



**United Nations
Environment
Programme**



Distr.
LIMITED

UNEP/OzL.Pro/ExCom/17/9
30 June 1995

ORIGINAL: ENGLISH

Executive Committee of
the Multilateral Fund for the
Implementation of the Montreal Protocol

Seventeenth Meeting
Montreal, 26-28 July 1995

CONSOLIDATED PROGRESS REPORT

INTRODUCTION

1. This Consolidated Progress Report presents an update of Fund-supported activities as at mid-June 1995. This Report incorporates inputs from the implementing agencies.
2. The Report is divided in two sections:
 - Section I: Overview on status of implementation of the projects and other activities approved; and
 - Section II: Information on implementation of projects and activities by agency.
3. Individual reports indicating the progress made in the implementation of the activities of each implementing agency (as submitted by the agencies) are provided separately in documents UNEP/OzL.Pro/ExCom/17/10, 17/11, 17/12, and 17/13, along with comments of the Fund Secretariat where applicable.

SECTION I: OVERVIEW

4. Since the establishment of the Fund, the Executive Committee has approved over 830 activities in 81 Article 5 countries. By region, 392 activities were approved in Asia and the Pacific, followed by Latin America and the Caribbean (204 activities), Africa (173 activities), and Europe (22 activities). Additionally, 87 global activities (e.g., activities covering several countries from different regions, and UNEP's clearinghouse) were approved.

5. About US \$292 million has been allocated to the four agencies for the implementation of these activities. Also, US \$11.45 million has been provided by seven Parties not operating under Article 5 of the Montreal Protocol as bilateral assistance namely, Australia, Canada, France, Germany, Singapore, South Africa and the United States.

6. The World Bank is the implementing agency for 272 projects amounting to 54.9 per cent of the disbursed funds; UNDP is implementing 289 projects amounting to 26.2 per cent of the funds disbursed; UNIDO is implementing 72 projects amounting to 14.32 per cent of the funds disbursed; and UNEP is implementing 160 activities amounting to 4.6 per cent of the funds disbursed.

7. The largest allocation of funds corresponds to projects under the refrigeration (US \$172.9 million) and foam (US \$64.8 million) sectors. The "several" sector category (US \$41.7 million) indicates projects which cover more than one sector, e.g., country programme preparation, preparation of investment projects, etc. The distribution of project allocations is presented in the Table below:

Project Allocations by Implementing Agency, Party and Sector
(in thousand US \$)

Sector	IBRD	UNDP	UNEP	UNIDO	Bilateral	Total
Aerosol	10,216	511	250	25	6	11,008
Closure	838					838
Foam	26,670	35,803		2,279	91	64,843
Fumigant		87	100		300	487
Halon	1,220	2,046	390	496	2,656	6,808
Multi-sec.	2,613					2,613
Other	4,720					4,720
Production	1,885					1,885
Refrig.	81,050	26,597	1,288	38,554	5,406	172,895
Solvent	9,237	4,438		684	1,258	17,617
Several	16,736	9,932	12,055	1,259	1,772	41,754
Total	175,185	79,414	14,083	43,297	11,489	303,468

Country programmes

8. The Executive Committee has disbursed more than US \$5.37 million for the preparation of the country programmes of 85 Article 5 Parties. So far, the Committee has approved 46 country programmes. Additional country programmes, namely, Congo, Dominican Republic, Lebanon, Malta, Peru, Romania, Saint Lucia, Togo, and Venezuela, are being submitted for consideration at the Seventeenth Meeting of the Executive Committee.

9. Total consumption of controlled substances covered by the approved country programmes amounts to almost 135,450 ODP which represents over 90 per cent of the reported consumption in all developing countries (the Report under Paragraph 8 of Article 5 of the Montreal Protocol estimates (1993) the total consumption of controlled substances in Article 5 countries at 208,000 ODP tonnes).

Institutional strengthening

10. Funds amounting to US \$9.85 million have been provided to 50 Article 5 countries for institutional strengthening to facilitate the implementation of country action plans for the phase-out of controlled substances. All of the ozone units that have been so far supported by the Multilateral Fund are already operational or at the final stages to become operational, where funds were made available to them by the implementing agencies.

Investment projects

11. Preparation of ODS phase-out investment projects has resulted in submission and approval of 277 investment projects. Thirty nine investment projects in all sectors using controlled substances have become operational. In total, 5,395 tonnes ODP of the controlled substances have been phased-out. Implementation of the other approved investment projects will lead to the elimination of additional 44,680 ODP tonnes of controlled substances.

Training programmes and technical assistance activities

12. The Executive Committee has approved 84 training programmes at the national, regional and global levels, at a cost over US \$7.5 million. So far, 57 national training programmes, regional workshops and global training activities have been completed.

13. In total of 155 technical assistance programmes and 21 demonstration programmes have been.

**INFORMATION ON IMPLEMENTATION OF PROJECTS
AND ACTIVITIES BY AGENCIES**

UNDP PROGRESS REPORT

PROJECT STATUS: UNDP WORK PROGRAMME UNDER THE MONTREAL PROTOCOL
(as of 20 June 1995)

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Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
<u>ARGENTINA</u>							
ARG/FOA/14/INV/13: Sector: Foam Type: INV	<u>Convert to non-CFC technology in the manufacture of flexible and integral skin PUF at PRENSIPLAST</u>	30	345,000	100,000	Sept. 94	4Q95 4Q95	Ongoing. UNOPS executed. Specifications on retrofitting the existing equipment were drawn up, but quote from local representative of the original equipment supplier lacks important information. Prensplast is following up with this machine supplier. Slight delay since the key person at Prensplast dealing with the project left the company in May 1995.
ARG/FOA/15/INV/14: Sector: Foam Type: INV	<u>CINTER S.R.L. Elimination of CFC use in the manufacture of sandwich polyurethane panels</u>	45	725,000	100,000	Dec. 94	4Q95 4Q95	Ongoing. UNOPS executed. Project approved in December 1994. Equipment specifications were made during implementation visit by UNDP's rigid foam consultant in May 1995. They were finalized and sent to the company for approval.
ARG/HAL/13/TAS/07: Sector: Halon Type: TAS	<u>Technical assistance to prepare a national halons programme</u>	0	50,000	38,810	July 94	2Q95 4Q95	Ongoing. Visits undertaken in August 94 and February 1995 by UNDP's halon sector expert, following which two local subcontracts were established, one with MATALONI for a survey on the exact quantities of halons used, and another one with INTI to assess the quality of the halons that could be recovered. The outcome of these surveys will lead to the formulation of a halon banking project proposal.
ARG/SEV/04/TAS/01: Sector: Sev Type: TAS	<u>Technical assistance for CP preparation</u>	0	25,000	25,000	June 91	4Q92 4Q94	Completed.
ARG/SEV/13/INS/11: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	359,500	0	July 94	4Q97 4Q97	Ongoing. Project document signed and implementation through the national execution modality has started. National staff have been recruited and are coordinating the overall national ODS phaseout programme and the activities of the implementing agencies. Financial expenditure reports still awaited.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
ARG/SEV/14/PRP/12: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	70,000	70,000	Sep. 94	3Q95 2Q95	Operationally Completed. At Govt. request, UNDP foam sector consultants visited 10 rigid and flexible PUF plants over the period Aug94-May95. Two projects (PRENSIPLAST, CINTER), whose preparation had been accelerated, were approved at the 14th ExCom Meeting and are ongoing. A local subcontract with INTI was established and has proven to be exceptionally efficient and of high quality. Nine foam projects (6 flexible, 3 rigid) amounting to \$4.6 million have been formulated and submitted to the 17th ExCom Meeting for approval. Additional funds are being requested at the 17th ExCom to continue current activities as per UNDP's 1995 workplan.
<u>BANGLADESH</u>							
BGD/SEV/04/TAS/01: Sector: Sev Type: CPG	<u>ODS reconnaissance survey and training</u>	0	55,000	53,850	June 91	4Q92 2Q93	Completed.
BGD/SEV/06/CPG/02: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	25,000	25,000	Feb. 92	3Q93 3Q94	Completed.
BGD/SEV/14/INS/04: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	150,000	0	Sep. 94	4Q97 4Q97	Ongoing. Signature of project document awaiting finalization of internal government procedures. Detailed workplan prepared for project implementation.
BGD/SEV/14/PRP/03: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	35,000	1,440	Sep. 94	4Q95 4Q95	Ongoing. One aerosol project (\$376,312) has been formulated and has been submitted to the 17th Excom Meeting for approval. A visit by a UNDP refrigeration sector expert is scheduled for second-half 1995.

PROJECT STATUS: UNDP WORK PROGRAMME UNDER THE MONTREAL PROTOCOL
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<u>BRAZIL</u>							
BRA/FOA/12/INV/11: Sector: Foam Type: INV	<u>Conversion to CFC-free technology in the manufacture of rigid PUF (spray) in three companies</u>	72	370,000	69,500	Mar. 94	2Q95 1Q96	Ongoing. During a recent implementation visit, progress was noted on POLYURETANO's efforts to establish a new formulation of the alternative polyol. In addition, laboratory testing of the chemical and physical properties of the new foam was also carried out. The next step is to build a prototype dispenser unit, further to which pilot production will be demonstrated to other users of the CFC-free system.
BRA/REF/06/DEM/01: Sector: Ref Type: DEM	<u>Demonstration programme for analysis of refrigerant CFC reuse technologies & processes</u>	0	25,000	25,000	Feb. 92	4Q92 2Q94	Completed.
BRA/SEV/10/INS/09: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	403,100	138,905	June 93	3Q96 3Q96	Ongoing. The ozone unit is operational and staff have been recruited. The recent elections resulted in the transfer of several national counterparts, which has slowed project implementation. The Government is also evaluating whether to transfer the project to the Ministry of Environment and the Amazon.
BRA/SEV/11/PRP/10: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	91,876	Nov. 93	4Q94 2Q95	Operationally Completed. Based on an interagency agreement between UNDP, UNEP, UNIDO and the World Bank in December 1994, project preparation activities have accelerated. National consultants were recruited, visits by UNDP international experts took place in the foams, halons, MAC, refrigeration solvents sectors. As a result, 4 foam projects, 2 solvents projects and 1 refrigeration project with a combined budget of \$ 1.95 million are being presented for approval at the 17th ExCom Meeting. A request for additional preparatory assistance funds is being presented at this meeting to continue current activities as per UNDP's 1995 workplan.

CHILE

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
CHI/REF/06/DEM/02: Sector: Ref Type: DEM	<u>Demonstration programme for technicians in refrigerator</u>	0	25,000	25,000	Feb. 92	4Q92 3Q93	Completed.
<u>CHINA</u>							
CPR/ARS/06/TAS/02: Sector: Aerosol Type: TAS	<u>TA for Guangdong aerosols inv project and investigation of non-ODS filling technology and LPG purification</u>	0	75,000	45,684	Feb. 92	4Q92 2Q95	Ongoing. Delay in activity completion. Review of remaining project activities discussed during the project review meeting between UNDP and the Govt. in April 1995. Efforts are being made to complete all activities by mid-1995.
CPR/FOA/06/TAS/03: Sector: Foam Type: TAS	<u>Technical assistance for CFC-11 substitute technology in flexible polyurethane foam</u>	0	70,000	65,000	Feb. 92	4Q92 4Q94	Operationally completed. Awaiting closure of financial accounts.
CPR/FOA/06/TAS/04: Sector: Foam Type: TAS	<u>Quality control testing on CFC-11 substitute technology in a production line for home refrigerators</u>	0	65,000	60,019	Feb. 92	4Q92 3Q93	Completed.
CPR/FOA/06/TAS/05: Sector: Foam Type: TAS	<u>Technical Assistance for CFC-11 substitute technology in rigid polyurethane foam</u>	0	70,000	70,000	Feb. 92	4Q92 3Q93	Completed.
CPR/FOA/07/TAS/17: Sector: Foam Type: TAS	<u>TA to the Beijing Household Electric Appliances Research Institute (BHEARI)</u>	0	480,000	50,000	June 92	4Q95 4Q95	Ongoing. Testing of CFC-free refrigerators is being done in 15 factories. Quotations on computer equipment completed and being reviewed by NEPA. Specifications for the thermal conductivity meter being finalized. Project authorities met with NEPA in early June to review project activities and discuss training and seminar schedules.

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CPR/FOA/10/INV/52: Sector: Foam Type: INV	<u>Tianjin conversion to CFC-free technology in the manufacture of flexible polyurethane foam</u>	180	1,080,000	1,080,000	June 93	3Q94 2Q95	Operationally completed. The CFC conversion process was completed in mid-April 1995. Following a month of successful operation, the project was officially commissioned and the hand-over protocol officially signed by all parties at an official ceremony at the factory, attended by over 100 participants from Government and industry, it being the first CFC phaseout investment project completed in China under the Montreal Protocol's Multilateral Fund.
CPR/FOA/10/TAS/37: Sector: Foam Type: TAS	<u>Strategy and action programme for the elimination of CFCs in the manufacture of foams</u>	0	200,000	40,000	June 93	3Q94 4Q95	Ongoing. The Government implementing agency is the National Council for Light Industry (NCLI). Activities during the first-half 1995 were done jointly with the World Bank. The overall foam sector strategy paper was discussed at the 12-13 June 1995 International Symposium on Sectoral Strategies for ODS Phaseout in China, held in Xi'an, China. Subsector strategies and action programmes are being worked out for automotive trim, polystyrene, panels and spray foam.
CPR/FOA/11/INV/54: Sector: Foam Type: INV	<u>BCMF: Conversion to CFC-free technology in the manufacture of rigid PUF (spray) at Beijing Commercial Machinery Factory</u>	30	435,000	375,000	Nov. 93	4Q94 4Q95	Ongoing. UNOPS executed. The UNDP foam sector expert visited the plant in Nov 1994 and discussed equipment specifications. These specifications were approved by BCMF in March 1995 and the invitation to bid was sent out in May 95. A national expert has been selected from the Tianjin Commercial University to oversee formulation work for the chemical part of the project. UNOPS awaits detailed expense reports from the company.
CPR/FOA/13/INV/67: Sector: Foam Type: INV	<u>YANGFENG conversion to non-CFC technology in the manufacture of flexible and integral skin PUF (demonstration project)</u>	68	670,000	0	July 94	4Q95 4Q95	Frozen. Company selected for demonstration project to change. UNDP and NEPA were informed in late-1994 that in late-June 1994, after the project had been sent to ExCom Members for the July 1994 ExCom Meeting, that the Yanfeng company had entered into a joint venture agreement with the Ford Motor Company and as such would no longer allow itself to be a technology demonstration project. The Government has designated the Daimay Polyurethane Co. as the replacement demonstration project for the automotive sector, and the revised project document (with a smaller budget) is being submitted to the 17th ExCom for approval.

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CPR/FOA/13/INV/73: Sector: Foam Type: INV	<u>Elimination of CFC-12 in the manufacture of XPE foam sheets at Danshui Huaya Plastics Industries Co. Ltd.</u>	160	241,000	241,000	July 94	4Q95 2Q95	Operationally completed. CFC phaseout completed. Certificate of completion signed by NEPA, UNOPS, UNDP and the company in April 1995. The signing of the Hand-over Protocol is expected in June 1995.
CPR/FOA/13/INV/74: Sector: Foam Type: INV	<u>Elimination of CFC-11 in the manufacture of rigid PUF products at Tianjin polyurethane plastic plant</u>	100	690,000	0	July 94	4Q95 4Q95	Not yet operational. This project is being integrated with the World Bank's approved project for the same plant covering different components and using 50% CFC-free technology. The new UNDP-implemented combined project will utilize 100% CFC-free technology and is being submitted to the 17th ExCom Meeting for approval.
CPR/FOA/15/INV/87: Sector: Foam Type: INV	<u>Shijiazhuang Plastic Cement General Factory: Elimination of CFC-12 in the manufacture of foam sheet</u>	160	621,000	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. Project document signed on 6 June 1995. Equipment specifications being prepared. Procurement activities expected to start in July 1995.
CPR/FOA/15/INV/88: Sector: Foam Type: INV	<u>Suzhou Plastic Works No.7: Elimination of CFC-12 in the manufacture of PE foam tubing</u>	70	358,000	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. NEPA and UNOPS awaiting clearance of company-related administrative matters before proceeding.
CPR/FOA/15/INV/89: Sector: Foam Type: INV	<u>Shenrong: Eliminate CFC-12 in the manufacture of XPS foam sheet</u>	48	166,700	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. Project document signed on 6 June 1995. Equipment specifications being prepared. Procurement activities expected to start in July 1995.
CPR/FOA/15/INV/90: Sector: Foam Type: INV	<u>Feicheng Plastic Packaging Material Factory: Elimination of CFC-12 in the manufacture of XPS/XPE foam sheet</u>	150	388,000	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. Project document was approved and signed on 6 June 1995. Equipment specifications are being prepared. Procurement activities are expected to start in July 1995.

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CPR/FOA/15/INV/91: Sector: Foam Type: INV	<u>Guangxing Plastic Products Co. (Hubei): Eliminate CFC-12 in manufacture of XPS foam sheet</u>	36	375,000	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. NEPA and UNOPS are awaiting clearance of company-related administrative matters before proceeding.
CPR/FOA/15/INV/92: Sector: Foam Type: INV	<u>Shenzhen Shentie: Eliminate CFC-12 in the manufacture of XPS foam sheet at Shenzhen Shentie Plastics Tableware Co.</u>	75	345,000	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. Project document was approved and signed on 6 June 1995. Equipment specifications are being prepared and procurement activities are expected to start in July 1995.
CPR/FOA/15/INV/93: Sector: Foam Type: INV	<u>Hebei Sixing Polypack Products Co.: Elimination of CFC-12 in the manufacture of XPE netting</u>	65	436,000	0	Dec. 1994	2Q96 2Q96	Ongoing. UNOPS executed. UNDP was informed by NEPA on 15 June 1995 that the company in reality was a joint venture, with a foreign ownership at 30% or less. UNDP and NEPA are jointly investigating this matter and the approved project budget would be reduced accordingly.
CPR/FOA/15/INV/94: Sector: Foam Type: INV	<u>Beijing Yanxi: Conversion to non-CFC technology in the manufacture of flexible PUF</u>	25	125,000	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. UNDP was informed by NEPA on 15 June 1995 that the company in reality was a joint venture, with a foreign ownership at 25% or less. UNDP and NEPA are jointly investigating this matter and the approved project budget would be reduced accordingly.
CPR/FOA/15/INV/95: Sector: Foam Type: INV	<u>Faw Trim: Conversion to non-CFC technology in the manufacture of flexible PUF</u>	28	143,000	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. Project document awaiting signature by all parties. Specifications being finalized UNDP expert. Procurement activities expected to start in July 1995.
CPR/FOA/15/INV/96: Sector: Foam Type: INV	<u>Hubei Auto Engineering: Convert to non-CFC technology in the manufacture of integral skin PUF</u>	20	150,000	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. Project document awaiting signature by all parties. Specifications being finalized by UNDP expert. Procurement activities expect to start in July 1995.
CPR/FOA/15/INV/97: Sector: Foam Type: INV	<u>Dalian No. 1: Conversion to CFC-free technology in the manufacture of flexible PUF (slabstock)</u>	100	490,000	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. Project document awaiting signature by all parties. Specifications being finalized UNDP expert. Procurement activities expected to start in July 1995.

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CPR/FOA/15/INV/98: Sector: Foam Type: INV	<u>Jinfeng: Conversion to CFC-free technology in manufacture of extruded polystyrene foam sheet</u>	70	235,340	0	Dec. 94	2096 2096	Ongoing. UNOPS executed. Project document signed on 6 June 1995. A UNDP expert visited the plant and confirmed that the enterprise has already completed the conversion to butane use during the project approval process. However, serious safety conditions exist and measures have to be taken immediately before the plant can be declared safe for normal production with butane. Expert's report expected shortly.
CPR/FOA/15/INV/99: Sector: Foam Type: INV	<u>Jinan Plastics #4 Factory: Convert to CFC-free technology in the manufacture of extruded polystyrene foam sheet</u>	30	337,000	0	Dec. 94	2096 2096	Ongoing. Project document signed on 6 June 1995. Equipment specifications are being prepared. Procurement activities expected to begin in July 1995.
CPR/FOA/15/INV/A0: Sector: Foam Type: INV	<u>Guizhou Jinchang Plastics Products Co.: Elimination of CFC-12 in the manufacture of XPS foam sheet</u>	50	390,000	0	Dec. 94	2096 2096	Ongoing. UNOPS executed. UNDP was informed by NEPA on 15 June 1995 that the company in reality was a joint venture, with a foreign ownership at 30% or less. UNDP and NEPA are jointly investigating this matter and the approved project budget would be reduced accordingly.
CPR/FOA/15/INV/A1: Sector: Foam Type: INV	<u>Hailun Plastic Packaging Material Factory: Elimination of CFC-12 in the manufacture of XPS/XPE foam sheet</u>	95	321,000	0	Dec. 94	2096 2096	Ongoing. Project document signed on 6 June 1995. Equipment specifications are being prepared. Procurement activities expected to start in July 1995.
CPR/FOA/15/INV/A2: Sector: Foam Type: INV	<u>Shanghai Jianhua Electro- Mechanical and Chemical Co.: Elimination of CFC-12 in the Manufacture of XPE/XPS</u>	100	280,000	0	Dec. 1994	2096 2096	Ongoing. Project document was signed on 6 June 1995. Equipment specifications are being prepared. Procurement activities should start in July 1995.
CPR/FOA/15/INV/A3: Sector: Foam Type: INV	<u>Foshan #3 Plastic Factory: Elimination of CFC-12 in the manufacture of XPS/XPE foam sheet</u>	360	1,065,000	0	Dec. 94	2096 2096	Ongoing. Project document was signed on 6 June 1995. Equipment specifications being finalized. Procurement activities should start in July 1995.

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CPR/FUM/12/TAS/60: Sector: Others Type: TAS	<u>Survey of production and consumption of methyl bromide to facilitate planning of a future phaseout programme</u>	0	87,000	0	Mar. 94	2Q95 4Q95	Ongoing. Terms of reference prepared and detailed workplan approved by the UNDP consultant. Recruitment of local experts to implement the survey is being carried out. Specifications for data computational needs being finalized.
CPR/HAL/06/TAS/06: Sector: Halon Type: TAS	<u>Technical study on halons usage and applications of halons substitutes</u>	0	40,000	43,345	Feb. 92	4Q92 2Q93	Completed.
CPR/HAL/10/TAS/39: Sector: Halon Type: TAS	<u>Implementation of the halon phaseout plan for China; current situation, revision of national codes, and education & training</u>	0	280,000	0	June 93	3Q96 3Q96	Ongoing. Nationally executed. Sub-contract with Tianjin Fire Research Institute (TFRI) signed by NEPA. Draft revision of national codes currently under review by Ministry of Public Safety (MPS). In December 1994, NEPA and MPS sent out a joint circular banning non-essential uses of halons. A national halon conference was held during 12-14 January 1995 in Xianen under the project to discuss fire protection safety strategy and halon control programmes. It was attended by 100 fire protection officers from 60 organizations, including fire protection bureaux from 21 provinces. A detailed report from TFRI and financial disbursements record from NEPA awaited.
CPR/HAL/10/TAS/40: Sector: Halon Type: TAS	<u>Implementation of the halon phaseout plan for China; transfer of technology on alternatives to halon fire protection systems</u>	0	300,000	0	June 93	4Q96 4Q96	Ongoing. In late-May, UNDP's halons sector expert prepared the specifications for the international equipment needed under the project. Potential suppliers have also been listed. UNOPS is preparing the equipment purchase orders. For local procurement, NEPA has signed a subcontract with TFRI. Awaiting record of financial disbursements.
CPR/HAL/12/INV/58: Sector: Halon Type: DEM	<u>Acquisition of local air compressors for H-1211 recovery/recycling machines</u>	0	155,000	116,552	Mar. 94	2Q95 2Q95	Ongoing. Major part of equipment purchase completed with the procurement of 127 air compressors for the H-1211 recycling machines. The remaining funds can be utilized to purchase additional air compressors for use with any additional H-1211 recovery/recycling machines.

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CPR/REF/06/TAS/07: Sector: Ref Type: TAS	<u>Feasibility study on the application of HFC-134a technology in MACs and CFC recycling</u>	0	40,000	24,836	Feb. 92	4Q92 4Q93	Completed.
CPR/REF/06/TRA/08: Sector: Ref Type: TAS	<u>Evaluation on the use of reduced ODS and ODS-free technologies in the manufacture of refrigerators</u>	0	75,000	75,000	Feb. 92	1Q93 3Q93	Completed.
CPR/REF/09/TAS/27: Sector: Ref Type: TAS	<u>Testing for applications of CFC substitute chemicals in the refrigeration sector in Southern China</u>	0	100,000	0	Mar. 93	1Q94 4Q95	Ongoing. Chemicals have been purchased and applications testing has started. Project activity completion by end-1995. Awaiting record of financial disbursements.
CPR/REF/10/TAS/38: Sector: Ref Type: TAS	<u>Revision of design standards for cold storage</u>	0	200,000	0	June 93	3Q95 3Q95	Ongoing. Specifications for foam insulation and refrigeration testing equipment were reviewed by the UNDP sector experts who recommended several revisions. The specifications are being revised accordingly. A UNDP expert followed up on this in May 1995. NEPA undertaking procurement activities. Test plans being finalized.
CPR/REF/11/TAS/55: Sector: Ref Type: TAS	<u>Survey and development of a national policy to promote CFC recovery and recycling in China</u>	0	100,000	0	Nov. 93	1Q95 4Q95	Ongoing. A UNDP consultant prepared the revised terms of reference for the survey in February 1995. The project is being implemented by the Ministry of Internal Trade which is finalizing the selection of the national consultant. Activity completion expected by end-1995.
CPR/SEV/06/CPG/12: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	200,000	200,000	Feb. 92	1Q93 1Q93	Completed.

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CPR/SEV/06/INS/11: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	450,000	191,400	Mar. 93	2096 2096	Ongoing. The Project Management Office comprises 13 staff. Internal working procedures have been defined. UNDP, at its own cost, provided one month in-service training on project implementation to 2 NEPA project management staff from 22 Sept-26 Oct 1994 in New York, conducted primarily by UNOPS. Project activities include: (a) periodic publications of "Ozone Action in China" in Chinese and English; (b) annual reports of ODS data to UNEP; (c) defining, reviewing and finalizing national and sectoral ODS phaseout strategies which were discussed at the 12-13 June 1995 International Symposium on Sectoral Strategies for ODS Phaseout in China at Xilan which was organized by NEPA; (d) monitoring the work of implementing agencies; (e) meetings with line Ministries on policies, strategy and implementation; (f) drafting workplans for all approved MP projects. All computer hardware in the project has been procured and is operational.
CPR/SEV/06/TAS/10: Sector: Ref Type: TAS	<u>Establishment of a quality control testing plant for using CFC-12 substitute technology in refrigeration</u>	0	70,000	0	Feb. 92	4Q92 4Q95	Ongoing. NEPA is awaiting finalization of its refrigeration sector strategy before proceeding with this project. Since China will be presenting all its sector strategies to the 17th ExCom Meeting in July 1995, this project will be implemented immediately thereafter.
CPR/SEV/09/PRP/28: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	100,000	Mar. 93	4Q93 3Q94	Completed.
CPR/SEV/09/TAS/29: Sector: Sev Type: TAS	<u>Survey and assessment of small CFC plants conversion possibilities</u>	0	90,000	39,853	Mar. 93	1Q94 4Q95	Ongoing. First phase of the survey completed. Detailed surveys have been done for 60 sample plants in 16 provinces in the upper half of China. The results are being processed.
CPR/SEV/11/PRP/51: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	100,000	Nov. 93	4Q94 4Q94	Completed.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
CPR/SEV/11/TAS/56: Sector: Sev Type: TAS	<u>National product qualification and standards evaluation for non-ODS alternatives to CFC applications at SIOFM</u>	0	362,500	0	Nov. 93	1Q95 4Q95	Ongoing. The project is being implemented by the Shanghai Institute of Organo-Flourine Materials (SIOFM). Project implementation has started based on the detailed work plan prepared. Based on the comments of the UNDP consultant on the proposed specifications, the programme for modifications of the SIOFM laboratory equipment/procedures has been finalized. The modification work starts in July 1995 with activity completion now expected by December 1995.
CPR/SEV/15/PRP/A6: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	100,000	Dec 94	4Q95 2Q95	Operationally completed. Two UNDP project formulation visits took place in Dec. 1994. 9 XPS foam projects and 1 automotive trim project were formulated. 5 domestic refrigeration projects were also identified. In April 1995, UNDP refrigeration sector consultants formulated 5 domestic refrigeration projects, two of which amounting in total to \$12.1 million are being submitted for approval to 17th Excom Meeting. In addition, a solvents sector strategy paper has been prepared by NEPA/MEI in close consultation with the UNDP sector expert detailing the project submission process in sector and listing the projects involved.
CPR/SOL/06/TAS/09: Sector: Solvent Type: TAS	<u>Prefeasibility study to phaseout CFC-113 in electronics cleaning in four production lines</u>	0	40,000	41,829	Feb. 92	4Q92 1Q93	Completed.
CPR/SOL/07/DEM/20: Sector: Solvent Type: INV	<u>Dalian precision parts cleaning line demonstration project</u>	86	495,000	68,325	June 92	4Q94 1Q96	Ongoing. Invitations to bid were sent out in September 1994. Financial quotes are with UNOPS. Contaminated test parts had to be sent out to potential suppliers for a second time. (First set of test parts, already cleaned, were lost by UPS and cannot be traced). Project commissioning rescheduled to 1Q96.
CPR/SOL/07/DEM/21: Sector: Solvent Type: INV	<u>Dandong electronic tuner aqueous cleaning line demonstration project</u>	25	495,000	384,801	June 92	4Q94 4Q95	Ongoing. Equipment supplier selected and purchase order issued. Equipment expected to be delivered to the plant in September 1995. Project commissioning expected by end-1995.

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CPR/SOL/10/INV/35: Sector: Solvent Type: INV	<u>Elimination of CFCs in cleaning operations at Nanjing Wire Works (demonstration project)</u>	14	409,000	0	June 93	4Q95 4Q95	Ongoing. Equipment specifications being prepared by UNDP solvents consultant.
CPR/SOL/10/INV/36: Sector: Solvent Type: INV	<u>Elimination of CFCs in cleaning operations at the Chengdu Radio Instrument Factory (demon. project)</u>	11	394,700	0	June 93	4Q95 4Q95	Ongoing. UNDP's solvent sector expert has cleared the equipment specifications and the testing plan. List of potential suppliers also prepared. Parts for test-cleaning and invitations to bid are being sent to vendors to determine the short-list.
CPR/SOL/12/INV/57: Sector: Solvent Type: DEM	<u>ODS-free cleaning equipment manufacturing center for phasing out ODS in the solvents sector across China.</u>	0	524,734	0	Mar. 94	2Q96 2Q96	Frozen. Awaiting 17th Executive Committee Meeting's approval of China's solvents sector strategy in July 1995. It is anticipated that implementation can start shortly thereafter.
CPR/SOL/12/TAS/61: Sector: Solvent Type: DEM	<u>Cleaning Applications Deployment Center for Replication of ODS-Free Processes across China.</u>	0	489,400	0	Mar. 94	2Q95 4Q95	Ongoing. Equipment specifications cleared and procurement has started. The terms of reference for a solvents sector survey and data base development have been completed and UNOPS will subcontract the No. 46 Institute to perform this activity. Awaiting reports on financial disbursements from NEPA.

COLOMBIA

COL/FOA/13/INV/05: Sector: Foam Type: INV	<u>Elimination of the use of ODS in the polystyrene foams sector (2 companies)</u>	320	1,072,000	615,455	July 94	4Q95 4Q95	Ongoing. UNOPS executed. A subcontract with AJOVER was signed, and payments will be made to the company upon receipt of invoices about the various items concerned. Commissioning of the project scheduled for end-1995. The other company, INALDES, was purchased by MULTIDIMENSIONALES, a 100% Colombian owned company; specifications are being rewritten by UNDP's process consultant to fit the requirements of the new owners within the approved budget.
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Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
COL/REF/13/INV/04: Sector: Ref Type: INV	<u>Eliminate CFCs in manufacture of domestic refrigerators at 5 companies (Andinos, Corelsa, Haceb, Icasa and Polarix)</u>	226	4,808,900	1,000,000	July 94	4Q95 4Q95	Ongoing. UNOPS executed. (1) A subcontract has been sent to ANDINOS for signature covering most of the compressor-related component of the project. A reply from ANDINOS is awaited. (2) For the refrigerant-part of the four refrigerator manufacturers, all equipment orders have been placed, and will be shipped to Colombia in August 1995. (3) Concerning the foam-part of the project, equipment orders have been placed for ICASA and CORELSA and will be shipped to Colombia in September 1995. POLARIX wants to select a more expensive bid and discussions are ongoing about the modality whereby POLARIX would have to pay the additional costs involved.
COL/REF/15/INV/06: Sector: Ref Type: INV	<u>INDUCOL: Eliminate CFC-11/12 in manufacture of commercial refrigeration equipment at Industrias Colombia</u>	16	381,548	100,000	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 1995, equipment specifications were finalized. For the refrigerant-part, international bidding took place and bid-analysis will be carried out in June 1995. For the foam-part, equipment specifications were sent to the company on 15 May, comments are awaited and bidding will start soon thereafter.
COL/REF/15/INV/07: Sector: Ref Type: INV	<u>INDUFRIAL: Eliminate CFC-11/12 in manufacture of commercial refrigeration equipment at Industrias de Refrigeracion Comercial</u>	30	442,644	100,000	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 95, equipment specifications were finalized. For the refrigerant-part, international bidding took place and bid-analysis will be carried out in June 1995. For the foam-part, equipment specifications were sent to the company on 15 May, comments are awaited and bidding will start soon thereafter.
COL/REF/15/INV/08: Sector: Ref Type: INV	<u>WONDER: Eliminate CFC-11/12 in manufacture of commercial refrigeration equipment at Industrias Wonder</u>	7	251,315	160,000	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 1995, equipment specifications were finalized. For the refrigerant-part, international bidding took place and bid-analysis will be carried out in June 1995. For the foam-part, equipment specifications were sent to the company on 15 May, comments are awaited and bidding will start soon thereafter.
COL/SEV/12/INS/02: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	317,790	85,100	Mar. 94	2Q97 2Q97	Ongoing. Ozone unit established and local staff recruited. Funds are being disbursed according to budget schedule. The ozone unit is coordinating the national ODS phaseout effort, reviews all project proposals and supervises project implementation.

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COL/SEV/12/PRP/03: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	100,000	Mar. 94	2Q95 2Q95	Operationally Completed. Several visits made by UNDP international consultants in foam, refrigeration, halon and recovery-recycling sectors between March94-April95. Approvals were obtained for 5 projects in the foam and refrigeration sectors with a combined budget of \$7 million. An additional \$1.5 million in recovery/recycling and refrigeration manufacturing sector projects is being presented for approval at the 17th ExCom Meeting. A request for additional preparatory assistance funds has been submitted to the 17th ExCom as per UNDP's 1995 workplan.

COSTA RICA

CSR/FOA/08/TRA/05: Sector: Foam Type: TRA	<u>Seminar/Workshop in the foam sector</u>	0	21,120	10,000	Oct. 92	3Q94 4Q95	Ongoing. Activity proceeding slowly. UNDP will discuss methods to accelerate implementation.
CSR/REF/08/TRA/04: Sector: Ref Type: TRA	<u>Conservation and training in the refrigeration sector</u>	0	88,000	40,000	Oct. 92	3Q94 4Q95	Ongoing. Activity proceeding slowly. UNDP will discuss methods to accelerate implementation.
CSR/SEV/04/TAS/01: Sector: Sev Type: CPG	<u>PDS reconnaissance study</u>	0	20,000	23,422	June 91	4Q91 2Q92	Completed.
CSR/SEV/06/CPG/02: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	20,000	22,909	Feb. 92	4Q92 3Q92	Completed.

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CSR/SEV/08/INS/03: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	213,160	125,608	Oct. 92	4Q95 4Q95	Ongoing. The Ozone Office stated that a seminar was recently held under this project. Some changes in Ozone Unit personnel will be made.
CSR/SEV/08/TRA/07: Sector: Sev Type: TAS	<u>Ad-hoc consultants for implementation of CP</u>	0	50,000	28,136	Oct. 92	4Q95 4Q95	Ongoing. Work on two project proposals, one in refrigeration manufacturing and another in recovery/recycling of refrigerant have been completed and they have been submitted for approval to the 17th ExCom Meeting.
CSR/SOL/08/TRA/06: Sector: Solvent Type: TRA	<u>Seminar/Workshop in the solvents sector</u>	0	21,120	10,000	Oct. 92	2Q94 4Q95	Ongoing. Activity proceeding slowly. UNDP will discuss methods to accelerate implementation.
CUBA							
CUB/REF/13/DEM/03: Sector: Ref Type: TAS	<u>Development of an ODS phaseout strategy in the refrigeration sector</u>	0	30,000	15,979	July 94	4Q95 4Q95	Ongoing. Visits were undertaken by MLF Secretariat and UNDP staff as well as a UNDP consultant in recovery/recycling during 4Q94 to review strategy in the refrigeration sector and formulate a project proposal on development of a national programme in refrigerant recovery/recycling, which was approved at the 15th ExCom Meeting. A visit by UNDP's refrigeration expert is scheduled for 3Q95.
CUB/REF/15/TAS/04: Sector: Ref Type: TAS	<u>Implementation of a national programme for recovery and recycling of refrigerant</u>	49	169,000	100,000	Dec. 94	1Q96 1Q96	Ongoing. Project approved in December 1994. Specifications for recovery/recycling equipment were finalized, and call for bids initiated. The bid-analysis will take place in June, and the equipment should arrive in October 1995. Five national training workshops will take place after the equipment arrives.
CUB/SEV/08/CPG/01: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	20,000	15,000	Oct. 92	2Q93 2Q93	Completed.

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CUB/SEV/10/INS/02: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	172,000	76,000	June 93	3Q96 3Q96	Ongoing. The Ozone Office has been set up. Staff have been recruited. The Ozone Office is coordinating all aspects of CP implementation. Funds are being disbursed according to budget schedule.
<u>ECUADOR</u>							
ECU/REF/06/TRA/03: Sector: Ref Type: TRA	<u>CFC refrigerant conversion and materials handling training programme</u>	0	140,000	140,000	Feb. 92	2Q94 2Q94	Completed.
<u>EGYPT</u>							
EGY/FOA/08/INV/05: Sector: Foam Type: INV	<u>Phaseout CFC-11 in manufacture of flexible PUF at Misr Foam</u>	121	497,000	500,489	Oct. 92	4Q94 1Q94	Completed.
EGY/FOA/08/INV/06: Sector: Foam Type: INV	<u>Phaseout CFC-11 in manufacture of molded, semi-rigid & rigid PUF at Taki-Vita Factory</u>	50	352,500	352,500	Oct. 92	1Q95 2Q95	Operationally completed. The project replaced CFC-11 by switching to an all water-blown technology. Equipment supplied included 4 high-pressure machines, one oven and one press. Equipment installation and staff training have been completed. The project has eliminated 50 tonnes/annum of CFC-11 and was formally commissioned in early April 1995.
EGY/FOA/08/INV/07: Sector: Foam Type: INV	<u>Phaseout CFC-11 in manufacture of molded PUF at Technopol Co.</u>	55	645,000	676,211	Oct. 92	4Q94 2Q94	Completed.

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EGY/FOA/09/INV/10: Sector: Foam Type: INV	<u>Elimination of CFC-12 in the manufacture of extruded polystyrene foam at Al-Sharif Plastic Factories</u>	75	498,000	13,880	Mar. 93	2Q94 2Q96	Ongoing. UNOPS executed. EEAA informed UNDP that the enterprise is now operating under a new management which is also 100% Egyptian-owned. Procurement activities have been initiated by UNOPS. The project had been delayed due to Government and UNDP efforts during Oct93-Dec94 to secure ExCom approval for two other linked projects so that all three could be implemented together to avoid giving any one company a market advantage over the other. Those efforts failed and so in Feb 95 the Government instructed UNDP to proceed with Al-Sharif project implementation.
EGY/FOA/09/INV/11: Sector: Foam Type: INV	<u>Phaseout CFC-11 in molded foam manufacturing at Mizr Foam</u>	28	275,000	284,431	Mar. 93	1Q94 4Q93	Completed.
EGY/FOA/10/INV/15: Sector: Foam Type: INV	<u>Elimination of CFC-11 in the manufacture of molded flexible PUF at Modern Building Carpentry Co. (MOBICA)</u>	20	434,000	397,029	June 93	4Q94 4Q95	Ongoing. UNOPS executed. There were some project start-up difficulties. Equipment has been ordered and will be delivered in 3Q95. Project completion now expected by end 1995.
EGY/FOA/10/INV/16: Sector: Foam Type: INV	<u>Elimination of CFC-11 in the manufacture of molded rigid PUF at Cairo Light Industries Co. (OLYMPIC ELECTRIC)</u>	75	940,000	895,000	June 93	4Q94 2Q95	Ongoing. UNOPS executed. The equipment has been delivered and installed and the final test runs are being conducted. It is expected that by end-June 1995 the project would have succeeded in eliminating 75 tonnes/annum of CFC-11. The formal project commissioning is scheduled for July 1995.
EGY/FOA/11/INV/18: Sector: Foam Type: INV	<u>Convert to CFC-11 free technology in manufacture of rigid PUF at Specialized Engg. Contracting Co. (SECC)</u>	15	85,000	85,000	Nov. 93	4Q94 3Q94	Operationally complete and financially closed. UNOPS executed. The project was formally commissioned on 14 September 1994 and has phased out 15 tonnes/annum of CFC-11. The project was completed ahead schedule. The project accounts have now been financially closed.
EGY/FOA/11/INV/19: Sector: Foam Type: INV	<u>Conversion to CFC-11 free technology in the manufacture of flexible PUF at Dekheila Chemical Industries Corp.</u>	130	650,000	440,000	Nov. 93	3Q94 3Q95	Ongoing. UNOPS executed. UNDP was informed that the company has changed its name to "Alex Foam" with no change in ownership. The contract for the "Rapidcure" system was finalized, the equipment was delivered and local works are being completed. The target date for project completion is 3Q1995.

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EGY/FOA/11/INV/21: Sector: Foam Type: INV	<u>Conversion of CFC-11 free technology in manufacture of flexible PUF at Horse Foam Co.</u>	120	385,000	295,034	Nov. 93	4Q94 3Q95	Ongoing. Equipment was ordered and delivered. The subcontract for local works was signed and is operational. Equipment tests and trials are scheduled for 3Q95 with project completion and commissioning targeted for end 3Q95.
EGY/FOA/12/INV/22: Sector: Foam Type: INV	<u>Conversion to CFC-free technology in the manufacture of flexible PUF in 2 companies</u>	170	525,000	426,000	Mar. 94	2Q95 4Q95	Ongoing. (A) The Foam Industrial project has completed its ODS phaseout activities with the elimination of 150 tonnes/yr of CFCs. It will be commissioned in July 1995; financial disbursement to date is \$346,000. (B) For the Kyma project, procurement activities have started and the subcontract for local works is awaiting signature; disbursement to date is \$80,000, with project completion targeted for 4Q95.
EGY/FOA/12/INV/26: Sector: Foam Type: INV	<u>Conversion to CFC-free technology in manufacture of rigid molded and miscellaneous PUF (5 plants)</u>	44	870,000	340,000	Mar. 94	2Q95 4Q95	Ongoing. Procurement activities have started for all five enterprises. Disbursements to-date are: Tiba Air: \$6,000; Egat: \$60,000. Solar: \$80,000; Ismailia: \$40,000; and PU Tech: \$100,000. The remaining \$54,000 comprises unliquidated obligations. Projects encountered start-up difficulties but are now progressing well. Projects completion remains 4Q95.
EGY/FOA/15/INV/31: Sector: Foam Type: INV	<u>Conversion to CFC-free technology in the manufacture of flexible slabstock PUF at El-Tawil Manufacturing Company</u>	36	121,000	0	Dec. 94	1Q96 1Q96	Ongoing. Specifications for ventilating system equipment were finalized in March 1995, and procurement and contracting activities are now underway.
EGY/FOA/15/INV/32: Sector: Foam Type: INV	<u>Conversion to CFC-free technology in the manufacturing of rigid PU foam in 7 plants.</u>	69	780,000	0	Dec. 94	1Q96 1Q96	Ongoing. Equipment specifications have been finalized and procurement/contracting activities are underway.
EGY/HAL/12/TAS/23: Sector: Halon Type: TAS	<u>Technical assistance to prepare a national halons action plan and project development</u>	0	25,000	26,730	Mar. 94	2Q95 3Q95	Ongoing. A national halons strategy paper together with 2 project proposals for halon banking and recycling have been prepared. However, EEAA requested some changes in the strategy and the revised strategy paper together with the halon projects will now be submitted for consideration at the 18th ExCom meeting.

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EGY/REF/08/INV/09: Sector: Ref Type: INV	<u>Phaseout CFCs in refrigeration at Koldair Company</u>	18	272,000	250,021	Oct. 92	4Q94 1Q94	Completed.
EGY/REF/12/INV/21: Sector: Ref Type: INV	<u>Conversion to CFC-free technology in commercial refrigeration (5 enterprises)</u>	225	2,100,000	685,000	Mar. 94	3Q95 4Q95	Ongoing. Procurement activities for all five enterprises are underway. Disbursements to-date are: Scib - \$35,000; Reftruck - \$200,000; Misr Panel - \$200,000; ICON - \$100,000; and El Fateh - \$150,000. Projects encountered start-up problems but are now progressing well. Project completion now targetted for 4Q1995.
EGY/REF/15/INV/34: Sector: Ref Type: INV	<u>Two Enterprises (MOG, ROYAL): Eliminate CFCs in manufacture of commercial refrigeration equipment</u>	32	1,023,000	200,000	Dec. 94	1Q96 1Q96	Ongoing. Equipment specifications have been finalized and the bidding process has been initiated.
EGY/SEV/04/TRA/02: Sector: Sev Type: TRA	<u>Study tours for government and industry officials, and pre-feasibility studies</u>	0	51,000	44,090	June 91	2Q92 2Q92	Completed.
EGY/SEV/06/PRP/03: Sector: Sev Type: PRP	<u>Preparation of investment projects (project preparation assistance)</u>	0	100,000	100,319	Feb. 92	3Q93 3Q93	Completed.
EGY/SEV/11/PRP/20: Sector: Sev Type: PRP	<u>Project Preparation Assistance (reallocated funds)</u>	0	75,000	75,000	Nov. 93	4Q94 4Q94	Completed.

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<u>GHANA</u>							
GHA/FOA/08/TAS/03: Sector: Foam Type: TAS	<u>Technical assistance for technology transfer for CFC-11 phaseout in flexible foam</u>	0	85,000	70,186	Oct. 92	4Q94 2Q95	Operationally completed. A UNDP foams sector consultant made several visits in 1994 during which on-the-job training and technical advice was provided to four continuous and one single block foam plants. Testing equipment to measure fume levels and to carry out safety audits was specified and purchased. Factory inspection staff undertook a technology transfer evaluation visit to the USA in October 1994. UNDP awaits final expenditure statements for the project.
GHA/FOA/12/INV/07: Sector: Foam Type: INV	<u>Umbrella project to continue CFC-free technology in the manufacture of flexible PUF at four enterprises</u>	316	345,000	0	Mar. 94	3Q95 3Q95	Ongoing. UNOPS executed. For the Ashanti, Latex Foam and Nsawam companies, the generic drawings and specifications of the UNDP consultant covering the ventilation system are being adapted for each company which would most likely undertake the works/local procurement themselves. One company is looking at an unproven new technology and is being dissuaded from taking that route.
GHA/REF/04/TRA/02: Sector: Ref Type: TRA	<u>Refrigeration training programme for servicing technicians</u>	0	5,200	5,200	June 91	4Q92 4Q92	Completed.
GHA/REF/08/TAS/04: Sector: Ref Type: TAS	<u>Improved servicing and maintenance within the refrigeration sector</u>	0	328,000	230,350	Oct. 92	4Q95 4Q95	Ongoing. A series of 10 training workshops for local refrigeration technicians on improved practices are being implemented by the Government. 4 have been completed, the rest will be completed by end-1995. 16 refrigerant recovery/recycling machines have been delivered for use in the training programmes and for follow-up activities.
GHA/SEV/08/INS/05: Sector: Sev Type: INS	<u>Institutional Strengthening</u>	0	160,000	60,000	Oct. 92	4Q95 4Q95	Ongoing. An ozone unit has been created and national staff appointed. They are now directing and supervising implementation of the Ghana Country Programme.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
<u>GUATEMALA</u>							
GUA/REF/15/INV/05: Sector: Ref Type: INV	<u>IMCA: Eliminate CFC-11/12 in manufacture of commercial refrigeration equipment</u>	4	155,017	0	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 1995, equipment specifications for foams were finalized, while those for the refrigeration part of the project were sent to the company, whose approval is awaited.
GUA/REF/15/INV/06: Sector: Ref Type: INV	<u>REFRIGUA: Eliminate CFC-11/12 in manufacture of commercial refrigeration equipment</u>	24	194,866	0	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 1995, the specifications for foam equipment were finalized, while those for the refrigeration equipment were sent to and cleared by the company. The bid analysis for the refrigeration equipment will take place in June 1995.
GUA/SEV/11/PRP/05: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	30,000	30,261	Nov. 93	4Q94 2Q95	Operationally completed. Following a visit by a UNDP foam consultant and two visits by a UNDP refrigeration consultant, all in 3Q94, two project proposals in the commercial refrigeration sector amounting to \$0.35 million were submitted to and approved at the 15th ExCom Meeting.
<u>INDIA</u>							
IND/FOA/12/INV/16: Sector: Foam Type: INV	<u>Camphor & Allied Products Ltd.: Phaseout use of CFCs in the manufacture of extruded polyethylene foam sheet</u>	120	280,000	0	Mar. 94	2Q95 2Q95	Frozen. Despite numerous attempts during April94-May95, no resolution yet on the Government's insistence that UNDP use a financial intermediary for MP investment project implementation, which contravenes UNDP rules and procedures. In April 1995, a joint UNDP/UNOPS negotiating team discussed with the company its technology conversion/phaseout plan. The company stated that due to market pressures, it had been forced to complete the planned project activities itself and had eliminated 120 tonnes of CFCs. It was now awaiting reimbursement for its costs, incurred in full compliance with what was specified in the approved project document.
IND/FOA/12/INV/17: Sector: Foam Type: INV	<u>Sunpra Ltd.: Phaseout use of CFCs in the manufacture of rigid PUF panels</u>	20	414,000	0	Mar. 94	3Q95 3Q95	Frozen. Same reason as stated above. In April 1995, a joint UNDP/UNOPS team discussed with the company an update of its technology conversion/phaseout plan.

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IND/FOA/12/INV/18: Sector: Foam Type: INV	<u>Eagle Flask Industries Ltd.: Phaseout use of CFCs in the manufacture of rigid PUF for thermoware</u>	20	365,000	0	Mar. 94	2095 2095	Frozen. Same reason as stated above. In April 1995, a joint UNDP/UNOPS team discussed with the company an update of its technology conversion/phaseout plan.
IND/FOA/13/INV/27: Sector: Foam Type: INV	<u>Bakelite Hylam Ltd.: Phaseout CFCs in the manufacture of phenolic foam and foam products</u>	58	367,000	0	July 94	4095 4095	Frozen. Same reason as stated above. In April 1995, a joint UNDP/UNOPS team discussed with the company an update of its technology conversion/phaseout plan.
IND/FOA/13/INV/30: Sector: Foam Type: INV	<u>U-Foam Private Ltd.: Phaseout CFC use in the manufacture of polyurethane foams</u>	35	328,500	0	July 94	4095 4095	Frozen. Same reason as stated above. In April 1995, a joint UNDP/UNOPS team discussed with the company an update of its technology conversion/phaseout plan.
IND/FOA/13/TAS/29: Sector: Foam Type: TAS	<u>Strategy and action programme for the elimination of CFCs in the manufacture of foams</u>	0	200,000	0	July 94	4095 4095	Ongoing. This activity is being implemented by the Department of Chemicals and Petrochemicals. The detailed terms of reference have been prepared by the national counterpart and have been reviewed by UNDP's foams sector expert. The foams sector strategy and action programme are now being formulated.
IND/HAL/13/DEM/28: Sector: Halon Type: DEM	<u>Demonstration and evaluation of alternative technologies for halon fire protection systems and TA for sectoral ODS phaseout strategy</u>	0	309,000	0	July 94	3097 3097	Ongoing. Project document signed by all parties. The project is being implemented by the Defense Institute for Fire Research (DIFR) with the assistance of UNDP's halons sector expert. Two halons sector strategy workshops were held in New Delhi (19 April) and Bombay (22 April) following which in May 1995 a draft report on the India halons sector phaseout strategy was prepared and submitted for comments. Awaiting record of financial disbursements under the project.
IND/SEV/08/INS/02: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	430,600	166,970	Oct. 92	1096 1096	Ongoing. The Ozone Cell has been established and staffed and is coordinating implementation of the India Country Programme, project formulation and implementation, and monitoring and review of project and programme activities. It also serves as Secretariat to the national Steering Committee on the Montreal Protocol and to the Technology and Finance Standing Committee of the Steering Committee.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
IND/SEV/08/PRP/01: Sector: Sev Type: PRP	<u>Assistance in project preparation</u>	0	100,000	81,661	Oct. 92	4Q93 1Q94	Completed.
IND/SEV/09/CPG/03: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	200,000	200,000	Mar. 93	3Q93 3Q93	Completed.
IND/SEV/11/TAS/11: Sector: Sev Type: TAS	<u>Survey of ODS use in small-scale and informal sectors, data base generation and ODS transition management planning</u>	0	120,000	108,000	Nov. 93	4Q94 2Q95	Operationally completed. A total of 8,967 units were surveyed in all sectors. The final survey report was completed in late-May 1995 and was received by UNDP in early-June 1995. It is currently being reviewed by UNDP, UNEP and other concerned agencies. Following receipt of comments, it will be determined whether any additional explanations are required. The final survey report will be presented to the 18th ExCom meeting.
IND/SEV/12/PRP/19: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	37,127	Mar. 94	2Q95 4Q95	Ongoing. Two foam sector investment projects, a foam sector strategy project and a halons sector project on demonstration and evaluation of alternative non-halons technologies amounting in total to \$1.2 million were approved at the 13th ExCom Meeting. All other foam sector projects that had been formulated in 1994 have, at Government request, been turned over to the World Bank. Pending resolution of implementation modality questions, there was no further UNDP project preparation activity in first-half 1995.

INDONESIA

IDS/SEV/08/CPG/01: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	200,000	200,000	Oct. 92	4Q93 4Q93	Completed.
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Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
IDS/SEV/10/INS/05: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	314,780	113,260	June 93	4Q96 4Q97	Ongoing. The Government has revised its work plan and budget for an extra year but within the same approved budget. A Project Manager has been nominated. The ozone unit collects data on national ODS consumption, assists factories in their ODS phaseout programmes, organizes media and other programmes to raise public awareness, and coordinates the activities of the implementing agencies.
IDS/SEV/11/PRP/06: Sector: Sev Type: PRP	<u>Project Preparation Assistance</u>	0	100,000	100,000	Nov. 93	4Q94 4Q94	Completed.
IDS/SEV/15/PRP/28: Sector: Sev Type: PRP	<u>Project preparation assistance in solvents, halons and the refrigeration sectors</u>	0	100,000	37,127	Dec. 94	4Q95 4Q95	Ongoing. A project preparation visit in commercial refrigeration was undertaken in early May. Several projects were identified, 2 were formulated and have been submitted for approval at the 17th Excom Meeting. A brief visit by the UNDP solvent sector expert in early April discussed the possibility for reformulation of two solvent projects.
IDS/SOL/15/INV/25: Sector: Solvent Type: INV	<u>Eliminate use of TCA and CFC-113 in the manufacture of metal and plastic motorcycle parts at PT-KGD Indonesia Inc.</u>	42	88,000	0	Dec. 94	2Q96 2Q96	Ongoing. Project document not yet signed pending confirmation by the enterprise on the technology selection, specifically the external suppliers/partners involved.
<u>IRAN</u>							
IRA/SEV/04/TAS/01: Sector: Sev Type: CPG	<u>ODS reconnaissance survey</u>	0	30,350	30,350	June 91	4Q91 2Q92	Completed.
IRA/SEV/06/CPG/02: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	35,000	35,000	Feb. 92	4Q92 2Q93	Completed.

Project Number, Sector and Type	Project Title	OOS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
IRA/SEV/08/INS/04: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	200,200	62,500	Oct. 92	1096 4096	Ongoing. The ozone unit has been created under an ozone Coordinator. National staff have been recruited. A revision in the work plan and budget extends the life of the project to four years within the approved project budget. The ozone unit is coordinating implementation of the country programme and the work of implementing agencies in Iran.
IRA/SEV/08/PRP/05: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	17,935	17,935	Oct. 92	4Q93 1Q95	Operationally completed and financially closed. As requested by the Government of Iran and approved at the 16th ExCom Meeting, UNDP has transferred the remaining funds (\$32,065 + \$4,168 support costs) to UNIDO.
<u>JAMAICA</u>							
JAM/SEV/14/PRP/02: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	30,000	12,510	Sept. 94	4Q95 4Q95	Ongoing. Two visits by UNDP refrigeration consultants took place over the reporting period. A project in refrigerant recovery/recycling is being prepared and will be presented at the 18th ExCom Meeting.
<u>JORDAN</u>							
JOR/ARS/04/TAS/01: Sector: Aerosol Type: TAS	<u>Technical assistance and study in the aerosols sector</u>	0	29,000	29,000	June 91	4Q91 1Q92	Completed.
JOR/ARS/06/TAS/12: Sector: Aerosol Type: TAS	<u>Feasibility study: deodorization of local gas as a CFC substitute in cosmetics</u>	0	12,000	12,000	Feb. 92	4Q92 2Q93	Completed.

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<u>KENYA</u>							
KEN/REF/10/TRA/05: Sector: Ref Type: DEM	<u>Demonstration and training unit for maintenance and recharge of refrigeration and AC equipment</u>	0	9,850	9,852	June 91	4Q92 4Q92	Completed.
KEN/SEV/06/CPG/02: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	25,000	22,730	Feb. 92	3Q93 2Q94	Completed.
KEN/SEV/09/INS/04: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	175,000	43,000	Mar. 93	4Q96 4Q96	Ongoing. Project document signed in November 1994 reflected changes in workplan. An ozone coordinator and an assistant have been recruited. A National Interministerial Committee on Environment has been guiding the ozone unit on activities, has met four times and has formed sectoral task forces. Activities completed include a National Methyl Bromide Workshop during 24-25 April attended by 33 participants, a halon survey at the preliminary stage including preparation of project proposals, start-up of the National Refrigeration Demonstration Centre, launching of a national awareness campaign, and purchase of computer equipment under the project.
<u>MALAYSIA</u>							
MAL/ARS/12/TAS/30: Sector: Aerosol Type: TAS	<u>Safety and technical programme to aid manufacturers of aerosol products</u>	0	145,700	17,250	Mar. 94	2Q96 2Q96	Ongoing. The survey activity on small and medium-sized aerosol manufacturers has been completed and the initial draft report has been reviewed. 44 enterprises have registered. A national aerosols seminar was organized on 25 May 1995 in Kuala Lumpur where safety aspects relating to use of hydrocarbons, and the need to phaseout ODS rapidly were highlighted. Participant turnout far exceeded expectations. Safety audits for six plants were implemented, serious safety problems were identified and the enterprises are eager to switch away from CFCs. As a result, two individual projects and one umbrella project covering 6 small enterprises have been prepared for consideration at the 17th ExCom meeting.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
MAL/FOA/10/INV/11: Sector: Foam Type: INV	<u>Eliminate CFC-12 in manufacture of extruded polystyrene foam sheet at Junaya Industries</u>	150	235,811	235,873	June 93	4Q94 4Q93	Completed.
MAL/FOA/11/INV/15: Sector: Foam Type: INV	<u>Key Asset: Elimination of CFC-11 and methyl chloroform in the manufacture of integral skin PUF</u>	50	690,000	690,000	Nov. 93	4Q94 1Q95	Operationally completed. UNOPS executed. A Certificate of Project Completion and the Hand-over Protocol were signed in April 1995. The company reported that the reject rate is now down, to about 5% as compared to the initial 7% registered after the production trials. Although this reject rate is still high, the company is confident that within the next few months, the temperature control problem will be resolved and that the reject rate will decrease to close to zero.
MAL/FOA/11/INV/16: Sector: Foam Type: INV	<u>Elimination of CFC-11 in the manufacture of pre-insulation pipe panel and slabstock PUF at Insafoam Insulation Company</u>	30	310,000	310,000	Nov. 93	4Q94 3Q95	Ongoing. UNOPS executed. Equipment has been installed and production trials are currently being carried out. Initial production difficulties encountered. Project completion now targeted for 3Q1995.
MAL/FOA/11/INV/17: Sector: Foam Type: INV	<u>Elimination of CFC-11 in the manufacture of integral skin PUF at Island Resources Company</u>	30	230,000	230,000	Nov. 93	3Q94 2Q94	Completed.
MAL/FOA/11/INV/21: Sector: Foam Type: INV	<u>Eliminate CFC-12 in manufacture of extruded polystyrene and polyethylene foam sheet at Associated Air-Pack Industries</u>	50	234,000	224,110	Nov. 93	4Q94 4Q95	Ongoing. UNOPS executed. Imported equipment expected to be delivered in July 1995 by BEC. Local works on gas storage and ventilation system progressing well. An expert visit will be fielded in August to supervise the extruder retrofitting works when the gas storage piping system is completed. Project completion now targeted for end-1995.
MAL/FOA/12/INV/22: Sector: Foam Type: INV	<u>Cycle World elimination of CFCs in the manufacture of the polyurethane insulated panels</u>	45	353,000	353,000	Mar. 94	2Q95 4Q95	Ongoing. UNOPS executed. Equipment procurement is currently underway. Project completion now targeted for end-1995.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
MAL/FOA/12/INV/23: Sector: Foam Type: INV	<u>Pulai Lamipak Industries: Elimination of CFC-12 in the manufacture of extruded poly- ethylene foam sheet</u>	50	355,000	355,000	Mar. 94	2Q95 4Q95	Ongoing. UNOPS executed. Procurement of imported safety equipment will be finalized by end June, together with the Thailand MIC-CEL project; delivery expected in July. Contract for local works (gas storage/piping and ventilation) and equipment has been signed and works are progressing well. An expert visit in August will supervise the extruder retrofitting works when the gas storage piping works are completed. Project completion now targeted for end-1995.
MAL/FOA/12/INV/24: Sector: Foam Type: INV	<u>Elimination of CFC-11 in the manufacture of integral skin, spoiler and moulded flexible foam at P.U. Tech</u>	24	198,000	183,000	Mar. 94	2Q95 2Q95	Operationally completed. UNOPS executed. The project Hand-over Protocol was signed in April 1995. The project has phased-out the use of 24 tonnes/yr of CFC-11 by switching to all water blown system for its molded foam operation, and to HCFC-141b for the integral skin foam line. Awaiting report on concluding financial disbursements.
MAL/FOA/12/INV/25: Sector: Foam Type: INV	<u>P.U. Mate: Elimination of CFCs in the manufacture of integral skin PUF</u>	10	113,000	113,000	Mar. 94	2Q95 4Q95	Ongoing. UNOPS executed. Project will be implemented by the enterprise under the reimbursement modality. Equipment delivery expected in October 95. Project completion targeted for end-1995.
MAL/FOA/12/INV/26: Sector: Foam Type: INV	<u>Pexafoam: Elimination of CFC-11 in the manufacture of flexible PUF (slabstock)</u>	120	195,000	195,000	Mar. 94	2Q95 1Q95	Operationally completed. UNOPS executed. A Certificate of Project Completion and the Hand-Over Protocol were signed in May 1995. Project has installed a continuous unit together with the associated safety and encapsulation/ventilation systems, and factory personnel have been given extensive process and safety training. The project has phased out 120 tonnes/yr of CFC-11. Awaiting closure of financial accounts.
MAL/FOA/12/INV/27: Sector: Foam Type: INV	<u>N.L.Y.: Elimination of CFC-11 in the manufacture of flexible PUF (slabstock).</u>	55	130,000	130,000	Mar. 94	2Q95 1Q95	Operationally completed. UNOPS executed. A Certificate of Substantial Completion was signed in Feb. 1995 with a few open items relating to ventilation and safety aspects still to be completed. The company has stated that these are now completed; however the Hand-over Protocol can be signed only upon confirmation by a UNDP expert that the remaining activities have indeed been completed. This will be done in the coming months. The company has eliminated 55 tonnes/year of CFC-11 from its operations.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
MAL/FOA/12/INV/33: Sector: Foam Type: INV	<u>Phaseout use of CFCs in the manufacture of flexible polyurethane foam (slabstock) at small-scale producers</u>	80	1,045,000	37,125	Mar. 94	3Q95 4Q95	Ongoing. UNOPS executed. Survey report has been accepted by UNDP and the production of a training video will be completed by August. Some 49 enterprises have been identified for this programme. However, funding (originally foreseen for 30 enterprises) may not be sufficient. Contracts for ventilation works currently being finalized. Project completion now targeted for 4Q95/1Q96. An extension of this programme may be required to cover enterprises not covered by this programme because of lack of funds.
MAL/FOA/13/INV/34: Sector: Foam Type: INV	<u>Allied Foam Insulation: Elimination of CFC-11 in the manufacture of cold cure molded PUF</u>	25	276,000	0	July 94	4Q95 4Q95	Ongoing. UNOPS executed. Project encountered startup difficulties which have now been resolved. Invitations to bid were issued on 26 May 1995. Equipment delivery expected in October. The original project completion schedule of 4Q95 can still be maintained.
MAL/FOA/13/INV/35: Sector: Foam Type: INV	<u>Phoenix Base: Elimination of CFC-11 in the manufacture of flexible PUF</u>	61	165,000	165,000	July 94	4Q95 2Q95	Operationally completed. UNOPS executed. A Certificate of Project Completion and the Hand-over Protocol were signed in May 1995. The UNDP expert inspected the plant in Feb and May 1995. The Feb95 visit confirmed substantial completion of project activities; however, an inadequate ventilation and exhaust system was identified and corrective design works were necessary. The May95 visit confirmed that all remaining works had been completed and the Hand-over Protocol was signed. The project resulted in a slight cost overrun which is currently under review by UNDP/UNOPS. The project has phased out 61 tonnes/yr CFC-11 in the production of slabstock and was completed 7 months ahead of schedule. The project awaits closure of financial accounts.
MAL/FOA/13/INV/38: Sector: Foam Type: INV	<u>Wong Brothers Electrical and Refrigeration: Elimination of CFC-11 in manufacture of rigid PUF panels for cold storage</u>	35	299,000	0	July 94	4Q95 4Q95	Ongoing. UNOPS executed. Project will be implemented by the enterprise under the reimbursement modality. Equipment delivery expected in 4Q95. Project on schedule.
MAL/FOA/13/INV/39: Sector: Foam Type: INV	<u>Eversoft Foam Industries: Elimination of CFC-11 in the manufacture of cold cure molded flexible PUF</u>	30	185,000	0	July 94	4Q95 4Q95	Ongoing. UNOPS executed. Invitation to Bid was sent out on 26 May 1995. The UNDP sector consultant and a UNOPS representative met with the company in Feb 95. Equipment delivery expected in 4Q95. Project on schedule.

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MAL/FOA/13/INV/40: Sector: Foam Type: INV	<u>Nian Aik Foam: Elimination of CFC-11 in the manufacture of cold cure molded flexible PUF</u>	30	245,000	0	July 94	4Q95 4Q95	Ongoing. UNOPS executed. Project encountered startup difficulties which have been solved. Equipment procurement activities are now underway. Equipment delivery expected by end-October. Project completion remains as scheduled.
MAL/FOA/13/INV/41: Sector: Foam Type: INV	<u>Pangkat Refrigeration Industries: Elimination of CFC-11 in the manufacture of commercial refrigerators</u>	20	210,000	0	July 94	4Q95 4Q95	Ongoing. UNOPS executed. Project encountered startup difficulties which have been resolved. Equipment procurement activities are now underway. Equipment delivery expected by end- October. Project completion remains as scheduled.
MAL/FOA/15/INV/45: Sector: Foam Type: INV	<u>Shaga Cooling Technology: Phaseout use of CFCs in the manufacture of rigid PU panels</u>	24	190,000	0	Dec. 94	1Q96 1Q96	Ongoing. UNOPS executed. Project document was signed on 26 May 1995. Equipment specifications finalized and procurement activities initiated.
MAL/FOA/15/INV/46: Sector: Foam Type: INV	<u>Saferay: Phaseout CFCs in the manufacture of rigid foam for use as imitation wood</u>	11	246,000	0	Dec. 94	1Q96 1Q96	Ongoing. UNOPS executed. Project document was signed on 26 May 1995. Equipment specifications finalized and procurement activities initiated.
MAL/FOA/15/INV/47: Sector: Foam Type: INV	<u>Ricwil: Phaseout CFC-11 in the manufacture of pipe insulation</u>	25	118,000	0	Dec. 94	1Q96 1Q96	Ongoing. UNOPS executed. Project document was signed on 26 May 1995. Equipment specifications finalized and procurement activities initiated.
MAL/FOA/15/INV/48: Sector: Foam Type: INV	<u>Dream Product: Elimination of CFCs in the manufacture of moulded and flexible PU foams</u>	15	66,500	0	Dec. 94	1Q96 1Q96	Ongoing. UNOPS executed. Project document was signed on 26 May 1995. A UNDP expert visited the plant and provided advice on cold-cure molding formulations and alternatives. The design of the ventilation system for the slabstock line was also finalized and the contracting process is now underway.
MAL/FOA/15/INV/49: Sector: Foam Type: INV	<u>Rigid Foam Industries: Eliminate CFCs in the manufacture of rigid foam panels</u>	19	335,000	0	Dec. 94	1Q96 1Q96	Ongoing. UNOPS executed. Project document was signed on 26 May 1995. Equipment specifications finalized and procurement activities initiated.

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MAL/FOA/15/INV/50: Sector: Foam Type: INV	<u>Leading Refrigeration & Engineering: Eliminate CFCs in manufacture of rigid foam panels and shipyard insulation works</u>	10	214,000	0	Dec. 94	1Q96 1Q96	Ongoing. UNOPS executed. Project document was signed on 26 May 1995. Equipment specifications finalized and procurement activities initiated.
MAL/REF/04/TRA/01: Sector: Ref Type: TRA	<u>Training in MAC sector</u>	0	50,000	30,000	June 91	4Q92 3Q95	Ongoing. A national MAC workshop was conducted in April 1995 and the proceedings have been prepared for dissemination. A request for technology assessment visits to USA is currently under review.
MAL/REF/12/INV/29: Sector: Ref Type: INV	<u>Eliminate CFC-11 and CFC-12 in the manufacture of home refrigerators at Sharp-Roxy</u>	65	962,000	962,000	Mar. 94	2Q96 2Q96	Ongoing. UNOPS executed. Project involves partial retroactive payment since major parts of the planned activity have already been carried out by the company, which reported that the switch to R-134a refrigerant has been completed. Technical visits will be fielded during 3Q95 to confirm this and to inspect the cyclopentane machine and the related safety installations. Issues surrounding the explosion-proof nature of some parts of the equipment remain to be resolved by the manufacturer.
MAL/REF/13/INV/36: Sector: Ref Type: INV	<u>Lian Pang: Eliminate CFCs in the manufacture of commercial refrigerator products</u>	10	201,000	0	July 94	4Q95 2Q96	Ongoing. UNOPS executed. Equipment specifications finalized and procurement activities initiated. Project completion now targeted for first half 1996.
MAL/REF/13/INV/37: Sector: Ref Type: INV	<u>United: Eliminate CFCs in commercial refrigeration products</u>	71	351,200	0	July 94	4Q95 2Q96	Ongoing. UNOPS executed. Equipment specifications finalized and procurement activities initiated. Project completion now targeted for first half 1996.
MAL/REF/13/INV/42: Sector: Ref Type: INV	<u>OYL Appliances: Elimination of CFC-11 and CFC-12 in the manufacture of refrigerators</u>	22	625,100	170,000	July 94	4Q96 4Q96	Ongoing. UNOPS executed. Procurement activities underway. Design for building modifications approved by UNDP expert. Equipment delivery expected by end-1995.

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Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
MAL/SEV/09/INS/08: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	322,520	115,920	Mar. 93	3Q96 3Q96	Ongoing. The Ozone Office is fully operational and is actively coordinating and supervising the national ODS phaseout programme. Additional ozone officers are expected to be recruited and be on board by July 1995. A national ODS phaseout seminar was organized on 28 May as part of the ongoing awareness campaign. The Ozone Office has produced several publication on ozone activities including one on legislation.
MAL/SEV/10/PRP/14: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	50,000	54,438	June 93	1Q94 1Q94	Completed.
MAL/SEV/10/TRA/13: Sector: Sev Type: TRA	<u>National ODS Conference</u> <u>(technical assistance)</u>	0	40,000	40,000	June 93	3Q93 3Q93	Completed.
MAL/SEV/12/PRP/31: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	100,000	Mar. 94	2Q95 4Q94	Completed.
MAL/SEV/15/PRP/52: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	6,000	Dec. 94	4Q95 4Q95	Ongoing. A project identification visit in December 94 was fielded and over 25 small-scale enterprises in the rigid foam and commercial refrigeration sectors were identified. A visit by the UNDP refrigeration expert in April 1995 was also completed. 2 umbrella projects for the small-scale sectors in these two sub-sectors have been finalized and submitted for consideration at the 17th ExCom meeting. Other projects identified as being within UNDP's submitted 1995 workplan will be formulated during second half 1995.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
MAL/SOL/11/INV/18: Sector: Solvent Type: INV	<u>Conversion of metal cleaning processes from TCA to non-ODS organic solvents at Ngai Cheong Metal Industries</u>	23	63,480	63,480	Nov. 93	4Q94 2Q95	Operationally completed. UNOPS executed. The enterprise bought and installed an aqueous system using TCE to replace its TCA vapour-degreasing metal cleaning process. The new installation was inspected by the UNDP solvents sector expert and a Certificate of Project Completion as well as the Hand-over Protocol were signed in April 1995. The project has phased out the use of 23 tonnes/yr of TCA.
MAL/SOL/11/INV/19: Sector: Solvent Type: INV	<u>Eliminate TCA in home appliance parts mfg. at Matsushita Electric Company (main plant)</u>	10	113,570	113,570	Nov. 93	3Q94 2Q94	Completed.
MAL/SOL/11/INV/20: Sector: Solvent Type: INV	<u>Eliminate TCA use in home appliance parts mfg. at Matsushita Electric Co. (Port Klang plant)</u>	10	173,280	173,280	Nov. 93	3Q94 2Q95	Operationally completed. UNOPS executed. The second cleaning unit was inspected in April 1995 by the UNDP Solvent Sector Expert and a Hand-over Protocol was signed. An aqueous cleaning process is installed to replace the use of TCA. Since no contingency was provided for in the budget, preliminary financial indications are that final project costs are around 15% above the project budget. This is being verified.
MAL/SOL/12/INV/21: Sector: Solvent Type: INV	<u>Eliminate TCA use in automobile bumper cleaning at Perusahaan Otomobilo NationalBhd (PROTON)</u>	195	700,439	700,439	Mar. 94	1Q96 2Q95	Operationally completed. UNOPS executed. The project was implemented by PROTON under a retroactive reimbursement basis. A Certificate of Project Completion and the Hand-over Protocol were signed in early April 1995. An alkaline based aqueous cleaning process using deionized water rinsing system has been installed to replace the TCA vapor degreasing process. The project has eliminated 195 tonnes/yr of TCA and was completed almost one year ahead of schedule. Awaiting closure of financial accounts.
MAL/SOL/12/INV/28: Sector: Solvent Type: INV	<u>Eliminate CFC-113 use in the integrated circuit lead frame cleaning processes at San Matech</u>	5	141,100	0	Mar. 94	4Q95 -	Frozen. During a programme monitoring mission in April 1995, UNDP was advised that the enterprise has eliminated several products in its business and that the remaining products are CFC-free. As such, the company may no longer be eligible for this project. UNDP has advised the Government to submit an official letter to MLF Secretariat in this regard.

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<u>MAURITIUS</u>							
MAR/ARS/12/INV/03: Sector: Aerosol Type: INV	<u>Compagnie manufacturiere de produits cosmetiques Itée (COMANU)</u>	25	62,150	0	Mar. 94	2Q95 2Q95	Ongoing. The new equipment has been delivered and is being installed. Training activity by PAMASOL engineers is expected to take place in early July. Completion is scheduled for end July 1995.
MAR/REF/15/INV/05: Sector: Ref Type: INV	<u>Blyfridge: Eliminate CFC-11 and CFC-12 in the manufacture of domestic refrigerators</u>	2	197,208	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. Signing of project documents awaiting clarifications on several issues requested by the Solicitor-General's office. UNDP country office has advised that the Govt. has now arranged for the signing of the project document on 26 June. Meanwhile, equipment specifications have been finalized by the process expert during a visit in May 95 and procurement activities have been initiated.
MAR/REF/15/INV/06: Sector: Ref Type: INV	<u>Bahemia: Eliminate CFC-11 and CFC-12 in the manufacture of domestic refrigerators</u>	3	213,500	0	Dec. 94	2Q96 2Q96	Ongoing. UNOPS executed. Signing of project documents delayed pending clarification of certain issues. UNDP country office advises that Govt. has now arranged for the signing of the project document on 26 June. Meanwhile, equipment specifications have been finalized by the process expert during a visit in May 1995 and procurement activities have been initiated.
MAR/SEV/12/PRP/04: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	25,000	25,000	Mar. 94	2Q95 2Q95	Operationally completed. Two projects in the domestic refrigeration subsector were formulated and approved in 1994. In May 1995, a second project formulation visit was fielded and a national programme for CFC recovery and recycling has been formulated and submitted for approval to the 17th Excom meeting. The problem of the Agricultural Marketing Board has also been partially addressed under this project, at the specific request of the Government.
<u>MEXICO</u>							
MEX/HAL/06/TAS/06: Sector: Halon Type: TAS	<u>Preparatory study on halons inventory and proposals for revisions of existing standards</u>	0	25,000	27,223	Feb. 92	4Q92 3Q95	Ongoing. Delayed completion of this activity is due to illness of the national consultant responsible for this study. He is now working in cooperation with UNDP's halons sector expert and a survey is presently being carried out. Activity completion is expected in 3Q95. No additional expenditures are foreseen.

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MEX/REF/15/INV/19: Sector: Ref Type: INV	<u>Elimination of CFCs in the manufacture of domestic refrigerators at MABE Group</u>	391	4,495,689	0	Dec. 94	1Q96 1Q96	Ongoing. Project approved in December 1994. UNOPS executed. An implementation visit to ASTRAL, ENRESA and COMASA took place in Feb 1995 and equipment specifications were prepared. Bidding and bid-analysis is being carried out. In certain cases, subcontracts with recipient companies are being established to enable them to carry out some of the activities themselves, with guidance from the UNDP sector experts.
MEX/REF/15/INV/20: Sector: Ref Type: INV	<u>Eliminate CFCs in manufacture of domestic refrigerators at the VITRO Group</u>	415	3,639,826	0	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. An implementation visit to SUPERMATIC, ERNA and FACOSA took place in Feb 95 and equipment specifications were prepared. Bidding and bid analysis is being carried out. In certain cases, subcontracts with recipient companies are being established to enable them to carry out some of the activities themselves, with guidance from the UNDP sector experts.
MEX/SEV/04/PRP/03: Sector: Sev Type: PRP	<u>Preparation of terms of reference for investment projects identified in the CP</u>	0	50,000	52,277	June 91	4Q92 2Q95	Operationally Completed. The national expert drafted 12 project outlines as per his contract. Some of the resulting project proposals were approved under the World Bank work programme and others under the UNDP work programme. Some of the project proposals were not pursued due to the lack of interest by the companies themselves.
MEX/SEV/11/PRP/14: Sector: Sev Type: PRP	<u>Project Preparation Assistance</u>	0	50,000	50,000	Nov. 93	4Q94 4Q94	Completed.
MEX/SEV/14/PRP/18: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	77,985	Sep. 94	4Q95 3Q95	Ongoing. UNDP expert visits in the refrigeration and foams sector resulted in the preparation and subsequent approval of two large project proposals in domestic refrigeration amounting to \$8.1 million at the 15th ExCom Meeting. In addition, following UNDP/USEPA cooperation, two solvents projects were approved at the 15th ExCom Meeting. Further work is needed in the foam and halons sectors for which additional preparatory assistance funds are being sought as specified in UNDP's 1995 workplan.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
MEX/SOL/15/INV/21: Sector: Solvent Type: INV	<u>Elimination of TCA from precision cleaning processes at Lucas Diesel</u>	3	168,000	0	Dec. 94	4Q95 4Q95	Ongoing. Project approved in December 1994. UNOPS executed. A subcontract with the recipient company is being established whereby the company will submit workplans and specifications for review by UNOPS, while the company will carry out the procurement. Guidance will be provided by UNDP's solvent sector expert throughout the project.
MEX/SOL/15/INV/22: Sector: Solvent Type: INV	<u>Elimination of CFC-113 from the textile cleaning processes at Procesadora y Revitalizadora</u>	3	71,337	0	Dec. 94	4Q95 4Q95	Ongoing. Project approved in December 1994. UNOPS executed. Turnkey contract to be established, for which equipment specifications were already drawn up by the company. They will be reviewed by the UNDP solvent sector expert in June, following which international bidding will take place.
<u>NIGERIA</u>							
NIR/SEV/04/TRA/02: Sector: Sev Type: TRA	<u>National seminar on industry & protection of the ozone layer</u>	0	49,650	26,449	June 91	1Q92 4Q92	Completed.
NIR/SEV/09/INS/04: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	300,000	111,174	Mar. 93	3Q96 3Q96	Ongoing. An ozone unit has been created and national staff appointed. They are now working directly on the completion of the country programme and the ODS phaseout implementation strategy. The ozone unit has been conducting a public awareness campaign and has also procured the required computer equipment under the project.
<u>PAKISTAN</u>							
PAK/SEV/14/INS/05: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	259,000	0	Sept. 94	4Q97 4Q97	Ongoing. Project document was signed on 11 January 1995 and a detailed workplan has been prepared. Recruitment of ozone staff is underway.

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PANAMA							
PAN/FOA/13/INV/05: Sector: Foam Type: INV	<u>Elimination of CFC-11 in the manufacture of flexible and rigid PUF in Plastifoam, Profomsa and Thermofoam</u>	26	155,000	0	July 94	4Q95 4Q95	Ongoing. UNOPS executed. The companies have prepared equipment specifications with the help of a UNDP foam sector consultant. The companies had changed their fax numbers, resulting in UNOPS and UNDP faxes not being received by the companies. The projects are now back on schedule.
PAN/SEV/11/PRP/03: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	30,000	24,181	Nov. 93	4Q94 4Q95	Ongoing. A visit by a UNDP foam consultant resulted in development of the PROMFOSA AND THERMOFOAM projects. A recovery/recycling project is being formulated following visits by UNDP refrigeration sector consultants. A draft project proposal was submitted to the Government in early 1995, but no reply has been received so far.
PERU							
PER/REF/15/INV/03: Sector: Ref Type: INV	<u>Eliminate CFC-11/12 in the manufacture of domestic refrigerators at Industrias Alfa</u>	7	252,727	50,000	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 1995, equipment specifications were developed. For the foam part, the company has raised some issues that will be resolved in June 1995. For the refrigeration part, the bidding process is finalized, and bid-analysis will take place in June 1995.
PER/REF/15/INV/04: Sector: Ref Type: INV	<u>Eliminate CFC-11/12 in the manufacture of domestic refrigerators at ANDINA Industrial</u>	5	229,816	50,000	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 95, equipment specifications were developed. For the foam part, the company has raised some issues that will be resolved in June 1995. For the refrigeration part, the bidding process is finalized and bid analysis will take place in June 1995.
PER/REF/15/INV/05: Sector: Ref Type: INV	<u>Eliminate CFC-11/12 in the manufacture of domestic refrigerators at COLDEX</u>	67	748,966	50,000	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 95, equipment specifications were developed. For the foam part, the company has raised some issues that will be resolved in June 1995. For the refrigeration part, the bidding process is finalized and bid analysis will take place in June 1995.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
PER/REF/15/INV/06: Sector: Ref Type: INV	<u>Eliminate CFC-11/12 in the manufacture of domestic refrigerators at Industrias Lenche (INLENSA)</u>	6	201,443	0	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 95, equipment specifications were developed. For the foam part, all issues have been resolved and bidding has started. For the refrigerant part, the bidding process is finalized and bid analysis will take place in June 1995.
PER/REF/15/INV/07: Sector: Ref Type: INV	<u>Eliminate CFC-11/12 in the manufacture of domestic refrigerators at Industrias Reunidas (INRESA)</u>	17	267,641	50,000	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 95, equipment specifications were developed. For the foam part, the company has raised some issues that will be resolved in June 1995. For the refrigeration part, the bidding process is finalized and bid analysis will take place in June 1995.
PER/REF/15/INV/08: Sector: Ref Type: INV	<u>Eliminate CFC-11/12 in the manufacture of domestic refrigerators at Industrial Selva (INDUSEL)</u>	35	412,098	0	Dec. 94	2Q96 2Q96	Ongoing. Project approved in December 1994. UNOPS executed. Following an implementation visit in Feb 95, equipment specifications were developed. For the foam part, the company has raised some issues that will be resolved in June 1995. For the refrigeration part, the bidding process is finalized and bid analysis will take place in June 1995.
PER/SEV/13/PRP/02: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	86,268	July 94	4Q95 4Q95	Ongoing. Work during the last few months have focussed on the polystyrene foam sector, resulting in a project (PROMOLA for US\$ 325,500) being presented for approval at the 17th ExCom Meeting. Further work will include recovery/recycling of refrigerant.

PHILIPPINES

PHI/FOA/12/INV/23: Sector: Foam Type: INV	<u>Elimination of the residual use of CFCs in the manufacture of extruded polystyrene foam sheet (three companies)</u>	24	505,000	280,000	Mar. 94	2Q95 1Q96	Ongoing. UNOPS executed. Implementation visit by UNDP/UNOPS during 31 March-14 April. Specific workplans drawn for each company (all three companies will be completed at the same time) and problems (particularly on safety aspects) were resolved. Bids have been sent out. Bid analysis expected by August/September. Local procurement by September and installation by November. International procurement by November. Delay in project due to delay in building construction of one of the companies (Concept), done at company expense. Building is now completed. Expected project completion is 1Q96.
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Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
PHI/FOA/12/INV/24: Sector: Foam Type: INV	<u>Nikon Industrial Corporation: Phaseout use of CFCs in the manufacture of rigid PUF for thermoware.</u>	15	315,000	155,000	Mar. 94	2Q95 4Q95	Ongoing. UNOPS executed. Equipment to be delivered June 1995 and installed in July 95. Training of NIKON staff by August. One week test scheduled for September. Expected date of completion is October 1995.
PHI/FOA/12/INV/26: Sector: Foam Type: INV	<u>Technical assistance programme for the elimination of CFC use at small manufacturers of flexible foam.</u>	35	745,000	80,000	Mar. 94	2Q95 2Q96	Ongoing. UNOPS executed. Additional bids to be submitted by June. During July and August, bid analysis and selection of suppliers/contractors will commence. Equipment purchase is scheduled for September and installation by November. The company being the model a video tape is under production and will be used for other small scale flexible foamers. The video tape will be ready by 3Q95. Simultaneously, other small scale flexible foamers have already been identified and the standard implementation process will be followed, i.e. drafting of specs, submission of bids, etc. It is expected that the project should be completed by 2Q96.
PHI/FOA/13/INV/27: Sector: Foam Type: INV	<u>Foamcraft: Phaseout of CFCs in the manufacture of flexible PUFs (slabstock)</u>	90	185,000	0	July 94	4Q95 4Q95	Ongoing. UNOPS executed. Under the original project the company was to buy the equipment and convert to methylene chloride. However, the company is also looking at alternative replacement choices. UNOPS alerted the company during the implementation visit in April that it has to proceed swiftly. The company has indicated that the difference in amount to convert to the new technology will be borne by the company. A final decision is awaited.
PHI/FOA/13/INV/28: Sector: Foam Type: INV	<u>Metal Forming Corp: Phaseout CFCs in the manufacture of polyurethane insulated building elements</u>	50	305,000	114,000	July 94	3Q95 1Q96	Ongoing. UNOPS executed. Bids should be received in July and bid analysis will follow in August. Equipment procurement is scheduled during Sept 1995 through Jan 1996. Delivery, installation and trials scheduled in 1Q96.
PHI/FOA/13/INV/30: Sector: Foam Type: INV	<u>Elimination of the residual use of CFCs in the manufacture of extruded polystyrene foam sheets - Styrotech</u>	25	60,000	0	July 94	2Q95 2Q95	Ongoing. UNOPS executed. This project will be implemented together with the umbrella project for XPS foam sheet manufacturers and therefore has the same workprogramme and schedule of activities.

PROJECT STATUS: UNDP WORK PROGRAMME UNDER THE MONTREAL PROTOCOL
(as of 20 June 1995)

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PHI/REF/04/TRA/01: Sector: Ref Type: TRA	<u>Training programme in the refrigeration sector</u>	0	64,000	62,297	June 91	2Q92 4Q92	Completed.
PHI/REF/13/INV/29: Sector: Ref Type: INV	<u>Unimagma: Phaseout use of CFCs in the manufacture of commercial refrigerators and ice boxes</u>	30	1,015,700	621,526	July 94	4Q95 1Q96	Ongoing. UNOPS executed. Process consultant has finalized and submitted specifications. Bidding began in May and bid analysis will follow in June. Purchase order for equipment has been done. Simultaneously completion of new factory and shutdown of old plant by July. Equipment arrival in 4Q95. Project commissioning expected in 1Q96.
PHI/SEV/08/CPG/05: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	79,640	79,640	Oct. 92	2Q93 4Q93	Completed.
PHI/SEV/11/PRP/22: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	50,000	50,000	Nov. 93	4Q94 4Q94	Completed.
PHI/SEV/11/TAS/20: Sector: Sev Type: TAS	<u>Survey of ODS usage, data base generation and TA for ODS phaseout for small scale enterprises using ODS</u>	0	100,000	43,750	Nov. 93	4Q94 4Q95	Ongoing. Phase 2 now in process. Computer equipment to be used to undertake work under phase two has been procured. Expected completion date 4Q95.
PHI/SEV/15/PRP/31: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	50,000	23,634	Dec. 94	1Q96 1Q96	Ongoing. Project identification/formulation mission by Sector Experts/consultants in Ref/Foams undertaken during 31 March - 17 April 1995. As a result 4 projects have been finalized (2 in refrigeration 2 in foams) for a total amount of \$2,530,898 which have been submitted at the 17th ExCom for approval.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
<u>SRI LANKA</u>							
SRL/SEV/06/CPG/01: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	35,000	35,000	Feb. 92	2Q93 4Q93	Completed.
SRL/SEV/12/INS/02: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	154,680	59,040	Mar. 94	2Q97 2Q97	Ongoing. Detailed workplan prepared. The ozone unit is actively coordinating the implementation of the country programme, is launching public awareness activities, and deals with the respective implementing agencies.
SRL/SEV/14/PRP/03: Sector: Sev Type: PRP	<u>Project Preparation Assistance</u>	0	30,000	0	Sept. 94	4Q95 4Q95	Ongoing. Visit by a UNDP refrigeration sector expert as well as UNDP staff is being planned for November 1994 to formulate the required technical assistance and investment projects.
<u>THAILAND</u>							
THA/ARS/15/TAS/38: Sector: Aerosol Type: TAS	<u>Safety and technical assistance programme to manufacturers of aerosol products</u>	0	127,000	0	Dec. 94	1Q96 1Q96	Ongoing. Project document awaiting Govt's signature. Meanwhile, terms of reference for national aerosol expert have been prepared and candidate identification/recruitment action has been initiated. Project will be implemented based on experience gained from a similar project in Malaysia.
THA/FOA/11/INV/20: Sector: Foam Type: INV	<u>Eliminate CFC-114 in manufacture of extruded polystyrene foam sheet and profiles at Thermaflex Insulation Asia</u>	30	220,000	6,516	Nov. 93	4Q94 -	Project to be cancelled. Due to interlocking ownership of the holding company and the operating entity as well as legal disagreements regarding the ownership of the equipment, the Government and UNDP, with the full involvement of the Fund Secretariat, have concluded the project should be returned back to the Executive Committee and cancelled.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
THA/FOA/12/INV/25: Sector: Foam Type: INV	<u>Elimination of the use of CFCs in manufacture of polystyrene foam sheet in Thailand (Phase 1: Two companies)</u>	100	455,000	364,000	Mar. 94	2Q95 1Q95	Operationally completed. UNOPS executed. This project consists of two sub projects: Thai Poly Seal and Foodbox. Both subprojects have been completed and Certificates of Project Completion were signed in February 95. The two subprojects have together eliminated 100 tonnes/annum of CFCs. Requests for payments being processed. The subprojects were completed slightly ahead of schedule.
THA/FOA/12/INV/26: Sector: Foam Type: INV	<u>Henger Panel: Eliminate use of CFCs in manufacture of laminated rigid PUF insulation panels.</u>	15	257,500	190,000	Mar. 94	2Q95 1Q96	Ongoing. UNOPS executed. Project being implemented together with 2 other projects in Thailand and procurement activities are now underway. Equipment delivery expected in 4Q95. Project completion now targeted for 1Q96.
THA/FOA/12/INV/27: Sector: Foam Type: INV	<u>Mic-Cell Co. Ltd.: Elimination of CFC-12 and CFC-114 used in extruded polyethylene foam sheet</u>	44	339,500	139,300	Mar. 94	2Q95 4Q95	Ongoing. UNOPS executed. Contract for local works signed and activities on ventilation and gas storage/piping systems presently underway. Delivery of imported safety equipment expected in October 95. Project completion now targeted for end-95.
THA/FOA/12/INV/29: Sector: Foam Type: INV	<u>Modular Compound: Eliminate use of CFCs in manufacture of laminated rigid PUF insulation panels</u>	30	508,000	355,000	Mar. 94	2Q95 1Q96	Ongoing. UNOPS executed. Project being implemented together with 2 other projects in Thailand. Procurement activities are underway. Equipment delivery expected in 4Q95. Project completion now targeted for 1Q96.
THA/FOA/13/INV/30: Sector: Foam Type: INV	<u>Lucky Group: Elimination of the use of CFCs in the manufacture of flexible PUF (slabstock)</u>	187	605,000	0	July 94	4Q95 4Q95	Ongoing. UNOPS executed. Project encountered startup difficulties and some physical plant layout problems have been identified. Equipment specifications and design for plant modification awaited.
THA/FOA/13/INV/31: Sector: Foam Type: INV	<u>Pongsri: Elimination of CFC use in the manufacture of extruded polystyrene foam sheets</u>	100	340,000	0	July 94	4Q95 4Q95	Ongoing. UNOPS executed. Project being implemented under the reimbursement modality. UNDP process expert visited the plant in February and May 95 and reported that project activities are on schedule.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
THA/FOA/15/INV/35: Sector: Foam Type: INV	<u>Thai Union: Eliminate CFC use in manufacture of flexible PUF cold cured mouldings, integral skin mouldings and rigid PUF</u>	45	525,000	0	Dec. 94	1Q96 1Q96	Ongoing. UNOPS executed. Project document awaiting signature by Govt. Equipment specifications being finalized by UNDP expert.
THA/FOA/15/INV/36: Sector: Foam Type: INV	<u>Somboon Paisarn: Eliminate CFC use in manufacture of flexible PUF slabstock and cold cured mouldings</u>	100	225,000	0	Dec. 94	1Q96 1Q96	Ongoing. UNOPS executed. Project document awaiting signature by Govt. Equipment specifications being finalized by UNDP expert.
THA/FOA/15/INV/37: Sector: Foam Type: INV	<u>Karn Yang: Eliminate CFC use in manufacture of flexible PUF slabstock</u>	110	170,000	0	Dec. 94	1Q96 1Q96	Ongoing. UNOPS executed. Project document awaiting signature by Govt. Equipment specifications being finalized by UNDP expert.
THA/REF/13/INV/33: Sector: Ref Type: INV	<u>Sanden: Eliminate CFC use in the manufacture of commercial refrigerators</u>	30	533,800	241,500	July 94	4Q95 4Q95	Ongoing. UNOPS executed. Procurement activities underway. Equipment delivery expected in October 1995.
THA/SEV/04/TRA/02: Sector: Sev Type: TRA	<u>Training of Government staff</u>	0	50,000	53,785	June 91	2Q92 4Q92	Completed.
THA/SEV/09/INS/08: Sector: Sev Type: INS	<u>Institutional strengthening of the Ozone Layer Protection Unit</u>	0	400,000	143,000	Mar. 93	2Q96 2Q96	Ongoing. An Ozone Layer Protection Unit was created under this project. The Unit has recruited professional staff and a technical consultant. A workplan has been developed and is being implemented. The Unit is actively engaged in the implementation of the country programme and monitors and coordinates the work of the implementing agencies.

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Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
THA/SEV/10/PRP/11: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	50,000	50,000	June 93	2094 3Q94	Completed.
THA/SEV/15/PRP/39: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	43,801	Dec. 94	1Q96 1Q96	Ongoing. A visit was fielded in Dec 94 and 2 aerosol projects were formulated and are being submitted to the 17th ExCom meeting for approval. Several aerosol plants were also visited but additional information is required. In addition, a visit for commercial refrigeration and foam sector project preparation was fielded in Dec. 94 and in March 95. Several small-scale enterprises in the com. ref. sector have been identified. Govt's decision in this sector is awaited. One foam project has been finalized and has been submitted to the 17th ExCom meeting for approval.
<u>TRINIDAD/TOBAGO</u>							
TRT/SEV/04/TRA/01: Sector: Sev Type: TRA	<u>Training of Govt. technical staff and preliminary work on the country programme</u>	0	53,800	53,902	June 91	4Q92 4Q95	Ongoing. Following two visits by a UNDP consultant on CP preparation and the signature of a subcontract with CARIRI, a draft CP was prepared. Several reminders were sent to speed up CP finalization, and a return visit by the international consultant was suggested. The Government indicated it wanted to finalize the CP itself. Despite repeated reminders, the CP has not yet been received.
TRT/SEV/06/CPG/03: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	25,000	26,200	Feb. 92	4Q92 4Q95	Ongoing. These funds are actually a follow-up to the above activity. CP finalization is expected in 4Q95.
<u>URUGUAY</u>							
URU/FOA/13/INV/06: Sector: Foam Type: INV	<u>Conversion to CFC-free technology in the manufacture of rigid PUF (spray) at seven enterprises</u>	71	665,000	323,400	July 94	4Q95 4Q95	Ongoing. UNDP's foam sector expert's last visit was in May 1995. Subcontract with Thermopur is in place to allow the company to purchase equipment. For the other six companies, equipment orders were placed and should arrive in July 95. National workshop will take place in August/Sept 95.

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Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
URU/FOA/13/INV/09: Sector: Foam Type: INV	<u>Conversion to CFC-free technology in the manufacture of flexible PUF at 5 plants</u>	17	200,000	29,527	July 94	4Q95 4Q95	Ongoing. UNDP's foam sector expert last visit took place in May 1995. MAXI has received funds to enable it to carry out testing and test trials. The other four companies are reviewing the specifications for the ventilation and forced cooling equipment.
URU/REF/12/TAS/04: Sector: Ref Type: DEM	<u>TA for refrigerant conservation and demonstration programme: recovery & recycling of CFC-12</u>	22	175,000	138,500	Mar. 94	2Q96 2Q96	Ongoing. Two workshops were held on reduction of CFC losses in refrigeration sector servicing by preventing leaks and venting, and by instituting good practices for CFC recovery and recycling. The recovery-recycling equipment was ordered and will arrive in June 1995, following which it will be distributed throughout the recycling centers. Thereafter, the monitoring system to check on the amounts of recovered material will commence.
URU/SEV/04/TAS/01: Sector: Sev Type: TAS	<u>Consultant mission to assess technical assistance requirements</u>	0	13,050	14,042	June 91	4Q91 4Q92	Completed.
URU/SEV/08/CPG/02: Sector: Sev Type: CPG	<u>Country programme preparation</u>	0	23,894	25,444	Oct. 92	2Q93 2Q93	Completed.
URU/SEV/10/INS/03: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	173,800	105,883	June 93	3Q96 3Q96	Ongoing. Project document was signed in October 1993 and implementation started immediately. The ozone unit is fully staffed and is actively coordinating the national ODS phaseout effort including all project preparation and investment activities by implementing agencies.
URU/SEV/13/PRP/08: Sector: Sev Type: PRP	<u>Preparation of projects in the foams and halons sector</u>	0	30,000	17,510	July 94	2Q95 4Q95	Ongoing. UNDP sector experts will visit Uruguay in second half 1995 to continue project preparation in these sectors.

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Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
<u>VENEZUELA</u>							
VEN/HAL/09/TAS/09: Sector: Halon Type: TRA	<u>Workshops for the recycling and banking of halons</u>	0	26,800	23,100	Mar. 93	1Q94 2Q94	Completed.
VEN/REF/04/TRA/01: Sector: Ref Type: TRA	<u>Technical assistance and training of servicing technicians in the refrigeration sector</u>	0	30,000	19,020	June 91	1Q92 2Q92	Completed.
VEN/REF/09/PRP/10: Sector: Ref Type: PRP	<u>Workshops for identification of projects in the refrigeration sector</u>	0	19,800	19,800	Mar. 93	4Q93 4Q94	Completed.
VEN/REF/09/TAS/11: Sector: Ref Type: TRA	<u>Workshops on conversion and installation of new non-ODS central A/C systems</u>	0	26,200	13,200	Mar. 93	2Q94 2Q94	Completed.
VEN/REF/09/TAS/12: Sector: Ref Type: DEM	<u>Pilot programme in recovery and recycling of CFC-12 in domestic refrigeration</u>	8	100,000	100,000	Mar. 93	2Q94 4Q95	Ongoing. Subcontract with MADOSA signed and equipment specification as well as bidding process and bid-analysis for recovery-recycling equipment finalized. Equipment was shipped to Venezuela in May. The pilot programme will be implemented in second-half 1995. No further expenditures are visualized under this project.
VEN/REF/12/DEM/14: Sector: Ref Type: DEM	<u>Pilot Programme in Recovery and Recycling of CFC-12 in Mobile Airconditioning</u>	0	13,400	13,400	Mar. 94	1Q95 1Q95	Completed.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
VEN/REF/15/TAS/22: Sector: Ref Type: TAS	<u>Pilot project for recovery and recycling of CFC-12 in MAC's (phase 2)</u>	75	220,000	200,500	Dec. 94	4Q96 4Q96	Ongoing. Project approved in December 1994. UNOPS executed. Subcontract to organize the workshop was established, and bidding process for recovery/recycling equipment was finalized. Equipment would have been ordered already, but last minute changes regarding the respective numbers of machines for cars and for buses is causing minor delay. Equipment should arrive in July 1995 following which full implementation starts. The project is on schedule.
VEN/SEV/09/INS/08: Sector: Sev Type: INS	<u>Institutional strengthening</u>	0	329,192	273,492	Mar. 93	2Q96 2Q96	Ongoing. Funds are being disbursed corresponding to budget schedule. FONDDIN is now fully staffed and is actively coordinating the national ODS phaseout programme.
VEN/SEV/11/CPG/17: Sector: Sev Type: CPG	<u>Finalization of the Venezuela Country Programme</u>	0	12,000	5,587	Nov. 93	4Q94 2Q95	Operationally completed. Country Programme was finalized during first half 1995, comments from UNDP were incorporated, and the CP is being presented for approval at the 17th ExCom Meeting. Costs incurred over the last few months are not yet reflected in the accounts.
VEN/SEV/15/PRP/21: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	40,000	45,445	Dec. 94	4Q95 2Q95	Operationally completed and financially closed. Several visits were undertaken by UNDP foam and refrigeration consultants in February and May 1995, resulting in the formulation of 5 domestic refrigeration projects, 2 commercial refrigeration projects and 1 polystyrene project with a combined budget of \$4.3 million and are all being presented for approval at the 17th ExCom Meeting. Additional funds are requested to prepare remaining projects in the commercial refrigeration sector as per UNDP's 1995 workplan.

VIETNAM

VIE/SEV/12/PRP/01: Sector: Sev Type: PRP	<u>Project preparation assistance</u>	0	100,000	50,288	Mar. 94	2Q95 4Q95	Ongoing. A UNDP consultant visit to identify/formulate projects in the aerosol sector was fielded in March 95. Several enterprises have been identified and additional follow-up work is needed. One project has been finalized and has been submitted to the 17th ExCom meeting for approval. A second consultant visit to finalize the other projects identified is being scheduled for October 1995.
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Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
<u>REGIONAL</u>							
AFR/FOA/06/TRA/03: Sector: Foam Type: TRA	<u>One of three low-CFC foam training and demonstration programmes (Middle East/Africa)</u>	0	52,500	38,087	Feb. 92	4Q92 4Q93	Completed.
ASP/FOA/06/TRA/05: Sector: Foam Type: TRA	<u>One of three low-CFC foams training and demonstration programme (Asia and Pacific)</u>	0	52,500	36,828	Feb. 92	4Q92 4Q93	Completed.
ASP/REF/06/TRA/03: Sector: Ref Type: TRA	<u>One of three MAC recycling training/demonstration programme (Asia)</u>	0	45,000	0	Feb. 92	4Q92 4Q95	Ongoing. A draft demonstration programme agenda/curriculum has been formulated and discussed between USEPA/UNDP and the UNDP MAC sector consultant. Logistics are being finalized as to the timing and venue which would be in 4Q95, since it would follow that for the Latin America which would be held in 3Q95.
GLO/HAL/06/TRA/16: Sector: Halon Type: TRA	<u>Halons reduction/recycling training & demonstration programme (Africa/Middle East)</u>	0	60,000	39,012	Feb. 92	4Q92 4Q93	Completed.
GLO/REF/06/TRA/03: Sector: Ref Type: TRA	<u>Regional MAC recycling training and demonstration programme (Middle East)</u>	0	45,000	0	Feb. 92	4Q92 1Q96	Ongoing. A draft demonstration programme agenda/curriculum has been formulated and discussed between UNSEPA/UNDP and the UNDP MAC sector consultant. Logistics are being finalized as to the timing and venue. It would be held in 1Q96 following conclusion of the demonstration programme/workshops for Latin America (3Q95) and Asia (4Q95).
LAC/FOA/06/TRA/02: Sector: Foam Type: TRA	<u>Regional low-CFC foam training and demonstration programme (Latin America)</u>	0	52,500	53,812	Feb. 92	4Q93 4Q93	Completed.

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
LAC/HAL/06/TRA/03: Sector: Halon Type: TRA	<u>Halons reduction/recycling training and demonstration programme (Latin America)</u>	0	60,000	44,842	Feb. 92	1Q94 2Q94	Completed.
LAC/REF/06/TRA/04: Sector: Ref Type: TRA	<u>MAC CFC-recycling training and demonstration programme (Latin America)</u>	0	45,000	0	Feb. 92	4Q92 3Q95	Ongoing. A draft demonstration programme agenda/curriculum has been formulated, discussed and finalized between USEPA, UNDP staff and the UNDP MAC sector consultant. This would be the first workshop/demonstration programme which would be held in 3Q95. The venue and other logistical arrangements should be finalized by end-June. The Asia (4Q95) and Middle East (1Q96) workshops will use this as the model.
LAC/REF/06/TRA/05: Sector: Ref Type: TRA	<u>Training/demonstration programme in commercial/industrial refrigeration in Latin America</u>	0	23,000	23,047	Feb. 92	3Q92 3Q92	Completed.
<u> GLOBAL</u>							
GLO/ARS/06/TAS/05: Sector: Aerosol Type: TAS	<u>Technical assistance in aerosols</u>	0	60,000	44,212	Feb. 92	4Q92 2Q95	Ongoing. Activities planned in this sector include assistance of a sector expert in Asia and Latin America. A visit is already scheduled for Bangladesh. Activity completion in 2Q95.
GLO/FOA/06/TAS/08: Sector: Foam Type: TAS	<u>Technical assistance in flexible polyurethane foam sector</u>	0	40,000	40,000	Feb. 92	4Q92 4Q93	Completed.
GLO/FOA/06/TAS/17: Sector: Foam Type: TAS	<u>Technical Assistance in rigid polyurethane foam sector</u>	0	60,000	60,000	Feb. 92	4Q92 4Q93	Completed.

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Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
GLO/FOA/14/TAS/69: Sector: Foam Type: TAS	<u>Determination of cost-effective phaseout approaches for enterprises with relatively small ODS use in foams</u>	0	50,000	14,763	Sept. 94	3Q95 3Q95	Ongoing. The strategy paper has been prepared by UNDP's foam sector expert and has been distributed by UNDP to the other implementing agencies as well as to the Fund Secretariat for comment in preparation for its submission to the 17th ExCom Meeting. Based on the discussion on this matter at the 17th ExCom Meeting, it is visualized that UNDP's foams sector expert may have to update and revise the strategy paper. This could also serve as the model strategy paper for small ODS users in other sectors as well.
GLO/HAL/06/DEM/04: Sector: Halon Type: DEM	<u>Procurement of 40 H-1211 recycling machines for demonstration and continued use</u>	0	250,000	250,000	Feb. 92	2Q93 3Q93	Completed.
GLO/HAL/06/TAS/10: Sector: Halon Type: TAS	<u>Technical assistance in halons</u>	0	70,000	70,000	Feb. 92	4Q92 2Q94	Completed.
GLO/HAL/08/TAS/23: Sector: Halon Type: TAS	<u>Global Halons Project</u>	0	345,133	121,178	Oct. 92	4Q94 4Q95	Ongoing. As part of the joint UNDP/USEPA halons programme, UNDP assisted USEPA in its visits to Panama; in Uruguay USEPA conducted H-1211 recycling/recovery demonstration workshops which were attended by 15 participants (including Argentina) with the involvement of UNDP's halons sector expert. The project supported USEPA technical visits during Nov-Dec 94 to Asia (China, Republic of Korea, Malaysia, Philippines). In China, discussions were held with NEPA, MPS and the Tianjin Fire Research Institute on national halons sector activities. The visit facilitated development of a cost-effective leak reduction demonstration project. The visits to Malaysia & the Philippines will be followed by halon management workshops. The halons workshop in Bahrain was held during 17-18 June 1995 with the active participation of UNDP's halons sector expert.
GLO/HAL/13/TAS/37: Sector: Halon Type: TAS	<u>Analysis and formulation of a halon action plan and phaseout strategy for small consuming countries</u>	0	50,000	50,000	July 94	1Q95 1Q95	Operationally and financially completed. The strategy paper has been finalized and has been submitted to the 17th ExCom Meeting for its consideration..

Project Number, Sector and Type	Project Title	ODS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
GLO/REF/06/TAS/06: Sector: Ref Type: TAS	<u>Technical assistance in MAC</u>	0	50,000	13,623	Feb. 92	4Q92 1Q96	Ongoing. In close collaboration with USEPA, the UNDP MAC sector consultant has been recruited and will assist both UNDP and USEPA jointly implement the three regional MAC demonstration programmes/workshops for Asia, Middle East and Latin America as well as some activities in the Global MAC Project.
GLO/REF/06/TAS/07: Sector: Ref Type: TAS	<u>Technical assistance in refrigeration</u>	0	90,000	90,000	Feb. 92	4Q92 3Q94	Completed.
GLO/REF/08/TAS/24: Sector: Ref Type: TAS	<u>Global MAC project</u>	0	318,584	277,117	Oct. 92	4Q94 4Q95	Ongoing. A MAC project jointly developed and implemented in Venezuela by USEPA/UNDP/VEN (FONDOIN) has been completed. The Mexico MAC Demonstration Workshop held in March 1995 was a success. Another activity - a recycling demonstration project in China - is also ongoing; equipment has been procured and shipped to China.
GLO/SEV/06/TRA/11: Sector: Sev Type: PRP	<u>Three national policy workshops</u>	0	45,000	27,240	Feb. 92	4Q92 2Q95	Ongoing. Two national policy workshops in India (March 1993) and Peru (April 1994) have been funded. UNDP is evaluating funding requests for the third workshop.
GLO/SEV/06/TRA/12: Sector: Sev Type: TRA	<u>Two study-tours for officials and industry representatives</u>	0	50,000	23,531	Feb. 92	4Q92 3Q95	Ongoing. A delegation from Malaysia reviewed technologies for ODS phaseout in both the US and Japan covering all sectors and also attended the 1994 International CFC & Halons Alternatives Conference in Washington DC. Planning is underway for a study group from India again covering all sectors.
GLO/SEV/06/TRA/13: Sector: Sev Type: TRA	<u>Participation at workshops and key meetings</u>	0	140,000	131,737	Feb. 92	4Q92 4Q94	Operationally Completed. Remaining funds already budgeted for two developing country representatives to attend the 1994 International Conference on CFCs and Halons Alternatives, 24-26 October 1994, in Washington D.C. Awaiting closure of accounts.

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Project Number, Sector and Type	Project Title	QOS to be phased out (tonnes)	Approved Funding (US\$)	Disbursed Obligated (US\$)	Date of Approval	Date of Completion Proposed/Expected	STATUS (Progress/Delay)
GLO/SEV/12/TAS/63: Sector: Sev Type: TAS	<u>Safety, pre-assessment & post- assessment of UNDP implemented foam and solvent sector projects</u>	0	25,000	28,000	Mar. 94	2Q95 2Q95	Operationally Completed. The analyzer purchased was explosion-proof so that it could be used for flammable substances like pentane and butane. It has been used frequently during project formulation to measure baseline air quality and during post-assessment to test the safety aspects of projects. A TDI analyzer was also purchased and used in pre-assessment of these safety assessments. The \$3,000 overrun was due to the higher cost for explosion-proof analyzers.
GLO/SOL/06/TAS/09: Sector: Solvent Type: TAS	<u>Technical assistance in solvents</u>	0	50,000	50,000	Feb. 92	4Q92 3Q93	Completed.

UNEP PROGRESS REPORT

UNEP

ON GOING ACTIVITIES

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
ALGERIA						
Several	Institutional Strengthening		Nov 1993	\$297,000	1994-1996	Ongoing. Project document is signed and funds are being disbursed according to budget.
ANTIGUA AND BARBUDA						
Several	Country programme preparation		Oct 1993	\$30,000	1994-1995	Phase I completed. Phase II is expected to start in June 1995. Delayed due to the country.
BAHAMAS						
Several	Country programme preparation		Oct 1993	\$40,000	1994-1995	Phase I completed. Phase II is expected to start in June 1995. Delayed due to the country.
BAHRAIN						
	Country programme preparation		Mar 1994	\$50,000	1994-1995	Phase I completed. Phase II is expected to start in August 1995.
BARBADOS						
	Institutional Strengthening		Dec 1994	\$136,000	1995-1997	Project document under preparation.

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
BENIN	Country programme preparation		Jul 94	\$35,000	1994-1995	Phase I completed. Phase II planned for 28 June 1995. Delayed due to late transfer of funds to the country. ODS survey is now completed.
BOLIVIA	Country programme preparation		Mar 1995	\$10,000	1995	Phase II completed. The report needs to be updated.
BOTSWANA						
Several	Institutional Strengthening		Jul 1994	\$90,200	1995-1997	Project document pending signature by the country. Some Institutional Strengthening activities in the country started 1st October 1994.
BRUNEI	Country programme preparation		Dec 1994	\$40,000	1995	Consultant identified.
BURKINA FASO						
Several	Institutional Strengthening		Nov 1993	\$83,500	1994-1997	On-going. Project document is signed and funds have been transferred. Institutional Strengthening activities in the country started 1st July 1994.
Refrigeration	Training of repair technicians		Nov 1993	\$41,500	1994	Planned for 1st quarter 1995.
CAMEROON						

Country Sector	Project Title	CDS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
Several	Institutional Strengthening		Nov 1993	\$161,000	1994-1997	Ongoing. Project document is signed and funds are being disbursed according to budget. Institutional Strengthening activities in the country started 1st July 1994.
CENTRAL AFRICAN REPUBLIC	Country programme preparation		Mar 1994	\$50,000	1994-1995	Phase II completed. Report being reviewed.
CHAD	Country programme preparation		Dec 1994	\$40,000	1995	First contact with the country. Consultant identified.
COTE D'IVOIRE						
Several	Institutional Strengthening		Jul 1994	\$122,800	1995-1997	Revised project approved by 13th ExCom (July 94) Project document under preparation. Expected date to finalize document: 1st quarter 1995.
	Training for refrigeration and air-conditioning technicians		Jul 1994	\$76,000	1994-1995	Organization has been started. Scheduled for 1 st quarter 1995.

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
Croatia	Country Programme preparation		Mar 1995	\$40,000	1995	Identification of the consultant in process.
DOMINICAN REPUBLIC	Country programme preparation		Dec 1994	\$10,000	1995	Report is ready for submission.
EL SALVADOR	Country programme preparation		Mar 1995	\$40,000	1995	Consultant identified. Phase I expected to start in August 95.
ETHIOPIA	Country programme preparation		Mar 1995	\$40,000	1995	Phase I planned for July 1995.
FIJI						
Several	Institutional Strengthening		Mar 1994	\$65,890	1994-1997	Project document being finalized and pending signature by the country. Activities started on 1st January 1995.
GABON	Country programme preparation		Dec 1994	\$10,000	1995	Consultant contracted. Phase I planned for July 1995.
GAMBIA						
Several	Country programme preparation		Feb 1992	\$30,000	1995	Phase I completed. Phase II planned for June 1995.

Country Sector	Project Title	ODS to be phase- out	Date of approval	Approved Funding	Time frame	Status of implementation
GHANA						
Refrigeration	Implementation of train the trainer programme and national demonstration programme		Jun 1993	\$99,000	1993	Funds transferred to UNEP in June 1993. First two training courses completed in October 1993. Establishment of NRDC (National Refrigeration Demonstration Centre) is in process. Expected date of establishment 2nd quarter 1994.
GUATEMALA						
Several	Institutional Strengthening		Jun 1993	\$172,000	1994-1997	On going. Project document signed and funds transferred. Activities started 4th quarter 1994.
GUINEA						
	Country programme preparation		Nov 1993	\$40,000	1994-1995	Phase I completed. Phase II planned for July 1995.
HONDURAS						
Several	Country programme Preparation		Jul 1994	\$40,000	1994-1995	Phase I completed. Phase II is expected to start June 1995. Delayed due to slow answer from the country.
JAMAICA						
Several	Country programme preparation		Mar 1994	\$40,000	1994-1995	Phase I completed. Phase II should start in June 1995.

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
KENYA						
Refrigeration	Support to a national workshop on refrigeration		Jun 1993	\$115,000	1993	Funds transferred in June 1993 to UNEP. First two training courses completed in December 1993. Establishment of NRDC is delayed as the Government has not yet signed the agreement.
LEBANON						
Several	Country programme Preparation		Mar 1994	\$50,000	1994-1995	Report ready for submission.
LESOTHO						
	Country programme preparation		Dec 1994	\$40,000	1995	Phase I completed. Phase II planned for August 1995.
MALAWI						
Several	Institutional Strengthening		Mar 1994	\$77,000	1995-1997	Project document signed, and funds transferred. Some Institutional Strengthening activities started in the country in 2nd half of 1994.
MALTA						
Several	Country programme preparation		Mar 1994	\$50,000	1994	Report ready for submission.
MALDIVES						
Several	Institutional Strengthening		Mar 94	\$41,250	1995-1997	Project document signed and funds are being transferred.

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
MAURITIUS						
Several	Institutional Strengthening		Jun 1993	\$50,000	1994-1997	Project document finalized and waiting for signature of the country.
MOZAMBIQUE						
	Institutional Strengthening		Dec 1994	\$92,400	1995-1997	Project document under preparation.
MYANMAR						
Several	Country programme preparation		Mar 1994	\$50,000	1994-1995	Phase I completed. Phase II delayed due to slow response from the country.
NAMIBIA						
	Country programme preparation		Dec 1994	\$40,000	1995	Phase I completed. Phase II planned for August 1995.
NICARAGUA						
Several	Country programme preparation		Jul 1994	\$40,000	1994-1995	Phase I planned for July 1995. Delayed due to slow answer from the country.
NIGER						
	Institutional Strengthening		Dec 1994	\$74,800	1995-1997	Project document under preparation.
PAKISTAN						
Several	Country programme preparation		Mar 1993	\$60,000	1993-1995	Phase I visit completed. Phase II is expected to start July 1995. Delayed due to slow answer from the country and delays in the transfer of funds.

C S	Country Sector	Project Title	ODS to be phase- out	Date of approval	Approved Funding	Time frame	Status of implementation
S S	PANAMA Several	Institutional Strengthening		Jun 1993	\$172,500	1995-1997	Project document signed, and funds are being transferred.
S N S	PAPUA NEW GUINEA Several	Country programme preparation		Jul 1994	\$40,000	1994-1995	Should start in July 1995. Delayed due to slow answer from the country.
S S	PERU Several	Country programme preparation		Nov 1993	\$50,000	1994-1995	Report is ready for submission.
S S	PHILIPPINES Several	Information dissemination project		Nov 1993	\$200,000	1994-1995	The government has requested extension of the project (without additional funds) up to 1996 due to delayed start-up. By end of June most print materials and other awareness tools will be ready.
S							
T S	SENEGAL Several	Institutional strengthening		Nov 1993	\$175,000	1994-1997	Project document finalized and awaiting signature by the country.
	Refrigeration	Training and upgrading of repair technician training		Nov 1993	\$50,000	1994	Planned for first quarter 1995.
T S							

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
SEYCHELLES						
Several	Institutional Strengthening		Jul 1994	\$31,900	1995-1997	Project document finalized and awaiting signed by Government.
ST KITTS & NEVIS Several	Country programme preparation		Mar 1994	\$35,000	1994-1995	Phase I is completed. Phase II is expected to start June 1995. Delayed due to the country.
ST LUCIA Several	Country programme preparation		Jul 1994	\$30,000	1994-1995	Report ready for Submission.
SUDAN Several	Institutional Strengthening		Mar 1994	\$168,300	1995-1997	Project document pending PRC approval. Delays due to very difficult communication with the country.
SWAZILAND	Institutional Strengthening		Dec 1994	\$ 67,520	1995-1997	Project document under preparation.
TANZANIA Several	Country programme preparation		Nov 1993	\$10,000	1994-1995	Country Programme started when country was not a Party. Phase I visit completed. ODS survey received. Phase II planned for July 1995.
TOGO Several	Country programme preparation		Feb 1992	\$30,000	1992-1995	Report ready for submission.

Country Sector	Project Title	ODS to be phase- out	Date of approval	Approved Funding	Time frame	Status of implementation
UGANDA Several	Institutional Strengthening		Jul 1994	\$64,500	1995-1997	Project document finalized and pending signature by the country.
VIETNAM Several	Country programme preparation		Jul 1994	\$60,000	1994-1995	Report ready for submission.
WESTERN SAMOA Several	Country programme preparation		Mar 1994	\$35,000	1994	Phase I is expected to start in July 1995. Delayed due to slow answer from the country and change of the consultant working for the contracted company.
ZAMBIA Several	Institutional Strengthening		Mar 1993	\$75,600	1994-1997	Project document signed and funds are being transferred.
ZIMBABWE Several	Institutional Strengthening		Jul 1994	171,000	1995-1997	Project document finalized and pending signature by the Country. Activities to start 1st quarter of 1995.
REGION: Several	AFR Support to regional network for ODS-officers Technical Assistance (ODSONET-AF)					1st Workshop for French-speaking African Countries planned for August 1995 (Venue to be decided).

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
METHYL BROMIDE	Regional Workshop on Methyl Bromide alternatives for English - speaking Africa		Mar 95	\$100,000	1995	Venue tentatively agreed as Zimbabwe, September 1995.
REGION:	SEAP					
	Support to regional network for ODS technical assistant ODSNET/SEAP					Workshop in South East Asia/Pacific countries planned for September in Manila, Philippines.
Refrigeration	Regional Training Course on chillers for Asia (previously for French Speaking Africa)		Jun 1993	\$48,000	1994	To be held in Bangkok, Thailand on 18-19 July 1995.
Refrigeration	Regional Training Course on chillers for East-Asia		Jun 1993	\$48,000	1994	Funds transferred from UNDP in June 1993. Indonesia has expressed interest. Discussions are on-going Planned for December 1995.
REGION:	LAC					
Several	Support to regional network for ODS officers technical assistance ODSNET/LA-S					Follow-up meeting for South American network planned for September 1995, in LA Paz, Bolivia.

Country Sector	Project Title	ODS to be phase- out	Date of approval	Approved Funding	Time frame	Status of implementation
	Support to regional network for ODS Officers Technical assistance ODSONET-LA-C					Follow-up meeting for Central America network planned for 15- 16 June 1995, in San Salvador, El Salvador.
	Regional Workshop on Technology assessment for the LAC region		Mar 1995	\$30,000		Being organized.
REGION:	MID-EAST					
GLOBAL						
Refrigeration	Preparation of training material for refrigeration sector technical assistance		Mar 1993	\$160,000	1 year	
	Technical Directory of R+R equipment					Review has made it necessary to re-design part of the project. 2nd review estimated for 1st quarter 1995.
Refrigeration	Translation of "Training manual on Good Practices in Refrigeration" and "Training Manual on Chillers and Refrigerant management" into French, Spanish and Chinese		Mar 1995	\$264,000	2 Years	On-going translators be identified.

refrigeration report 1995/02/29

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
Refrigeration	Completion of "Recommendations for a code of Good Practice in Refrigeration" for Article 5 Countries.		Mar 1995	\$38,000	2 Years	On-going.
Several	Development of a training strategy		Mar 1993	\$100,000	2 years	TORs drafted. Comments invited from IAG. Draft strategy expected to be ready by April 1995.
Several	Information exchange Collect sectoral data from worldwide sources		Mar 1995	180,000		On-going. See "Completed Activities" for progress to-date.
	Update the OAIC diskette version		Mar 1995	25,000		On-going. See "Completed Activities" for progress to-date.
	Prepare information papers and fact sheets for evaluation of technical options to replace ODS		Mar 1995	100,000		On-going. See "Completed Activities" for progress to-date.
	Update Technology Sourcebooks and quality review updated material		Mar 1995	90,000		On-going. See "Co
	Provide direct query-response service		Mar 1995	35,000		On-going. See "Completed Activities" for progress to-date.

Country Sector	Project Title	ODS to be phase- out	Date of approval	Approved Funding	Time frame	Status of implementation
	Information Kit project		1993	\$ 90,000	1993-1995	3 Posters produced, video ready by end of June 95, handbook for ozone officers ready by Mid-July 95.
Several	Meeting of Consultants		Mar 1994	\$70,000	1 year	Organization is on going. Meeting to be held in July 1995.

Note: Phase I includes first visit to the country by the consultant, consultation with national team and conducting of the ODS survey.
Phase II includes analysis of ODS data, formulation of national strategy and action plan, identification and prioritization
of specific projects and drafting of country programme report in consultation with national team.

UNEP

ACTIVITIES COMPLETED

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
ALGERIA						
Several	Country programme preparation		Mar 1993	\$15,000	Mar-Jun 1993	Completed. Approved by the 11th ExCom meeting.
BARBADOS						
Several	Country programme preparation		Mar 1993	\$30,000	1993-1994	Completed. Approved by the 15th ExCom meeting.
BOTSWANA						
Several	Country programme preparation		Feb 1992	\$40,000	1992-1994	Completed. Approved by the 13th ExCom meeting.
BURKINA FASO						
Several	Country programme preparation		Feb 1992	\$30,000	1992-1993	Completed. Approved by the 11th ExCom meeting.
	Workshop on Monitoring and Control of ODS consumption		Nov 1993	\$14,500	1994	Completed. Workshop held in Ouagadougou, in October 1994. 4 neighboring countries attended.

Note: Phase I includes first visit to the country by the consultant, consultation with national team and conducting of the ODS survey. Phase II includes analysis of ODS data, formulation of national strategy and action plan, identification and prioritization of specific projects and drafting of country programme report in consultation with national team.

Country Sector	Project Title	ODS to be phase- out	Date of approval	Approved Funding	Time frame	Status of implementation
CAMEROON						
Several	Country programme preparation		Feb 1992	\$30,000	1992 - Jun 1993	Completed. Approved by the 10th ExCom meeting.
	Workshops on Monitoring and Control of ODS consumption		Jun 1993	\$20,200	1993-1994	Completed. Workshop held in Douala, in August 1994. 3 neighboring countries participated.
COTE D'IVOIRE						
Several	Country programme preparation		Nov 1993	\$10,000	1994	Completed. Approved by the 12th ExCom meeting.
FIJI						
Several	Country programme preparation		Jun 1991	\$25,000	1991 - Jun 1992	Completed. Approved by the 10th ExCom meeting.
GHANA						
Several	Country programme preparation		Jun 1991	\$25,000	1991-1992	Completed. Approved by the 8th ExCom meeting.
GUATEMALA						
Several	Country programme preparation		Feb 1992	\$30,000	1992-1993	Completed. Approved by the 10th ExCom meeting.
MALAWI						
Several	Country programme preparation		Feb 1992	\$30,000	1992-1993	Completed. Approved by the 12th ExCom meeting.
MALDIVES						
Several	Country programme preparation		Jun 1991	\$25,000	1991-1992	Completed. Approved by the 10th ExCom meeting.
MAURITIUS						

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
Several	Country programme preparation		Mar 1993	\$10,000	Mar 1993-Jun 1993	Country Programme started when country was Non-Party. Completed. Approved by the 10th ExCom meeting.
PANAMA						
Several	Country programme preparation		Feb 1992	\$30,000	1992 - Jun 1993	Completed. Approved by the 10th ExCom meeting.
SENEGAL						
Several	Country programme preparation		Nov 1993	\$10,000	1994	Country Programme started when country was non-party. Completed. Approved by the 11th ExCom meeting.
	Workshop on Monitoring and Control of ODS consumption		Nov 1993	\$26,000	1994	Completed. Held in Dakar on 24-27 October 1994. 4 neighboring countries participated.
SEYCHELLES						
Several	Country programme preparation		Oct 1993	\$30,000	1993-1994	Completed. Approved by the 13th ExCom meeting.
SUDAN						
Several	Country programme preparation		Nov 1993	\$10,000	Nov 93 - Mar 94	Country programme started when country was non-party. Completed. Approved by the 12th Excom meeting.

Note: Phase I includes first visit to the country by the consultant, consultation with national team and conducting of the ODS survey. Phase II includes analysis of ODS data, formulation of national strategy and action plan, identification and prioritisation of specific projects and drafting of country programme report in consultation with national team.

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
SWAZILAND						
Several	Country programme preparation		Mar 1994	\$40,000	1994	Completed . Approved by the 15th ExCom meeting.
SYRIA						
Several	Country programme preparation		Jun 1991	\$25,000	1991-1992	Country Programme completed. Approved at the 11th ExCom meeting.
UGANDA						
Several	Country programme preparation		Jun 1991	\$25,000	1991-1994	Completed. Approved at the 13th ExCom meeting.
ZAMBIA						
Several	Country programme preparation		Jun 1991	\$25,000	1991-1992	Completed. Approved by the 8th ExCom meeting.
ZIMBABWE						
Several	Country programme preparation		Mar 1993	\$40,000	1993-1994	Completed. Approved by the 13th ExCom meeting.
REGION: AFR						
Several	Regional Workshop on the implementation of the Montreal Protocol for African region		Feb 1992	\$210,000	Dec 1992	Completed. Workshop held in Nairobi, Kenya (Dec 1992).
Refrigeration	Regional training course on refrigeration for Africa		Feb 1992	\$90,000	Dec 1992	Completed. Training Course was held in Nairobi, Kenya for 11 countries from Africa (Dec 1992).

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
Refrigeration	Regional Training Course on Chillers/Refrigerant Management plan for English Speaking Africa		Jun 1993	\$48,000	1994	Completed. Training Course held in Zambia, in September 1994.
Several	Regional Workshop on practical implementation of the Montreal Protocol - Industry perspective		Nov 1993	Bilateral Cooperation	Aug 1994	Completed. Workshop held in Swaziland in Co-operation with South Africa. 15 countries attended. Practical case studies presented along with field visit.
	1995-ODSONET/AR-E workshop for the ODS officers Network for English speaking countries					Workshop held in Kenya from 15-18 May 1995.
REGION:	SEAP					
Several	Regional Workshop on the Implementation of the Montreal Protocol for the Asia-Pacific region		Jun 1991	\$217,000	Nov 1991	Completed. Workshop held in Jomtien, Thailand (Nov 91).
Several	Workshop for SMEs on management of phase-out (CSTMA)		Mar 1994	\$ 95,000	1994-1995	Completed. Held on 7-10 February 1995 in New Delhi, India.

Note: Phase I includes first visit to the country by the consultant, consultation with national team and conducting of the ODS survey. Phase II includes analysis of ODS data, formulation of national strategy and action plan, identification and prioritization of specific projects and drafting of country programme report in consultation with national team.

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
Aerosol	Regional Workshop for Aerosol conversion		Mar 1995	\$120,000	1995	Completed workshop held in Jakarta in 29 May - 1 June 1995.
Refrigeration	Regional Training Course on chillers for South-Asia		Jun 1993	\$48,000	1994	Completed. Training course was held in Philippines in December 1994.
Refrigeration	Regional Workshop on Refrigeration and Air-Conditioning Training Programmes for SouthEast Asia/Pacific		Mar 1993	\$90,000	Apr 1994	Completed. Workshop held in Jakarta, 12-15 April in cooperation with Australia.
Halon	Regional Halon Workshop, organized by Malaysia for Southeast Asian Countries		Mar 1993	\$80,000	Jan 1994	Completed. Workshop held in Kuala Lumpur, Malaysia, 18-20 January 1994. 10 countries attended.
Several	1995 ODSNET/SEAP meeting, part of the activities under the Network for ODS officers for the South East Asia/Pacific. Follow-up meeting to ODSNET workshop					Meeting held in Bangkok, Thailand 30-31 January 1995.

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
REGION:	LAC					
Several	Regional workshop on the Implementation of the Montreal Protocol for Latin America and the Caribbean		Jun 1991	\$217,000	May 1992	Completed. Workshop held in Caracas, Venezuela (May 1992).
	1994 ODSNET/LA-S workshop part of activities under the Network for ODS offices in South America					Workshop held in Santiago, Chile in 7-10 March 1995; ODSNET/LA-S Bulletins issued on 31 March 1995.
Refrigeration	Regional workshop on non-CFC technologies for Domestic Refrigerator manufacturing industries in the LAC region		Dec 1994	\$100,000	1995	Completed. Held on 18-19 May 1995 in Sao Paulo, Brazil.
REGION:	MID-EAST					
Aerosol	Aerosol Conversion Training Course		Mar 1993	\$90,000	1st quarter 1994	Completed. Training Course held in March 1994. 11 countries attended.
Refrigeration	Regional training Course on Chillers for Mid-East		Jun 1993	\$48,000	1994	Completed. Training course held in Bahrain, in December 1994.

Note: Phase I includes first visit to the country by the consultant, consultation with national team and conducting of the ODS survey. Phase II includes analysis of ODS data, formulation of national strategy and action plan, identification and prioritisation of specific projects and drafting of country programme report in consultation with national team.

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
REGION:	ARABIC SPEAKING COUNTRIES					
Several	Regional workshop on the Implementation of the Montreal Protocol for Arabic speaking countries		Jun 1991	\$217,000	Dec 1991	Completed. Workshop held in Cairo, Egypt (Dec 91).
GLOBAL						
Aerosol	Conversion technology manual/handbook		Mar 1993	\$40,000	1 year	Completed in mid-1994.
Refrigeration	Preparation of training material for refrigeration sector		Mar 1993	\$160,000	1 year	See below for status of sub projects.
	1) Manual/Guidelines on Good practices	-	-	-	-	Completed.
	2) Training Manual on Chillers and Refrigerant Management	-	-	-	-	Completed.
Several	Practical guide to Policy guidelines for Industry on Management of Phase-out in SMEs					Completed.
Several	Elements for establishing Policies; strategies and Institutional Framework for Ozone Layer Protection (for National Ozone Units/Focal Point)					Completed.

Country Sector	Project Title	ODS to be phase-out	Date of approval	Approved Funding	Time frame	Status of implementation
Several	Ozonaction Newsletter		Mar 1995	\$245,000	1 year	Issue No. 14; and 15 have been published in 5 languages (E, F, Sp, A, Ch).
Several	Information exchange clearinghouse		Mar 1995	See below	1 year	See details below.

43 Note: Phase I includes first visit to the country by the consultant, consultation with national team and conducting of the ODS survey. Phase II includes analysis of ODS data, formulation of national strategy and action plan, identification and prioritization of specific projects and drafting of country programme report in consultation with national team.

Collect sectoral data from worldwide sources	Mar 1995	\$180,000	1 year	80 new technical and policy documents/papers acquire by abstracted 86 documents under guidance of TOC Co-Chairs/members. Finalized agreements with aerosols and foam TOC Co-chairs to (a) assist in selecting of literature for abstracting and (b) quality review/check abstracts produced.
Update the OAIC diskette version	Mar 1995	\$25,000	1 year	Finalized and disseminated 300 copies of OAIC-DV Version 2.0 to NOUs and other target groups in developing countries; began software modifications and data input for OAIC-DV version 3.0.
Prepare information papers and fact sheets for evaluation of technical options to replace ODS	Mar 1995	\$100,000	1 year	1 existing information paper updated and disseminated; 3 new information papers drafted. 12 aerosol case studies finalized and disseminated; case Study Compendium containing 100 existing case studies finalized and disseminated; two draft case studies on retrofits of cold storage equipment produced; initiated project to produce six foam sector case studies.

Update Technology Sourcebooks and quality review updated material	Mar 1995	\$90,000	1 year	See completed sub-project activities below.
1) Sourcebook of Technologies for Protecting the Ozone Layer: Refrigeration, Air-Conditioning & Heat Pumps Sector	per above	per above	per above	Produced errata sheets and provided them to all sourcebook owners. Formed quality review team under leadership of refrigeration TOC chair, and draft on quality review guidelines.
2) Sourcebooks for Aerosols; Flexible and Rigid Foams; Specialized solvents uses.	per above	per above	per above	Continued dissemination.
Provide direct query-response service	Mar 1995	\$35,000	1 year	Researched and responded to technical and policy queries (118).
Conduct outreach at conferences and workshops	Mar 1995	\$60,000	1 year	Participated in workshop on ODS destruction and Opportunities (made presentation) and 11th OEWG (held information booth).
Provide halon bank management query response, information collection and dissemination	Mar 1995	\$25,000	1 year	Researched and responded to approx. 20 technical and policy queries.
Disseminate existing halon banking awareness flyer	Mar 1995	--	1 year	Met with Halon TOC Co-Chair to plan schedule of approved IRHBMIC activities for 1995.
Convene a meeting of halon bank managers	Mar 1995	\$50,000	1 year	Met with Halon TOC Co-Chair to plan schedule of approved IRHBMIC activities for 1995.
Develop a "self-help" guide for small halon-consuming countries	Mar 1995	\$25,000	1 year	Met with Halon TOC Co-Chair to plan schedule of approved IRHBMIC activities for 1995.

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Note: Phase I includes first visit to the country by the consultant, consultation with national team and conducting of the ODS survey. Phase II includes analysis of ODS data, formulation of national strategy and action plan, identification and prioritization of specific projects and drafting of country programme report in consultation with national team.

Publication dissemination	Mar 1995	\$200,000	1 year	1186 publication requests were responded to during this period. Over 30,000 technical brochures and 5,550 halon information kits disseminated at conferences have been distributed to-date.
Translate Technical Brochures (Arabic and Chinese)	Mar 1994		1 year	Delayed, expected to be completed in June 1994.

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WORLD BANK PROGRESS REPORT

Montreal Protocol

Region/Country				ODP to be Phased Out 2/
Project Activity Description				Project Type1/
Sector	ODS	Replacement Technology	Subproject Description	
Africa		Regional Coordinator : Bill Rahill		
CY95 Plan - Country Program				Country Program N/A

1/ Project Type: Main Project, Subproject, or Pre-investment.
 2/ Metric tons estimated at time of project preparation.
 PFA - Project Preparation Advance.

N/A - Not applicable.
 TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
		\$150,000	\$2,025		In a July 1994 mission, the Bank agreed with the Federal Environmental Protection Agency (FEPA) to again request proposals for preparation of the Country Program for the Phaseout of Ozone Depleting Substances. FEPA has selected its consultant (a joint venture between a local and international firm) that will carry out the Country Program. Discussions are now on-going to finalize the contract. The expected date of completion is amended to 12/95. The CP will establish the nature of cooperation between the Bank, UNDP and UNIDO.

Montreal Protocol

Region/Country Project Activity Description				Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description		
East Asia and the Pacific		Regional Coordinator : Jessica Poppo			
China					
CY95 Plan - ODS I Project Supervision					N/A
CY95 Plan - ODS II Project Supervision					N/A
CY95 Plan - ODS III Project Preparation					N/A
ODS Project I				Main Project	15,400
Aerosols	CFC-12	HAP (Hydrocarbon Aerosol Propellant)	<u>Tianjin CFC conversion to LPG propellant</u> Phaseout of CFC in aerosols for the Tianjin area by creating a local supplier of purified LPG and a central filling station. It includes (i) establishment of a quality control laboratory, (ii) safety monitoring program for the filling and purification plants, (iii) training program in handling flammable products, and (iv) laboratory tests and trial runs.	Subproject	6,300
Aerosols	CFC-12	HAP (Hydrocarbon Aerosol Propellant)	<u>Shanghai CFC conversion to LPG propellant</u> Phaseout of CFC in aerosols for the Shanghai area by creating a local supplier of purified LPG and a central filling station. It includes (i) establishment of a quality control laboratory, (ii) safety monitoring program for the filling and purification plants, (iii) training program in handling flammable products, and (iv) laboratory tests and trial runs.	Subproject	6,300
Foam	CFC-12	Pentane/Butane	<u>Zhejiang foam plant conversion to butane</u> Replacement of CFC-12 with butane at Zhejiang Plastics Plant in its polystyrene/polyethylene (PS/PE) extruded foam sheet operation and demonstration of the applicability of using butane in other PS/PE installations. It covers plant design, procurement of equipment, development of safety measures, trial runs and full scale operations. Plant layout reorganized to handle flammable substances.	Subproject	400
Halons	Halon 1211	ABC dry powder	<u>Beijing ABC powder production project</u> The project includes the following activities: (i) transfer of technology to manufacture 3,000 tons per year of amorphous dry powder chemical, by Beijing Fire Protection Equipment factory, (ii) increase production of sodium carbonate dry powder by 1,000 tons, (iii) ensure replacement of halons by powder, and (iv) training. This project is related to the Zhejiang halon extinguisher conversion project.	Subproject	1,200

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
		\$75,000	\$29,225		Project supervision is on-going.
		\$75,000	\$57,237		Supervision of the second CHina ODS phaseout project is on-going.
		\$650,000	\$148,488		Processing of the third ODS Phaseout project for China is almost complete. Grant agreement signature is expected in the next few weeks. Supervision activities will be initiated shortly after grant agreement signature. Funds from this budget also utilized to support the preparation of a number of projects which had been identified earlier.
		\$6,925,000	\$1,944,476		Implementation of five subprojects underway. All subprojects are scheduled for completion by mid-1996.
Jun 1992		\$2,770,000		Jun 96	Contract signed with equipment supplier. Trial production scheduled for 1Q 1996. Upon completion of project in early 1996, 3,000 tons CFC-12 will be phased out. An additional 3,300 tons will be phased out by 1997 as small enterprises shift to use of filling center.
Jun 1992		\$2,309,000		Mar 96	Contract signed with equipment supplier. Trial production scheduled for 3Q 1995. Upon completion of project in early 1996, 3,200 tons CFC-12 will be phased out. An additional 3,100 tons will be phased out by 1997 as small enterprises shift to use of filling center.
Jun 1992		\$993,000		Sep 95	Local equipment installed. Contracts signed for most imported equipment, but one contract still under negotiation due to price escalation. Safety provisions installed to date inadequate, but company is now addressing the problem. Project will phaseout 400 tons CFC-12 in late 1995.
Jun 1992		\$930,000		Mar 95	Factory renovation to receive production line underway. Equipment scheduled to arrive in March and production line in May 1995. Upon completion of the project in 3Q 1995, 1,500 tons of ABC Powder will be produced. In 1996 this will increase to 2,100 and reach 3,000 tons in 1997.

Montreal Protocol

Region/Country Project Activity Description				Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description		
Halons	Halon 1211	ABC dry powder	<u>Zhejiang halon extinguisher conversion</u> The project includes the following activities: (i) conversion of the halon fire extinguisher production line at Zhejiang factory to ABC dry chemical and light foam, (ii) expansion of the plant's capacity from 1000,000 units to 250,000 units, and (iii) conversion of fixed halon systems to CO2 and water.	Subproject	1,200
ODS Project II - 50% CFC Foam				Main Project	365
Foam	CFC-11	Reduced (50%) CFC	<u>Qindao Haier conversion</u> Conversion of a 200,000 unit capacity production line at Qindao Haier Refrigerator Factory (QHRF) from CFC-based insulation foam to 50% reduced CFC foam. QHRF is one of China's largest household refrigerator manufacturers with a production capacity of 600,000 units. 17% of the production is exported to more than 30 countries in Europe, North America, and Southeast Asia. Conversion will consist of prototype evaluation, batch production, trial runs, and full-scale production. Incremental costs comprise new foaming equipment, test instruments, and on-site training by foreign chemical manufacturers and domestic experts.	Subproject	60
Foam	CFC-11	Reduced (50%) CFC	<u>Liming Research Institute</u> This project will enhance production techniques of polyether polyol feedstock and blended polyol compatible with reduced CFC formulations at the Liming Chemical Research Institute (LCRI). LCRI will refine present laboratory scale production techniques and establish a pilot production facility for new and blended polyols. Technology will be transferred to commercial manufacturers and suppliers of blended polyols.	Subproject	N/A
Foam	CFC-11	Reduced (50%) CFC	<u>Shuangyan conversion</u> Conversion of a 250,000 household refrigerator capacity facility at Shuangyan General Refrigerator Factory (SGRF) from CFC-based foam insulation to 50% reduced CFC foam. Technology was imported from Sharp Corporation (Japan). The 50% foam formulation will be prepared on technology developed by the 510 Research Institute. Incremental costs comprise quality control instruments, trial runs to optimize formula and blowing technique, and batch production. The project includes on-site training from foreign experts.	Subproject	30
Foam	CFC-11	Reduced (50%) CFC	<u>Henan Xinfei conversion</u> Conversion of a 400,000 household refrigerator capacity facility at Henan Xinfei Electric Appliance Group (HXEAG) from CFC-based foam insulation to 50% reduced CFC foam. HXEAG is the only modern household refrigerator manufacturer in Henan province; technology was imported from IRE Co., Italy. Incremental costs comprise quality control instruments, trial runs to optimize formula and blowing technique, and batch production. The new foam formulation will be used with existing foam-blowing equipment. The project includes on-site training from foreign chemical suppliers.	Subproject	100
Foam	CFC-11	Reduced (50%) CFC	<u>Chengde</u> Conversion of a 160,000 m2 capacity rigid PU insulation panel production line and in-situ spray operations at Chengde Commercial Machinery Company, CCMC, (under the Ministry of Commerce), to 50% reduced CFC foam. It will facilitate the implementation of mature technology in China's largest CFC use sector (CCMC exports products to countries in Europe, Asia, and Africa).	Subproject	30

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Jun 1992	\$730,000		Dec 95	Most contracts signed and equipment is being installed. Trial production scheduled for 4Q 1995. Upon completion of project in 1995, 100 tons of Halon 1211 will be phased out. An additional 200 tons will be phased out in 1996 and 400 tons in 1997.
158		\$4,865,000	\$709,295		Implementation of 8 subprojects underway. One component will go directly to 100% phaseout technology and is being transferred to another implementing agency. Several subprojects are fully implemented and the rest will be completed by 1Q1996.
108	Jun 1993	\$476,000		Jun 95	Production of reduced CFC refrigerators underway resulting in 108 tons CFC-11 phaseout in 1994. Project completion documentation to be finalized by 2Q 1995. ODS phaseout will surpass original estimate and will phase out 120 tons CFC-11 in 1995.
	Jun 1993	\$457,000		Sep 95	Retroactive financing is being requested for domestic expenditures. Imported equipment to be delivered in April. Project will be completed by 3Q 1995.
20	Jun 1993	\$485,000		Jun 95	Equipment has been installed and trial production complete in 1994 for phaseout of 20 tons CFC-11. Project completion documentation is being prepared. Factory will produce 130,000 units with reduced CFC-11 in 1995 for ODS phaseout of 70 tons, an increase over original expectations.
16	Jun 1993	\$1,042,000		Sep 95	All equipment purchased. Trial production complete. 42,000 reduced CFC units produced in 1994 for phaseout of 16 tons CFC-11. The factory will produce 500,000 reduced CFC foam units in 1995 for phaseout of 82 tons CFC-11. Phaseout will increase to 205 tons by 1996. Project completion documentation process underway.
14	Jun 1993	\$163,000			Trial production done in 1994 resulting in 14 tons CFC-11 phased out. Planned production with 50% CFC is 80,000 square meters in 1995, 120,000 in 1996, and 260,000 in 1997. ODS phaseout will surpass 30 ton estimate and reach 85 tons in 1997.

Montreal Protocol

Region/Country					ODP to be Phased Out 2/	
Project Activity Description					Project Type1/	
Sector	ODS	Replacement Technology	Subproject Description			
Foam	CFC-11	Reduced (50%) CFC	<u>Tianjin conversion</u>		Subproject	31
Conversion of the Tianjin Polyurethane Plastic Factory (TPU) production of CFC-based polyurethane foam materials to butane (originally low CFC foam formulations was proposed). Conversion of 2,000 tons of polyol production; 3,300 tons of blended polyol and 250,000 m2 of panels will be achieved. TPU will acquire production technology for polyether polyols compatible with reduced CFC foam formulations from the Liming Chemical Research Institute. On-site training from foreign chemical suppliers and domestic experts is included.						
Foam	CFC-11	Reduced (50%) CFC	<u>Dalian conversion</u>		Subproject	14
Conversion of a 110,000 m2 capacity rigid polyurethane insulation panels manufacturing facility at Dalian Refrigerator Works (DRW) from CFC to 50% reduced CFC foam. DRW, under the Ministry of Machinery Building Industry is one of the largest suppliers of rigid PU insulation panel in China. It will use domestic raw materials, including a special flame-resistant blended polyol, to demonstrate their performance. On-site training from foreign chemical suppliers is included.						
Foam	CFC-11	Reduced (50%) CFC	<u>Shanghai conversion</u>		Subproject	100
Conversion of a 400,000 household refrigerator capacity production line at Shanghai Shangling General Refrigerator Factory (SSGRF) from CFC-based foam insulation to 50% reduced CFC foam. SSGRF is one of the largest household refrigerator manufacturers; its production line was imported from Mitsubishi Electronics (Japan). Incremental costs comprise new foaming equipment and modification of existing equipment (renewal of the mixing head on its existing HP foaming machine), lost productivity during conversion, and batch production. SSGRF will use raw materials produced by the Shanghai No.6 Plastics Factory. The project includes on-site training from foreign chemical suppliers.						
Foam	CFC-11	Reduced (50%) CFC	<u>Shenyang Production of Polyol</u>		Subproject	N/A
This project will re-tool existing polyol operations at Shenyang Petrochemical Factory (SPF) to establish 2,000 ton production capacity of polyol and blended polyol for 50% CFC foam reduction. It will include a training program, trial runs and scale up for full production.						
Foam	CFC-11	Reduced (50%) CFC	<u>Wuxi Production of Polyol</u>		Subproject	N/A
This project will convert a 5,000 ton facility for the production of blended polyol feedstocks compatible with 50% reduced CFC foam at Wuxi KZ Foam Factory (WKZ). The blended polyol will be sold to domestic household refrigerator producers. WKZ will build a new pre-blend reactor facility and renovate their existing line for production of blended polyol compatible with low CFC formulation.						
ODS Project III					Main Project	8,485
Aerosols	CFC-12	Dimethyl ether	<u>Zhongshan Fine</u>		Subproject	4,067
Replacement of CFC-12 with dimethyl ether (DME) in the Zhongshan Fine Chemical Aerosol Filling Center. DME was selected as propellant due to non availability of clean LPG in Guangdong Province. The enterprise plans to take available technology of making DME by methanol from South-West Research Institute.						

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Jun 1993	\$400,000			The enterprise has revised its project proposal from 50% reduction to a complete CFC phaseout using approved funds. Butane will be used to replace CFC-11. The project is being transferred to UNDP who is conducting other related projects at the same enterprise.
	Jun 1993	\$275,000		Mar 96	Trial production of 300 square meters completed in 1994. Projected annual production with reduced CFC foam will phaseout 2.5 tons in 1995, 8.6 tons in 1996 and 8.6 tons in 1997. Due to competition, the factory will not reach target production of 110,000 m2. The project will be completed in 1Q 1996.
	Jun 1993	\$958,000		Mar 96	Contract negotiations complete. Disagreement with procurement company over appropriate fee delayed further progress. New schedule based on March resolution of dispute will mean equipment installation in Dec 1995 and trial production in early 1996.
	Jun 1993	\$152,000		Sep 95	Contracts for the imported equipment have been signed and letters of credit obtained. Down payments have been made for domestic equipment.
	Jun 1993	\$264,000		Dec 95	Equipment will be shipped and installed by June. Batch production of 300 tons scheduled for September 1995. 1,500 tons of blended polyol for 50% foam to be produced in 1996 and 3,000 tons in 1997.
1,200		\$29,447,790			Negotiations for the \$90 million umbrella grant agreement are complete. Signing and effectiveness expected by July 1995. The halon closure subproject has, however, already been completed.
	Jul 1994	\$1,351,000			Subproject implementation underway. Funds will be requested retroactively.

Montreal Protocol

Region/Country	Project Activity Description	Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description
Foam	CFC-12	Pentane/Butane	Shanghai #18 Replacement of CFC with pentane used in the production of polyethylene and polystyrene foam. Plant modifications include equipment retro-fitting and safety modifications. Production trials and training will be provided. Butane will be used as a back-up blowing agent only when supply of pentane is interrupted (the plant will use more additives to prevent shrinkage in PE foam making and accurately control the aging time in PS food packaging material production). Subproject 200
Foam	CFC-12	Pentane/Butane	Cangzhou No. 2 Replacement of CFC-12 used to produce extruded polyethylene and polystyrene foam with butane. Savings in operational costs resulting from the lower price of butane have been considered. Capital costs include extruder, equipment retrofitting and training of workers for safe use and handling of butane. Subproject 140
Foam	CFC-12	Pentane/Butane	Lanzhou Plastic Packing Replacement of CFC-12 used to produce extruded polyethylene and polystyrene foam with butane. Savings in operational costs resulting from the lower price of butane have been considered. Capital costs include extruder, equipment retrofitting and training of workers for safe use and handling of butane. Subproject 200
Foam	CFC-12	Pentane/Butane	Zhengzhou Plastic Plant Replacement of CFC-12 used to produce extruded polyethylene and polystyrene foam with butane. Savings in operational costs resulting from the lower price of butane have been considered. Capital costs include extruder, equipment retrofitting and training of workers for safe use and handling of butane. Subproject 260
Foams : Flexible	CFC-11	Methylene chloride	Beijing Foam Plastic Replacement of CFC-11 used to produce extruded polyurethane flexible foams with water/methylene chloride blowing agent and an accelerated cooling system. Capital costs include procurement of an accelerated curing system, a metering and storage system, improved ventilation, and safety training. There will be no incremental operating costs or savings. EC requested World Bank to report on possible reduction in costs by avoiding the need for a very high cost accelerated cooling system. Subproject 100
Foams : Flexible	CFC-11	Methylene chloride	Gaofeng Plastic Plant Replacement of CFC-11 used to produce extruded polyurethane flexible foams with water/methylene chloride blowing agent and an accelerated cooling system. Capital costs include procurement of an accelerated curing system, a metering and storage system, improved ventilation, and safety training. There will be no incremental operating costs or savings. EC requested World Bank to report on possible reduction in costs by avoiding the need to extend the factory premises). Subproject 180
Foams : Flexible	CFC-11	Methylene chloride	Hebei Dongfeng Plastic Replacement of CFC-11 used to produce extruded polyurethane flexible foams with water/methylene chloride blowing agent and an accelerated cooling system. Capital costs include procurement of an accelerated curing system, a metering and storage system, improved ventilation, and safety training. There will be no incremental operating costs or savings. Subproject 110
Foams : Rigid	CFC-11	CO2	Shanghai #6 Replacement of CFC with HCFC-141b (interim) and CO2 (final) used in the production of rigid polyurethane pipe insulation foam. Plant modifications include technology transfer, equipment modifications (high-pressuring foaming machine, premix station) and safety. Production trials and training will be provided. Subproject 105
Halons	Halon 1211	Closure	Tongxiang Dismantling of present production facility and demolishing the workshop buildings and warehouses which have no other useful purpose. Appropriate disposition of staff and workers employed would be made according to national laws and local regulations. Approval was contingent on a permanent decrease in the total annual actual national halon production at a level of at least 400 tons below current levels as indicated in the project. Subproject 1,200

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Jul 1994	\$450,000			Procurement agent agreed and factory has begun to seek quotes for equipment. Detailed production drawings not yet complete. Safety guidelines require additional consideration.
	Dec 1994	\$394,000			Procurement agent has been assigned. Price solicitation is underway
	Dec 1994	\$222,190			Procurement agent has been assigned. Price solicitation is underway
	Dec 1994	\$267,100			Procurement agent has been assigned. Price solicitation is underway
	Dec 1994	\$720,000			Procurement agent has been assigned. Price solicitation is underway.
	Dec 1994	\$458,400			Procurement agent has been assigned. Price solicitation is underway
	Dec 1994	\$268,600			Procurement agent has been assigned. Price solicitation is underway.
	Jul 1994	\$687,000			The factory plans to adopt pentane instead of CO2 as its long-term blowing agent using approved funds. Procurement agent has been agreed and the factory has begun solicitation of quotes.
1,200	Jul 1994	\$838,000			Plant was closed in December 1994. Funds will be disbursed retroactively.

Montreal Protocol

Region/Country		Project Activity Description		Project Type ^{1/}	ODP to be Phased Out ^{2/}
Sector	ODS	Replacement Technology	Subproject Description		
Refrigeration : Commercial	CFC-12	HCFC-22	<u>Beijing Refrigeration</u> Conversion to HCFC-22 compressor. It will include equipment purchase and installation, training, trial production and scaling-up to full-scale production, with an agreement in principle with Arctic Circle, UK. There will be some modernization to the production facility, which will be compensated with a 20% portion of the project cost that will be borne by the enterprise. EC stated that whenever possible HCFCs should not be used but in view of the extensive review conducted, the advice of the World Bank expert, the ability of the country to implement non-ODS technologies in this sub-sector at this time, the consequences to the ozone layer of delaying action, the cost effectiveness and the advanced state of project development, it was appropriate to proceed with this technology.	Subproject	245
Refrigeration : Commercial	CFC-12	HCFC-22	<u>Nanjing Refrigeration</u> Conversion to HCFC-22 compressor. It will include equipment purchase and installation, training, trial production and scaling-up to full-scale production, with an agreement in principle with Arctic Circle, UK. There will be some modernization to the production facility, which will be compensated with a 20% portion of the project cost that will be borne by the enterprise. EC stated that whenever possible HCFCs should not be used but in view of the extensive review conducted, the advice of the World Bank expert, the ability of the country to implement non-ODS technologies in this sub-sector at this time, the consequences to the ozone layer of delaying action, the cost effectiveness and the advanced state of project development, it was appropriate to proceed with this technology.	Subproject	300
Refrigeration : Commercial	CFC-12	HCFC-22	<u>Taizhou Refrigeration</u> Conversion to HCFC-22 compressor. It will include equipment purchase and installation, training, trial production and scaling-up to full-scale production, with an agreement in principle with Arctic Circle, UK. There will be some modernization to the production facility, which will be compensated with a 20% portion of the project cost that will be borne by the enterprise. EC stated that whenever possible HCFCs should not be used but in view of the extensive review conducted, the advice of the World Bank expert, the ability of the country to implement non-ODS technologies in this sub-sector at this time, the consequences to the ozone layer of delaying action, the cost effectiveness and the advanced state of project development, it was appropriate to proceed with this technology.	Subproject	300
Refrigeration : Commercial	CFC-12	Ammonia(NH3)	<u>Yantai Refrigeration</u> Production of small and medium open-type compressors with technology from abroad. Using existing production machinery and few new pieces, the enterprise will set up a production facility for 3,200 compressors per year. This will not directly displace any of the current production but will replace CFC-12 compressors manufactured by other (Luahuan Ref. Machinery Factory, Harbin, Wuhan, Hangzhou, Guangzhou, Changcheng, Qingpu Branch Shanghai Air Conditioning).	Subproject	240
Refrigeration : Commercial	CFC-12	HCFC-22	<u>Shanghai Refrigeration</u> Conversion to HCFC-22 compressor. It will include equipment purchase and installation, training, trial production and scaling-up to full-scale production, with an agreement in principle with York International, USA. There will be some modernization to the production facility, which will be compensated with a 20% portion of the project cost that will be borne by the enterprise. EC stated that whenever possible HCFCs should not be used but in view of the extensive review conducted, the advice of the World Bank expert, the ability of the country to implement non-ODS technologies in this sub-sector at this time, the consequences to the ozone layer of delaying action, the cost effectiveness and the advanced state of project development, it was appropriate to proceed with this technology.	Subproject	170
Refrigeration : Commercial	CFC-12	HCFC-22	<u>Anhui Refrigeration</u> Conversion to HCFC-22 compressor. It will include equipment purchase and installation, training, trial production and scaling-up to full-scale production, with an agreement in principle with York International, USA. There will be some modernization to the production facility, which will be compensated with a 20% portion of the project cost that will be borne by the enterprise. EC stated that whenever possible HCFCs should not be used but in view of the extensive review conducted, the advice of the World Bank expert, the ability of the country to implement non-ODS technologies in this sub-sector at this time, the consequences to the ozone layer of delaying action, the cost effectiveness and the advanced state of project development, it was appropriate to proceed with this technology.	Subproject	180

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons - estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Dec 1994	\$3,098,000			Technology transfer agreement negotiated with Artic Circle.
	Mar 1995	\$2,890,000			Technology transfer agreement with Artic Circle negotiated.
	Mar 1995	\$2,797,500			Technology transfer agreement with Arctic Circle negotiated.
	Mar 1995	\$2,874,000			Recently approved.
	Mar 1995	\$2,710,000			Recently approved.
	Mar 1995	\$2,224,000			

Montreal Protocol

Region/Country Project Activity Description				Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description		
Refrigeration : Domestic	CFC-12	HFC-152a	<u>Chang Ling</u>	Subproject	70
		HCFC-22	Replacement of CFC-12 with HFC-152a and HCFC-22 blend as refrigerant in household refrigerators. Technology has been developed locally in cooperation with Xi'an Jiaotong University. In Phase I, engineering, product development and lab and field testing of 500 units produced under factory conditions will be conducted. Full conversion of the factory will be made during Phase II.		
Refrigeration : Domestic	CFC-12	HFC-134a	<u>Hua Yi Electrical</u>	Subproject	60
			Replacement of CFC-12 with HFC-134a as refrigerant in household refrigerators using new reciprocating compressors manufactured by Tecumseh (USA). Retroactive financing of Phase I of the project (engineering, product development and lab and field testing of 500 units produced under factory conditions) is being requested.		
Refrigeration : Domestic	CFC-12	HFC-134a	<u>Shanghai Shangling</u>	Subproject	108
			Replacement of CFC-12 with HFC-134a as refrigerant in household refrigerators. In Phase I, engineering, product development and lab and field testing of 500 units produced under factory conditions, will be conducted. Full conversion of the plant will be made during Phase II.		
Refrigeration : Domestic	CFC-12	Ternary blend refrigerant (MP-39)	<u>Shanghai Shanglu</u>	Subproject	70
			Replacement of CFC-12 with a blend of HCFC-22 and HFC-152a in household refrigerators. Technology has been developed in co-operation with DuPont China Limited and the Shanghai General Mechanical Institute. In Phase I, engineering, product development and lab and field testing of 500 units produced under factory conditions will be conducted. Full conversion of the plant will be made during Phase II.		
Refrigeration : Domestic	CFC-12	HFC-152a	<u>Wanabo Electrical</u>	Subproject	80
			Replacement of CFC-12 with a blend of HCFC-22 and HFC-152a in household refrigerators. Technology has been developed in co-operation with DuPont China Limited and the Shanghai General Mechanical Institute. In Phase I, engineering, product development and lab and field testing of 500 units produced under factory conditions will be conducted. Full conversion of the plant will be made during Phase II.		
Refrigeration : Domestic	CFC-12	HFC-134a	<u>Shanghai Compressor</u>	Subproject	100
			Production of 500,000 rotary HFC-134a compressors. Technology will be obtained from Mitsubishi (Japan). In Phase I, engineering, product development and lab and field testing of 1,000 units will be conducted. Full conversion of the factory will be made during Phase II.		
PPA I for ODS I and ODS II				Pre-investment	N/A
					N/A
PPA II for ODS III				Pre-investment	N/A
					N/A

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Jul 1994	\$853,000			
	Jul 1994	\$1,368,000			Conversion to 134a largely complete although additional equipment still required. Funds will be requested retroactively.
	Jul 1994	\$1,327,000			Technology agreement with Mitsubishi still being finalized. Procurement will commence following agreement signature.
	Jul 1994	\$1,010,000			Three test units built with MP39. Technology agreement with Dupont negotiated but not yet signed. Procurement agency is awaiting grant agreement signature to proceed.
	Jul 1994	\$1,360,000			120 units with 152a produced and under going testing. Project is 12 months behind schedule in proposal. Retroactive expenses will be minimal.
	Jul 1994	\$1,280,000			Technology agreement with Mitsubishi signed in February 1995. Technology transfer was scheduled to start in May 1995 with procurement orders to be placed by August 1995.
		\$1,500,000	\$687,864		These funds are being used to support implementation of the China ODS Projects I and II. All activities are underway and will be completed in 1996.
		\$300,000	\$300,000		Project preparation activities are complete. Six proposals to phaseout 1,300 tons of CFC-12 were submitted and approved at the 16th EC meeting. In addition, a sector-wide phaseout strategy for the commercial refrigeration and air-conditioning sector was prepared (12,500 tons of CFCs).

Montreal Protocol

Region/Country					Project Type ^{1/}	ODP to be Phased Out ^{2/}
Project Activity Description		Sector	ODS	Replacement Technology	Subproject Description	
PPA III for ODS III					Proj. Preparation	N/A
						N/A
Indonesia						
CY95 Plan - ODS I Project Supervision					Project Preparation	N/A
CY95 Plan - ODS II Project Preparation						N/A
ODS Project I					Main Project	2,065
			CFC-11	Methylene chloride	<u>Association of Polyurethane Foams Indonesia Technical Assistance Program</u>	Subproject 100
					The project is divided in 2 phases: Phase I: Identification of small CFC consuming users and assistance needed to phase out ODS. Phase II: Conversion of about 50 small users from CFC to methylene chloride. It includes 4 workshops, international and local expert technical assistance, and equipment for safety measures associated with the use of methylene chloride. A vacuum cooling equipment to prevent scorching of low density foams is included. The lessons learned from this project will be used in the implementation of phaseout for small CFC users in the foam sector.	
Aerosols			CFC-12	Hydrocarbon	<u>Indonesian Ministry of Industry and Ministry of Environment (TA Aerosol)</u>	Subproject N/A
					It includes plant safety audits, a training program, safety equipment, and information awareness to several companies that have already converted from CFC to hydrocarbon. These companies do not have adequate flammability safeguards in place to prevent accidents. It will serve as a model for other aerosol-producing companies in the country.	
Foam			CFC-12	HCFC-22	<u>P.T.Tulus Bakti Sempurna CFC elimination in PS/PE foam manufacturing</u>	Subproject 95
					Replacement of CFC-12 by HCFC-22 in the manufacture of extruded polyethylene and polystyrene foams. Hydrocarbon cannot be used due to the layout of the production facility. The company is aware that the use of HCFC-22 constitutes an interim solution and will convert at its own expense to HFC-134a technology at a time that price and availability allows for the change.	
Foam			CFC-12	Pentane/Butane	<u>Inter Foam Indonesia</u>	Subproject 120
					Replacement of CFC-12 used in the production of extruded polyethylene and polystyrene foam sheets with CO2 supplemented with butane. The company has arranged to acquire a technology from Sencorp Systems Inc., USA. Training and technology transfer is included.	

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons - estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
		\$320,000	\$213,650		Project preparation activities are complete, including many proposals and six sector phaseout strategies. The third of three foam workshops was successfully held in May 1995. 26 foam projects, to be implemented by UNDP and the Bank, were prepared following first two workshops.
		\$72,000	\$36,003		Activities under this budget item include the supervision of the ODS phaseout project in Indonesia. Supervision is on-going.
		\$220,000	\$17,305		This budget is being utilized to support the preparation of investment projects in Indonesia and will consist in a project preparation advance of US\$170,000.
		\$8,681,200	\$1,500,000		Subprojects are being implemented under a \$17 million umbrella grant agreement. Enterprises are now finalizing subproject agreements with the financial agent.
	Nov 1993	\$1,600,000		Sep 96	Detailed work program under preparation.
	Nov 1993	\$238,000		Jun 96	Financial agent finalizing agreements with the enterprises.
	Nov 1993	\$416,000			Financial agent finalizing agreement with the enterprises. Enterprise in revising proposal to convert to LPG within approved budget. The revised proposal will be OORG endorsed before finalization of the subgrant agreement with the financial agent.
	Dec 1994	\$390,000			Financial agent finalizing agreement with the enterprise. Enterprise in revising proposal to convert to LPG within approved budget. The revised proposal will be OORG endorsed before finalization of the subgrant agreement with the financial agent.

Montreal Protocol

Region/Country	Project Activity Description			Project Type ^{1/}	ODP to be Phased Out ^{2/}
Sector	ODS	Replacement Technology	Subproject Description		
Foam	CFC-11	HCFC-22	<u>P.T. Dasu Windu Agung CFC-11 elimination in foam manufacturing</u> Replacement of CFC-11 by either water blown foam system or HCFC-22 blowing agent use in the production of moulded, integral skin, rigid spray, and rim foams. Due to higher viscosities and low boiling point of the blowing agent, low-pressure equipment will be replaced by high-pressure units. A vacuum cooling equipment to prevent scorching of low density foams is included. The company is aware that HCFC-22 is an interim solution.	Subproject	122
Foam	CFC-12	CO2	<u>Intitri Muliatama Phaseout of CFC in PS/PE Foam Production</u> This project will phase out 120 MT of CFC-12 consumption in the production of extruded polystyrene (EPS) and polyethylene (EPE) foam sheet at PT. Intitri Muliatama by converting the production line to the use of butane/carbon dioxide for EPS and EPE. The enterprise previously intended to convert to CO2 using licensed technology from DOW Chemical. However, it has become clear through the company's negotiations that DOW will no longer make such technology available to enterprises in Indonesia. The company has identified another supplier that is willing to provide CO2 blowing technology. Intitri will, however, have to supplement its use of CO2 with butane and undertake various safety modifications at its plant. As before, the revised project proposal takes into account the local content of the enterprise (50%).	Subproject	120
Foams : Flexible	CFC-11	Methylene chloride	<u>Multikarya Makmur</u> Replacement of CFC-11 with methylene chloride used as a blowing agent in the production of flexible polyurethane foam. It includes installation of a vacuum cooling system to avoid scorching during production of low density foam, and measures to ensure occupational health and safety.	Subproject	200
Foams : Flexible	CFC-11	Methylene chloride	<u>P.T. Erlangga</u> Phaseout of CFC used as a blowing agent through the use of methylene chloride technology. Plant modifications include: enhanced ventilation for both maxfoam and batch foam-making lines, procurement of fire and safety equipment, and installation of vacuum cooling equipment will remove additional process heat that is generated and reduce the use of methylene chloride and a partial substitution to water-blown formulations.	Subproject	100
Foams : Flexible	CFC-11	Methylene chloride	<u>Positive Foam</u> Replacement of CFC-11 with methylene chloride used as a blowing agent in the production of flexible polyurethane foam. It includes installation of a vacuum cooling system to avoid scorching during production of low density foam, and measures to ensure occupational health and safety.	Subproject	90
Foams : Flexible	CFC-11	Methylene chloride	<u>P.T. Royal Abadi</u> Phaseout of CFC used as a blowing agent through the use of methylene chloride technology. Plant modifications include: enhanced ventilation for both maxfoam and batch foam-making lines, procurement of fire and safety equipment, and installation of vacuum cooling equipment will remove additional process heat that is generated and reduce the use of methylene chloride and a partial substitution to water-blown formulations.	Subproject	120
Foams : Flexible	CFC-11	Methylene chloride	<u>Musimmassejahtera</u> Replacement of CFC-11 with methylene chloride used as a blowing agent in the production of flexible polyurethane foam. It includes installation of a vacuum cooling system to avoid scorching during production of low density foam, and measures to ensure occupational health and safety.	Subproject	120
Foams : Flexible	CFC-11	Methylene chloride	<u>P.T. Foamindo CFC-11 elimination in foam manufacturing</u> This project will phase out 80 MT of CFC-11 consumption in the production of flexible polyurethane foam (both slabstock and moulded) at PT Foamindo by converting foam-blowing operations to methylene chloride (slabstock) and water blown systems (moulded). The enterprise to train personnel in the safe handling of methylene chloride. The requested grant takes into account the local content of the enterprise (51%).	Subproject	80

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Plased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Nov 1993	\$1,733,000		Sep 95	Down payment on equipment complete. Finalizing project agreement with financial agent.
	Nov 1993	\$387,000			New technology supplier identified. Financial agent finalizing agreement with the enterprise. Enterprise in revising proposal to convert to LPG within approved budget. The revised proposal will be OORG endorsed before finalization of the subgrant agreement with the financial agent.
	Dec 1994	\$123,700			Financial agent finalizing agreement with the enterprise.
	Jul 1994	\$379,000		Dec 95	Financial agent finalizing agreement with the enterprise.
	Dec 1994	\$449,000		Dec 95	Financial agent finalizing agreement with the enterprise.
	Jul 1994	\$237,500		Dec 95	Financial agent finalizing agreement with the enterprise.
	Dec 1994	\$390,000		Dec 95	Financial agent finalizing agreement with the enterprise.
	Nov 1993	\$175,000			Financial agent finalizing agreement with the enterprise.

Montreal Protocol

Region/Country	Project Activity Description	Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description
Malaysia			
Halons	Halon 1211	ABC dry powder	Multicomponent Halon Subproject 465 Phase out the use of halon 1211 in all fire equipment manufacturing by replacing halon 1211 extinguisher manufacturers with the production of ABC powder and CO2 units. It includes procurement of new equipment, modification of some existing equipment and training to increase companies abilities to manufacture ABC and CO2 units. Operating savings are calculated on the basis of the differences in production costs of halon 1211 extinguishers and ABC powder or CO2 extinguishers. EC decided that no further projects for the conversion of halon extinguishers would be brought forward since this project represented conversion of the entire sub-sector in the country. Approval was contingent on the Bank receiving confirmation from the Government that no future production of halon portable fire extinguishers was planned.
MAC	CFC-12	Recovery/Recycle	PT Nippondenso Subproject 41 To reduce emissions of CFC-12 during servicing of MAC units by installation of recycling equipment at multiple service shops. Practical implementation issues will be identified during a pilot phase in which 50 recycling machines will be installed and resolved prior to full scale implementation in which another 320 machines are installed. Ongoing training and equipment maintenance will be provided to MAC service shops.
Refrigeration : Domestic	CFC-12	HFC-134a	Lippo Melca Subproject 46 Phaseout of CFC-12 in refrigeration circuit of household refrigerators by converting to HFC-134a refrigerant. The elimination of CFC in insulation foam will be submitted in another project proposal at a later stage. It includes engineering assistance, training, testing, procurement and installation of equipment for mass production of new refrigerators. The company is a subsidiary of Matsushita, Japan, who will provide assistance in model development and testing. The company will contribute with 50% of cost of test equipment. Operating costs are calculated for a six months duration based on actual production of 47,000 units per year. Local ownership fraction of 52.7% was considered in the incremental cost analysis.
Refrigeration : Domestic	CFC-12	HFC-134a	Sanyo Industries Subproject 73 Replacement of CFC-12 and CFC-11 used in the production of household refrigerators with HFC-134a as refrigerant and HCFC-141b as foam blowing agent (transition to cyclopentane). The company is a subsidiary of Sanyo, Japan. The conversion has started and it is expected to be completed in mid-1995 (retroactive funding). Costs requested are for product development, technical assistance, training and conversion of the plant. Engineering assistance and training are provided by Sanyo, Japan. Company will contribute with 50% of cost of test equipment. Incremental operating costs are calculated for a 6 month duration. Local ownership fraction of 35% was considered in the incremental cost analysis.
Refrigeration : Domestic	CFC-12	HCFC-141b	Sharp Yasonia Subproject 173 Replacement of CFC-12 and CFC-11 used in the production of household refrigerators with HFC-134a as refrigerant and cyclopentane as foam blowing agent. It will cover testing and development of non-CFC foam insulation and refrigeration systems and conversion of the refrigeration part of the production line. A project on the conversion of the foam insulation system to cyclopentane will be submitted to a future meeting. Training will be provided from Sharp, Japan. Incremental operating costs are requested at 10% of eligible capital cost. The enterprise would contribute 50% of the cost of the test equipment. Local ownership fraction of 49% was considered in the incremental cost analysis.
Several			EA/TA (Financial Agent/Technical Assistance) Subproject N/A
Project Preparation Advance			Pre-investment N/A
			N/A
CY95 Plan - ODS I Project Preparation			
			Proj. Preparation N/A

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Dec 1994	\$500,000			Financial agent finalizing agreement with the enterprise.
	Dec 1994	\$327,000			Detailed work program under preparation.
	Dec 1994	\$382,000			Financial agent finalizing agreement with the enterprise.
	Dec 1994	\$558,000			Financial agent finalizing agreement with the enterprise.
	Dec 1994	\$346,000			Financial agent finalizing agreement with the enterprise.
	Mar 1994	\$50,000			Program underway.
		\$250,000	\$250,000		Project preparation activities are complete. 14 subproject proposals were prepared.
		\$153,000	\$111,551		Malaysia ODS I will consist in the umbrella agreement. Project preparation is at an advanced stage and it slated for signature in the next few weeks.

Montreal Protocol

Region/Country					Project Type/	ODP to be Phased Out 2/
Project Activity Description						
Sector	ODS	Replacement Technology	Subproject Description			
CY95 Plan - ODS II Project Supervision						N/A
ODS Investment Project I					Main Project	337
Aerosols	CFC-12	Hydrocarbon	<u>Kontrak</u>		Subproject	200
Retroactive request for the purchase of a hydrocarbon filling line (1992) and equipment and safety devices to convert other CFC filling lines to hydrocarbons. Equipment is also requested to enable the plant to act as a filling center for small fillers who cannot cost-effectively convert to HAP. (In 1993, a fire destroyed the filling plant).						
Aerosols	CFC-12		<u>Argon</u>		Subproject	38
Replacement of CFC to hydrocarbon propellant (HAP). The company now fills some products with HAP, without proper safety equipment installed. The enterprise is willing to provide new facilities for safety reasons at its own cost. A new filling machine with water bath, modifications to current installations, an additional molecular sieve column, and safety equipment is requested.						
Refrigeration : Domestic	CFC-12	HFC-134a	<u>MELCOM</u>		Subproject	99
Replacement of CFC used in manufacturing commercial refrigerator equipment (insulation panels, refrigerators and display cabinets), with HCFC-141b (as foam blowing agent) as an interim substitution and HFC-134a (as refrigerant). Enterprise plans to convert to cyclopentane in 1997. The low-pressure foaming unit will be replaced by a high-pressure machine, and the refrigerant evacuation and charging equipment will also be replaced. TCA used as a solvent cleaning will be phased out through a water soluble oil system. Incremental operating costs are requested for 6 months. Local ownership fraction of 56.9% was considered in the incremental cost analysis.						
ODS Recycling Project					Main Project	1,270
Halons	Halon 1211	Recovery/Recycle	<u>Servicing, maintenance and recovery of portable extinguishers (Halon-1211) and training program</u>		Subproject	900
The project will establish maintenance and recovery centers, a central reclamation plant, a training program for 100 core trainers and 500 technicians, and procurement of 50 halon-recycling machines.						
MAC	CFC-12	Recovery/Recycle	<u>Conservation, leakage control and recycling of CFC-12 and demonstration project in MAC sector</u>		Subproject	370
Establishment of a national recycling network and a training program for 90 core trainers and 500 technicians, and procurement of 200 CFC-recycling machines.						
Philippines						
Controlled Substances Engineering Project					Pre-investment	N/A
						N/A
CY95 Plan - ODS I Project Preparation and Supervision						N/A

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
		\$51,300	\$3,928		This budget is being utilized to supervise the MACs Recover and Recyclling project approved for Malaysia in 1993.
		\$2,025,700			Umbrella grant agreement negotiations completed in May 1995. Signing and effectiveness expected by July 1995. Subproject activity has been initiated by enterprises.
	Dec 1994	\$618,000			Newly approved.
	Dec 1994	\$131,200			Newly approved.
	Dec 1994	\$1,276,500			Project implementation under way. Funds will be disbursed retroactively.
		\$1,630,000	\$364,100		Implementation of the two recycling subprojects is underway.
	Feb 1992	\$720,000			Contract for equipment and technical assistance awarded. Awaiting documentation to process disbursement.
	Feb 1992	\$910,000			50 MAC recycle machines imported and are being installed at service shops by July 1995. Training is being conducted in parallel to installations.
		\$400,000	\$393,675		Project completed and closed. Balance of funds returned to Multilateral Fund.
		\$224,000	\$24,537		Ongoing.

Montreal Protocol

Region/Country		Project Activity Description		Project Type ^{1/}	ODP to be Phased Out ^{2/}
Sector	ODS	Replacement Technology	Subproject Description		
ODS Project I				Main Project	791
Foams : Rigid	CFC-11	HCFC-141b	<u>Application of a reduced CFC blowing agent and non-CFC application preparation at Philippines Appliance Corporation (Philacor)</u> The project is aimed at reducing CFC-11 by 50% using available technology. Foaming operations will be converted to equipment capable of processing high-pressure foam formulations. The high-pressure equipment improves performance of the low-pressure foam formulation and will be required in future phases for a complete CFC phaseout in foam production through introduction of HCFC technology. It will also include a batch testing. The final phase of the project will be the conversion to a non-CFC foam formulation (i.e., HFC-134a) that would require high-pressure handling. Local ownership fraction of 61% was considered in the incremental cost analysis.	Subproject	240
Foams : Rigid	CFC-11	HCFC-141b	<u>Application of a reduced CFC blowing agent and non-CFC application preparation at Federal Electric Company</u> The project is aimed at reducing CFC-11 by 50% using available technology. Foaming operations will be converted to equipment capable of processing high-pressure foam formulations. The high-pressure equipment improves performance of the low-pressure foam formulation and will be required in future phases for a complete CFC phaseout in foam production through introduction of HCFC technology. It will also include a batch testing. The final phase of the project will be the conversion to a non-CFC foam formulation (i.e., HFC-134a) that would require high-pressure handling.	Subproject	2
Foams : Rigid	CFC-11	HCFC-141b	<u>Application of a reduced CFC blowing agent and non-CFC application preparation at Sanyo Philippines</u> The project is aimed at reducing CFC-11 by 50% using available technology. Foaming operations will be converted to equipment capable of processing high-pressure foam formulations. The high-pressure equipment improves performance of the low-pressure foam formulation and will be required in future phases for a complete CFC phaseout in foam production through introduction of HCFC technology. It will also include a batch testing. The final phase of the project will be the conversion to a non-CFC foam formulation (i.e., HFC-134a) that would require high-pressure handling. Local ownership fraction of 70% was considered in the incremental cost analysis.	Subproject	10
Foams : Rigid	CFC-11	HCFC-141b	<u>Application of a reduced CFC blowing agent and non-CFC application preparation at Concepcion Industries</u> The project is aimed at reducing CFC-11 by 50% using available technology. Foaming operations will be converted to equipment capable of processing high-pressure foam formulations. The high-pressure equipment improves performance of the low-pressure foam formulation and will be required in future phases for a complete CFC phaseout in foam production through introduction of HCFC technology. It will also include a batch testing. The final phase of the project will be the conversion to a non-CFC foam formulation (i.e., HFC-134a) that would require high-pressure handling.	Subproject	70

1/ Project Type: Main Project, Subproject, or Pre-investment.
 2/ Metric tons estimated at time of project preparation.
 PPA - Project Preparation Advance.

N/A - Not applicable.
 TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
141		\$11,729,000	\$1,500,000		The grant agreement is signed and effective. Subproject activity has been initiated by enterprises. Enterprises are finalizing subgrant agreements with the financial intermediaries (FI). The agreement is being amended into a \$30 million umbrella agreement.
100	Mar 1993	\$1,770,000		Mar 96	Commercial production with 50% reduced CFC-11 achieved for phaseout of 100 tons in 1994. Philacor will next adopt HCFC-141b with funds approved under this project for total phaseout of 214 tonnes ODP in 1995. Agreement with FI will be finalized soon. Disbursements will be retroactive.
1	Mar 1993	\$770,000			Reduction of 1 tonne of CFC-11 complete through adoption of 50% CFC foam. Thermal efficiency down 2%. The company, now called Transunion, will use approved funds to adopt HCFC 141b for total of 2.2 tonnes of ODP phaseout in 1995. Agreement with FI will be finalized soon. Disbursements will be retroactive.
5	Mar 1993	\$660,000		Mar 96	Reduction of 5 MT/year complete through adoption of 50% CFC foam. Sanyo will use funds approved under this project to convert to HCFC-141b for phaseout of total of 9 tonnes ODP in 1995. Agreement with FI will be finalized soon. Disbursements will be retroactive.
35	Mar 1993	\$790,000		Mar 96	Reduction of 35 tonnes of CFC-11 complete through adoption of 50% CFC foam. Thermal efficiency down 8%. Concepcion will use funds approved under this project to convert to HCFC-141b for phaseout of total of 62 tonnes ODP in 1995. Agreement with FI will be finalized soon. Disbursements will be retroactive.

Montreal Protocol

Region/Country		Project Activity Description			Project Type ^{1/}	ODP to be Phased Out ^{2/}
Sector	ODS	Replacement Technology	Subproject Description			
Other	CFC-11	CO2	<u>Conversion of tobacco stuffing process to carbon dioxide at Fortune Tobacco Corporation</u>		Subproject	350
			The CFC-11 stuffing process will be replaced with a new dry ice expanded tobacco (AIRCO's-DIET) CO2 process. The patent holder and distributor of this process technology is AIRCO Industrial Gases (New Jersey, USA). Funding for this project will provide for the acquisition of AIRCO's services to design, plan and install a 2,500 lb/hr plant. The project will not enhance the manufacture or sale of tobacco products in any other way, nor does it represent an expansion of the production capacity. The project will also eliminate a negligible amount of HCFC-22 used as refrigerant in one component of the expansion process.			
Several			<u>Technical assistance for the financial institution</u>			N/A
			Build up the financial institution's technical expertise for the appraisal and supervision of ODS phaseout projects through training.			
Several			<u>Institutional strengthening for Ozone Desk Operations</u>			N/A
			Strengthen the DENR Montreal Protocol Secretariat (Ozone Desk), to facilitate the execution of the cost-effective phaseout program proposed by the Government.			
Solvents	TCA	Aqueous cleaning with ultrasonic	<u>Conversion to high-purity water cleaning at Integrated Microelectronics, Inc.</u>		Subproject	15
	CFC-113		Phaseout of CFC-113 in one-in-line high-volume vapor degreaser and one-batch vapor degreaser for cleaning electronic devices and metal parts (pulse transformers, coils, hard disk drives). The project will replace the high-volume degreaser with one high-volume aqueous cleaning machine and retrofit the batch degreaser for use with non-ODS solvent (methylene chloride or trichloroethylene). The project will also provide for wastewater treatment system installation, improvement to exhaust and ventilation systems and training.			
Solvents	CFC-113	Low-emissions vapor degreasers	<u>Conversion to low-emission processing and organic solvents at Pacific Semiconductors, Inc.</u>		Subproject	11
			Phaseout of CFC-113 and trichloroethane (TCA) in five vapor degreasers used for cleaning electronic components, metallic lead frames, and other metal parts. The project consists of the following elements: . Process development and material handling. . Low-emission vapor degreasers (using perchloroethylene, dichloromethane or another organic solvent). . Improvement to exhaust and ventilation systems. . System design and training. Local ownership fraction of 80% was considered in the incremental cost analysis.			
Solvents	CFC-113	Semi-aqueous cleaning	<u>Conversion to semi-aqueous cleaning solvents at Solid Circuits, Inc.</u>		Subproject	3
			Phaseout of CFC-113 in one-batch vapor degreaser for cleaning of specialty electronic components. The project will replace the batch vapor degreaser with a batch semi-aqueous cleaning machine; will provide for a closed-loop water rising system, improvement to exhaust and ventilation systems, engineering support and training.			
Solvents	CFC-113	Aqueous cleaning with ultrasonic	<u>Conversion to aqueous at Electronic Assemblies.</u>		Subproject	4
			Phaseout of CFC-113 in three vapor degreasers use for cleaning electronic circuit cards. The project consists of the following elements: . Process development and material handling. . Deionized water system installation. . High-volume aqueous cleaning machine installation. . High-volume semi-aqueous cleaning machine installation. . Ionic contamination tester installation. . Water decanter installation. . Water recycling system installation. . Wastewater treatment system installation. . Improvement to exhaust and ventilation systems. . Training.			

^{1/} Project Type: Main Project, Subproject, or Pre-investment.
^{2/} Metric tons estimated at time of project preparation.
 PPA - Project Preparation Advance.

N/A - Not applicable.
 TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Mar 1993	\$4,720,000		Jun 96	Contract signed. Procurement package cleared. Project agreement being finalized with financial agent.
	Mar 1993	\$100,000			Program underway.
	Mar 1993	\$209,000			Program underway.
	Mar 1993	\$430,000			Project agreement being finalized with financial agent.
	Mar 1993	\$710,000		Jan 96	Project agreement being finalized with financial agent.
	Mar 1993	\$70,000			Project agreement being finalized with financial agent.
	Mar 1993	\$710,000		Jan 96	Project agreement being finalized with financial agent.

Montreal Protocol

Region/Country Project Activity Description				Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description		
Solvents	CFC-113		Conversion to semi-aqueous and aqueous cleaning solvents at Ionics Circuits, Inc.	Subproject	86
	TCA	Semi-aqueous cleaning	Phaseout of CFC-113 (98 metric tons/year) and methyl chloroform (73 metric tons/year), in eight vapor degreasers used for cleaning electronic circuit cards, computer disk drives, and other equipment. The project consists of the following elements: . Process development and material handling. . Deionized water system installation. . Aqueous cleaning machine installation. . Batch semi-aqueous cleaning machines (4) installation. . Water recycling system installation. . Wastewater treatment system installation. . Improve 5 exhaust and ventilation systems. . System design and training. Local ownership fraction of 90% was considered in the incremental cost analysis.		
Philippines					
Controlled Substances Engineering Project				Pre-investment	N/A
					N/A
CY95 Plan - ODS I Project Supervision and Preparation				Proj. Preparation	N/A
ODS Project I				Main Project	1,292
Foams : Rigid	CFC-11	HFC-141b	<u>Technic Foam</u> Replacement of CFC-11 with HCFC-141b use in rigid polyurethane insulating foam production, through modification of existing equipment and chemical formulations and technical assistance (Technic Foam, Ltd. is the largest of 3 PU spray insulation companies with more than 60% of the market). Incremental operating costs result from differences in blowing agent cost.	Subproject	50
MAC	CFC-12	Recovery/Recycling	<u>CFC recycling in MAC</u>	Subproject	250
MAC	CFC-12	HFC-134a	<u>Nippondense</u> Phaseout of CFC-12 used in manufacturing MAC systems. The project is divided into 2 phases. Phase I: conversion of the existing assembly line, including replacement of tools and equipment for the production and assembly of evaporators, condensers, piping, and connectors. Phase II: replacement of brazing oven. Funds requested are only for Phase I. Local ownership fraction of 64% was considered in the incremental cost analysis.	Subproject	85
Refrigeration	CFC-12	HFC-134a	<u>Sanyo Universal -- 2 sites, Phase I.</u> Replacement of CFC with HFC-134a as refrigerant and HCFC-141b as a foam blowing agent, in two phases. In Phase I technical assistance, training, and acquisition of equipment for testing new refrigerators (modification to production test room to increase the cooling test time and improve ventilation, air conditioning systems) will be provided. In Phase II new equipment (charging equipment for HFC-134a, halogen leak detector for HFC-134a, chlorine checkers and two sets of pre-mix equipment) will be installed. Sanyo Electric of Japan (its parent company) will provide technical assistance (designs, tests, drawings, training). Local ownership fraction of 65% was considered in the incremental cost analysis.	Subproject	486

1/ Project Type: Main Project, Subproject, or Pre-investment.
 2/ Metric tons estimated at time of project preparation.
 PPA - Project Preparation Advance.

N/A - Not applicable.
 TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Mar 1993	\$790,000		Jan 96	Project agreement being finalized with financial agent.
		\$390,000	\$389,960		Project completed and closed. Balance returned to Multilateral Fund.
		\$374,000	\$90,645		Project supervision is on-going. Support also being provided to further project preparation.
44		\$12,401,660			The \$40 million umbrella grant agreement has been signed, but effectiveness is pending receipt of a legal opinion. Subproject activity has been initiated by enterprises. The enterprises are finalizing subgrant agreements with the financial agent.
	Jun 1993	\$180,000			Project agreement being finalized with financial agent.
	Jun 1992	\$900,000			Government is seeking proposals for project implementation.
	Jul 1994	\$142,000			Project agreement being finalized with financial agent.
	Jun 1993	\$1,890,000			Project agreement being finalized with financial agent.

Montreal Protocol

Region/Country	Project Activity Description	Project Type ^{1/}	ODP to be Phased Out ^{2/}
Sector	ODS	Replacement Technology	Subproject Description
Refrigeration	CFC-12	HFC-134a	<u>Sanyo Universal - Compressor</u> To assemble 100 HFC-134a compressors using imported parts, followed by test manufacturing of 1,200 compressors (12 models) in existing facilities. It includes acquisition of technology from Sanyo Japan, procurement and installation of testing facilities, production and testing, field test in refrigerators, freezers, coolers, and feasibility study and cost estimate for full plant conversion (planned for Phase II). Local ownership fraction of 65% was considered in the incremental cost analysis. Subproject N/A
Refrigeration	CFC-12	HFC-134a	<u>Kulthorn Kirby</u> To assemble 100 HFC-134a compressors using imported parts, followed by test manufacturing of 1,200 compressors (9 models) in existing facilities. It includes acquisition of compressor technology from Tecumseh and motor technology from Kirby, procurement and installation of testing facilities, production and testing, field test in refrigerators, freezers, coolers, and feasibility study and cost estimate for full plant conversion (planned for Phase II). Local ownership fraction of 70% was considered in the incremental cost analysis. Subproject N/A
Refrigeration	CFC-12	HFC-134a	<u>Hitachi -- Phase I</u> Replacement of CFC with HFC-134a as a refrigerant and HCFC-141b as foam blowing agent, in two phases. In Phase I technical assistance, training, and acquisition of equipment for testing new refrigerators (controlled ambient test room with data acquisition system) will be provided. In Phase II new equipment (charging equipment for HFC-134a, halogen leak detectors for HFC-134a, a set of dies, moulds and jigs, and maybe a vacuum forming machine will be installed. Hitachi Ltd. of Japan (its parent company) will provide technical assistance (designs, tests, drawings, training). Local ownership fraction of 51% was considered in the incremental cost analysis. Subproject 144
Refrigeration	CFC-12	HFC-134a	<u>Kang Yong -- Mitsubishi Phase I</u> Replacement of CFC with HFC-134a as refrigerant and HCFC-141b as a foam blowing agent, in two phases. In Phase I technical assistance, training, and acquisition of equipment for testing new refrigerators (controlled ambient test room with data acquisition system) will be provided. In Phase II new equipment (charging equipment for HFC-134a, halogen leak detector for HFC-134a and polyurethane injection foam machine) will be installed. A new vacuum forming machine might be needed. The new foam may need more time for curing which will require lengthening the foaming line. Mitsubishi Electric Co. of Japan (its parent company) will provide technical assistance (designs, tests, drawings, training). Local ownership fraction of 60% was considered in the incremental cost analysis. Subproject 120
Refrigeration	CFC-12	HFC-134a	<u>Thai Toshiba Phase I</u> Replacement of CFC with HFC-134a as a refrigerant and HCFC-141b as a foam blowing agent, in two phases. In Phase I technical assistance, training, and acquisition of equipment for testing new refrigerators (controlled ambient test room with data acquisition system) will be provided. In Phase II new equipment (charging equipment for HFC-134a and a polyurethane injection foam machine) will be installed. Change in insulation thickness will require a set of new dies, moulds and jigs. Toshiba Corporation of Japan (its parent company) will provide technical assistance (designs, tests, drawings, training). Local ownership fraction of 54.5% was considered in the incremental cost analysis. Subproject 54
Solvents	CFC-113	Aqueous cleaning with ultrasonic	<u>Teamtronics</u> Phaseout of CFC-113 used in the cleaning of flexible circuit card assemblies through one in-line aqueous cleaner, including a water purification system. Subproject 12
Solvents	TCA	Aqueous cleaning with ultrasonic	<u>Thai Heat Exchanger</u> Phaseout of 1,1,1 trichloroethane (TCA) use for cleaning small and medium size heat exchangers for MAC and refrigeration units at Thai Heat Exchange Co. Ltd. (THECO). It will replace the vapour degreaser cleaning process with an aqueous based cleaning process and drying equipment. Subproject 11
Solvents	TCA	Aqueous cleaning with ultrasonic	<u>CIGroup</u> Phaseout of 1,1,1 trichloroethane (TCA) used for cleaning small and medium size heat exchangers for MAC and refrigeration units at C.I. Group Company, Ltd. (CIG). An aqueous based cleaning process including a dryer, and water recycling equipment will be installed. Subproject 13

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Jun 1993	\$1,000,000			Project implementation near completion. Financing will be requested retroactively.
	Jun 1993	\$680,000			Project agreement being finalized with financial agent.
	Jun 1993	\$550,000			Project agreement being finalized with financial agent. Funds will be disbursed retroactively.
	Jun 1993	\$1,100,000			Project agreement being finalized with financial agent.
	Jun 1993	\$830,000			Project agreement being finalized with financial agent.
	Jul 1994	\$221,760			Project agreement being finalized with financial agent.
	Jun 1993	\$268,000			Project enterprise changed location. Project being revised for new plant location.
	Jun 1993	\$277,000			C1 Group considering reformatting project to adopt "no clean" instead of aqueous technology as proposed in approved project.

Montreal Protocol

Region/Country		Project Activity Description		Subproject Description	Project Type ^{1/}	ODP to be Phased Out ^{2/}
Sector	ODS	Replacement Technology				
Solvents	CFC-113	Aqueous cleaning with ultrasonic	<u>Thai Airways</u>		Subproject	6
				Phaseout of ODS solvents used in aircraft maintenance operations by replacing them with aqueous cleaning system, non-ODS solvents and no-clean options. Environment aspects are duly taken into consideration. It also aims to provide a basis for transfer of CFC-free technology in the airline industry in other countries. EC recommended that implementing agencies take into consideration the experience gained in preparation of this project when preparing similar projects in other Article 5 countries.		
Solvents	CFC-113	Aqueous cleaning with ultrasonic	<u>GSS Array</u>	Subproject	16	
				Phaseout of CFC-113/methanol blended solvent in the cleaning of circuit card assemblies at GSS Array (GSS) by installing 3 in-line aqueous cleaners, to remove flux residues and light ionic contamination from the circuit cards. It also includes a water recycling system. Local ownership fraction of 51% was considered in the incremental cost analysis.		
Solvents	CFC-113	Aqueous cleaning with ultrasonic	<u>Saha Union</u>	Subproject	27	
				Phaseout of CFC-113 and ethanol azeotrope by adopting an ultrapure deionized (UDI) water cleaning process (reverse osmosis, water filtration, distillation, air filtration). The project consists of: . Ultraclean, low-moisture air equipment; . Ultrapure deionized water and air equipment; . Wastewater treatment and recycling system; . Recurring costs (solvent purchase, labor, electricity). Local ownership fraction of 80% was considered in the incremental cost analysis.		
Solvents	CFC-113	Aqueous cleaning with ultrasonic	<u>Hana Semiconductor</u>	Subproject	18	
				The project will eliminate CFC-113 and TCA in two vapor degreasers through adoption of aqueous-based processes. The CFC-113-based degreaser is used in the PCB division to remove flux residues from the soldering process, and the TCA is used in the semi-conductor division to remove mould release compound from electronic parts. The project includes: . Process development and material compatibility testing; . Purchase of 3 medium capacity wet-media blasting machines; . Purchase of 1 high-volume aqueous cleaning machine; . Installation and training; . Recurring costs (labor, electricity, wastewater treatment); . Costs of environmental permitting; Local ownership fraction of 78% was considered in the incremental cost analysis.		
	TCA	Aqueous cleaning with ultrasonic				

^{1/} Project Type: Main Project, Subproject, or Pre-investment.
^{2/} Metric tons estimated at time of project preparation.
 PPA - Project Preparation Advance.

N/A - Not applicable.
 TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Dec 1994	\$463,900			Newly approved.
17	Jun 1993	\$316,000			Project implementation complete. Project agreement being finalized. Retroactive financing will be sought from funds already approved by the EC.
27	Jun 1993	\$2,573,000			Project implementation complete. Financing will be provided retroactively.
	Jun 1993	\$1,010,000			Project implementation underway. Special attention being given to adequate water treatment. Project agreement being finalized with financial agent. Funds will be requested retroactively.

Montreal Protocol

Region/Country	Project Activity Description	Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description
Europe and Central Asia		Regional Coordinator : Bill Rahill	
Bulgaria			
CY95 Plan - ODS I Project Supervision			N/A
CY95 Plan - ODS II Project Preparation			N/A
IFC - ODS Project I (Assan Foam)			Main Project 180
Foams : Rigid	CFC-11	Cyclopentane	Assan Foam Subproject 180
			Replacement of CFC-11 blowing agent with cyclopentane in manufacturing rigid polyurethane-foam insulating panels. A small portion of the production will be converted to HCFC-141b for a transitional period of 2 years and to a water blown system thereafter. It includes modification of existing equipment when possible, installation of safety equipment, trial runs, testing, and training. The existing foam machine will be used with HCFC-141b blowing agent. Incremental operating savings due to a lower price of pentane than CFC-11 will be offset by higher costs for the need of fire retardant polyols, higher operation and maintenance, higher density of the all water-blown foam, and ongoing safety training.
ODS Project I			Main Project 754
Refrigeration	CFC-12	Recovery/Recycle	Recovery and recycling of CFC-12 at a refrigeration production plant Subproject 4
			To provide a recovery machine for each of three servicing stations and a reclaim machine at the refrigerant incoming facility. The recovered refrigerant will be reclaimed and returned to the market, as stock of new refrigerant.
Refrigeration	CFC-12	Recovery/Recycle	Recovery and recycling of CFC-12 in network of service shops Subproject N/A
			Installation of CFC-12 recovery machines at 90 service shops, a training program, establishment of a reclamation center, and testing laboratory. After a test-period, the center will be expanded to provide service to all CFC-12 based equipment.
Refrigeration : Domestic	CFC-11	Cyclopentane	Introduction of non-ODS technologies in the production of domestic refrigerators at Arçelik A.S. Subproject 750
	CFC-12	HFC-134a	This project will introduce non-ODS technologies in both the refrigeration loop and foam injection operations of the manufacturing plant. The switch to non-ODS foam technologies will be achieved through a two-step approach. First the CFC content of the foam will be reduced by 50% and then a non-ODS alternative will be introduced. Although initially the project intended to use a transitional substance, the enterprise has opted to introduce cyclopentane as the non-ODS blowing agent of choice. This project also includes the redesign of a large number of compressor models for use with HFC-134a. The CFC-12 used in the refrigeration cycle is being replaced by HFC-134a, a non-ODS alternative which has been introduced in a large number of compressor manufacturing.

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
		\$30,000	\$114		Project supervision is on-going.
		\$80,000	\$0		This second project for Turkey consists in an umbrella agreement of US\$18 million, which should cover the transfe of resources for the next 2 to 3 years. This umbrella agreement is now in the final stages of preparation and is expected to signed in the July-September timeframe. Substantial retroactive financing is expected.
		\$925,000			Project has been appraised by IFC (which is executing agency on behalf of the Bank). Implementation will be initiated shortly after grant agreement signature which is expected in the July-September timeframe.
	Dec 1994	\$925,000			Project has been appraised by IFC (which is executing agency on behalf of the Bank). Implementation will be initiated shortly after grant agreement signature.
655		\$6,165,000	\$4,243,375		Project under implementation. Most components are well advanced and close to completion. Substantial ODS phaseout has been achieved.
4	Jun 1992	\$65,000		Dec 94	Subproject has been fully implemented. Monitoring of recovery and quality or material underway.
1	Jun 1992	\$400,000		Jun 96	Arcelik is in the midst of this pilot program. Twelve machines have been purchased and are being tested in service shops in Istanbul, Trakya and Kadikoy regions. These machines have been purchased from 7 different firms and each has different handling and operational features in order to determine what is most appropriate for the Turkish servicing sector. The collected refrigerant is being analyzed in great detail to determine its recyclability. Arcelik's objective is to expand the program to over sixty centers by 1996.
650	Oct 1992	\$4,900,000		Dec 95	The conversion to non-ODS technologies in the foaming operation is complete. Cyclopentane has successfully been introduced and is now in continuous use. The cost of this conversion has been larger than initially planned due to the extensive safety equipments required to accommodate a flammable material. This conversion has lead to a savings of about 600 tons ODP. A growing volume of refrigerators is now being produced with HFC-134a compressors and the switchover in production will be completed by the end of 1996. ODS savings in this area have been estimated at about 50 tons. The enterprise is also pursuing, at its own costs, the development of hydrocarbon compressors which it may manufacture to service some European markets. Arcelik commenced the mass production of CFC-free refrigerators in November 1994 and is actively marketing their environmentally-friendly product.

Montreal Protocol

Region/Country		Project Activity Description		Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description		
Several			<u>Demonstration activities in other sectors</u> The purpose of this component is to support the testing of new technologies or to support the preparation of new investment projects.	Subproject	N/A
Several			<u>Institutional strengthening</u> Creation of an Ozone Panel consisting of a joint industry and Government panel to encourage dialogue on key issues and to broker agreements on conservation, bans and other policies; finalize the provisions for the ODS monitoring system; establishment of policy and regulatory measures for the introduction of levies and bans; introduction of an ODS licensing system and accreditation system for refrigeration technicians; and public and industry awareness.	Subproject	N/A
ODS Project II				Main Project	327
Refrigeration : Domestic	CFC-11	Cyclopentane	<u>Klimasan A.S.</u> Replacement of CFC-11 used as a blowing agent with cyclopentane and CFC-12 used as refrigerant with HFC-134a. The conversion will be implemented in two phases. In Phase I, the plant will be converted to HCFC-141b technology, and in Phase II to cyclopentane technology. It includes modification of existing equipment when possible, procurement and installation of new equipment, redesign of assembly lines, testing and development of prototypes, and training.	Subproject	37
	CFC-12	HFC-134a			
Refrigeration : Domestic	CFC-11	Cyclopentane	<u>PEG Profile</u> Replacement of CFC-11 used as a blowing agent with cyclopentane and CFC-12 used as refrigerant with HFC-134a. It includes modification of existing equipment when possible, procurement and installation of new equipment, redesign of assembly lines, testing and development of prototypes, and training.	Subproject	290
	CFC-12	HFC-134a			

1/ Project Type: Main Project, Subproject, or Pre-investment.

2/ Metric tons estimated at time of project preparation.

PPA - Project Preparation Advance.

N/A - Not applicable.

TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Jun 1992	\$500,000			This fund is being administered by the Technology Development Foundation (TDF) and is supporting the identification and preparation of projects where new and ODS-free technologies can be implemented. A number of project preparation activities have been funded under this component, including the preparation of three additional refrigeration-sector projects which were approved at the EC's 15th Meeting. Additional project identification is being supported in the halon and solvent sector.
	Oct 1992	\$300,000			Additional measures have been taken to accelerate implementation of institutional strengthening component. Budget constraints due to austerity measures were addressed and budgets were made available to cover the VAT needed to disburse part of the IS budget. The first meeting of the Ozone Panel was held. Both the monitoring and regulatory framework are now under review.
290		\$2,268,903			Project implementation has been initiated by Klimasan and completed by PEG Profilo. Provisions for retroactive funding are being made in the grant agreement. A third refrigeration-sector project has been prepared for consideration at the 17th EC Meeting.
	Dec 1994	\$690,903		Dec 95	Project implementation has already been initiated. Provisions for retroactive financing are being made in grant agreement.
290	Dec 1994	\$1,578,000		Dec 95	Project implementation has been completed. CFC-free refrigerators are now on the market. Additional safety measures for the proper handling and usage of cyclopentane were recommended during the course of appraisal of the umbrella project. Provisions for retroactive funding are being made in grant agreement.

Montreal Protocol

Region/Country				Project Type1/	ODP to be Phased Out 2/
Project Activity Description					
Sector	ODS	Replacement Technology	Subproject Description		
Latin America and the Caribbean		Regional Coordinator : Sergio Oxman			
Argentina					
CY95 Plan - ODS Project I					N/A
ODS Project I				Main Project	376
MAC	CFC-12	HFC-134a	<u>Mirgor S.A. Conversion of the production of CFC-12 hoses for MAC to HFC-134a refrigerant</u> Conversion of manufacturing of hoses to be used in HFC-134a MAC units. It includes redesign and retooling of production lines, training, technical assistance, and incremental operating costs for one year, due to the use of HFC-134a compressors. To assure CFC reduction, this project has been integrated with the Interclima project (condensers and evaporators) and the Cachan project (condensers), in order to cover all system components. Incremental operational costs were deferred until production of HFC-134a condensers and evaporators starts.	Subproject	N/A
MAC	CFC-12	HFC-134a	<u>Interclima S.A. Conversion of the production of CFC-12 heat exchangers for MAC to HFC-134a refrigerant</u> Conversion of production of CFC-12 heat exchangers for MAC to HFC-134a refrigerant. It includes redesign and retooling of production lines, training, and technical assistance. The change to parallel flow condenser design includes a Seco Warwick Aluminum Brazing System (flux application system, drying oven, brazing furnace), cut-off and tube straightener, wash paint process, degreasing system, leak test. To assure CFC reduction, this project has been integrated with the Cachan project (condensers) and the Mirgor project (unit assembly and hoses).	Subproject	183
MAC	CFC-12	HFC-134a	<u>Simon Cachan S.A. Conversion of the production of CFC-12 condensers for MAC to HFC-134a refrigerant</u> Conversion of production of CFC-12 condensers for MAC to HFC-134a refrigerant. It includes redesign and retooling of production lines, training, and technical assistance. The parallel flow condenser design involves, inter alia, manufacture of multi-channel tube, aluminum fins, aluminum tanks and heads, degreasing, washing and drying, preheating, furnace brazing, and cooling in nitrogen atmosphere, leakage test, and painting. To assure CFC reduction, this project has been integrated with the Interclima project (condensers and evaporators) and the Mirgor project (unit assembly and hoses).	Subproject	N/A

1/ Project Type: Main Project, Subproject, or Pre-investment.
 2/ Metric tons estimated at time of project preparation.
 PPA - Project Preparation Advance.

N/A - Not applicable.
 TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
		\$175,000	\$104,441		Invitation to negotiate an umbrella grant agreement of US\$25 million was submitted to the Government of Argentina on March 27, 1995. Seven projects were submitted and approved at the 15th EC Meeting. Some delays in signing the documents are expected due to the forthcoming Presidential elections and associated administrative changes in the Government.
		\$13,467,811			Invitation to negotiate an umbrella grant agreement of US\$25 million was submitted to the Government of Argentina on March 27, 1995. A draft grant agreement for consideration of the Government of Argentina, GOA was sent by the Bank in early April. The document is undergoing minor revisions resulting from the GOA review. In parallel, the Bank supported project preparation leading to the submission of six projects to the 17th meeting of the EC: 5 projects in the domestic refrigeration sector and 1 project in MACs.
	Dec 1994	\$35,632			The Country Department submitted legal documents to the Government of Argentina in April 1995. Grant agreement is expect to be signed with the Government of Argentina during the third quarter of CY95. The grant agreement is required for the subsequent transfer of funds. Incremental operational cost of US\$1,882,187 was deferred of approval.
	Dec 1994	\$1,983,430			The Country Department submitted legal documents to the Government of Argentina in April 1995. Grant agreement is expect to be signed with the Government of Argentina during the third quarter of CY95. The grant agreement is required for the subsequent transfer of funds. Incremental operational cost of US\$1,882,187 was deferred of approval.
	Dec 1994	\$2,738,217			The Country Department submitted legal documents to the Government of Argentina in April 1995. Grant agreement is expect to be signed with the Government of Argentina during the third quarter of CY95. The grant agreement is required for the subsequent transfer of funds. Incremental operational cost of US\$1,882,187 was deferred of approval.

Montreal Protocol

Region/Country	Project Activity Description	ODS	Replacement Technology	Subproject Description	Project Type1/	ODP to be Phased Out 2/
Refrigeration : Domestic	CFC-11	Cyclopentane	HFC-134a	<u>Fribe Buenos Aires Plant. Conversion of a domestic refrigeration plant. Replacement of CFC-11 used as blowing agent with cyclopentane and CFC-12 used as refrigerant with HFC-134a</u> Replacement of CFC-11 used as a blowing agent with cyclopentane and CFC-12 used as refrigerant with HFC-134a. It includes modification of existing equipment when possible, procurement and installation of new equipment, redesign of assembly lines, testing and development of prototypes, and training. Incremental operating costs include the additional costs of raw materials and the HFC-134a compressors for one year's duration. Disbursement will be required when the actual production of non-CFC refrigerators starts (Bank should report back to EC).	Subproject	37
	CFC-12					
Refrigeration : Domestic	CFC-11	Cyclopentane	HFC-134a	<u>McLean S.A. Conversion of a domestic refrigeration plant. Replacement of CFC-11 used as blowing agent with cyclopentane and CFC-12 used as refrigerant with HFC-134a</u> Replacement of CFC-11 used as a blowing agent with cyclopentane and CFC-12 used as refrigerant with HFC-134a. It includes modification of existing equipment when possible, procurement and installation of new equipment, redesign of assembly lines, testing and development of prototypes, and training. Incremental operating costs include the additional costs of raw materials and the HFC-134a compressors for one year's duration. Disbursement will be required when the actual production of non-CFC refrigerators starts (Bank should report back to EC).	Subproject	74
	CFC-12					
Refrigeration : Domestic	CFC-11	Cyclopentane	HFC-134a	<u>Fribe La Rioja Plant. Conversion of a domestic refrigeration plant. Replacement of CFC-11 used as blowing agent with cyclopentane and CFC-12 used as refrigerant with HFC-134a</u> Replacement of CFC-11 used as a blowing agent with cyclopentane and CFC-12 used as refrigerant with HFC-134a. It includes modification of existing equipment when possible, procurement and installation of new equipment, redesign of assembly lines, testing and development of prototypes, and training. Incremental operating costs include the additional costs of raw materials and the HFC-134a compressors for one year's duration. Disbursement will be required when the actual production of non-CFC refrigerators starts (Bank should report back to EC).	Subproject	20
	CFC-12					
Refrigeration : Domestic	CFC-11	Cyclopentane	HFC-134a	<u>Helametal S.A. & Helametal Catamarca. Conversion of a domestic refrigeration plant. Replacement of CFC-11 used as blowing agent with cyclopentane and CFC-12 used as refrigerant with HFC-134a</u> Replacement of CFC-11 used as a blowing agent with cyclopentane and CFC-12 used as refrigerant with HFC-134a. It includes modification of existing equipment when possible, procurement and installation of new equipment, redesign of assembly lines, testing and development of prototypes, and training. Incremental operating costs include the additional costs of raw materials and the HFC-134a compressors for one year's duration. Disbursement will be required when the actual production of non-CFC refrigerators starts (Bank should report back to EC).	Subproject	62
	CFC-12					

Bravall

CY95 Plan - ODS I Project Supervision and Preparation

N/A

1/ Project Type: Main Project, Subproject, or Pre-investment.
 2/ Metric tons estimated at time of project preparation.
 PPA - Project Preparation Advance.

N/A - Not applicable.
 TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Dec 1994	\$1,822,750			The Country Department submitted legal documents to the Government of Argentina in April 1995. Grant agreement is expect to be signed with the Government of Argentina during the third quarter of CY95. The grant agreement is required for the subsequent transfer of funds. Incremental cost was requested for a one-year duration.
	Dec 1994	\$2,440,570			The Country Department submitted legal documents to the Government of Argentina in April 1995. Grant agreement is expect to be signed with the Government of Argentina during the third quarter of CY95. The grant agreement is required for the subsequent transfer of funds. Incremental cost was requested for a one-year duration.
	Dec 1994	\$1,488,127			The Country Department submitted legal documents to the Government of Argentina in April 1995. Grant agreement is expect to be signed with the Government of Argentina during the third quarter of CY95. The grant agreement is required for the subsequent transfer of funds. Incremental cost was requested for a one-year duration.
	Dec 1994	\$2,959,085			The Country Department submitted legal documents to the Government of Argentina in April 1995. Grant agreement is expect to be signed with the Government of Argentina during the third quarter of CY95. The grant agreement is required for the subsequent transfer of funds. Incremental cost was requested for a one-year duration.
		\$210,000	\$103,900		Project supervision is on-going. Support to project preparation being managed by FINEP is also being provided.

Montreal Protocol

Region/Country	Project Activity Description	Project Type ^{1/}	ODP to be Phased Out ^{2/}
Sector	ODS	Replacement Technology	Subproject Description
ODS Project 1			Main Project 572
Refrigeration			Project preparation on converting CFC-11 central air conditioning units with HCFC-123 or HFC-134a
Refrigeration	CFC-12	Recovery/Recycle	CFC-12 collection, recycling and conservation program for household refrigerator maintenance and repair shops Provide repair shops with equipment and training for the collection and recycling of CFC-12 from refrigerators and freezers. After collection, the CFC-12 will be delivered to Hoechst for purification and resale at reduced price. Operating costs will be covered from sales of the recycled CFC-12. The implementation will start with a pilot stage followed by full scale production if proven.
Refrigeration : Domestic	CFC-12	HFC-134a	Refrapir, Sao Carlos. Conversion of a domestic refrigeration plant.
	CFC-11	50% CFC Reduced	This project covers the transition to 50% ODS reduced insulation foam. The company is planning to switch over to HCFC-141b in the near future without requesting additional financing. Capital costs are associated with replacement and conversion of existing equipment and testing. Local ownership fraction of 93.5% was considered in the incremental cost analysis.
Refrigeration : Domestic	CFC-11	Cyclopentane	Metalfrío. Conversion of a domestic refrigeration plant
	CFC-12	HFC-134a	Replacement of CFC-11 and CFC-12 used in manufacturing freezers with cyclopentane, HFC-134a and HP-162 as refrigerants and with non-chlorinated chemicals as cleaning solvents. It includes refrigeration model redesign, installation of safety measures (protection, gas detector system, exhausting and ventilation), and training. Incremental operating costs for a one-year period will be assessed and requested for reimbursement on a post-facto basis at a later stage.
Refrigeration : Domestic	CFC-12	HFC-134a	EMBRACO - Compressor manufacturing Purchase and installation of the ester oil storage, dehumidification and charging system for use on 7 assembly lines for HFC-134a compressors. Phase I (3 lines) is already completed and funding will be retroactive. Phase II will consist of installations for 6 additional lines, 2 of which will not be eligible for funding as they are for expanded capacity. The EC requested that the production exported to Article 5 countries should be at a price which takes funding from the Multilateral Fund into account; there must be no double-counting; and the assistance given by the Multilateral Fund to refrigerator manufacturers based in Article 5 countries supplied with compressors from Embraco should take the subsidy given to Embraco into account. Local ownership fraction of 53% was considered in the incremental cost analysis. Also, the share of Embraco's production (79%) utilized in Article 5 countries was considered.

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
270		\$5,674,163	\$1,000,000		An umbrella grant agreement was signed with FINEP (the financial intermediary) in Brazil on December 17, 1993 for a total amount of US\$10.9 million. The Bank and FINEP exchanged views on enhancing project identification and preparation at the national level during a workshop held in March 1995. The workshop contributed to accelerating project preparation which resulted in seven projects prepared for the 17th Meeting of EC; five projects in rigid foams, one in domestic refrigeration, and one in solvents. The Government of Brazil and the implementing agencies signed an agreement in December 1994 clarifying the division of activities for the implementation of the Montreal Protocol in Brazil.
	Jun 1992	\$400,000			The scope of this project preparation activity was expanded to cover other sectors which are more cost-effective. Several of the projects presented to the 17th EC Meeting were prepared by FINEP with funding from this activity.
	Jun 1992	\$2,000,000			The national recovery and recycling program will consist in a very large network of servicing centers and recycling centers. Pilot program being designed. To be processed through umbrella agreement. FINEP has submitted a revised project proposal (3 R's) and the Bank has requested clarification on the policy framework involved.
	Dec 1994	\$162,603			Speedy implementation expected taking into account the umbrella agreement signed in December 1993.
	Dec 1994	\$2,360,360			Speedy implementation is expected taking into account the umbrella agreement signed in December 1993. Following approval at the 15th EC Meeting, ownership of the company has changed (Bosh-Siemmens), reducing the local capital to 65%. The grant amount will be adjusted accordingly.
270	Jul 1994	\$221,200			Project has been fully implemented resulting in savings of 270 tons per year ODP.

Montreal Protocol

Region/Country					ODP to be Phased Out 2/
Project Activity Description					Project Type1/
Sector	ODS	Replacement Technology	Subproject Description		
Refrigeration : Domestic	CFC-12	HFC-134a	<u>Assembly line refitting for HFC-134a refrigerator compressor commercial production.</u> Conversion of 7 compressor assembly lines with new ester oil storage and filling facilities in the 2 largest refrigerator compressor manufacturers, EMBRACO and SICOM (75% of the market). Commercial production is expected to begin end of 1993.		Subproject N/A

CH00

CY95 Plan - ODS I Project Supervision and Preparation

Proj. Preparation N/A

ODS Project I

Main Project 350

Several		Public Awareness	N/A
The program will promote consumer discrimination in favour of "ozone friendly" products by providing public information on the hazards of ozone depletion through the mass media.			
Several		Ozone Seal	N/A
The Ozone Seal component will standardize labels on "ozone friendly" products and services.			
Several	CFC-11/12	TECFIN	350
Technological Conversion Financing Program will provide a lump sum subsidy to private firms to purchase alternative technologies. The subsidy will be expressed in terms of US\$ per ODP saved over a "reduction" period.			
Several		Ozone Team	N/A
The Ozone Team will monitor and coordinate the proposed projects and develop an action plan for Phase II from 1996-2000.			
Several		Specific Training	N/A
The component will provide technical guidance to technicians and entrepreneurs in specific industries on mechanisms to shift to non-ozone-depleting technologies.			

CH00007

CY95 Plan - ODS I Project Preparation

N/A

1/ Project Type: Main Project, Subproject, or Pre-investment.
 2/ Metric tons estimated at time of project preparation.
 PPA - Project Preparation Advance.

N/A - Not applicable.
 TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Jun 1992	\$530,000			Project has been CLOSED. This early project approval has become redundant given the EC's approval of the July 1994 compressor manufacturing project for EMBRACO. Funds will be credited against future project approvals for Brazil.
		\$130,000	\$36,039		Activities under this component include the supervision of the first project which is under implementation (details under Chile ODS I) and the preparation of the second phase on investment projects which will expand the unique formula adopted by Chile in its first project. The use of Market-Based Instruments (MBI) will also be considered as part of the design of the second project.
		\$1,206,076	\$181,483		The grant agreement was signed in July 1993. Project implementation has been initiated. The main component of this grant agreement provides subsidies to private firms in the foam and refrigeration sectors for the conversion to non-ODS technologies. After overcoming legal and institutional problems, project implementation is now proceeding as planned. By the end of the summer, investment proposals for a first tranche of financing under the TECFIN program will be evaluated. Initial delays in the investment program were due partly to uncertainties about budgetary autonomy of the National Commission of Environment CONAMA.
	Jun 1992	\$361,000			The concept and timing of the campaign was developed for dissemination of the Ozone seal. The bidding process took place in December 1994 and the contract is being awarded.
	Jun 1992	\$7,000			The contest for the "Ozone Seal" logo drew 240 participants. An award of \$3,000 was handed to the winning design in June 1994. The seal has been legally registered and the bidding process for private certification firms is underway. This component is now completed.
	Jun 1992	\$495,000			A number of subprojects are now under preparation for funding under the TECFIN component. Institutional delays have been addressed and this component is now proceeding forward. The present plan is that the grant to large consumers (more than 10 tons per year) will be the lesser of 90% of the actual cost incurred and US\$2/kg ODP reduction. For small consumers, the maximum grant is the lesser of 90% of the actual cost incurred and US\$20,000. Based on the identified pipeline, it is expected that this component will lead to the actual phaseout of about 350 tons.
	Jun 1992	\$215,200			The Ozone Team was appointed in December 1993. In mid 1994 the Team delivered a satisfactory progress report. The Team is fully operational and proceeding with the various project activities.
	Jun 1992	\$127,876			The program is intended for plant managers, technicians and operators closely related with the potential investment projects. The first seminar is planned to be held in CY95.
		\$40,000	\$24,245		Project supervision on-going. Implementation is proceeding satisfactorily. A second phase of the Country Program is expected for CY95.

Montreal Protocol

Region/Country Project Activity Description				Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description		
ODS Project I				Main Project	340
Aerosols	CFC-12	HAP (Hydrocarbon Aerosol Propellant)	<u>Conversion of aerosol plants to hydrocarbon propellants</u> Phaseout CFC-12 in 18 aerosol manufacturing plants by introducing hydrocarbon propellants (HAP): . Laboratorios Windsor (60 ton CFC/year); . Pro Quim (6 ton CFC/year); . Jabonería Nacional (50 ton CFC/year); . Camposa (5 ton CFC/year); . Other companies (about 14 plants) (169 ton CFC/year). The following sections of each plant will be modified: (i) propellant delivery and storage, (ii) filling system (room and equipment that injects the pressurized propellant), and (iii) final product warehouse. The filling station ("open-air filling room") will be adapted to minimize the risk of fire during propellant injection. Each plant will undergo a four-part training program.	Subproject	290
Foams : Flexible	CFC-11	Reduced (50%) CO2	<u>Reduction of CFC-11 use in foam insulation at three refrigerator manufacturing plants</u> Elimination of CFC-11 use for foam insulation in the 3 largest refrigeration manufacturing companies (Indurama, Durex, Ecasa). The plants will require some or all of the following equipment changes to adapt to the CO2/water system: (i) mould modifications (adding heaters), (ii) procurement of an oven to heat portions of the mould or refrigerator cabinet, (iii) replacing low-pressure foam injection system with a high-pressure system, (iv) new ancillary equipment (mixing equipment), and (v) training provided by the suppliers of the equipment and the CO2/water system.	Subproject	50
Several			<u>Institutional Strengthening</u> To strengthen MICIP's operational capacity to establish and operate a Montreal Protocol Project Implementation Unit (MPPIU). This unit will be responsible for the implementation of Phases I and II of the Country Program.	Subproject	N/A

Mexico

CY95 Plan - ODS I & II Supervision

N/A

CY95 Plan - ODS III Project Preparation

N/A

MAC Recycling and Aerosols

Main Project

N/A

N/A

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
60		\$1,566,000	\$714,014		Project implementation is proceeding satisfactorily. The grant agreement includes conversion of aerosol producers and reduction of ODS in foam applications for domestic refrigerator manufacturers.
60	Mar 1993	\$697,000			Project appraisal completed in June 1993. Grant agreement signed in September 1993. The Implementation phase has been completed at Laboratory Windsor. Staff of the ozone unit are currently monitoring production at Laboratory Windsor while implementation continues at other enterprises.
	Mar 1993	\$665,000			Project appraisal completed in June 1993. Grant agreement signed in September 1993. The implementation has been completed at Indurama. New foam injection equipment is in place and operational. In early fall 1995, Indurama expects to begin production with HFC-141b and completely phase out the consumption of CFC.
	Mar 1993	\$204,000			Project appraisal completed in June 1993. Grant agreement signed in September 1993. Public awareness campaign has been successfully carried out.
		\$20,000	\$18,777		Supervision of projects is on-going.
		\$30,000	\$0		It is unlikely that new MP investment projects will be pursued in Mexico by the Bank at this time.
		\$180,000			The project consist of two components: CFC-12 Recycling (42%) and Aerosol Manufacturing Safety (58%). The Bank proposed an action plan to the Government of Mexico to improve the implementation of the Montreal Protocol in January 1995. The contract for the aerosol component was awarded in April 1995.

Montreal Protocol

Region/Country	Project Activity Description				Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description			
ODS Project I -- Ozone Protection Policy					Main Project	436
Refrigeration : Commercial	CFC-12	Recovery/Recycle	<u>Instituto Mexicano de S.S.</u> Recovery and recycling of CFC in the installation of the Institute.	Subproject	15	
Refrigeration : Commercial	CFC-12	Recovery/Recycle	<u>Climas Jimenez</u> Recovery and recycling of CFC in the installation and maintenance of commercial refrigeration.	Subproject	4	
Refrigeration : Domestic	CFC-11/12	Recovery/Recycle	<u>Quimobasicos Planta</u> To set the technical and operational conditions at the local producer of ODS, to recover and recycle ODS.	Subproject	140	
Refrigeration : Domestic	CFC-11/12	Recovery/Recycle	<u>Quimobasicos Promotion</u> To promote and teach Mexican technicians about recovery and recycling options of ODS.	Subproject	18	
Refrigeration : Domestic	CFC-12	HFC-134a	<u>Refrigeracion Ojeda</u> Modify the line of production to HFC-134a.	Subproject	130	
Solvents	CFC-113	Methylene chloride	<u>Quimica Omega</u> Recovery and recycling of CFC-113 and methyl chloroform used as solvents.	Subproject	128	
Solvents	CFC-113	Semi-aqueous cleaning	<u>Styloptic S.A.</u> Modify the cleaning process through which the parts are cleaned in this glass-frame factory.	Subproject	1	

Uruguay

CY95 Plan - ODS I Project Preparation

N/A

ODS Project I Investment				Main Project	48
Foams : Rigid	CFC-11	HCFC-141b	<u>Etchepare-Gil S.A. Replacement of CFC-11 used in the production of rigid foam with HCFC-141b</u> Replacement of CFC-11 used in the production of rigid polyurethane foam for insulation in water heater tanks with HCFC-141b, given the domestic availability of chemical products and equipment. It includes installation of a high pressure foaming machine, mould modifications, trial runs and training.	Subproject	4
Foams : Rigid	CFC-11	HCFC-141b	<u>Tein S.A. Replacement of CFC-11 used in the production of rigid foam with HCFC-141b</u> Replacement of CFC-11 used in the production of rigid polyurethane foam for insulation in water heater tanks with HCFC-141b, given the domestic availability of chemical products and equipment. It includes installation of a high pressure foaming machine, mould modifications, trial runs and training. EC requested the World Bank to ensure the old equipment was disposed of in accordance with existing guidelines.	Subproject	5

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
		\$1,605,070	\$890,424		The total funds allocated by the EC are US\$4.0 million. Seven subsidiary agreements, committing approximately 60% of the resources were signed in June 30, 1994 between the government entities Instituto Nacional de Ecologia (INE), and Nacional Financiera (NAFIN), with the enterprises. Disbursement began quickly. The technical assistance components include: a) updating the country program; b) a survey of commercial refrigeration sector; and c) tradable permits system. Additional projects prepared for funding under this component are in final stages of preparation. Funds which are not committed after the final review of these projects will be returned to the Multilateral Fund.
	Nov 1993	\$499,918			Implementation expected to begin in 1995.
	Nov 1993	\$30,690			Implementation expected to begin in 1995.
	Mar 1994	\$222,615			Implementation expected to begin in 1995.
	Mar 1994	\$252,246			Implementation expected to begin in 1995.
	Dec 1993	\$225,000			Implementation expected to begin in 1995.
	Jan 1994	\$295,302			Implementation expected to begin in 1995.
	Jan 1994	\$79,299			Implementation expected to begin in 1995.
		\$60,000	\$25,010		Preparation of the umbrella grant agreement for Uruguay is well advanced. Preparation is on-going. Supervision will be initiated later this year.
		\$1,228,560			A draft grant agreement was delivered to the Government of Uruguay in early April which is in the process of being finalized. Signature is expected before June 30, 1995. The Bank is working with the ozone unit in assessing the viability of ODS abatement activities in the air conditioning and commercial refrigeration sectors, including recycling initiatives.
	Dec 1994	\$235,050			Approved at 15th EC Meeting. The Country Department expects to have a grant agreement effective during the second quarter of 1995.
	Dec 1994	\$220,300			Approved at 15th EC Meeting. The Country Department expects to have a grant agreement effective during the second quarter of 1995.

Montreal Protocol

Region/Country		Project Activity Description		Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description		
Refrigeration : Commercial	CFC-12	HFC-134a	<u>Indunor S.A. Conversion of a domestic refrigeration plant. Replacement of the CFC-11 used as blowing agent with cyclopentane and the CFC-12 used as refrigerant with HFC-134a.</u>	Subproject	20
	CFC-11	Cyclopentane	Replacement of CFC-11 and CFC-12 in the manufacture of cold storage rooms with cyclopentane as blowing agent and HFC-134a as refrigerant. It includes retrofitting the existing high pressure injection equipment for use with cyclopentane, review of cold circuit design, charge equipment, leak detectors, trial runs and training. Local ownership fraction of 66% was considered in the incremental cost analysis.		
Refrigeration : Domestic	CFC-12	HFC-134a	<u>Colder S.A. Conversion of a domestic refrigeration plant. Replacement of the CFC-11 used as blowing agent with HCFC-141b and the CFC-12 used as refrigerant with HFC-134a.</u>	Subproject	19
	CFC-11	HCFC-141b	Replacement of CFC-11 and CFC-12 in the manufacture of domestic refrigerators, the largest producer of domestic refrigerators (75% of the market) with HCFC-141b as blowing agent and HFC-134a as refrigerant. Cyclopentane is not an option for this company because its urban location and the municipal regulations rule out the use of flammable substances. It includes installation of a high pressure foaming machine, review of cold circuit design, charge equipment, leak detectors, trial runs and training. EC requested the World Bank to ensure that the old equipment replaced was disposed of in accordance with existing guidelines.		
Venezuela					
CY95 Plan - ODS I & II (Molanca & Chiller) Project Supervision				Proj. Preparation	N/A
CY95 Plan - ODS III (FAACA) Project Supervision					N/A
CY95 Plan - ODS IV (AAISA) Project Preparation					N/A
CY95 Plan - ODS V (Chiller retrofit) Project Supervision					N/A
ODS Project I -- Plasticos Molanca				Main Project	259
Foams : Rigid	CFC-12	Pentane/Butane	<u>Plasticos Molanca. Conversion of a CFC-12 polystyrene foam production facility to use hydrocarbon as blowing agent.</u>		259
			Installation of fire protection equipment such as fire detectors, explosion prevention systems, ventilation and isolation of electric equipment, and a training program.		

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Dec 1994	\$448,140			Approved at 15th EC Meeting. The Country Department expects to have a grant agreement effective during the second quarter of 1995.
	Dec 1994	\$325,070			Approved at 15th EC Meeting. The Country Department expects to have a grant agreement effective during the second quarter of 1995.
		\$40,000	(\$1,327)		Budget is for project supervision, including the project completion report of the Plásticos Molanca project.
		\$10,000	\$7,000		Project preparation is complete and implementation has been initiated. Supervision will be initiated shortly.
		\$10,000	\$8,335		Preparation of the grant agreement is well advanced. Arrangements are being made for grant agreement signature.
		\$10,000	\$8,141		Supervision of the Chiller Retrofit project is on-going.
259		\$1,300,000	\$1,264,626		Project is complete and the closing report is expected to be received shortly (6 months after completion). The plant production of expanded polystyrene has been shifted to the use of propane-butane and was restarted in March 1995.
259	Jun 1992	\$1,300,000			Completed. Project operational.

Montreal Protocol

Region/Country Project Activity Description				Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description		
ODS Project II -- Conversion of CFC-12 to HCFC-134a				Main Project	14
Chillers	CFC-12	Retrofit HFC-134a	<u>Chiller Retrofits, Replacement of CFC by HFC-134a as a refrigerant in central air conditioning units.</u> The projects includes i) retrofit of 27 CFC units with HFC-134a, ii) replacement of 4 CFC-12 units with new HFC-134a units, and iii) installation of 3 HFC-134a air conditioning units in new buildings.		14
ODS Project III -- FAACA-MAC				Main Project	90
MAC	CFC-12	HFC-134a	<u>FAACA Conversion of MACs</u> To convert the production line of heat exchangers and evaporators to be used in MAC units using HFC-134a as a refrigerant. It includes retooling of the fabrication line and related training, technical assistance and licensing fees for transfer of technical data and design specifications. Consumption of CFC-12 will be completely phased out when new condenser and evaporator lines are installed.	Subproject	90
ODS Project IV -- AAISA-MAC				Main Project	80
MAC	CFC-12	HFC-134a	<u>AAISA - Heat Exchanger Line</u> To convert the production line of heat exchangers and evaporators to be used in MAC units using HFC-134a as a refrigerant. It includes retooling of the fabrication line and related training, technical assistance and licensing fees for transfer of technical data and design specifications. Consumption of CFC-12 will be completely phased out when new condenser and evaporator lines are installed.		80
MAC	CFC-12	HFC-134a	<u>AAISA - Compressor Assembly Line</u> To convert the production line of heat exchangers and evaporators to be used in MAC units using HFC-134a as a refrigerant. It includes retooling of the fabrication line and related training, technical assistance and licensing fees for transfer of technical data and design specifications. Consumption of CFC-12 will be completely phased out when new condenser and evaporator lines are installed.		N/A

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
		\$1,100,000			Three of the four legal subgrant agreements have been signed. Delay in the disbursement of the approved fund was due to one company's refusal to sign the contract and receive the grant funds. On April 21, 1995 the Government of Venezuela formally canceled this allocation. Implementation is now expected to be underway shortly.
	Oct 1992	\$1,100,000			Project appraised. Three of the four legal agreements signed.
		\$3,480,000			Grant agreement was signed in January 1995. Subproject implementation is underway.
	Dec 1994	\$3,480,000			Legal agreement was signed in January 1995.
		\$4,422,000			The grant agreement is comprised of two subprojects approved in November 1993 (US\$0.62) and in September 1994 (US\$3.80) million. The Bank is in the process of final legal clearance.
	Sep 1994	\$3,802,000			Legal documents have been issued by the Bank and are under review by the enterprises and the ozone unit in Venezuela.
	Nov 1993	\$620,000			Legal documents have been issued by the Bank and are under review by the enterprises and the ozone unit in Venezuela.

Montreal Protocol

Region/Country				Project Type1/	ODP to be Phased Out 2/
Project Activity Description					
Sector	ODS	Replacement Technology	Subproject Description		
Middle East and North Africa			Regional Coordinator : Bill Rahill		
Algeria					
CY95 Plan - ODSI Project Preparation					N/A
Egypt					
CY95 Plan - IFC Project Preparation					N/A
CY95 Plan - ODS I Project Preparation					N/A
IFC - MCMC Compressor				Main Project	292
Refrigeration : Domestic	CFC-12	HFC-134a	Conversion of refrigeration compressor manufacturing to HFC-134a at MCMC Subproject includes procurement of equipment, engineering assistance and training for the design, testing and introduction of new HFC-134a technology. Much of the equipment has been procured.	Subproject	292
Jordan					
CY95 Plan - ODS I Project Supervision and Preparation					N/A
ODS Project I				Main Project	310
Aerosols	CFC-11/12	Hydrocarbon	Deodorization of liquefied petroleum gas (LPG) Supply a high-quality deodorized LPG, as substitute for CFC propellants (LPG available contains high-level of olefins). It includes preparation of specifications and designs, technical support, procurement of equipment, training and safety measures.	Subproject	200

1/ Project Type: Main Project, Subproject, or Pre-investment.
 2/ Metric tons estimated at time of project preparation.
 PPA - Project Preparation Advance.

N/A - Not applicable.
 TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
Activities are now on hold.					
		\$20,000			Funds to be utilized to finalize processing of the MCMC project and for initial supervision work.
		\$40,000	\$33,752		The reconnaissance mission which visited Egypt in 1994 reported that the scope of refrigeration-sector projects would be limited to recovery and recycling activities. Project identification was then undertaken and it was concluded that the key market conditions required to support a recovery/recycling program had yet to appear. It was therefore recommended to defer further project preparation until that time when the underlying conditions could better support such an initiative.
292		\$2,100,000			Construction of the factory is complete. The technology transfer issue and general project-related difficulties which have delayed the signing of the grant agreement between the IFC and MCMC have been resolved and the grant agreement was signed in May 1995. An important change which has occurred is that the ownership of the enterprise has changed and 25% is now owned by a non-Article 5 country. The amount of the grant was therefore reduced by 25% to take this change in ownership into consideration. The remainder of this amount (US\$700,000) will be credited to the Multilateral Fund.
292	Oct 1992	\$2,100,000		Dec 95	For all practical purposes the project has been fully implemented and the entire amount is expected to be disbursed in two tranches.
		\$60,000	\$35,993		Two supervision mission have visited Jordan to support the initiation of Project implementation. Continued close supervision is planned through the end of 1995. Continued support to project preparation is also being provided through this activity.
		\$1,200,000	\$200,000		Project Implementation Unit established. The Unit has hired the required staff and set up the office. A number of subgrant agreements have been signed and procurement of goods and services has been initiated. This project was initially approved by the EC as a line-of-grant and the entire amount has been committed, including contingencies.
	Jun 1992	\$700,000		Jun 96	Subgrant agreement has been signed. Preparation of the procurement package is complete and procurement is underway. The total project cost including contingency is expected to be US\$805,000.

Montreal Protocol

Region/Country						ODP to be Phased Out 2/
Project Activity Description						
Sector	ODS	Replacement Technology	Subproject Description	Project Type1/		
Aerosols	CFC-11/12	HAP (Hydrocarbon Aerosol Propellant)	<u>Conversion of aerosol fillers</u> Subproject will convert the aerosol filling operations of two large fillers in the Amman area.	Subproject	50	
Foams : Flexible	CFC-11	Methylene chloride	<u>Reduction of CFC-11 in flexible foam</u> Subproject to support the phaseout of CFC-11 in flexible foam manufacturing at one large foam producers.	Subproject	30	
Foams : Rigid	CFC-11		<u>Reduction of CFC-11 in rigid insulation foams in domestic and commercial refrigerators</u> Funding for subproject was approved by EC implementation by UNIDO.	Subproject	N/A	
Several			<u>Institutional Strengthening</u> Institutional strengthening to implement, inter alia, information clearing-house activities, technical awareness and assistance to industry, monitor consumption and uses of ODS, and establish procedures and guidelines for financing ODS phaseout projects.	Subproject	N/A	
ODS Project II				Main Project	114	
Foams : Flexible	CFC-11	Methylene chloride	<u>Three foam-sector enterprises</u> Project will phaseout the use of CFC-11 at three foam-sector enterprises. The replacement technology will be methylene chloride.		114	

Tunisia

CY95 Plan - ODS I Project Supervision

Proj. Preparation N/A

ODS Project I

Main Project 1,265

Aerosols	CFC-12	Hydrocarbon	<u>Technical seminar and conversion to non-CFC technology in aerosol sector</u> Technical assistance to support the replacement of CFC by hydrocarbon in small-size aerosol plants by providing required and plant modifications, technical assistance and training program.	Subproject	230	
Aerosols			<u>Technical consultancies in aerosols</u> Technical assistance to support the replacement of CFCs by hydrocarbons in small-size aerosol plants by providing required plant modifications, technical assistance and training program.	Subproject	N/A	
Foam	CFC-11		<u>Technical assistance and demonstration of non-CFC technology in rigid and flexible foam production</u> Technical assistance (seminars/consultations) and demonstration of non-CFC technology at major foam manufacturing companies (Polymousse, Sotumousse, SOTIM, Sud Intermousse, Isofrigo), in collaboration with the suppliers of foam formulations.	Subproject	700	
Foams : Rigid	CFC-11	Reduced (50%) CO2	<u>Introduction of low-CFC and non-CFCs in rigid foams in refrigeration insulation</u> Subproject is divided in two phases: Phase I will replace 50% of CFC-11 with water/CO2 as the blowing agent. Phase II will replace the remaining CFC-11. A training program and modifications of foam casting equipment (in collaboration with the suppliers of foam formulations) are also included.	Subproject	175	

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Montreal Protocol

Region/Country	Project Activity Description			Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description		
Refrigeration	CFC-12	Recovery/Recycle	<u>Maintenance of domestic, commercial and industrial refrigeration systems (including recovery and reclamation for household refrigerators)</u> Subproject is aimed at improving servicing procedures by implementing a training program for 1,000 technicians (in 2 year-period), increasing awareness among service technicians, and CFC-12 conservation by providing 25 recovery and recycling machines to large refrigeration service shops and using nitrogen for flushing and purging.	Subproject	100
Refrigeration	-	HFC-134a	<u>Technical assistance for development of HFC-134a-based domestic refrigerators</u> Subproject includes design and development of new refrigerator models, testing facility, procurement of equipment, and prototype production and testing.	Subproject	60
Several			<u>Implementation of Government action</u> Establishment of an Ozone Committee responsible to monitor ODS uses, introduction of regulatory measures, development of an ODS licensing, accreditation system, information and dissemination.	Subproject	N/A

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Jun 1992	\$250,000		Jun 96	Subgrant agreement signed with 2 aerosol fillers. Additional projects in this sector have been prepared and will soon be presented for funding. Bids have been received and are under review. Contract allocation is expected shortly
	Jun 1992	\$30,000			Subgrant agreements have been signed with the participating enterprises and implementation is proceeding. The amount allocated was based on the approved funding for other foam-sector activities plus the amount approved for this activity.
	Jun 1992	\$120,000			Project preparation in refrigeration sector being undertaken by UNIDO. Within the line-of-grant, these funds were utilized to cover contingencies and revised cost estimates of subprojects following appraisal. This activity is closed.
	Jun 1992	\$100,000			Project Implementation Unit has been established and is fully operational. Office equipment and computers have been purchased. Additional staff have been hired. Additional funds are being requested to complete the budget for the 3 year period of 1994-1996.
		\$368,500			This second project for Jordan will consist in an umbrella agreement of US\$3.5 million. The project is at an advanced stage of preparation and signature is expected shortly.
	Dec 1994	\$368,500		Dec 96	Subgrant agreements will be signed shortly after the umbrella agreement has been signed by Jordan and the Bank.
		\$35,000	\$6,639		Project supervision is ongoing. A request from the Government of Tunisia was recently received to initiate project preparation in the aerosol and solvent sectors.
		\$1,790,000	\$187,311		A project manager has been hired and the Project Implementation Unit has been established. Sub-grant agreements are being negotiated with the participating enterprises, several of which have initiated project implementation activities.
	Jun 1992	\$300,000			Project implementation initiated.
	Oct 1992	\$50,000			This component is being further prepared.
	Jun 1992	\$100,000			Project implementation initiated.
	Jun 1992	\$300,000			Project implementation initiated. Dow has been selected as the foam technology partner for this project.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Jun 1992	\$400,000			The curriculum for this training program is now being developed.
	Oct 1992	\$360,000			Project implementation has been initiated.
	Oct 1992	\$280,000			The Project Implementation Unit has been established and project-related activities have been initiated. Initial disbursement is expected shortly and will support the procurement of office equipment to set up the project office.

Montreal Protocol

Region/Country				Project Type1/	ODP to be Phased Out 2/
Project Activity Description					
Sector	ODS	Replacement Technology	Subproject Description		
South Asia			Regional Coordinator :	Bill Rahill	
India					
CY95 Plan - ODS I Project Supervision					N/A
CY95 Plan - ODS II Project Preparation and Supervision					N/A
ODS Project I				Main Project	54
Refrigeration : Commercial	CFC-11	HCFC-123	<u>Chiller Retrofits to HCFC-123 (Blue Star)</u> Subproject will provide technology and facilities for the conversion of CFC-11 to HCFC-123 use as refrigerant in centrifugal chillers at Blue Star facility. Phase I will provide the technology, engineering assistance and training to build and test chillers using HCFC-123. Phase II will be production of 25 HCFC-123 chillers per year. Technology will be obtained from York International Corp (USA) under terms of a technology transfer agreement (signed in December 1992).	Subproject	36
Refrigeration : Domestic	CFC-12	HFC-134a	<u>Shriram Industries - Compressor Conversion</u> Subproject will produce compressors to operate with HFC-134a instead of CFC-12 as refrigerant at Shriram Refrigeration Industries. The subproject to be conducted in two phases: Phase I will manufacture 12 compressor models in existing facilities for testing. Phase II will entail full conversion (requested costs are for Phase I only). Technology has been transferred by Tecumseh (USA) under the terms of an existing license agreement.	Subproject	18
ODS Project II				Main Project	1,507
Aerosols	CFC-12	Hydrocarbon	<u>Aero Pharma Aerosol Conversion</u> Conversion to hydrocarbon propellants through the installation of an "open air filling room. Installation of permanent storage tanks, increased fire protection and training is included.	Subproject	36
Foams : Flexible	CFC-11		<u>Milton Plastics</u>		30
Foams : Flexible	CFC-11		<u>Duroflex</u>		10
Foams : Flexible	CFC-11		<u>Polynate Foams</u>		20
Foams : Flexible	CFC-11		<u>Madras Plymounds</u>		10

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
		\$20,000	\$1,013		This project is under active supervision. Both subprojects are under active implementation. Project proceeding smoothly.
		\$392,000	\$41,512		Preparation of India ODS II (umbrella grant agreement) is completed and grant agreement was signed in May 1995. A budget of US\$392,000 has been allocated for the support of project preparation and supervision during 1995. A number of subprojects have already been funded and will be channelled through this umbrella grant agreement. Project preparation is on-going and a large number of projects are being presented to the 17th EC Meeting.
		\$1,252,000	\$200,000		Grant agreement was signed in August 1994 and implementation has been initiated by participating enterprises. Both subprojects are expected to be completed within the next 12 months. The project was supervised in May 1995. The Bank mission met with the two participating enterprises to review the project costs, implementation plans and revised disbursement schedules. Additional disbursements were authorized.
	Jun 1993	\$567,000		Jun 96	Implementation has been initiated and is progressing satisfactorily. The technology transfer agreement has been signed and paid by the enterprise
	Jun 1993	\$685,000		Jun 96	Implementation has been initiated.
		\$8,124,114			The preparation of the second Montreal Protocol project for India is complete. The Bank has approved this large umbrella grant agreement (US\$50 million) that will establish the framework for processing a large number of small projects over the next two to three years. Project preparation under this grant agreement is being supported through a Project Preparation Advance (PPA) for the preparation of at least 25 projects in the four major ODS-using sectors.
	Nov 1993	\$62,520			Subgrant agreement under preparation.
	May 1995	\$456,500		Dec 96	Approved through SPAP.
	May 1995	\$100,800		Dec 96	Project recently approve through SPAP
	May 1995	\$278,000		Dec 96	Approved through SPAP.
	May 1995	\$167,700		Dec 96	Approved through SPAP

Montreal Protocol

Region/Country	Project Activity Description	Project Type1/	ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description
Foams : Flexible	CFC-11	Methylene Chloride	Alfa Foams
			19
Foams : Flexible			Karnataka
			N/A
Foams : Flexible	CFC-11		Vikram Plastics
			15
Foams : Flexible	CFC-11		Ishwar Arts
			8
Foams : Flexible	CFC-11		Aswar Ashish Plastics
			8
Foams : Flexible	CFC-11		Blue Star Foam
			13
Foams : Flexible	CFC-11		Milton Polyplas
			15
Foams : Flexible	CFC-11		Tranquil Rubbers
			17
Foams : Flexible	CFC-11		Panorama Plastics
			8
Foams : Flexible	CFC-11		Industrial Foam
			35
Foams : Rigid	CFC-11	Several	Manali Petrochemical Polyol Systems Conversion
			Subproject
			488
			Subproject consists of two phases. Phase I: conversion of CFC-11/polyol systems to low/non-ODS formulations for flexible mould foam, including license technology from ARCO Inc. (USA) to manufacture polyol formulations using water-blown system, training in and outside India, and field trials. For rigid moulded foams it will include a technical consultancy agreement with Mitsui (Japan) to provide guidance in development of formulations, procurement of catalysts, chemicals and blowing agents (HCFC-22, HCFC-141b, HFC-134a and cyclopentane) for testing, procurement of additional high pressure dispensing equipment, large life-size mould to simulate operating conditions of refrigerator manufacture, and additional testing equipment. Phase II: establishment of manufacturing and supply capability for low/non-ODS systems.
Foams : Rigid	CFC-11		Seeco Precoated Steel
			13
Foams : Rigid	CFC-11	Several	Expanded Inc.
			Subproject
			72
			The enterprise would use in-house technology to develop new polyols and systems for the production of ODS-free rigid polyurethane foams under local conditions. After the technology is established, the enterprise would modify present polyols suitable for CFC-free rigid foams using alternative blowing agents, modify and relocate the blending plant to manufacture CFC-free blended polyols.
Foams : Rigid	CFC-11	Several	U/B Petroproducts Polyol Systems Conversion
			Subproject
			464
			Subproject aims to import new technology from its Italian Partner (Enichem) to develop formulated polyol and isocyanate foam systems that can be used with CFC alternate blowing agents; to test and characterize polyol systems to establish a facility for high pressure polyol blending and to modify the polyol plant. It will be implemented in two phases: Phase I: transfer of technology, establish high pressure foam machinery and test facilities, evaluation of different CFC-alternatives, production of base polyols, and testing and characterization. Phase II: commercial production of formulated polyols, trial testing at customers end, adaptation of ODS-free alternate systems, and train customers and technicians.

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	May 1995	\$219,900		Dec 96	This project has just been approved through the Small Project Approval Procedure (SPAP).
	May 1995	\$253,200		Dec 96	Approved through SPAP.
	May 1995	\$236,000		Dec 96	Approved through SPAP.
	May 1995	\$120,950		Dec 96	Project approved through SPAP.
	May 1995	\$120,950		Dec 96	Project approved through SPAP.
	May 1995	\$224,000		Dec 96	Project recently approved through SPAP.
	May 1995	\$236,000		Dec 96	Approved through SPAP.
	May 1995	\$215,250		Dec 96	Approved through SPAP.
	May 1995	\$120,950		Dec 96	Recently approved through SPAP.
	May 1995	\$320,000		Dec 96	Project recently approved through SPAP
	Nov 1993	\$700,000			Subgrant agreement under preparation..
	May 1995	\$224,000		Dec 96	Approved through SPAP.
	Jul 1994	\$502,130			Negotiations expected to be initiated shortly.
	Nov 1993	\$585,864			Subgrant agreement under preparation.

Montreal Protocol

Region/Country	Project Activity Description				ODP to be Phased Out 2/
Sector	ODS	Replacement Technology	Subproject Description	Project Type1/	
MAC	CFC-12	HFC-134a	<u>Subros CFC Phaseout in Mobile Air Conditioning</u> Subproject includes changes in production equipment and compressor design modifications for the company's export market. The conversion of the production line will benefit Phase II which will concern the phaseout of all compressors for the domestic market. Local ownership of 74% was considered in the incremental cost analysis.	Subproject	84
Refrigeration	CFC-12	HFC-134a	<u>Compressors Designs Conversion</u> Replacement of CFC-12 with HFC-134a for hermetic compressors. In Phases I and II, engineering development, prototype manufacturing and testing of compressors 15 different models will be conducted based on technology purchased from Copeland (USA). It will also establish requirements for retooling, training, and other activities needed to complete conversion to HFC-134a designs and provide customer training in use of new compressors. Phase III is the commercial manufacturing. 125 tons of CFC-12 will be phased out indirectly.	Subproject	57
Refrigeration : Commercial	CFC-12	HCFC-22	<u>Freeze King Industries Pvt. Ltd.</u> Redesign of 11 models of open-type CFC-12 compressors to produce 6 HCFC-22 compressor models to cover the same capacity range. During the first 2 years, engineering design, manufacturing development redesigning and prototyping of HCFC-22 compressors will be carried out by Freeze King, which will provide HCFC-22 compressor technology, assistance for building production and inspection system, and for vendor development. Jigs and fixtures, special tooling, patterns and dies, new testing equipment will be developed.	Subproject	35
Solvents	CFC-12 CFC-113	CO2	<u>Hindustan Syringes</u> Phaseout CFC-12 use in the 88-12 mixture of CFC-12 and ethylene oxide (EO) for sterilization of disposable syringes, needles and other medical devices. In phase I, replacement of the current system to mixture of CO2 and EO will be provided. In phase II, use of CFC-113 as a carrier medium for siliconization of syringe barrels and plungers will be replaced by resorting to direct spraying of a modified silicon oil via specially designed spray system. Alternative methods for application of silicon, currently diluted with CFC-113 for siliconization of needle points will be explored.	Subproject	50

Pakistan

CY95 Plan - ODS I Project Preparation

Proj. Preparation N/A

1/ Project Type: Main Project, Subproject, or Pre-investment.
2/ Metric tons estimated at time of project preparation.
PPA - Project Preparation Advance.

N/A - Not applicable.
TBD - To be determined.

Ozone Project Portfolio

ODP Phased Out to Date 2/	Date of EC Approval	Approved Funding	Disbur- sements	Expected Date of Completion	Status of Implementation
	Nov 1993	\$1,710,000			Processing of subgrant agreement has been initiated.
	Mar 1994	\$547,900			Subgrant agreement under preparation.
	Jul 1994	\$240,500			Subgrant agreement under preparation.
	Jul 1994	\$481,000			Subproject grant agreement expected to be initiated shortly.
		\$147,500	\$41,109		A budget of US\$147,500 has been allocated for the support of activities in Pakistan. The Country Program preparation is now underway with UNEP support while institutional capacity development has been initiated through UNDP. Both these development will further strengthen the Bank's project identification and preparation activities which are on-going in Pakistan. A Bank mission visited Pakistan in January/February to prep-appraise the project and to further identify and prepare ODS phaseout activities in the foam and refrigeration sector. The Bank mission participated in a successful MP project preparation workshop for the foam industry. Two foam-sector projects are in the final stages of preparation and are expected to be presented to the 17th Meeting of the Fund EC. The project would then be appraised shortly thereafter. The plan is to process an umbrella grant agreement of some US\$15 million.

UNIDO PROGRESS REPORT

Section II

Project - by - Project Progress Report covering the period from January 1995 to June 1995

Algeria

MP/ALG/94/409

Preparatory Assistance for phase out of CFCs in the
manufacture of aerosols at ENAD:

- Project operationally completed.

The project documents have been formulated and are ready to be submitted to the Executive Committee. Their characteristics are as follows:

<i>Project Title</i>	<i>Project Impact</i>	<i>Incremental costs requested</i>	<i>Technology chosen</i>
Preparation of an investment project at an aerosol plant (ENAD)	Phase-out of 400 MT of CFC-11, CFC-12 and CFC-114	US\$ 1,467,792 (excl. Agency Support costs)	Propane/ butane (HAPS)
Preparation of an investment project in the solvent sector (ENAD)	Phase-out of 15MT of CFC-113	US\$ 200,498 (excl. Agency support costs)	Vydx Technology with IPA as solvent

MP/ALG/95/025

Investment project for phasing out CFCs at Entreprise National
des Industries de l'Electromenager, ENIEM:

The Terms of Reference for the subcontracting services have been prepared and disseminated to potential companies for their consideration. The closing date for submission of offers (international bidding) was 25 May 1995. Meetings for the evaluation of offers and the selection of the company are scheduled in the week of 6 June 1995.

MP/ALG/95/026

Preparation of an investment project for CFC phase out in the production of rigid foam at BATIMETAL:

The formulation of the project document has started and is currently ongoing; in particular, a local subcontractor is cooperating with the international expert in the formulation of the project document. It is expected that the project will be presented to the Executive Committee at its 18th session in December 1995.

MP/ALG/95/027

Preparation of an investment project for the phase-out of CFC-11 in the manufacture of sandwich panels at PROSIDER (ANNABA):

The formulation of the project document has started and is currently ongoing; in particular, a local subcontractor is cooperating with the international expert in the formulation of the project document. It is expected that the project document will be presented to the Executive Committee at its session in December 1995.

MP/ALG/95/028

Project formulation for the establishment of a National Centre for recovery and recycling of CFC-11, CFC-12 and CFC-502:

Contracts have been established with main companies involved in the set up of a recovery network and a local subcontractor has been identified. The formulation of this project is expected to take place by the end of the year.

Argentina

MP/ARG/94/410

Investment project for phasing out of ODS at BANDEX S.A.:

The equipment purchased under the project is expected to be installed by the end of June 1995. Start up operation and performance tests of the equipment are scheduled for August/September 1995. It is anticipated that the project will be operationally completed by end 1995.

MP/ARG/94/413

Investment project for phasing-out of ODS at CELPACK S.A.:

The equipment purchased under the project is expected to be installed by the end of June 1995. Start up operation and performance tests of the equipment are scheduled for August/September 1995. It is anticipated that the project will be operationally completed by end 1995.

Barbados

MP/BAR/95/075

Preparation of project for retrofitting in all ice-making systems, ice-bin compressor systems, blast freezers, cold storage and chiller rooms:

The formulation of the project document will be carried out in the period July/August; it is expected to submit it to the Executive Committee at its 18th session.

Brazil

MP/BRA/93/095

Preparatory assistance for elimination of CFCs in the sector of Polymer Foams manufacturing of Brazil:

Following requests by the Brazilian Government for project formulation, five project documents have been formulated and are ready for submission to the Executive Committee. Their respective characteristics are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
(a) Investment project for ODS phase-out of CFC-11 at FRISOKAR	Phase out of 42 MT of CFC-11	US\$ 586,860 (excl. Agency support costs)	N-pentane
(b) Conversion of the assembly of refrigeration compressors to phase-out CFC-12 and CFC/HCFC-502 by using HFC-134a and R-404a	Indirect phase-out of 88.6 MT of CFC-12 and 1.4 MT of CFC/HCFC-502 (total ODS=89 MT)	US\$ 1,177,200 (excl. Agency support costs)	HFC-134a and R-404a

Project title	Project Impact	Incremental Cost requested	Technology chosen
(c) Servicing of new refrigerators and freezers using HFC-134a, servicing of refrigerators and freezers using CFC-12, recovering and recycling of CFC-12 used in old appliances	Phase-out of 274.5 MT of CFC-12 resulting from recovering and recycling	US\$ 1,396,980 (excl. Agency support costs)	HFC-134a
(d) Redesign of a combination filter-dryer-reciver applied in automotive air conditioning units to replace CFC-12 as refrigerant by HFC-134a	Phase-out of an annual consumption of 54 MT of CFC-12	US\$ 163,470 (excl. Agency support costs)	HFC-134a
(e) Conversion of ODS cleaning processes from 1,1,1-trichloroethane to Aqueous cleaning	Phase-out of an annual consumption of 60 MT of 1,1,1-trichloroethane	US\$ 276,765 (excl. Agency support costs)	Aqueous cleaning and cleaning with trichloroethylene

Cameroon

MP/CMR/94/411

Investment project for ODS phase-out at FAEM S.A.:

Contract awarded in February 1995. A UNIDO staff member visited the project site last April and discussed with the counterpart modalities of implementation. Equipment portion included in the contractor's services has been ordered; its delivery is scheduled for November this year; first performance test of the equipment is anticipated in February 1996.

MP/CMR/95/022

Preparation of a project for phasing out CFC-11 in the manufacture of domestic refrigerators, freezers and airconditioners at Union Camerounaise d'Entreprise:

- Project operationally completed.

A project document has been formulated and is ready for submission to the Executive Committee. Summarized information concerning this project is in the following table:

Project title	Project Impact	Incremental Cost requested	Technology chosen
Preparation of a project for ODS phase-out at Union Camerounaise d'Entreprise (domestic refrigeration plant)	Phase out of 44.6 MT of CFC-11 and 14 MT of CFC-12; total ODP phase-out 58.6 MT	US\$ 2,733,813 (excl. Agency Support costs)	Cyclo-pentane as blowing agent

Côte d'Ivoire

MP/IVC/95/068

Project formulation for the ODS Phase-out in the refrigeration sector - Preparatory Assistance:

A formulation mission is scheduled for the week of June 6.

China

MP/CPR/94/405

Conversion of compressor production for domestic refrigerators from CFC-12 to hydrocarbon refrigerant at Jiaxipera Compressor Company Ltd.:

- Project operationally completed.

A project document has been formulated and is ready for submission to the Executive Committee. Its characteristics are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Conversion of compressor production	Indirect phase-out of 200 MT of CFC-12 and direct elimination of 120 MT of CFC-113 as solvent (Total 296 ODP Tonnes)	US\$ 3,067,272 (excl. Agency support costs)	Hydro-carbons

MP/CPR/95/040

Conversion from halon 1211 to ABC dry powder and foam water spray at Nanjing Fire Fighting Equipment Factory:

NFFF workplan was discussed with the Factory management, Ministry of Public Security and NEPA. It is agreed that the NFFF will prepare a set of equipment specifications in line with the requirements of the approved version of the project.

MP/CPR/95/039

Conversion of domestic refrigerator and freezer factories to phase out CFC-12 and CFC-11 by hydrocarbons isobutane and cyclo-pentane at Hangzhou Xiling Holdings Company:

- Project operationally completed.

A project document has been formulated and is ready for submission to the Executive Committee. Its characteristics are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Conversion of domestic refrigerator and freezer factories to phase out CFC-12 and CFC-11 by hydrocarbons isobutane and cyclo-pentane at Hangzhou Xiling Holdings Company	Phase-out of an annual consumption of 60 MT of CFC-12 and 300 MT of CFC-11	US\$ 4,734,109 (excl. Agency Support Costs)	Isobutane as refrigerant and cyclo-pentane as foam blowing agent

In addition, two projects in the refrigeration sector have been formulated - one in a compressor factory (HUANGSHI DONGBEI) and one a domestic refrigeration plant (HANGZHOU HUARI).

Their characteristics are as follows:

Project Title	Project Impact	Incremental cost requested	Technology chosen
Phasing out of ODS at a compressor factory (HUANGSHI DONGBEI)	Phase-out of 120 MT of CFC-12, 40 MT of CFC-11 as solvents (ODP = 160)	1,914,000 (excl. Agency support cost)	Iso-butane
Phasing out of ODS at a domestic refrigeration plant (HANGZHOU HUARI)	Phase-out of 272 MT of CFC-11 and 38 MT of CFC-12 (ODP = 310)	5,225,894 (excl. Agency support costs)	Iso-butane as a refrigerant and cyclopentane as foaming agent

Egypt

MP/EGY/94/038

Investment project for ODS phase-out at six domestic refrigeration plants: ALASKA, HELWAN Company, IBERNA, EL-NASR, SILTAL and SUPER BOSCH:

Terms¹ of reference for subcontracting services prepared and bidding exercise underway; closing date is end June 1995; issuance of purchase order expected by August 1995.

MP/EGY/94/414

Preparation of investment projects on ODS phase out for four additional refrigerator manufacturers:

- Project operationally completed.

MP/EGY/94/415

Investment project for ODS phase-out at ELECTROSTAR Refrigeration Co.:

Equipment ordered, delivery scheduled end 1995.

MP/EGY/94/416

Investment project for ODS phase-out at KIRIAZI (domestic refrigeration plant):

Equipment ordered, delivery scheduled end 1995.

MP/EGY/94/417

Investment project for ODS phase-out at DELTA (domestic refrigeration plant):

Equipment ordered, delivery scheduled beginning 1996.

In addition, three projects have been formulated in the solvents sector and are ready for submission to the Executive Committee. Their respective characteristics are as follows:

<i>Project Title</i>	<i>Project Impact</i>	<i>Incremental cost requested</i>	<i>Technology Chosen</i>
(a) Conversion of electronic cleaning processes from ODS solvents to non-ODS cleaning at three Electronics companies in Egypt (Benha Co. for Electronics Industry; A.I.O. Electronics Factory, Sakr Factory)	Phase-out of an annual consumption of 16.1 MT of CFC-113 and 8.0 MT of 1,1,1-trichloroethane	US\$ 311,809 (excl. support costs)	Hydro-carbon cleaning

(b) Conversion of cleaning processes from CFC-113 and 1,1,1-Trichloroethane to semi-aqueous cleaning at Arab International Optronics	Phase-out of 2.0 MT of CFC-113 and 4.5 MT of 1,1,1-trichloroethane	US\$ 79,450 (excl. Agency support costs)	Semi-Aqueous cleaning
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(c) Conversion of cleaning processes from CFC-113 to aqueous cleaning at Optica	Phase-out of 1.0 MT of CFC-113	US\$ 25,677 (excl. Agency support costs)	Aqueous cleaning
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GLOBAL

MP/GLO/94/407

Strategy for phasing-out of ODS in low ODS consuming countries:

The project is being implemented in cooperation with the U.S. EPA. FRIGO Consult Denmark will be contracted by UNIDO to prepare the technical guidance document as well as a project concept for specific subsectors of relevant countries. An executive summary of this document is being submitted to this Meeting of the Executive Committee.

MP/GLO/94/421

Joint UNEP/UNIDO Preparation of Country Programmes:

Schedule of visits for country programmes has just been received from UNEP. UNIDO will continue to participate in these joint missions whenever possible.

India

MP/IND/93/162

Project Formulation for the Conversion of Electronic Cleaning Processes for CFC-113/Alcohol Blended Solvents and 1,1,1-Trichloroethane to non-CFC Cleaning:

Project formulation mission carried out in April 1995. Two projects have been formulated and are ready for submission to the Executive Committee.

Their respective characteristics are as follows:

Project title	Project Impact	Incremental Cost requested	Technology chosen
Conversion of electronic cleaning processes from ODS solvents to no-clean and hydrocarbon cleaning technologies at ERL Bangalore	Phase-out of annual consumption of 15.0 MT of CFC-113 and 43.5 MT of 1,1,1-trichloroethane (ODP = 18.72)	US\$ 456,542 (excl. Agency support costs)	No-clean and hydrocarbon technologies
Conversion of electronic cleaning processes from ODS solvents to no-clean and aqueous photo-resist developing and stripping technologies at ITI-Palakkad	Phase-out of annual consumption of 15 MT of CFC-113 and 30 MT of TCA (ODP = 17.1)	US\$ 389,592 (excl. Agency support costs)	No-clean and aqueous technology

MP/IND/93/163

Feasibility Study for the Recovery and Recycling of CFC Refrigerants:

Subcontractual services carried out by MANTEC Consultants Ltd. that has prepared a study for recovery and recycling of CFC refrigerants, which was submitted to project authorities together with UNIDO outline of 5 project proposals. UNIDO project formulation mission still pending; final decision by Ministry of Environment and Forests is awaited in this regard.

MP/IND/93/164

Project formulation for phasing out of ODS in unorganized sector:

An agreement on implementation procedures was finalized with The Small-scale Industrial Bank of India (SIDBI) and is still under consideration by the Government of India. A series of projects in the aerosols sector have been prepared and will be submitted at the next session of the Executive Committee.

MP/IND/94/423

Conversion of Electronic Cleaning Processes from ODS Solvents to Aqueous Cleaning at ITI Mankapur:

Project implementation has not started due to decision of ITI management not to procure cleaning technology as specified in Project Document, but to utilize the funds to purchase soldering machines. After lengthy discussions it was finally agreed to purchase semi-aqueous cleaning machines. Mission of BSO in June 1995 to discuss specifications for equipment procurement.

Indonesia

MP/INS/95/013

Project Formulation for Phasing out ODS in Small- and Medium-scale Industries:

One project in the commercial refrigeration sector has been formulated and one project in the aerosols sector is under preparation. UNIDO proposed to the Government of Indonesia to make a survey of three sectors: solvents, foams and refrigeration in order to identify potential projects in small and medium scale industries. Terms of Reference are under consideration by the Government.

The project in the commercial refrigeration at P.T. Air Tech. is ready to be submitted to the Executive Committee. Its characteristics are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Phasing out of ODS at P.T. Air Tech. Co. Ltd. (commercial refrigeration)	Phase-out of 30 MT of CFC-11 and 1.5 MT of CFC-12 and 1.0 MT of CFC-502 (ODP = 30,162)	US \$ 437,799 excl. Agency support costs)	Conversion of CFC-11 for HCFC-141b for the foam; Conversion of CFC-12 and R502 to HCFC-22 as refrigerant

Iran

MP/IRA/93/093

Preparation of Investment Project Proposal for the Phase out of CFC-11 and CFC-12 in the Domestic Refrigeration Industry:
 - Project operationally completed.

MP/IRA/94/403

Conversion of Domestic Refrigerator Production Facilities to Phase out CFC-11 and CFC-12 at 5 Iranian Companies (Arj. Azmayesh, Bahman, Iran Poya and Pars Appl. Co):

Prototype with HFC-134a is made; the evacuating, filling and testing equipment for HFC-13a for trial test already purchased and delivered. All of the five companies will start with production using HFC-134a. Offers for conversion of insulation foam blowing equipment were requested and bids opened on 31 May 1995.

MP/IRA/95/021

Preparation of investment project for the phase out of CFC-12 and CFC-11 (Group II):

The following Iranian companies have been visited: Fariz Iran, Gadook, Lorestan, Movalled, Pars Machine and Pars Monark. An investment project proposal for Conversion of Domestic Refrigerator Production Facilities to phase out CFC-12 and CFC-11 (Group II) has been prepared and was reviewed with the Iranian counterparts and agreed upon. The project document has been amended according to the comments made by W.S. Atkins Consultants Ltd. The final project document is expected to be submitted to the 18th session of the Executive Committee. The characteristics of the project are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Preparation of Investment Project for phase-out of CFC-12 and CFC-11 (Group II) at 6 Iranian companies: Fariz Iran, Gadook, Lorestan, Movalled, Pars Machine and Pars Monark	Phase out of 371 MT of CFC-11 and CFC-12	US\$ 6,330,880 (excl. Agency Support Costs)	HFC-134a and cyclopentane

An umbrella project in the rigid foam sector was also prepared for the following companies: FABIS, IRAN Steel Parts, URETHANE Systems Company, MAMMOTH Teheran Industrial and F.M. Company. The project document is ready to be submitted to the Executive Committee. Its characteristics are as follows:

Project title	Project Impact	Incremental Cost requested	Technology chosen
Phasing out of CFC-11 through conversion of rigid PU foam manufactured with the techniques of continuous lamination at FABIS, IRAN Steel Parts, URETHANE Systems, MAMMOTH and F.M. Company	Phase-out of 1,200 MT of CFC-11 (ODP = 1,200 MT)	US \$ 5,068,350 (excl. Agency support costs)	N-pentane

Jordan

MP/JOR/94/418

Phasing out of ODS at Middle East Electrical Industries Co. Ltd.:

Between Ozone Unit in Jordan and UNIDO no agreement about implementation procedures has been reached, as the counterpart side (Ozone Unit) does not accept UNIDO Implementation Rules and Regulations/Procedures. However, offers for subcontracting services are available with UNIDO HQ since November 1994.

MP/JOR/94/419

Investment project for ODS phase-out at NRC (domestic refrigeration plant):

Between Ozone Unit in Jordan and UNIDO no agreement about implementation procedures has been reached, as the counterpart side (Ozone Unit) does not accept UNIDO Implementation Rules and Regulations/Procedures. However, offers for subcontracting services are available with UNIDO HQ since November 1994. A Jordanian delegation is expected to visit UNIDO's Headquarters in June 1995 in order to finalize discussions on implementation procedures.

MP/JOR/94/420

Investment project for ODS phase-out at HAMCO (domestic refrigeration plant):

Between Ozone Unit in Jordan and UNIDO no agreement about implementation procedures has been reached, as the counterpart side (Ozone Unit) does not accept UNIDO Implementation Rules and Regulations/Procedures. However, offers for subcontracting services are available with UNIDO HQ since November 1994.

MP/JOR/95/009

Preparation of an investment project at three commercial refrigeration plants:

No project formulation can be carried out as long as no agreement has been reached on the implementation procedures.

MP/JOR/95/027

Preparatory assistance for investment projects in the commercial refrigeration, airconditioning, foam and halon sectors.

An international consultant is under recruitment for a project formulation in the halon banking sector. The mission is scheduled for the month of June 1995. However, in order to avoid any misunderstandings, as the ones experienced with previous projects undertaken by UNIDO, an agreement on implementation procedures must be reached before any further activity can be carried out in Jordan.

Kenya

MP/KEN/94/401

Kenya Cold Storage Co.:

- Project operationally completed.

The investment project document has been prepared. It is ready to be submitted to the Executive Committee. Its characteristics are as follows:

<i>Project Title</i>	<i>Project Impact</i>	<i>Incremental cost requested</i>	<i>Technology Chosen</i>
Umbrella investment project for phasing-out CFCs at 3 companies of the Kenya Cold Storage Group	Phase-out of 30 MT of CFC-11 and 20 MT of CFC-12 (total ODP - 50 MT)	US\$ 1,206,900 (excl. Agency costs)	HFC-134a and HCFC-141b

Lebanon

MP/LEB/95/071

Project formulation for the phase-out of ODS in the foam sector (ETS Henri Abdallah and Nasri Karam):

One international expert has been fielded and has visited the two companies. The relevant reports and project documents are under preparation. It is expected to submit those to the 18th session of the Executive Committee.

MP/LEB/95/072

Refrigeration Sector Opaco Ltd.:

The draft project document has been prepared and will be finalized when the company OPACO will have reached an overview about their production capacity, since the company started its operation programme only recently after the war.

MP/LEB/95/070

Project formulation for the phase-out of ODS in the aerosol sector (Cosmaline Industries S.A.L.):

The formulation of two project documents has been finalized; both of them are ready for submission to the Executive Committee. Their respective characteristics are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Proj. formulation for the phase-out of ODS in the aerosol sector (Cosmaline Industries)	Phase out of 32 MT of CFC-11 and 72.6 MT CFC-12 and 35.4 MT of CFC-114	US\$ 591,532 (excl. Agency Support Costs)	LPG
Proj. formulation for the phase-out of ODS in the aerosol sector Zeenn's Trading Agency	Phase out of 212 MT CFC-12	US\$ 1,044,120 (excl. Agency Support Costs)	LPG

Macedonia

MP/MCD/95/034

Preparation of Country Programme for the Republic of Macedonia:

A list of consulting companies has been submitted to the Ministry of Science, Technology and Environment for clearance. This clearance is still awaited. A local consultant has been hired to start gathering of data, sector identification and to establish contact with official authorities.

Mozambique

MP/MOZ/95/044

Preparation of Project in the Commercial Refrigeration:

- Project operationally completed.

The formulation of a project document has been finalized and is ready for submission to the Executive Committee. Its characteristics are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Phasing out of CFCs at Indatec Industria de Applicacoes technico-domesticas Ltda.	Phase out of 30 MT of CFC-11 and 11.5 MT of CFC-12 both for services and production; total ODP phase out 41.5 MT	US\$ 1,117,121 (excl. Agency Support Costs)	Cyclo-pentane as blowing agent

Nigeria

MP/NIK/94/408

Preparation of CFC phase out strategy for refrigeration and airconditioning industries and services:

The formulation of two project documents has been finalized and both are ready for submission to the Executive Committee. The characteristics of these projects are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Preparation of an investment project at domestic refrigeration plant (THERMOCOOL)	Phase-out of 50 MT of CFC-11 and 19.5 MT of CFC-12; total ODP phase-out is 69.5 MT	US\$ 3,256,940 (excl. Agency Support costs)	Cyclopentane as blowing agent
Investment project for phasing-out of CFCs of DEBO Industries Ltd., Lagos	Phase out of 34 MT of CFC-11 and 13.5 MT of CFC-12 both for services and production; total ODP phase out is 47.5 MT	US\$ 1,772,742 (excl. Agency Support costs)	Cyclopentane as blowing agent

A strategy document is ready for review by the Executive Committee.

Romania

MP/ROM/94/422

Romania Country Programme:

- Project operationally completed.

The final version of the Country Programme document was submitted to the Ministry of Environment and Forests for comments and endorsement. It is now ready for submission by the Romanian Government to the Executive Committee.

MP/ROM/95/010

Preparation of an investment project for phase out of CFC-11 and CFC-12 at domestic refrigerator plant at mechanical enterprise SADU and ARCTIC

One project document has been finalized and is ready for submission to the Executive Committee. Its characteristics are as follows:

Project title	Project Impact	Incremental Cost requested	Technology chosen
Preparation of an investment project for phase-out of CFC-11 and CFC-12 at domestic refrigeration plant (ARCTIC)	Phase out of 237 MT of CFC-11 and CFC-12	US\$ 3,635,730 (excl. Agency Support Costs)	Cyclopentane for foam and R1234a for refrigerant

MP/ROM/95/073

Preparation of an investment project phasing-out of CFC-11 at S.C. SPUMOTIM S.A. flexible polyurethane foam plant:

The project document for the investment phase is ready and has been reviewed. The project document has been formulated for liquid carbon dioxide technology which has been recently industrialized in Europe. This technology has not yet been evaluated by the Executive Committee or the Fund Secretariat. Therefore, there is no data available to estimate the real cost-effectiveness; anyhow, the project does not fulfil the present threshold criteria. Additional negotiations are needed with the counterpart in order to decide on either the technology option or on cost-sharing. The project will be submitted to the Executive Committee at a future session.

One project document has been formulated in the aerosol sector and is ready for submission to the Executive Committee. Its characteristics are as follows:

Project Title	Project Impact	Incremental Cost Requested	Technology Chosen
Conversion of aerosol production at FARMEC S.A. to ecologically clean HAP propellants		US\$ 2,212,520 (excl. Agency support costs)	Propane/butane (HAPS)

Seychelles

MP/SEY/95/074

Preparation of a project proposal for setting up a national refrigerant recovery and recycling centre, National Halon Bank:

- Project operationally completed.

The project document has been finalized and is ready ready for submission to the Executive Committee. Its characteristics are as follows:

<i>Project Title</i>	<i>Project Impact</i>	<i>Incremental Cost Requested</i>	<i>Technology Chosen</i>
Reduction of consumption, recovery and reclamation of CFC-12 and Halon-1211	ODS recovered 1.8 MT per annum of CFC-12 and 0.22 MT per annum of Halon-1211; ODS consumption reduced: 0.9 MT of CFC-12; ODP weighted tonnes 3.4	US\$ 342,575 (excl. Agency support costs)	not applicable

Sudan

MP/SUD/95/035

Preparatory Assistance for elimination of CFCs in the aerosol, refrigeration and foam sectors:

- Project operationally completed.

A project document on the aerosol sector has been finalized and is ready for submission to the Executive Committee. Its characteristics are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Investment project for phasing out CFCs at Sudanese Cosmetics + Household Products Ltd.	Phase out of 281.5 MT of CFC-11	US\$ 897,600 (excl. Agency Support Costs)	LPG

Syria

MP/SYR/94/412

Phasing out of CFCs at Al Hafez Refrigerator Co.:

The contract was awarded. Detailed list and specification of equipment as well as scope/schedule of services to be provided by the contractor verified and the contract execution is in process.

MP/SYR/95/006

Preparation of investment projects for phasing out of CFC-11 from the subsector of flexible foams manufacturing (Dakkak, A. Karim Co., Shaar Brothers, Rankousi Co.):

The draft project document has been prepared. However, due to the recently introduced 'threshold figures' additional negotiations with the counterparts are required in order to decide on either the technology option or on cost-sharing.

MP/SYR/95/007

Preparatory Assistance for phasing out of CFC-11 from the Manufacturing of Pre-fabricated Sandwich Panels at Krayem Cold Stores Co.:

and

MP/SYR/95/008

Preparatory Assistance for Investment Project for Phasing out of CFCs in Manufacturing of Refrigerators at Krayem In. Co.:

The draft project document has been prepared as an 'umbrella project' covering both projects. However, additional negotiations are required with the counterparts due to the 'threshold figures'. It is expected to be finalized and presented to the 18th session of the Executive Committee.

MP/SYR/95/041

Investment project for phasing out of CFC at PENGUIN:

Contract will be awarded by June 1995.

MP/SYR/95/042

Investment project for phasing out of CFCs at BARADA, General Company for Metallic Industry:

Contract will be awarded by June 1995.

Swaziland

MP/SWA/95/094

Preparatory assistance for the formulation of a project in a domestic refrigerator plant (FRIDGEMASTER):

- Project operationally completed.

A project document has been formulated and is ready for submission to the Executive Committee. Its characteristics are as follows:

Project Title	Project Impact	Incremental Cost requested	Technology Chosen
Phasing out ODS at the FRIDGEMASTER Factory (domestic refrigeration)	Phase out of 180 MT of CFC-11 and CFC-12	US\$ 3,219,000 (excl. Agency Support Costs)	Cyclopentane and Isobutane

Turkey

MP/TUR/95/037

Preparation of investment projects on ODS phase-out in the foam sector:

Two project documents have been prepared. One of them is ready for submission to the Executive Committee. Its characteristics are as follows:

Project title	Project Impact	Incremental Cost requested	Technology chosen
Phasing-out CFC-11 at ÜROSAN KIMIYA A.S. polyurethane foam and polyurethane integral skin foam plant	Phase-out of 158 MT ODS 131 MT, CFC-11 in the production of flexible slabstock foams, 5 MT in the production of flexible cold core moulding and 22 MT CFC-11 in the production of integral skin moulding for office siting system	US\$ 1,146,728 (excl. Agency Support Cost)	(a) Flex.substitute liquid CO ₂ (b) flexible cold core moulding: chemical CO ₂ (water blowing) (c) integral skin foam: Pentane

United Republic of Tanzania

MP/URT/95/020

Aerosol Sector at Mansoor Daya Chemical Ltd.:

- Project operationally completed.

A project document has been finalized and it is ready for submission to the Executive Committee. Its characteristics are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
ODS phase out at Mansoor Daya Chemicals Ltd. (Aerosols)	Phase out of 150 MT of CFC-11 and CFC-12 (50/50)	US\$ 660,000 (excl. Agency Support Costs)	LPG

MP/URT/95/033

Preparation of an investment project in the refrigeration sector at Dailan Air Conditioning Ltd.:

- Project operationally completed.

A project document has been finalized and it is ready for submission to the Executive Committee. Its characteristics are summarized below:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Preparation of Investment project at a domestic refrigeration plant (DAILAN AIR)	Phase-out of 30 MT of CFC-11 and 13 MT of CFC-12, both for services and production; total ODP phase-out 43 MT.	US\$ 1,317,215 (excl. Agency Support Costs)	Cyclo-pentane as blowing agent

Vietnam

MP/VIE/95/011

Preparation of an investment project for conversion of industrial chillers:

Project document is being currently formulated. It is expected to be submitted to the 18th session of the Executive Committee.

MP/VIE/95/012

Preparation of investment project for reduction of refrigerant emissions and establishment of a collection and reclaiming network in domestic refrigeration service sector:

Mission completed and project document under formulation.

MP/VIE/95/047

Phasing out ODS at the Searefeco and Searee industrial refrigeration plants of Seaproduct Co.:

The international bidding exercise is currently underway for the subcontracting services. Award of subcontract is expected to be finalized by end June 1995.

Zambia

MP//ZAM/95/x01

Preparation of a training and certification programme for refrigeration technicians and preparation of investment projects for the refrigeration sector:

The project formulation mission will take place in the second half of 1995.

Zimbabwe

MP/ZIM/95/036

Preparation of investment projects in the refrigeration, airconditioning and recovery/recycling:

A project document has been formulated and is ready for submission to the Executive Committee. Its characteristics are as follows:

Project title	Project Impact	Incremental Cost requested	Technology chosen
CFC Refrigerant Recovery and Reclaim	Phase out of 46.5 MT of CFC-12	US\$ 379,132 (excl. Agency Support Costs)	Cyclo-pentane