



**United Nations
Environment
Programme**



Distr.
LIMITED

UNEP/OzL.Pro/ExCom/18/54
31 October 1995

ORIGINAL: ENGLISH

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

Eighteenth Meeting
Vienna, 22-24 November 1995

UNIDO PROGRESS REPORT



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO's Progress Report

September 1995

This report presents UNIDO's Montreal Protocol-related activities covering the period between July and September 1995. It consists of three sections:

Section I relates to the status of operational policies adopted by UNIDO.

Section II presents both in *table form* and *narrative* the status of on-going projects in each country where UNIDO is active and activities that have been completed during the reporting period.

Section III is a financial report on receipts, disbursements, savings/deficits as well as planned commitments for each project.

Section I

Operational Policy

a) Policy:

As it was previously reported, UNIDO is concentrating most of its efforts on implementation of investment projects approved previously. Indeed, for projects approved at the 13th, 15th and 16th sessions of the Executive Committee and for which contracts have been awarded, the implementation is progressing quite satisfactorily. Equipment for projects in Cameroon (FAEM), Egypt (Electrostar, Kiriazi and Delta), Syria (Al-Hafez) and Vietnam (Searefico and Searee) has been ordered and the delivery is expected very soon; whilst projects in Argentina (Bandex and Celpack) and Iran (Arj, Azmayesh, Bahman, Iran Poya and Pars Appl. Co. for the refrigeration part) are near completion and the start-up production is scheduled for end-October 1995.

As for projects approved at the 15th session of the Executive Committee, all contracts have been awarded, i.e. Algeria (ENIEM), Egypt (Alaska, Helwan, Ibernna, El-Nasr, Siltal and Super Bosch), Syria (Penguin and Barada), and purchase of equipment is taking place. Projects approved at the last session of the Executive Committee have also known a significant progress through the finalization of terms of reference and calls for bids. Contracts are expected to be awarded by the end of this year.

The only projects which have been delayed for external reasons are as follows:

China: Nanjing fire equipment: The counterpart was not ready to receive any new equipment due to the transfer of the plant to a new place. However, the implementation is expected to start in a very short future.

India: ITI Mankapur: The agreement between IDBI (financial intermediary) and UNIDO has yet to be finalized. But in order not to waste any more time, the international bidding for the purchase of equipment has been carried out by UNIDO. It is hoped that the agreement is signed by the end of November.

Jordan: MEEI, NRC, and HAMCO: despite the fact that terms of reference were prepared and calls for bids were done, UNIDO could not start any implementation before reaching an agreement with the Jordanian Government on implementation modalities. We are now glad to report that this issue is resolved and the implementation is now underway.

A fairly high number of projects have also been prepared in various countries, particularly in new ones such as Barbados, Indonesia, Kenya, Lebanon, Mozambique, Nigeria, Pakistan, Romania, Seychelles, Sudan, Swaziland, Tunisia, Turkey and Tanzania, thus ensuring a more balanced geographic distribution among article 5 countries.

In order to respond to numerous requests from article 5 countries and more specifically from new countries like Croatia, Democratic Republic of Korea, Libya and Santa Lucia, UNIDO will continue to prepare investment projects and expand its activities in rather new sectors such as aerosols, solvents and halons.

b) Strengthening UNIDO's staff

After the strengthening of the Contracts and Purchase Branch and the Coordination Unit, a newly recruited professional in the refrigeration sector has recently joined the Montreal Protocol operations team, boosting its capacities in both formulation and implementation.

UNIDO's roster of experts and companies is constantly updated and enriched by new registrations.

c) Inter-agency cooperation:

(i) Cooperation with UNDP

The same spirit of cooperation between the two agencies is still prevailing, with the coordination and division of labour in many article 5 countries and particularly in Africa where it was agreed to have one agency operating in each country in order to avoid overlapping and duplication of efforts.

(ii) Cooperation with the World Bank

The coordination of activities in some countries has shown some concrete results in Philippines, Zimbabwe, Brazil and India. Recently a division of labour was agreed upon in the halon sector in China. UNIDO, the World Bank and UNDP are also expected to coordinate their activities in Mexico.

(iii) Cooperation with UNEP

UNIDO is regularly attending regional workshops organized by UNEP and in Nairobi, Dakar, Manila and Djakarta. UNIDO will also participate in a training workshop in the refrigeration sector to be held in October in Abidjan.

(iv) Cooperation with U.S. EPA

The guidance/strategy document is now finalized by US EPA/UNIDO and is ready for submission. Further cooperation is expected as an outcome of this document.

(v) Bilateral cooperation

Discussions with Australia have fairly progressed for a joint project formulation and implementation, particularly in South-East Asia. An Australian delegation has been invited to UNIDO's headquarters in order to formalize an agreement.

Austria has also expressed the wish to cooperate with UNIDO. As a result, projects to be financed on a bilateral basis in Romania with UNIDO as an implementing agency are being submitted to this session of the Executive Committee.

Section II

Project - by - Project Progress Report
covering the period from July 1995 to September 1995

Algeria

MP/ALG/94/409

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

Under the project which has been reported as completed in the progress report submitted to the last (17th) session of the Executive Committee one project document had been formulated, was submitted to the 17th Executive Committee and was approved at the same session as being eligible for funding at the 18th or subsequent sessions of the Executive Committee. The characteristics of this project as approved read 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 150 MT of CFC-11, CFC-12 and CFC-114	US \$ 614,850 (excl. agency support costs)	Propane/ butane (HAPS)

MP/ALG/95/025

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

Following the evaluation of the offers received, in September contract has been awarded to Sicplant-Perros (Italy) as a general contractor, for a total amount of US\$ 4,550,000. The engineering work including finalization of specification of equipment to be purchased is scheduled to start immediately.

MP/ALG/95/026

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

Local subcontractor is cooperating with the international expert in the formulation of the project document. The project is presented to the Executive Committee at its 18th session in November 1995. Its characteristics are as follows:

<i>Project Title</i>	<i>Project Impact</i>	<i>Incremental costs requested</i>	<i>Technology chosen</i>
Phasing out of CFC-11 in the manufacture of sandwich panels at BATIMETAL Beni Mansour	Phase-out of annual consumption of 110 MT of CFC-11	US\$ 656,150 (excl. agency support costs)	n-pentane (as blowing agent)

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):

Local subcontractor is cooperating with the international expert in the formulation of the project document. The project document is presented to the Executive Committee at its 18th session in November 1995. Its characteristics read as follows:

<i>Project Title</i>	<i>Project Impact</i>	<i>Incremental costs requested</i>	<i>Technology chosen</i>
Phasing out of CFC-11 in the manufacture of sandwich panels by discontinuous method at PROSIDER Berrahal	Phase-out of annual consumption of 82 MT CFC-11	US\$ 633,050 (excl. agency support costs)	n-pentane (as blowing agent)

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 and it will be ready for submission to the Executive Committee at its 19th session.

MP/ALG/95/123

Investment project for phasing out of CFCs at ENAD

The project has been approved at the last (17th) session of the Executive Committee. The implementation has started. Equipment specifications have been prepared and the bidding exercise for submission of offers is underway. The 4th of October 1995 is the closing date for submission of offers.

Argentina

MP/ARG/94/410

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

The equipment has been delivered and its installation will be finalized soon. Start-up operation and performance test are foreseen for mid-October 1995. 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 has been delivered and its installation will be finalized soon. Start-up operation and performance test foreseen for mid-October 1995. 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 project document has been prepared and it is submitted to the 18th session of the Executive Committee (November 1995). Its characteristics read as follows:

<i>Project Title</i>	<i>Project Impact</i>	<i>Incremental costs requested</i>	<i>Technology chosen</i>
CFC recovery, recycling and training in refrigeration	Phase-out of annual consumption of 34 MT of ODP	US\$ 212,938 (excl. agency support costs)	N.A.

Benin

MP/BEN/95/131

Preparation of an investment project for ODS phase-out in a foam producing plant (Sibao):

The project was approved at the last (17th) session of the Executive Committee. A formulation mission is scheduled to be carried out in the beginning of 1996.

Brazil

MP/BRA/93/095

Preparatory assistance for elimination of CFCs in the sector of polymer foams manufacturing of Brazil:

The formulation mission took place in March 1995. One project document has been prepared for the company CALOI. Originally it was suggested to apply hydrocarbons-based technology. The management of the company, however, communicated to UNIDO (August 1995) their preference to select HCFC-141b as foam agent. Further, they indicated their desire to carry out the project by themselves without any assistance from the Multilateral Fund. The characteristics of the project elaborated by UNIDO for both above technology options are as follows:

<i>Project Title</i>	<i>Project Impact</i>	<i>Incremental costs requested</i>	<i>Technology chosen</i>
<u>Option 1:</u>			
Investment project for phasing out of ODS at CALOI company	Phase-out of 80 MT CFC-11	US\$ 1,100,000 (excl. agency support costs)	Hydrocarbons

Option 2:

Investment project for phasing out of ODS at CALOI company	Phase-out of 80 MT CFC-11	US\$ 222,000 (excl. agency support costs)	HCFC-141b
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Following a request by the Brazilian Government for project formulation, one project document for the company Elgin had been prepared and was submitted to the last (17th) session of the Executive Committee. In the same session it was decided that the project will receive priority consideration at the 18th session of the Executive Committee. The characteristics of the project which is submitted to the 18th session of the Executive Committee are as follows:

Project Title	Project Impact	Incremental costs requested	Technology chosen
Conversion of ODS cleaning processes from 1,1,1-trichloroethane to Aqueous cleaning and cleaning using trichloroethylene at Elgin Maquinas S.A.	Phase-out of annual consumption of 60 MT of 1,1,1-trichloroethane	US\$ 220,703 (excl. agency support costs)	Aqueous cleaning and cleaning with tri-chloroethane

MP/BRA/95/124

Investment project for phasing out of ODS at FRISOKAR Equipamentos Plasticos Ltd.

The project has been approved at the last (17th) session of the Executive Committee. The implementation has started and the initial mission of international technical staff to the project is scheduled for October 1995.

MP/BRA/95/125

Conversion of the assembly of refrigeration compressors to phase out CFC-12 and CFC/HCFC-502 by using HFC-134a and R404A at ELGIN MAQUINAS:

The project has been approved at the last (17th) session of the Executive Committee. The work plan is updated and specific data for the required equipment is collected and prepared by

the company ELGIN MAQUINAS. At the request of the company, mid-October 1995 a mission is scheduled by the backstopping officer to Brazil to discuss in detail the implementation procedures. Accordingly, it is expected that the terms of reference will be ready early November 1995.

MP/BRA/95/132

Project preparation assistance:

The project was approved at the last (17th) session of the Executive Committee. Following a request by the Brazilian Government, a number of projects are under formulation in the solvents sector.

Côte d'Ivoire

MP/IVC/95/068

Project formulation for the ODS phase-out in the refrigeration sector:

A field mission was undertaken by a consultant. The project document is under preparation and will be submitted to the 19th session of the Executive Committee.

MP/IVC/95/133

ODS phase-out of a foam-producing plant and at two aerosol filters:

The project was approved at the last (17th) session of the Executive Committee. A formulation mission is scheduled to take place early 1996.

Cameroon

MP/CMR/94/411

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

Contract awarded in February 1995 to Transfair (Germany). 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-March 1996, provided that no further delays occur due to facilities upgrading undertaken in parallel to conversion, by counterpart at his own cost.

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:

At the last (17th) session of the Executive Committee, under this project, a project document had been formulated and submitted which was approved by the Executive Committee as being eligible for funding at the 18th or subsequent sessions. Summarized information concerning this project is provided in the following table:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Preparation of a project for ODS phase-out at Union Camerounaise d'Entreprise (domestic refrigeration plant)	Phase out of 77 MT of CFC-11 and 17.5 MT of CFC-12; total ODP phase-out 94.5 MT	US\$ 1,321,400 (excl. agency support costs)	Cyclopentane as blowing agent

China

MP/CPR/94/405

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

Under the project which has been reported as operationally completed in the progress report submitted to the last (17th) session of the Executive Committee a project document had been formulated, was submitted to the 17th Executive committee and approved, at the same session, as being eligible for funding at the 18th or subsequent sessions. The characteristics of the project as approved read as follows:

Project title	Project Impact	Incremental Cost requested	Technology chosen
Conversion of compressor production for domestic refrigerators from CFC-12 to hydro-carbon refrigerant at Jiaxipera Compressor Factory	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\$ 1,490,000 (excl. agency support costs)	Hydro-carbons

In addition, two projects in the refrigeration sector have been formulated - one in a compressor factory (HUANGSHI DONGBEI) and one in a domestic refrigeration plant (HANGZHOU HUARI) - and are submitted to the 18th session of the Executive Committee. Their characteristics are as follows:

Project Title	Project Impact	Incremental cost requested	Technology chosen
Phasing out of ODS at a compressor factory of the HUANGSHI DONGBEI Refrigeration Company	Annual indirect phase-out of 100 MT of CFC-12, direct annual phase-out of 40 MT of CFC-11 as solvents and annual phase-out of 20 MT of CFC-12 for quality control (ODP = 160)	US\$ 1,546,600 (excl. agency support cost)	Iso-butane
Phasing out of ODS at a domestic refrigeration plant (HANGZHOU HUARI)	Phase-out of 285 MT of CFC-11 and 53 MT of CFC-12 (ODP = 338)	US\$ 4,884,792 (excl. agency support costs)	Iso-butane as a refrigerant and cyclopentane as foaming agent

MP/CPR/95/040

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

Offers from domestic suppliers for a variety of equipment components to be purchased locally have been received. However, due to lack of related technical information and due to incomplete specifications, the evaluation process cannot be completed. The missing data have been requested and are awaited from the counterparts.

MP/CPR/95/127

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

The project was approved at the last (17th) session of the Executive Committee. The implementation has started. The Terms of Reference have been elaborated and the process for the selection of potential suppliers to be invited to participate in the international bidding exercise is underway.

MP/CPR/95/134 & MP/CPR/95/135

Project formulation of investment projects in halons, domestic refrigeration, solvents, aerosols and foam sectors:

The project was approved at the last (17th) session of the Executive Committee. Four investment projects in the halon sector ("cylinder projects") have been formulated and are submitted to the 18th session of the Executive Committee. Their respective characteristics are as follows:

Project Title	Project Impact	Incremental cost requested	Technology chosen
(a) Conversion from Halon 1211 in portable fire extinguishers at the Xiangshan Fire Equipment Factory to dry chemical and foam	Phase-out of an annual consumption of 300 MT ODS (Total ODP phase-out 900 MT)	US\$ 696,824 (excl. agency support costs)	ABC Dry Powder AFFF foam
(b) Conversion from Halon 1211 in portable fire extinguishers at the Xiangshan Fire Equipment Factory to dry chemical and foam	Phase-out of an annual consumption of 300 MT ODS (Total ODP phase-out = 900 MT)	US\$ 695,206 (excl. agency support costs)	ABC Dry Powder AFFF foam
(c) Conversion from Halon 1211 in portable fire extinguishers at the Jiangxi First Fire Fighting Equipment Factory to dry chemical and carbon dioxide	Phase-out of an annual consumption of 200 MT ODS (Total ODP phase-out = 600 MT)	US\$ 693,124 (excl. agency support costs)	ABC Dry Powder CO ₂
(d) Conversion from Halon 1211 in portable fire extinguishers at the Dalian Jinzhou Fire Equipment Factory to dry chemical and carbon dioxide	Phase-out of an annual consumption of 100 MT ODS (Total ODP phase-out = 300 MT)	US\$ 337,279 (excl. agency support costs)	ABC Dry Powder CO ₂

MP/CPR/95/141

Workshop on domestic and commercial refrigerator compressors:

The project was approved at the last (17th) session of the Executive Committee. The workshop is under preparation and is planned to be held in Xian in November 1995.

Ecuador

MP/ECU/95/136

Preparation of investment project in a plant (ELASTA) for the production of polyurethane flexible foam for automotive industry:

The project was approved at the last (17th) session of the Executive Committee. A formulation mission is scheduled to take place before end-1995.

Egypt

MP/EGY/93/149

Institutional strengthening unit for the Montreal Protocol activities:

The activities, *inter alia*, included development on tracking system on PCs for ODS consumption by industry in Egypt and through imports to the country; coordination of investment projects; training for nationals and from other Arab countries, i.e. Syria; negotiate voluntary bilateral agreement for resource mobilization; coordinate public information and awareness on the ozone issue; cooperate with UNDP in the formulation of national halon strategy; development of a schedule for ODS phase out in Egypt by 1999; conducting of workshops both national and regional ones; cooperating with UNEP; cooperation in the preparation of a legal framework on phase out of ODS including imports/exports issues of those substances and elaboration of incentives for industries concerned.

MP/EGY/94/415

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

The production equipment will be supplied in December 1995. The test equipment will be supplied earlier to allow sufficient time for the model redesign. The company has concluded a technical assistance agreement with National Matsushita Japan from its own resources for the technology transfer related to the manufacturing of up-to-date cooling circuit. The company (Electrostar) is complementing the project with the erection of a new building to ensure proper safety of cyclopentane technology and has also purchased jigs and fixtures from its own resources.

MP/EGY/94/416

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

The production equipment is under manufacturing and will be supplied in February 1996. The test equipment will be supplied in November 1995 to allow sufficient time for the model redesign. The company (Kiriazi) is complementing the project with the erection of a new building to ensure proper safety of cyclopentane technology and has also purchased the required equipment for that purpose from its own resources.

MP/EGY/94/417

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

The production equipment will be supplied in December 1995. The test equipment will be supplied in November 1995 to allow sufficient time for the model redesign. The preparation for the model redesign has started.

Submissions to the 18th session of the Executive Committee on Egypt: six projects have been formulated in the solvents sector and are submitted 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 cleaning processes from CFC-113 to aqueous cleaning at Optica	Phase-out of an annual consumption of 1.2 MT of ODS	US\$ 18,543 (excl. agency support costs)	Aqueous cleaning
(b) Conversion of cleaning processes from CFC-113 and 1,1,1-trichloroethane to semi-aqueous cleaning at Arab International Optics	Phase-out of an annual consumption of 7 MT of ODS	US\$ 48,808 (excl. agency support costs)	Semi-aqueous cleaning

(c) 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 26.1 MT ODS	US\$ 288,910 (excl. agency support costs)	Cleaning in hydro-carbon
(d) Conversion of cleaning processes from 1,1,1-Tri-chloroethane to aqueous cleaning at Siltal	Phase-out of an annual consumption of 20 MT ODS	US\$ 76,834 (excl. agency support costs)	Aqueous cleaning
(e) Conversion of cleaning processes with TCA to trichloroethylene at Abbasol	Phase-out of an annual consumption of 80 MT ODS	US\$ 246,944 (excl. agency support costs)	Cleaning in trichloro-ethylene
(f) Conversion of cleaning processes with TCA to aqueous cleaning at Technopol	Phase-out of an annual consumption of 60 MT ODS	US\$ 203,894 (excl. agency support costs)	Aqueous cleaning

MP/EGY/95/038

Phasing out ODS at Ahaska, Helwan Company for metallic appliances, Ibernna, El Nasr Company for electric and electronic apparatus, Siltal and Super Bosh domestic refrigeration plants:

From almost 30 European, American and Japanese companies invited for bidding on the conversion of the 6 Egyptian domestic refrigeration plants Ahaska, Helwan, Ibernna, Philips, Siltal, and Super Bosh, only 7 companies participated in the bidding. For the conversion of the foaming section bids had been received from Cannon, OMS and Perros, whereas DKK, Galileo, Tecnoplant and A'Gramkov quoted on equipment for the refrigeration and refrigeration service section of the project. UNIDO's technical evaluation of bids has been presented to and discussed with the respective companies in September 95. Some companies reserved the right of inspecting the offered foaming equipment under operating conditions. Finalization of technical inputs for subcontracts and selection of suppliers is scheduled for October.

GLOBAL

MP/GLO/94/407

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

The guidance/strategy document is being finalized by UNIDO/U.S.EPA and is submitted to the 18th session of the Executive Committee.

MP/GLO/94/421

Joint UNEP/UNIDO preparation of country programmes:

The project activities are coordinated with UNEP and cover various joint efforts aiming at assisting Article 5 countries, particularly low ODS consuming countries, to meet requirements of the Montreal Protocol.

Guyana

MP/GUY/95/XX1

ODS phase-out at a domestic refrigeration plant (Guyana Refrigeration Ltd.):

The project was approved at the last (17th) session of the Executive Committee. The project formulation is scheduled for end-1995.

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:

Three project documents have been prepared and are submitted to the 18th session of the Executive Committee. Further, in cooperation with a local consultancy company and at the request of the Indian authorities it is planned to formulate further projects in the solvents sector for submission to future sessions of the Executive Committee. Also discussions are underway with the Ministry of Environment for the conduct of a survey on the use of CTC in the pharmaceutical industry.

The characteristics of the three projects submitted to the 18th session of the Executive Committee read as follows:

Project Title	Project Impact	Incremental cost requested	Technology Chosen
(a) Conversion of electronic cleaning processes from ODS solvents to no-clean and aqueous photoresist developing and stripping technologies at ITI-Palakkad	Phase-out of annual consumption of 45 MT of ODS	US\$ 351,100 (excl. agency support costs)	No-clean and aqueous photoresist developing
(b) Conversion of electronic cleaning processes from ODS solvents to no-clean and hydrocarbon cleaning technologies at ERL, Bangalore	Phase-out of annual consumption of 58.5 MT of ODS	US\$ 392,042 (excl. agency support costs)	No-clean and cleaning in hydro-carbon

MP/IND/93/163

Feasibility study for the recovery and recycling of CFC refrigerants:

A survey of air-conditioning, MAC refrigeration and sector on refrigerant recovery practices in two regions of India (Bombay, New Delhi) was prepared. The terms of reference for the development of a national recovery and recycling network in India, including the formulation of three demonstration recovery and recycling projects in India have been prepared. The international bidding has been carried out and a contractor has been selected. The Government's clearance is awaited.

MP/IND/93/164

Project formulation for phasing out of ODS in unorganized sector:

The draft agreement between UNIDO and the Small Industries Development Bank of India (SIDBI) is still under discussion. UNIDO is awaiting SIDBI's comments.

MP/IND/94/423

Conversion of electronic cleaning processes from ODS solvents to aqueous cleaning at ITI Mankapur:

The international bidding for the purchase of equipment has been carried out by UNIDO. The issue of funds transfer to the Industrial Development Bank of India (IDBI) is still pending. It is expected that upon receipt of the agreement of the Government of India the equipment will be procured by UNIDO in November 1995.

Indonesia

MP/INS/95/013

Project formulation for phasing out ODS in small- and medium-scale industries:

The mission of three UNIDO experts has already taken place. One project in the foam sector has been prepared and reviewed by the Fund Secretariat and a final understanding was reached between UNIDO and the Fund Secretariat in June/July 1995. The project is submitted to the 18th session of the Executive Committee. Its characteristics are listed in the table below:

<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 \$ 423,050 (excl. agency support costs)	Conversion of CFC-11 to HCFC-141b for the foam; conversion of CFC-12 and R502 to HCFC-22 as refrigerant

Further, a survey is planned to be carried out by the Ministry of Environment on the sectors foam, refrigeration and solvents in order to identify the companies using ODS in the small- and medium-scale industry. As a follow-up to this activity, UNIDO experts would formulate investment projects in the above-mentioned sectors.

Iran

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):

Contracts for model redefinition (design, calculation and drafting, prototyping and prototype testing) were awarded to all five companies. A national expert was recruited to review and examine the models (prototypes) manufactured. The prototypes and the work of the National Expert will be examined by an international expert at the end of September 1995.

One prototype from Azmayesh and one from Arj have been tested at DKK - Foron Research Centre at Scharfenstein, Germany, and the technical staff of all five companies participated in the testing process and in the review of the results of calculations made by them, as well as in a practical laboratory course of research and design of new refrigeration technology for phasing out CFCs and minimizing ODP impact.

In October 1995, it is expected that all five companies will start with production using HFC-134a as refrigerant.

The terms of reference for conversion of insulation foam blowing equipment to the application of cyclopentane as blowing agent in the production of refrigerators and freezers at the five Iranian companies were prepared and agreed upon with the counterparts. Offers were requested and bids evaluated. Contracts were awarded in July 1995. Agreements on implementation procedures of the project were signed between UNIDO and each Iranian company.

MP/IRA/95/021

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

The project document has been prepared and is 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>
Conversion of three ODS phase-out: domestic refri- 182.5 MT erator production facilities to phase out CFC-12 and CFC-11 (second group)		US\$ 3,016,384 (excl. agency support costs)	Cyclo- pentane and HFC-134a

MP/IRA/95/126

Phasing out of CFC-11 through conversion of rigid PU foam manufactured with the techniques of continuous lamination at FABIS, Iran Steel Parts, Methane Systems, Mammoth and F.M. Company:

The project was approved at the last (17th) session of the Executive Committee. The implementation has started and in September 1995, a UNIDO mission visited Iran and prepared in cooperation with the counterparts the terms of reference for the services to be delivered; the work programme was also revised.

Jordan

MP/JOR/94/418

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

and

MP/JOR/94/419

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

and

MP/JOR/94/120

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

A Jordanian delegation comprising representatives of concerned authorities and the companies visited UNIDO 20-22 September 1995. As a result, between the Hashemite Kingdom of Jordan and UNIDO an agreement about implementation procedures was reached. The signature of the Ministry on the agreement is expected no later than mid-October 1995. The revised terms of reference were given to the counterparts for their comments. Finalization of the terms of reference is scheduled for end-

October/early November with the backstopping officer visiting Jordan.

MP/JOR/95/009

Preparatory assistance for investment projects in commercial refrigeration, air conditioning and the halon sector:

A Jordanian delegation comprising representatives of the concerned authorities and the companies MEEI, NRC and HAMCO visited UNIDO in the period 20-22 September 1995. As a result, an agreement about implementation procedures was reached in connection with the respective ongoing investment projects, namely MP/JOR/94/418, MP/JOR/94/419, and MP/JOR/94/120. During the same meeting UNIDO was requested to undertake activities in formulating new projects in the sectors of commercial refrigeration and halons. Accordingly, a formulation mission in the halons sectors is planned to take place before end-1995.

Kenya

MP/KEN/94/401

Kenya Cold Storage Co.:

Preparatory assistance activities completed. Remaining project funds (UNIDO Progress Report on the 17th session, Section III, financial report, page 3, refers) is subject to deduction from the investment project fund formulated under this project. It was submitted to the Executive Committee at its 17th session and it is resubmitted to the 18th session of 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 20.5 MT of CFC-11 and 11.8 MT of CFC-12 (total ODP = 32.3 MT)	US\$ 465,190 (excl. agency support costs)	HFC-134a and HCFC-141b

MP/KEN/95/137

Identification and preparation of projects in the solvents and aerosols sectors:

The project was approved at the last (17th) session of the Executive Committee. Preparatory activities and contacts are underway for the identification and formulation of projects in the two sectors.

Lebanon

MP/LEB/95/070

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

Project operationally completed.

The formulation of the project proposals has been finalized and the documents were submitted to the Fund Secretariat for consideration by the Executive committee at its last (17th) session. The projects were recommended by the Fund Secretariat for approval subject to clarification on the eligibility of the Lebanon as Article 5 country. The Lebanese authorities are in the process of obtaining the clearance. The consideration of the two projects can be reactivated, as soon as the issue is resolved and the country is confirmed as Article 5 country. 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 87.7 MT of ODS	US\$ 323,700 (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\$ 549,780 (excl. agency support costs)	LPG

MP/LEB/95/071

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

The draft project documents for the two companies visited are ready. In view of the fact that the eligibility of the Lebanon as Article 5 country is not clarified yet, submission of the two projects has been postponed until the above-mentioned, pending issue has been clarified (project MP/LEB/95/070 refers).

MP/LEB/95/072

Refrigeration Sector Opaco Ltd.:

The eligibility of the Lebanon as Article 5 country is due to be confirmed (MP/LEB/95/070 and MP/LEB/95/071 refer). The draft project document has been prepared and will be finalized when the company OPACO will have reached an overview about their production capacity and as soon as the above-mentioned eligibility issue of the country is clarified.

Macedonia

MP/MCD/95/034

Preparation of a country programme for the Republic of Macedonia:

The local consultant has prepared the first draft of the country programme. Mid-September 1995, the debriefing session took place at UNIDO Headquarters where the draft country programme was presented, discussed and reviewed. The international bidding exercise for the consultancy company is underway.

Mozambique

MP/MOZ/95/044

Preparation of project in the commercial refrigeration:

Project operationally completed (UNIDO Progress Report on the 17th session, Section II, page 20, refers).

The formulation of a project document has been finalized and is submitted to the 18th session of 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 of CFCs at Indatec-Industria de Applicacoes Technico-domesticas Ltda. Machaua, Mozambique	Phase out of 30 MT of CFC-11 and 11.0 MT of CFC-12 both for services and production; total ODP phase out 41.0 MT	US\$ 730,235 (excl. agency support costs)	HFC-134a, cyclo-pentane as blowing agent

Nigeria

MP/NIR/94/408

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

The formulation of two project documents for the plants Thermocool and Debo has been finalized and both were submitted to the last (17th) session of the Executive Committee, together with a strategy report as no country programme was available by that time. The characteristics of these projects and details of the Executive committee's decision in connection with each one of the two investment projects are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
(a) Investment project for phasing out of CFCs at the domestic refrigeration plant, THERMOCOOL Engineering Co. PLC, Nigeria	Phase-out of 59 MT of CFC-11	US\$ 1,515,250 (excl. agency support costs)	HFC-134a, cyclo-pentane as blowing agent

Decision of the 17th ExCom: Project receives priority consideration at the 18th session of the Executive Committee (Nov. 95).

(b) Investment project for phasing-out of CFCs of DEBO Industries Ltd., Lagos	Phase-out of 34 MT of CFC-11	US\$ 1,048,053 (excl. agency support costs)	Cyclo-pentane as blowing agent
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Decision of the 17th ExCom: Project approved, at a cost of US \$1,048,053, as being eligible for funding at the 18th or subsequent sessions of the Executive Committee.

Pakistan

MP/PAK/95/043

Strategy for the phase-out of ODS in the refrigeration industry:

A formulation mission was carried out end-August/early September 1995, two project documents have been prepared in the refrigeration sector and are submitted to the 18th session of the Executive committee. Their respective characteristics read as follows:

<u>Project title</u>	<u>Project Impact</u>	<u>Incremental Cost requested</u>	<u>Technology chosen</u>
(a) Phasing out of ODS at the Chest Factory of Riaz Electric Comp. Ltd.	Phase-out of ODS of 48.2 MT	US\$ 873,430 (excl. agency support costs)	Cyclo-pentane, HFC-134a
(b) Phasing out of ODS at the refrigerator and chest freezer plants of Pak Electron Ltd. (PEL)	Phase-out of 68 MT ODS	US\$ 1,257,309 (excl. agency support costs)	Cyclo-pentane, HFC-134a

Peru

MP/PER/95/138

Project preparation assistance in solvent sector:

The project was approved at the last (17th) session of the Executive committee. UNIDO requested the Ministry of Industry to identify the companies using ODS solvents. A UNIDO formulation mission may start early 1996.

Regional Africa

MP/RAF/95/139

Preparation of a recovery and recycling project in Benin, Botswana, Burkina Faso, Gambia, Guinea, Namibia and Senegal:

The project was approved at the last (17th) session of the Executive Committee. The project formulation is scheduled for end-1995.

Romania

MP/ROM/94/422

Romania country programme:

Project operationally completed (UNIDO Progress Report for the 17th ExCom, Section II, page 21 refers).

The country programme was approved at the last (17th) session of the Executive Committee.

MP/ROM/95/010

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

The project document for ARTIC was submitted to the last (17th) session of the Executive Committee. Due to policy issues it was reformulated and is submitted to the 18th session of the Executive Committee. Its characteristics are as follows:

Project title	Project Impact	Incremental Cost requested	Technology chosen
Phasing out of ODS of CFC-11 and CFC-12 at the domestic refrigeration factory ARCTIC	Phase-out of 206.7 MT of CFC-11 and CFC-12	US\$ 2,481,942 (excl. agency support costs)	HCFC-141b and HFC-134a

The project document for SADU is under formulation and its submission is planned for the 19th session of the Executive Committee.

One project document has also been formulated in the aerosol sector and is submitted to the 18th session of 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>
Phase-out of ODS in the aerosol sector at "FARMEC S.A."	Phase-out of annual consumption of 730 MT ODS	US\$ 1,443,417 (excl. agency support costs)	LPG

UNIDO has also prepared an investment project to be financed by the Government of Austria in a bilateral way; it is submitted to the 18th session of the Executive committee and its characteristics are as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Conversion and retrofitting of commercial refrigeration equipment; recycling of CFC-12 and installation of a Romanian training centre for service technicians (Company: COMSERVICE & ICPIAF)	Phase-out of annual consumption of 10 MT ODS	US\$ 116,628 (excl. agency support costs)	HFC-134a, propane

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 is submitted to the Executive Committee at its 18th session. Its characteristics are as follows:

Project title	Project Impact	Incremental Cost requested	Technology chosen
Phasing out CFC-11 at S.C. SPUMOTIM S.A. flexible poly- methane foam plant	Phase-out of annual capacity of 35 MT ODS	US\$ 836,715 (excl. agency support costs)	Liquid carbon dioxide

MP/ROM/95/129

Creation of an ozone secretariat:

The project was approved at the last (17th) session of the Executive Committee. The project was discussed between UNIDO and Romanian authorities in September 1995, during the visit of a Romanian delegation to UNIDO to review the work programme of the Joint UNIDO/Romania Committee. An agreement between UNIDO and the Romanian authorities concerned on the implementation of the project is under preparation.

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.

One project document was formulated and submitted to the last (17th) session of the Executive Committee. Due to policy issues it was reformulated and is submitted to the 18th session of 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\$ 188,205 (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 (UNIDO Progress Report for the 17th session of the Executive Committee, Section II, page 23 refers).

A project document on the aerosol sector has been finalized and is submitted to the 18th session of 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\$ 608,559 (excl. agency support costs)	LPG

As a result of a UNIDO mission in September 1995, one more project document has been formulated. The counterparts decided to a final solution, namely "Cardio" technology or a similar one.

Swaziland

MP/SWA/95/014

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

Project operationally completed.

The project was submitted to the last (17th) session of the Executive Committee. Due to policy issues the project was reformulated and is submitted to the 18th session of the Executive Committee. Its characteristics are as follows:

Project title	Project Impact	Incremental Cost requested	Technology chosen
Phasing out ODS at the FRIDGEMASTER (dom. refrigeration)	Phase-out of annual consumption of 172 MT of ODS	US\$ 1,131,200 (excl. agency support costs)	HCFC-141b and HFC-134a

Syria

MP/SYR/93/148

Support to strengthening the general commission for environmental affairs to implement Montreal Protocol related activities:

Although actual project implementation started in January 1994, major project activities have commenced at the beginning of 1995. The delay in implementation was due mainly to the change in the staffing of the Ozone Layer Protection Unit at the General Commission for Environmental Affairs. All computer equipment has been delivered and installed. A detailed work plan which was prepared in 1994 has been updated and agreed upon by the Government.

The international consultant for the establishment of a database for the management of technical assistance project managed by the OLPU completed the first part of his assignment and is presently fielded for his second split mission.

A national awareness workshop was held on 16 September 1995 and two additional workshops on foams and aerosols are being planned to be held within the framework of the above project.

MP/SYR/94/412

Phasing out of CFCs at Al Hafez Refrigerator Co.:

The services under the contract progress ahead of schedule. 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. Purchase orders for equipment placed.

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. Eligibility of the "Cardio" technology to be confirmed by the Executive Committee.

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 project document has been prepared as an 'umbrella project' covering three factories at Krayem Co. and is submitted to the 18th session of the Executive Committee. Its characteristics are as follows:

<u>Project title</u>	<u>Project Impact</u>	<u>Incremental Cost requested</u>	<u>Technology chosen</u>
Investment project for phasing out of CFCs in manufacturing of refrigerators at Krayem In.Co.	Phase-out of annual consumption of 154 MT of ODS	US\$ 2,679,285 (excl. agency support costs)	HCFC-134a, cyclopentane, n-pentane

MP/SYR/95/041

Investment project for phasing out of CFC at PENGUIN:

The contract was awarded in August 1995 and relevant activities progress according to schedule.

MP/SYR/95/042

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

The contract was awarded in August 1995 and relevant activities progress according to schedule.

Tunisia

MP/TUN/95/140

Preparation of investment projects in the aerosol, foam, domestic refrigeration, and solvent sectors:

The project was approved at the last (17th) session of the Executive Committee. Preparatory work for project formulation in the domestic refrigeration sector is underway. An expert visited Tunisia in the second half of September 1995 and a project document has been prepared and is submitted to the 18th session of the Executive Committee. Its characteristics read as follows:

<i>Project title</i>	<i>Project Impact</i>	<i>Incremental Cost requested</i>	<i>Technology chosen</i>
Umbrella project to phase out ODS at the 6 small refrigeration manufacturers	Phase-out of annual consumption of 37 MT CFC-12 and 41 MT of CFC-11 (Total ODP = 78.5 MT)	US\$ 1,088,932 (excl. agency support costs)	HCFC-141b as foam blowing agent, HFC-134a as refrigerant

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 for UROSAN plant was submitted to the 17th session of the

Executive Committee. Its characteristics were 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 costs)	(a) Flex. substitute liquid CO ₂ (b) flexible cold core moulding: chemical CO ₂ (water blowing) (c) integral skin foam: Pentane

The project presented certain policy issues which were successfully resolved by the Executive Committee and, therefore, receives priority consideration at the 18th session of the Executive Committee (Nov. 1995). However, the company requested UNIDO to postpone its submission to a future session to enable them to fully familiarize themselves with the technology chosen.

A UNIDO mission visited Turkey in September 1995, and a project document has been formulated in the foam sector for the factory Barlon Metal. The project the characteristics of which are listed below is submitted to the 18th session of the Executive Committee.

Project title	Project Impact	Incremental Cost requested	Technology chosen
Conversion to CFC-free technology in the manufacture of rigid polyurethane from insulation panels at Barlan Metal	Phase-out of annual consumption of 462 MT ODS	US\$ 1,322,750 (excl. agency support costs)	n-pentane

United Republic of Tanzania

MP/URT/95/020

Aerosol sector at Mansoor Daya Chemical Ltd.:

Project operationally completed (UNIDO Progress Report for the 17th session of the ExCom, Section II, page 26 refers).

A project document has been finalized and it is submitted to the 18th session of the Executive Committee. Its characteristics are as follows:

Project title	Project Impact	Incremental Cost requested	Technology chosen
ODS phase-out at Mansoor Daya Chemicals Ltd. (Aerosols)	Phase-out of 150 MT of CFC-11 and CFC-12 (50/50)	US\$ 455,069 (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 (UNIDO Progress Report for the 17th session of the Executive Committee, Section II, page 26 refers).

A project document has been finalized and it is submitted to the 18th session of the Executive Committee. Its characteristics are summarized below:

Project title	Project Impact	Incremental Cost requested	Technology chosen
Investment project for phasing out of CFCs at Tanzania Domestic Appliance Manu- facturers Ltd.	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\$ 786,610 (excl. agency support costs)	HFC-134a, cyclo- pentane as blowing agent

Vietnam

MP/VIE/95/011

Preparation of an investment project for conversion of industrial chillers:

and

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:

A project document covering both above-mentioned areas is under formulation. An expert has been fielded, but owing to lack of some important information, further formulation work is required. The matter was discussed and is closely coordinated with the Vietnamese authorities concerned. The project document is expected to be finalized and submitted to the Executive Committee in 1996.

MP/VIE/95/047

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

The international bidding exercise is completed for the foaming equipment and the contract is awarded. The equipment for the refrigeration part is purchased.

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 will be implemented in 1996.

Zimbabwe

MP/ZIM/95/036

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

The investment project prepared under this project was formulated, submitted and approved at the last (17th) session of the Executive Committee. The implementation of the investment project has started (project MP/ZIM/95/128 refers).

MP/ZIM/95/128

CFC refrigerant recovery and reclaim:

The project was approved at the last (17th) session of the Executive Committee. The kick-off meeting of the project implementation was held in Harare in the first week of September 1995. Preparatory work for equipment ordering/purchase is underway.

UNIDO

Financial Report

31 August 1995

Country/Region Project Title	Project Number	Type of Project	Date of Approval	Funds Allocated	Funds Disbursed (PYs Expend. + CY disburse.)	Planned Commitment (CY Outstand. Obligations)	Savings/ Deficit	Date of Completion	Remarks
<u>Completed Projects</u>									
ALGERIA									
Preparatory assistance for elimination of CFCs in manufacturing domestic refrigerators and freezers at ENIEM	MP/ALG/94/406	PRP	34394	25,000	24,250	84	666	Mar 95	
Preparatory assistance for the phase out of CFCs in the manufacture of aerosols and solvents at ENAD	MP/ALG/94/409	PRP	Mar 94	25,000	20,128		4,872	Mar 95	
ARGENTINA									
Preparatory assistance for the elimination of CFCs in manufacturing foams at Bandex, S.A., Celpack, S.A. and Prensplant, S.A.	MP/ARG/94/010	PRP	Dec 93	35,000	44,062		(9,062)	Dec 94	
CAMEROON									
Preparation of an investment project proposal for phase out of CFCs at FAEM, Cameroun	MP/CMR/94/018	PRP	Nov 93	20,000	17,926		2,074	Apr 95	
CHINA									
Phasing out of ozone depleting substances (ODS) used in tobacco expansion in China	MP/CPR/93/107	PRP	Mar 93	72,000	76,499		(4,499)	Aug 94	
Substituting halon used in fire fighting equipment at Nanjing Fire-Fighting Equipment Company	MP/CPR/94/404	PRP	Mar 93	36,000	26,706	239	9,055	Dec 95	
Eliminating of ozone depleting substances used in the production of compressors for household refrigerators at Jiaxipera Compressor Co., Ltd.	MP/CPR/94/405	PRP	Mar 93	36,000	41,082		(5,082)	Dec 94	
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	MP/CPR/95/039	PRP	Dec 94	25,000	14,638	293	10,069	May 95	

UNIDO

Financial Report

31 August 1995

Country/Region Project Title	Project Number	Type of Project	Date of Approval	Funds Allocated	Funds Disbursed (PYs Expend. + CY disbursements)	Planned Commitment (CY Outstand. Obligations)	Savings/ Deficit	Date of Completion	Remarks
EGYPT									
Preparatory assistance for elimination of CFCs in manufacturing foams at ADVECHEMS and El Fateh	MP/EGY/93/094	PRP	Mar 93	50,000	38,594		11,406	Dec 95	Balance utilized for standard flammability tests of MP/EGY/93/138
Preparatory assistance for investment projects for phasing out of CFCs at Electrostar Refrigeration Manufacturers and at Kirlazi Refrigerators Manufacturing Co., Cairo	MP/EGY/93/121	PRP	Mar 93	50,000	56,602		(6,602)	Aug 94	
Preparation of investment projects on ODS phase-out for four additional refrigerator manufacturers	MP/EGY/94/414	PRP	Jul 94	15,000	18,364		(3,364)	May 95	
IRAN									
Preparation of investment project proposal for the phase out of CFC-11 and CFC-12 in the domestic refrigeration industry	MP/IRA/93/093	PRP	Mar 93	50,000	63,625		(13,625)	Aug 94	
JORDAN									
Preparation of investment project for phase-out of ODS in selected industries in the refrigeration and air-conditioning sector	MP/JOR/94/401	PRP	Sep 93	90,000	74,951		15,049	Apr 94	
KENYA									
CFC phase out project at Kenya Cold Storages Ltd., and its subsidiary companies: Hall Equatorial Ltd., Premier Refrigeration and Engineering Ltd., and Refrigeration Services Ltd.	MP/KEN/94/401	PRP	Nov 93	380,875	88,283		292,592	May 95	Completed. Balance to be used/ transferred to the investment project
LEBANON									
Project formulation for the phase-out of ODS in the aerosol sector (Cosmaline Industries S.A.L.)	MP/LEB/95/070	PRP	Mar 95	15,000	6,182		8,818	Dec 95	

Country/Region Project Title	Project Number	Type of Project	Date of Approval	Funds Allocated	Funds Disbursed (PYs Expend. + CY disbursements)	Planned Commitment (CY Outstand. Obligations)	Savings/ Deficit	Date of Completion	Remarks
ROMANIA									
Preparation of a Country Programme for Romania	MP/ROM/94/422	TAS	Dec 94	80,000	56,008		23,992	Dec 95	
Preparation of investment project for phasing out of CFC-11 at S.C. Spumolim S.A., flexible foam plant	MP/ROM/95/073	PRP	Dec 94	15,000	15,132		(132)	May 95	
SEYCHELLES									
Preparation of a project proposal for setting up a National Refrigerant Recovery and Recycling Centre, National Halon Bank and Regional Centre for Refrigeration Technicians and Engineers	MP/SEY/95/074	PRP	Dec 94	15,000	800	800	13,400	Dec 95	
SWAZILAND									
Preparatory assistance for the formulation of a project in a domestic refrigerator plant (FRIDGEMASTER)	MP/SWA/95/014	PRP	Dec 94	25,000	11,485	800	12,715	Dec 95	
SYRIA									
Preparation of investment project proposals for the phase out of CFC-11 and CFC-12 in the refrigeration industry	MP/SYR/93/118	PRP	Mar 93	35,000	34,927		73	Dec 94	
TANZANIA									
Preparation of an investment project in the aerosol sector at Mansoor Daya Chemical Ltd.	MP/URT/95/020	PRP	Dec 94	10,000	1,612	7,000	1,388	May 95	
Preparation of an investment project in the refrigeration sector at Dalkin Air Conditioning Ltd.	MP/URT/95/033	PRP	Dec 94	10,000	8,762	1,033	205	May 95	
SUB TOTALS (COMPLETED)				1,114,875	740,618	10,249	364,008		

UNIDO

Financial Report
31 August 1995

Country/Region Project Title	Project Number	Type of Project	Date of Approval	Funds Allocated	Funds Disbursed (PYs expend. + CY disburse.)	Planned Commitment (CY outstand. Obligations)	Balance	Date of Completion	Remarks (Phasing: allocation available/ planned for expenditure in a given year)
<u>Ongoing Projects</u>									
ALGERIA									
Investment project for phasing out CFCs at Enterprise Nationale des Industries de felectro- menager (ENIEM)	MP/ALG/95/025	INV	Dec 94	6,589,550	6,424		6,583,126	Mar 97	CY phasing: \$2,963076
Preparation of an investment project for CFC phase out in the production of rigid foam at BATIMETAL	MP/ALG/95/026	PRP	Dec 94	25,000	2,000	10,259	12,741	Dec 95	
Preparation of an investment project for the phase out of CFC-11 in the manufacture of sandwich panels at PROSIDER (Annaba - Algeria)	MP/ALG/95/027	PRP	Dec 94	25,000	1,000	8,708	15,294	Dec 95	
Project formulation of establishment of a national centre for recovery and recycling of CFC-11, CFC-12 and CFC-502	MP/ALG/95/028	PRP	Dec 94	25,000			25,000	Dec 95	
Investment project for phasing out of CFCs at ENAD	MP/ALG/95/123	INV	Jul 95	109,900			109,900	Feb 96	Delivery and installation of equip- ment planned for Dec. 95
Project formulation for phasing out ODS in small and medium-scale industries	MP/ALG/95/130	PRP	Jul 95	75,000			75,000	Feb 96	
ARGENTINA									
Investment project for phasing out of ODS at BANDEX, S.A.	MP/ARG/94/410	INV	Jul 94	517,630	444,980	65,364	7,286	Dec 95	
Investment project for phasing out of ODS at CELPACK, S.A.	MP/ARG/94/413	INV	Jul 94	503,094	466,407	7,670	29,017	Dec 95	
BARBADOS									
Preparation of project for retrofitting in all ice- making systems, ice bin compressor systems, blast freezers, cold storage and chiller rooms	MP/BAR/95/075	PRP	Dec 94	10,000	8,000	2,000	0	Dec 95	

UNIDO

Financial Report
31 August 1995

Country/Region Project Title	Project Number	Type of Project	Date of Approval	Funds Allocated	Funds Disbursed (PYs expend. + CY disbursem.)	Planned Commitment (CY outstand. Obligations)	Balance	Date of Completion	Remarks (Phasing: allocation available/ planned for expenditure in a given year)
BENIN									
Preparation of an investment project for ODS phase out in small- and medium-scale industries	MP/BEN/95/131	PRP	Jul 95	15,000			15,000	Dec 96	
BRAZIL									
Preparatory assistance for elimination of CFCs in the sector of polymer foams manufacturing of Brazil	MP/BRA/93/095	PRP	Mar 93	150,000	124,976	10,766	14,258	Mar 96	
Investment project for phasing out of ODS at FRISOKAR	MP/BRA/95/124	INV	Jul 95	267,948			267,948	Dec 96	CY phasing: \$73,198
Conversion of the assembly of refrigeration compressors to phase out CFC-12 and HCFC-502 by using HFC-134a and R404/7 at Elgin Maquinas	MP/BRA/95/125	INV	Jul 95	460,339			460,339	Jun 99	CY phasing: \$68,490. Highest funds disbursement planned for 1996/1997
Preparation of an investment project in a plant (ELGIN, consuming 60 MT of TCA as a degreasing agent in the production of compressors)	MP/BRA/95/132	PRP	Jul 95	15,000			15,000	Dec 96	
CAMEROON									
Phasing out of CFCs at FAEM, S.A.	MP/CMR/94/411	INV	Jul 94	1,935,860	827,908	130,000	977,952	Feb 96	Balance includes \$783,214 FY commitment (awarded contract)
Preparation of a project for the phasing out CFC-11 in the manufacture of domestic refrigerators, freezers and air-conditioners at Union Camerounaise	MP/CMR/95/022	PRP	Dec 94	25,000			25,000	Dec 95	No disbursements due to combined mission with investment project
CHINA									
Conversion from halon 1211 to ABC dry powder and foam water spray at Nanjing Fire-Fighting Equipment Factory	MP/CPR/95/040	INV	Dec 94	496,000			496,000	Dec 96	CY phasing: \$200,000

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Conversion of domestic refrigerator and freezer factories to phase out CFC-12 and CFC-11 at Hangzhou Xiling Holdings Company	MP/CPR/95/127	INV	Jul 95	2,790,320		800	2,789,520	Jun 98	95 planned disb.: \$200,000. Highest disbursement planned for 1996/1997
Project formulation of investment projects in the halon sector in the 3 fibre equipment factories and in domestic refrigeration sector and solvents	MP/CPR/95/134	PRP	Jul 95	61,946			61,946	Dec 96	
Project formulation of investment projects in the aerosols and foam sectors	MP/CPR/95/135	PRP	Jul 95	38,053			38,053	Dec 96	
Workshop on Domestic and Commercial Refrigeration Compressor Conversion	MP/CPR/95/141	TAS	Jul 95	40,000			40,000	Dec 95	
ECUADOR									
Preparation of an investment project in a plant (ELASTA) for the production of polyurethane flexible foam for automotive Industry	MP/ECU/95/136	PRP	Jul 95	15,000			15,000	Dec 96	
EGYPT									
Phase out of the use of CFC-12 in the manufacture of extruded polystyrene foam at ADVECHEMS	MP/EGY/93/139	INV	Mar 93	904,000	473,189	312,747	118,064	Dec 96	Balance includes \$112,253 commitment (awarded contract)
Institutional strengthening unit for the Montreal Protocol related activities	MP/EGY/93/149	TAS	Jun 93	263,450	125,646	24,936	112,868	Dec 96	
Phasing out ODS at the Electrostar for Refrigeration Company	MP/EGY/94/415	INV	Jul 94	1,450,585	441,500	159,800	849,285	Jul 96	Balance includes \$700,700 commitment (awarded contract)
Phasing out ODS at the Kirlazi Refrigerators Manufacturing Co.	MP/EGY/94/416	INV	Jul 94	1,643,040	661,021	154,650	827,369	Jul 96	Balance includes \$670,150 commitment (awarded contract)
Phasing out ODS at the refrigerator plants of Delta Industrial Co.	MP/EGY/94/417	INV	Jul 94	2,611,986	1,129,874	215,000	1,267,112 0	Jul 96	Balance includes \$929,000 commitment (awarded contract)

UNIDO

Financial Report
31 August 1995

Country/Region Project Title	Project Number	Type of Project	Date of Approval	Funds Allocated	Funds Disbursed (PYs expend. + CY disbursem.)	Planned Commitment (CY outstand. Obligations)	Balance	Date of Completion	Remarks (Phasing: allocation available/ planned for expenditure in a given year)
Phasing out ODS at the Alaska, Helwan Company for Metallic Appliances, IBERNA, El Nasr Company for Electric and Electronic Apparatus, SILTAL and Super Bosh domestic refrigeration plants	MP/EGY/95/038	INV	Dec 94	5,496,772	5,785		5,490,987	Dec 96	CY phasing: \$1,836,454
GLOBAL									
Establishment of a strategy for phasing-out of ODS in low ODS-consuming countries	MP/GLO/94/407	TAS	Mar 93	100,000	47,956	47,158	4,886	Dec 95	
Joint UNEP/UNIDO Preparation of Country Programmes	MP/GLO/94/421	TAS	Jul 94	75,000	31,215	5,612	38,173	Dec 96	CY phasing: \$56,699
INDIA									
Project formulation for the conversion of electronic cleaning processes for CFC-113/alcohol blended solvents and 1,1,1 trichloroethane to non CFC cleaning	MP/IND/93/162	PRP	Jun 93	74,000	22,225	5,800	45,975	Jul 96	CY phasing: \$52,160
Feasibility study for the recovering and recycling of CFC refrigerants	MP/IND/93/163	TAS	Jun 93	55,000	12,030		42,970	Jul 95	CY phasing: \$42,970
Project formulation for phasing out of ODS in unorganized sector	MP/IND/93/164	PRP	Jun 93	55,000	22,346	1,250	31,404	Dec 96	CY phasing: \$34,038
Conversion of electronic cleaning processes from ODS solvents to aqueous cleaning at ITI Mankapur	MP/IND/94/423	INV	Jul 94	610,160	3,950		606,210	May 96	
INDONESIA									
Project formulation for phasing out ODS in small- and medium-scale industries	MP/INS/95/013	PRP	Dec 94	80,000	25,259	10,500	44,241	Dec 96	
IRAN									
Conversion of domestic refrigerator production facilities to phase out CFC-11 and CFC-12	MP/IRA/94/403	INV	Nov 93	8,906,390	486,447	1,590,946	6,828,997	Dec 96	Balance includes \$3,186,000 FY commitment (awarded contract)

UNIDO

Financial Report
31 August 1995

Country/Region Project Title	Project Number	Type of Project	Date of Approval	Funds Allocated	Funds Disbursed (PYs expend. + CY disburse.)	Planned Commitment (CY outstand. Obligations)	Balance	Date of Completion	Remarks (Phasing: allocation available/ planned for expenditure in a given year)
Preparation of investment project for the phase out of CFC-11 and CFC-12 in the domestic refrigeration industry	MP/IRA/95/021	PRP	Dec 94	50,000	10,953		39,047	Dec 95	
Phasing out CFC-11 through conversion of rigid PU foam manufactured with the technique of continuous lamination at Fabig, Iran Steel, Mammoth, F.M., urethane systems	MP/IRA/95/126	INV	Jul 95	2,571,250			2,571,250	May 97	CY phasing: \$331,250
COTE D'IVOIRE									
Project formulation for the ODS phase-out in the refrigeration sector	MP/IVC/95/068	PRP	Mar 95	15,000	180	6,436	8,384	Dec 95	
ODS phase out of a foam producing plant (Fabrique Ivoirienne de mousse et amemblement) and at two aerosol fillers (SICOBEL and GANDOOR)	MP/IVC/95/133	PRP	Jul 95	10,000			10,000	Dec 96	
JORDAN									
Phasing out ODS at Middle East Electrical Industries Co., Ltd.	MP/JOR/94/418	INV	Jul 94	883,153	5,044	(2,500)	880,609	Jul 96	Agreement on implementation modalities between Jordan and UNIDO reached in Sep. 95
Phasing out ODS at the National Refrigeration Co.	MP/JOR/94/019	INV	Jul 94	813,887	44		813,843	Jul 96	Agreement on implementation modalities between Jordan and UNIDO reached in Sep. 95
Phasing out ODS at the Household Appliances Manufacturing Co., Ltd.	MP/JOR/94/420	INV	Jul 94	775,602	289		775,313	Jul 96	Agreement on implementation modalities between Jordan and UNIDO reached in Sep. 95
Preparatory assistance for investment projects in commercial refrigeration, air conditioning, foam and halon sectors	MP/JOR/95/009	PRP	Dec 94	50,000	3,138		46,862	Dec 95	
KENYA									
Identification and preparation of projects in the solvents and aerosol sectors	MP/KEN/95/137	PRP	Jul 95	15,000			15,000	Dec 96	

Section III

UNIDO

Financial Report
31 August 1995

Country/Region Project Title	Project Number	Type of Project	Date of Approval	Funds Allocated	Funds Disbursed (PYs expend. + CY disbursem.)	Planned Commitment (CY outstand. Obligations)	Balance	Date of Completion	Remarks (Phasing: allocation available/ planned for expenditure in a given year)
LEBANON									
Project formulation for the phase-out of ODS in foam sector (Ets Henri Abdallah and Nasri Karam)	MP/LEB/95/071	PRP	Mar 95	20,000	4,919	2,779	12,302	Dec 95	Eligibility of Lebanon as Article 5 country to be clarified
Project formulation for the phase-out of ODS in the refrigeration sector (Weather-mate and Opaco Ltd.)	MP/LEB/95/072	PRP	Mar 95	15,000			15,000	Dec 95	Eligibility of Lebanon as Article 5 country to be clarified
MACEDONIA									
Preparation of a Country Programme for the Republic of Macedonia	MP/MCD/95/034	TAS	Dec 94	80,000	4,082	3,508	72,410	Jul 96	
MOZAMBIQUE									
Preparation of projects in commercial refrigeration	MP/MOZ/95/044	PRP	Dec 94	15,000	5,055	1,133	8,812	Dec 95	
NIGERIA									
Preparation of CFC phase out strategy for refrigeration and air conditioning industries and services	MP/NIR/94/408	PRP	Nov 93	100,000	33,333	4,000	62,667	Mar 95	
PAKISTAN									
Strategy for the phase out of ODS in the refrigeration industry	MP/PAK/95/043	PRP	Dec 94	50,000		3,754	46,246	Jul 96	
PERU									
Project preparation assistance in solvent sector	MP/PER/95/138	PRP	Jul 95	30,000			30,000	Dec 96	

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REGIONAL AFRICA									
Preparation of a recovery and recycling project in Benin, Botswana, Burkina Faso, Gambia, Guinea, Namibia and Senegal	MP/RAF/95/139	PRP	Jul 95	45,000			45,000	Dec 96	
ROMANIA									
Preparation of an investment project for the phase out of CFC-11 and CFC-12 at a domestic refrigerator plant at Mechanical Enterprise Sadu and Arctic	MP/ROM/95/010	PRP	Dec 94	50,000	26,345	4,036		Jul 96	
Creation of an Ozone Secretariat	MP/ROM/95/129	TAS	Jul 95	168,443			168,443	Jul 98	
SUDAN									
Preparation of investment projects in the refrigeration, aerosol and foam sectors	MP/SUD/95/035	PRP	Dec 94	50,000	10,513	6,311	33,176	Dec 95	
SYRIA									
Support to strengthening the General Commission for Environmental Affairs to implement Montreal Protocol related activities	MP/SYR/93/148	TAS	Jun 93	235,180	47,445	11,780	175,955	Jul 97	CY phasing: \$100,300
Phasing out of CFCs at Al Hafez Refrigerator Co.	MP/SYR/94/412	INV	Jul 94	2,883,277	1,175,677	1,300,000	407,600	Mar 96	
Preparation of investment projects for phasing out of CFC-11 from the subsector of flexible foams manufacturing	MP/SYR/95/006	PRP	Dec 94	20,000	6,667	3,021	10,312	Dec 95	
Preparation of investment project for phasing out of CFC-11 from the manufacture of pre-fabricated sandwich panels at Krayem Cold Stores Ltd.	MP/SYR/95/007	PRP	Dec 94	15,000	4,313		10,687	Dec 95	
Preparation of investment project for phasing out of CFCs in manufacturing of refrigerators at Krayem Int. Co.	MP/SYR/95/008	PRP	Dec 94	15,000	9,089		5,911	Dec 95	
Investment project for phasing out of CFCs at Penguin (Syrian Batrik Co.)	MP/SYR/95/041	INV	Dec 94	1,719,900		312,500	1,407,400	Mar 97	Balance includes \$937,500 FY commitment (awarded contract)

UNIDO

Financial Report
31 August 1995

Country/Region Project Title	Project Number	Type of Project	Date of Approval	Funds Allocated	Funds Disbursed (PYs expend. + CY disburse.)	Planned Commitment (CY outstand. Obligations)	Balance	Date of Completion	Remarks (Phasing: allocation available/ planned for expenditure in a given year)
Investment project for phasing out CFCs at Barada, general company for metallic industry	MP/SYR/95/042	INV	Dec 94	989,650		150,000	839,650	Mar 97	Balance includes \$465,335 FY commitment (awarded contract)
TUNISIA									
Preparation of investment projects in the aerosol, foam, domestic refrigeration and solvent sector	MP/TUN/95/140	PRP	Jul 95	30,000			30,000	Dec 96	
TURKEY									
Preparation of investment projects on ODS phase out in the foam sector	MP/TUR/95/037	PRP	Dec 94	50,000	8,775		41,225	Dec 95	
VIET NAM									
Preparation of investment project for reduction of refrigerant emissions and conversion of food processing and other industrial refrigeration and A/C equipment to suitable alternatives	MP/VE/95/011	PRP	Dec 94	20,000	8,168	1,500	10,332	Dec 95	
Preparation of investment project for reduction of refrigerant emissions and establishment of a collection and reclaiming network in the domestic refrigeration service sector	MP/VE/95/012	PRP	Dec 94	15,000			15,000	Dec 95	
Phasing out ODS at the SEAREFICO and SEAREE industrial refrigeration plants of SEAPRODEX Co.	MP/VE/95/047	INV	Dec 94	497,070	9,536	94	487,440	Aug 97	
ZIMBABWE									
Preparation of investment projects in the refrigeration, air-conditioning and recovery/recycling sectors	MP/ZIM/95/038	PRP	Dec 94	40,000	26,226	2,710	11,064	Dec 95	
CFC refrigerant recovery and reclaim project	MP/ZIM/95/128	INV	Jul 95	312,300			312,300	Jul/Aug 96	

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ZAMBIA									
Training and certification programme in the refrigeration sector		TAS	Dec 94	82,100			82,100	Dec 96	
SUB TOTAL (ONGOING)				49,247,835	6,769,929	4,575,026	37,883,261		
TOTALS (COMPLETED AND ONGOING)				50,362,710	7,510,547	4,585,275	38,247,269		
Programme Support Cost: 13%				6,547,152	976,371	596,086	4,972,145		
GRAND TOTAL				56,909,862	8,486,918	5,181,361	43,219,414		