligible for funding

15. The Secretariat advised the World Bank that the remaining CFC consumption eligible for funding, (under Decision 35/57) is nil. The World Bank reported that Jordan has already taken steps to request changes to the data reported for 2000 and 2001 since data for these years does not affect the calculation of the baseline consumption. The World Bank expressed its view that, since data for the years 2000 and 2001 forms the basis for Option 2, any new reported data for 2000 and 2001 should form the basis for the remaining eligible costs.

16. It is to be noted that according to Proviso B of Decision 35/57 the resulting numbers for the starting point for implementation of the national aggregate consumption represent maximum residual ODS that the Fund will pay to reduce, and that existing Fund guidance related to eligibility of projects would be maintained in all respects.

17. It is to be noted that since adoption of Decision 35/57 by the Executive Committee, the Government of Jordan and the Fund Secretariat had exchanged several communications regarding the remaining CFC consumption in the country. The Government of Jordan pointed out to data discrepancies in the calculation performed by the Secretariat for the remaining CFC consumption, due to taking into account CFC consumption associated with projects that were considered as on going while in fact they were already completed. The Secretariat informed the Government of Jordan that the Secretariat used the data reported in progress reports submitted by the implementing agencies to the 31st, 34th and 37th Meetings of the Executive Committee. On that basis, the remaining consumption for Jordan resulted in negative figures (-279.9 and -72.1 ODP tonnes for Options 1 and 2, respectively).

Foam sector

18. The Secretariat informed the World Bank that at its 23rd Meeting, the Executive Committee approved for funding a CFC phase-out project for Fathei Abu Arja (the sole manufacturer of rigid foam in the country), on the understanding that it will achieve the complete phase out of CFCs in the rigid foam sector and that the Government of Jordan will not seek further assistance from the Fund for any other enterprise in this sector (in accordance with Decision 19/32 on terminal phase-out plans). Furthermore, a request from the Government of Jordan to submit a project proposal covering 9 enterprises in the rigid foam sector to the 33rd Meeting of the Executive Committee had been withdrawn because, the project was not eligible for funding since Jordan had agreed not to submit further requests for funding in this sector. Therefore, the inclusion of a request for funding for phase out of an additional 78 ODP tonnes of CFC-11 in rigid foam is ineligible.

19. The World Bank stated that the eligibility of the remaining CFC consuming foam companies in Jordan and their CFC consumption has been verified and confirmed by the Government. Regarding the umbrella project approved for Jordan at the 23rd Executive Committee Meeting, the project was not submitted as a terminal phase-out plan but as a regular umbrella project. It was acknowledged in the meeting documentation that there were no CFC consuming foam companies left in Jordan. It is also clear that Jordan never confirmed its agreement with the decision prior to the meeting nor was Jordan allowed to speak in relation to

its own projects during the meeting. Its seems clear that a mistake was made during the discussions and negotiation of the project and the fact remains that eligible enterprises remain and financial support from the Multilateral Fund is critical to Jordan.

20. It is to be noted that, although Jordan did not speak about their project at the 23rd Meeting in accordance with the Executive Committee rules, it did receive the project documentation prior to that meeting, as did all implementing agencies. Neither Jordan nor the World Bank (the implementing agency selected by Jordan for that project) raised any issue with the statement that the project was the last in the rigid foam sector and that Jordan will not seek further funding for the rigid foam sector in the future.

Chillers

21. The phase-out plan included a request for replacing CFC-based chillers with HFC-134a refrigerant before 2010, at an estimated cost of US $1.545 million. At its 37th Meeting, the Executive Committee decided to request the Secretariat to re-examine issues in the chiller sub-sector, and to report to a future meeting on the possibility of updating policy guidance, providing clarification of the nature of savings that could be envisaged as a result of increased energy efficiency and how soon those energy savings might be realised (Decision 37/21).

Other issues

22. The Secretariat has withheld the review of the phase-out projects and activities contained in the national ODS phase-out plan submitted by the Government of Jordan pending clarification of the above mentioned policy issues. Therefore, the investment component of the national ODS phase-out plan for Jordan has not been included in the documentation for the 38th Meeting. The Secretariat and the World Bank will finalise their discussions once the issues are resolved.

Section 5: Recommendation

23. The Executive Committee may wish to consider the Jordan country programme update on the basis of the above comments.

بسم الله الرحمن الرحيم

THE HASHEMITE KINGDOM OF JORDAN
The General Corporation For The Environment Protection
AMMAN

المملكة الاردنية الهاشمية
المؤسسة العامة لحماية البيئة
عمان

Ref .....
Date .....

الرقم ٢٥٦٩/٥/٢
التاريخ .....
الموافق ٢٠٠٢/٨/٢٧

سعـــــادة الدكتـــــور عمـــر العرينـــي
كبـــــير موظفـــي الصنـــدوق

تحيـــــة طيبـــــة وبعـــــد ،،،

كمـــا تعلمـــون سعادتكم ، فإن الأردن قد وقع على اتفاقية فيينا وبروتوكول مونتريال منذ عام 1989 وهـــو الآن طرف في كافة التعديلات التي تم إدخالها على البروتوكول . وقد تمكن الأردن بفضل جهـــودكم وجهـــود اللجنة التنفيذية ومساعدة الوكالات المنفذة من تنفيذ متطلبات بروتوكول مونتريال . وعلـــى 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 القطـــري الأردني والخطة الوطنية للتخلص من المواد المستنزفة لطبقة الأوزون"*** وذلك من خلال مراجعة شـــاملة وتقيـــيم لما تم تنفيذه من نشاطات متعددة ساهمت في التخلص من استخدام المواد المستنزفة لطبقة الأوزون في العديـــد مـــن القطاعات الصناعية ، وكذلك تحديد مختلف القطاعات المتبقية والتي لم يشملها الـــتمويل لغاية الآن وما تحتاجه من مشاريع وبرامج ونشاطات ينبغي تنفيذها للتخلص من استخدام المواد المستنزفة لطبقة الأوزون في تلك القطاعات من خلال تنفيذ ***"الخطة الوطنية للإزالة النهائية للمواد المستنزفة لطـــبقة الأوزون"*** والتي ستساهم بعون الله في جعل الأردن بلداً خالياً من المواد المستنزفة لطبقة الأوزون وبكلفة تقدر بحوالي 3.6 مليون دولار أمريكي .

هاتف ٥٣٥٠١٤٩ فاكس ٥٣٥٠٠٨٤ ص.ب ١٤٠٨ عمان - ١١٩٤١ - الاردن
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المملكة الاردنية الهاشمية
المؤسسة العامة لحماية البيئة
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Ref .....
Date .....

الرقم ٢٥٦٩/٥/٢
التاريخ .....
الموافق ٢٠٠٢/٨/٢٧

Amman 2002 عاصمة للثقافة العربية The Arab Cultural Capital

لذا يسرني إن أرفع إليكم وثيقة " ***تحديث البرنامج القطري الأردني والخطة الوطنية للتخلص من المواد المستنزفة 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.

وبهـــذه المناسبة فإننا نعبر عن شكرنا وتقديرنا للجهود التي بذلها البنك الدولي في المساعدة في إعداد هذه الوثيقة.

ونحـــن إذ نرفع إلى سعادتكم هذه الوثيقة، لنرجو 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 ،،،،،

واقبلـــوا فائـــق الاحتـــرام ،،،،،،

الدكتـــور عبـــد الـــرزاق طبيشـــات
وزيـــر الشـــؤون البلديـــة والقرويـــة والبيئـــة
رئيـــس مجلـــس حمايـــة البيئـــة

هاتف ٥٣٥٠١٤٩ فاكس ٥٣٥٠٠٨٤ ص.ب ١٤٠٨ عمان - ١١٩٤١ - الاردن
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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))
Minister of Municipality, Rural and Environmental Affairs
President of The Environment Protection Council

Tel: 5350149 Fax: 5350084 P.O.Box 1408 Amman = 11941 – Jordan

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 10^{th} 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.

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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 phasedout	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, CO2, 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 phasedout	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**

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