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

Ninth Meeting
Montreal, 8–10 March 1993

1993 WORLD BANK WORK PROGRAMME

This document includes:

- Comments and recommendations from the Fund Secretariat
- 1993 World Bank Work Programme

COMMENTS AND RECOMMENDATIONS FROM THE FUND SECRETARIAT ON THE 1993 WORLD BANK WORK PROGRAMME

SECRETARIAT'S COMMENTS

1. The World Bank work programme contains extensive information about activities planned for 1993. The document was submitted on schedule, addresses a sectoral summary and provides information about planned activities by country as required by the Executive Committee. The table concerning "investment project pipeline" provides the titles of investment projects anticipated for submission to the Executive Committee during the course of calendar year 1993.
2. Anticipated activities associated with projects already approved by the Executive Committee are presented in the table, "Planned Approval/Commitments", which indicates by quarter when project implementation (legal agreement signature) is projected to begin. The work programme also contains documentation for five projects costing below US\$ 500,000.
3. The work programme does not provide information concerning the total targeted amount of ODS to be phased out during 1993. Requests to the Executive Committee for investment projects are expected for projects in only six countries during this year.

Residuals from the 1992 work programme

4. The Bank also indicated in its work programme the following "Residuals from CY92 [work] programme":

Egypt demonstration project (cancelled)	(US\$ 370,000)
Ecuador pre-investment studies (cancelled)	(US\$ 400,000)
Thailand demonstration project (funding reduction)	(US\$ 80,000)
Work programme management and administrative costs (estimated balance)	(US\$ 1,980,000)
Interest income	(US\$ 750,000)
 Total residuals	 (US\$ 3,580,000)

5. Grounds for project cancellations or funding reductions were not supplied in the work programme or progress report notwithstanding Executive Committee explicit approvals. The category, "Work programme management and administrative costs", includes country programme preparation; project preparation; and, administrative, legal and financial costs. The level of this activity as represented by costs is less than half that requested and approved in the Bank's 1992 work programme.

Requested level of funding for 1993 work programme activities

6. Through its work programme, the World Bank is seeking the Executive Committee's approval (authorization) for the following expenditures:

Country programme preparation	US\$ 166,500
Project preparation ¹	US\$ 2,656,340
Administrative, legal and financial costs	US\$ 1,179,000
Proposed projects costing below US\$ 500,000	<u>US\$ 1,129,000</u>
 Total request	 US\$ 5,130,840

Country programme preparation

7. Country programme preparation is projected for five countries in 1993. Over half of the sum requested is earmarked for country programme preparation in Argentina. The remaining funds are essentially for assistance to governments for review and document submission. Bank country programme activity is being abated as other implementing agencies and national agencies assume lead roles.

Project preparation

8. Project preparation funds are intended for expenditure by World Bank staff or consultants to conduct missions, studies, and other documentation and travel necessary for project approval and implementation. The Bank is requesting an increase of 44 percent over the estimated 1992 level in funds for project preparation representing proposed activities in 18 countries.

Administrative, legal and financial costs

9. Administrative, legal and financial costs include staff and consultants' time (including overhead); travel in administering Multilateral Fund activities; and, the costs of OORG technical reviews and meetings (travel, per diem, honorarium, etc.). These costs increased by approximately US\$ 100,000 over the estimated 1992 figures primarily due to twice the costs for OORG activities (from US\$ 80,000 to US\$ 160,000).

Proposed projects costing below US\$ 500,000

10. Proposed projects costing below US\$ 500,000 include:

Ecuador institutional strengthening	US\$ 204,000
Ecuador technical assistance	US\$ 150,000
Indonesia project preparation advance ¹	US\$ 250,000
Philippines technical advance	US\$ 100,000
Philippines institutional strengthening	<u>US\$ 425,000</u>
 Total request	 US\$ 1,129,000

Ecuador institutional strengthening

11. Total project costs for institutional strengthening in Ecuador are estimated to be US\$ 280,000 for a three-year period with US\$ 76,000 coming from local sources as local counterpart funding. Local resources will be used to cover personnel expenditures, accounting and record keeping, and reconditioning office facilities.

12. Ecuador is classified as a low-volume ODS consuming country in the document on institutional strengthening (UNEP/OzL.Pro/ExCom/7/20) adopted by the Executive Committee at its seventh meeting. The indicative level of funding for countries so classified is US\$ 188,000.²

13. Proposed capital expenditures exceed the indicative level by 375 per cent (US\$ 33,000) and operational costs exceed the indicative level by 100 per cent (US\$ 75,480). The high costs for material purchases could be the result of high Customs duties. US\$ 60,000 is requested for travel costs which might include international travel to conferences and workshops.

Ecuador technical assistance

14. The objectives of the project are the training for civil servants and industry representatives and public awareness. This project was prepared by the Bank for UNDP implementation. This project is intended to supplement the funds for the project "CFC refrigerant conversion and material handling training programme", which was approved for UNDP at the eighth meeting for US\$100,000.

15. Project costs include staff and consultants, office equipment, conference materials and servicing, and audio/visual programmes which can be components of institutional strengthening.

16. The Bank's proposed investment projects in Ecuador for aerosol plants and refrigeration manufacturers, all include training components. These projects will provide training for staff in 21 facilities and plants in the country which represents approximately 60 per cent of total ODS consumption in Ecuador.

Indonesia project preparation advance

17. This project would utilize local consultants to prepare 10 to 12 sub-projects in priority ODS-using sectors, including refrigeration, foams, solvents and aerosols. Local consultants have collaborated with the Bank in the preparation of projects for Thailand and the Philippines.

Philippines technical advance

18. The objective of this project is to provide on-the-job training, in-house seminars, external seminars and consulting services to prepare a local financial institution to serve as a financial intermediary for upcoming Fund-supported investment projects. The role of a financial intermediary is to appraise and supervise the implementation of ODS phase-out projects.

19. The project cost is US\$ 100,000. The Bank is proposing to use the same institution as the financial intermediary for the US\$ 11.42 million of investment projects proposed for the Philippines. The fee for serving as a financial intermediary for this project is 3 percent of the project cost, i.e., over US\$ 340,000 if the US\$ 11.42 million is approved.

Philippines institutional strengthening

20. The Philippines is classified as a medium-volume ODS consuming country. The indicative level of funding for institutional strengthening in countries so classified is US\$ 319,000.³ The requested level of funding is US\$ 428,000 which includes US\$ 60,000 for travel and US\$ 200,000 for information dissemination to minimize the impact on small enterprises when ODS becomes in short supply.

SECRETARIAT'S RECOMMENDATIONS

21. The Secretariat recommends full funding for the costs requested for country programme preparation; project preparation; and, administrative, legal and financial expenses.

22. The US\$ 204,000 requested for the Ecuador institutional strengthening project should be approved with the provision that the Bank eliminate Customs duties and international travel from the amount disbursed.

23. UNDP has requested that the "Ecuador technical assistance" project, slated for UNDP implementation, should be deferred until the next meeting of the Executive Committee. The Secretariat recommends concurrence with UNDP's request.

24. US\$ 250,000 is recommended for the Indonesia project preparation advance.

25. The training for the financial intermediary proposed in the "Philippines technical advance" project should be offset against the service fee.

26. The information dissemination programme should be separated from the Philippines institutional strengthening project. It might qualify for consideration as a future activity if its objectives are clearly identified.

27. The balance of the request, US\$ 209,000⁴ is recommended for the Philippines institutional strengthening project with the provision that the amount disbursed is adjusted to eliminate international travel costs.

28. In summary, it is recommended that the Executive Committee approve the following work programme components and direct the Treasurer to transfer funds, accordingly:

Country programme preparation	US\$ 166,500
Project preparation	US\$ 2,656,340
Administrative, legal and financial costs	US\$ 1,179,000

Proposed projects costing below US\$ 500,000	
Ecuador institutional strengthening	US\$ 204,000 ⁵
Ecuador technical assistance	US\$ 0
Indonesia project preparation advance	US\$ 250,000
Philippines technical advance	US\$ 0
Philippines institutional strengthening	<u>US\$ 209,000⁵</u>
Total recommended for approval	US\$ 4,664,840
Minus Residuals from CY92 work programme	<u>US\$ 3,580,000</u>
Amount for transfer	US\$ 1,084,840

Endnotes

1. Project preparation is intended for internal Bank use while a project preparation advance (ppa) is a grant to an Article 5 country for project preparation. A project preparation advance requires the signature of a letter agreement between the Bank and the Article 5 country.

2. UNEP/OzL.Pro/ExCom/7/20, page 12 actually specifies US\$ 170,000. This figure is, however, based on Table 1 (page 10) of the document in which there is a calculation error. The correct amount is US\$ 188,000.

3. UNEP/OzL.Pro/ExCom/7/20, page 12 actually specifies US\$ 300,000. This figure is, however, based on Table 1 (page 10) of the document in which there is a calculation error. The correct amount is US\$ 319,000.

4. The remaining project amount is calculated based on remaining activities totalling US\$ 190,000 plus a 10 per cent contingency for the total amount of US\$ 209,000.

5. To be adjusted as recommended.

MULTILATERAL FUND under the MONTREAL PROTOCOL

WORLD BANK 1993 WORK PROGRAM

for Investment Project Preparation and Related Studies

(January 18, 1993, revised)

Global Environment Coordination Division, Environment Department

THE WORLD BANK

Introduction

1. This calendar year 1993 (CY93) work program and budget for assistance to developing countries in reducing their emissions of ozone depleting substances (controlled substances) ^{1/} has been prepared for consideration by the Executive Committee (EC) of the Multilateral Fund for the implementation of the Montreal Protocol (MFMP) at its March 8-10, 1993 meeting in Montreal.

Work Program Scope

2. With the recent addition of Indonesia, and provisionally India (written confirmation from the Government requesting Bank assistance is still required), the reconfirmation of Argentina, and the temporary suspension of activities in Yugoslavia, the World Bank work program covers eighteen (18) countries^{2/}. While the Bank's primary role as an implementing agency of the MFMP is to manage the investment project cycle, in collaboration with other implementing agencies the Bank will also assist eligible developing countries to prepare Country Programs and pre-investment studies.

The CY93 work program makes provision for:

- (i) assisting Governments in the preparation of five (5) Country Programs (Argentina, Brazil, Nigeria, Thailand, and Venezuela); continued support to China on its Country Program; two (2) Country Programs (Guatemala and Indonesia) in collaboration with other implementing agencies; the completion of three (3) Country Programs (Jordan, Philippines and Tunisia) and,
- (ii) six (6) new investment projects in China, Ecuador, Indonesia, Nigeria, Philippines, and Thailand, comprised of a number of sub-projects; and,
- (iii) a global refrigeration project consisting of twelve (12) sub-projects in several countries yet to be determined.
- (iv) global solvent projects in seven (7) countries.

The appended country work program summaries (Annex II) reports:

- (i) on each country's status of Montreal Protocol Implementation;

^{1/} The use of the term "controlled substance", in this context, should be understood to refer only to those ozone depleting substances specifically controlled by the Protocol.

^{2/} All countries included in the CY93 work program have ratified the Protocol.

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- (ii) the status of World Bank assistance to that country; and,
- (iii) the Bank's best estimate of that portion of the investment project pipeline which is expected will be presented for final approval by the Executive Committee of the Multilateral Fund within the CY93 period.

The financial dimensions of the CY93 work program are as follows:



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Multilateral Fund of the Montreal Protocol
WORLD BANK: CY93 WORK PROGRAM

	Amounts (US\$m)
COUNTRY INVESTMENT PROJECT COSTS	
Programmed project commitments (See Note A)	114.20
Pre-investment Studies	0.55
Total	114.75
Less: EC approvals through 12/31/92 (see Note A)	-27.11
Remaining projects to be approved by EC (See Note B below for project classification by amounts)	87.64
WORLD BANK WORK PROGRAM MANAGEMENT AND ADMINISTRATIVE COSTS	
Country Program Preparation	0.17
Project Preparation/Processing	2.66
Operations Coordination/policy analysis, financial and legal adm.	1.18
Total	4.00
Less: RESIDUALS FROM CY92 PROGRAM	
Egypt Demonstration Project (cancelled)	-0.37
Ecuador Pre-investment Studies (cancelled)	-0.40
Thailand Demonstration Project (Funding reduction)	-0.08
Work Program Management and Adm. Costs (Estim. Balance)	-1.98
Interest Income	-0.75
Total	-3.58
GRAND TOTAL	88.07

Note A: Since inception and net of projects (\$8.1 m) under Bank implementation through December 31, 1992. See Table 3.

Note B: Classification of proposed projects above and below \$500,000 for MP Executive Committee approval in March 1993.

	US\$m
I Proposed Projects Above \$500,000	
China Project Financing I	7.830
Ecuador Project Financing I	1.365
Philippines Project Financing I	14.740
Total	23.935
II Proposed Projects Below \$500,000 *	
Ecuador Institutional Strengthening	0.204
Ecuador Technical Assistance	0.250
Indonesia PPA	0.250
Philippines Technical Assistance	0.100
Philippines Institutional Strengthening	0.425
Total	1.229
Total proposed projects for EC approval in March	25.164

* Although these projects are shown separate here, these will be part of the grant agreement for the main project financing package that will be approved by the Bank.

Multilateral Fund under the Montreal Protocol: World Bank Work Program, 1993

Country Programs, supporting studies and policy analyses, and pre-investment studies are all part of a continuum culminating in the preparation, approval and implementation of investment projects. Such studies are only undertaken by the Bank in so far as they advance and facilitate investment project funding under the MFMP and establish clear operational guidelines. Activities not completed during CY92 have been deferred to CY93. Savings realized through not undertaking these activities will accrue to finance part of the CY93 work program^{3/}.

Investment Project Pipeline Projected for CY93

3. The Table below presents, by country, a summary of investment projects presently anticipated for presentation to the Executive Committee for approval during CY93.

^{3/} Provisional CY92 Expenditure Estimate As of January 18, 1993, the provisional estimate of expenditures under the CY92 MP administrative budget for Bank operations was \$2.7 million compared with a budget of \$4.4 million. A final balance sheet for CY92 will be provided at the Ninth Executive Committee meeting on March 8 - 10, 1993.

Multilateral Fund under the Montreal Protocol: World Bank Work Program, 1993

Summary of World Bank CY93 Investment Project Pipeline (in \$ millions)

Country	Investment Project Title & Sub-Projects, by Sector	ODS Phase-Out/Year (MT)	Incremental Cost (\$ m)
China (I) (increase)	ODS Investment Project (I): cost adjustment (total is now \$16.35 m) for 2 aerosols, 2 foams, 2 halons, 1 refrigeration.	N/A	\$7.83
China (II)	ODS Investment Project (II): 1 aerosol, 6-10 refrigerator/AC, 4-5 foam, 2 halon, and 3-4 non-ODS chemical substitute production sub-projects.	TBD	\$25.0
Ecuador (I)	ODS Investment Project (I): 12 aerosol sub-projects	290	\$0.7
	ODS Investment Project (I): Institutional Strengthening sub-project	N/A	\$0.204
	ODS Investment Project (I): Training and Technology Dissemination sub-project	N/A	\$0.25
	ODS Investment Project (I): Reduced CFC Insulating Foams in Refrigerator Manufacturing sub-project	25.5	\$0.665
Indonesia (PPA)	Project Preparation Advance (I): High priorities include recycling, refrigeration and foams.	N/A	\$0.250
Indonesia (I)	ODS Phase-Out Investment Project (I):	TBD	\$5.0
Nigeria (I)	ODS Phase-Out Investment Project (I): Sub-projects in aerosols, foams, MACS and refrigeration.	TBD	\$5.0
Philippines (I)	ODS Phase-Out Investment Project (I): refrigerant recycling, household refrigeration, household refrigeration foam, tobacco and solvent sub-projects.	826	\$20.0
Thailand (I)	ODS Phase-Out Investment Project (I):	800	\$20.0
Global Projects	Multi-Country Non-ODS Domestic Refrigeration Project: preparation of 12 (phase 1) sub-projects.	TBD	\$2.74
CY93 Total	Total Projected CY93 Investment Project Pipeline	TBD	\$87.639

Work Program and Budget

4. The tables listed below and presented in the succeeding five pages, present the status of the World Bank's work program budget and financing:

1. Table 1: Fund Receipts, Uses and Balances
2. Table 2: Work Program Budget Summary
3. Table 3: CY93 Planned Approvals/Commitments
4. Table 4: Financial Status of IMFMP Projects

5. Since the last Executive Committee meeting the Bank has received transfers of \$ 11.5 m for project investments and work program activities from the IMFMP. Of this, \$ 1.2 m was transferred to UNDP for the BHEARI component of the China project (\$.48m) and the Global MAC and Halons Projects (\$.36m and \$.39m, respectively).

6. The CY93 Work Program budget summary in Table 2 accounts for variances which occurred during CY92 in country program or project preparation activities as well as for initiatives in Argentina which had originally been proposed and approved in the CY92 Work Program but was subsequently delayed until CY93.

7. Table 4 presents the financial status of Montreal Protocol projects which already have been approved by the Executive Committee. Nearly \$2.8 million in pre-investment project activities in China, Mexico, Philippines and Thailand have been approved by the EC, and roughly \$ 32 million in project financing has been authorized for Brazil, Chile, China, Egypt, Jordan, Malaysia, Mexico, Thailand, Tunisia, Turkey and Venezuela. As of December 31, 1992, World Bank Montreal Protocol project disbursements for projects in China, the Philippines, and Thailand have totalled \$513,589.

Structure of the Report

8. The Bank's CY93 work program report includes: (1) a summary overview of program and project activities by ODS sub-sector (Annex I); (2) a country-by-country description of planned activities (Annex II); and, (3) proposed projects costing below \$500,000 (Annex III). Country activity descriptions identify, wherever possible, the country implementing agency, collaboration between the MFMP implementing agencies, Country Programs and related studies, and the CY93 investment project pipeline in the particular country.



Multilateral Fund under the Montreal Protocol: World Bank Work Program, 1993

Table 1

INTERIM MULTILATERAL FUND OF THE MONTREAL PROTOCOL

World Bank Work Program

Fund Receipts, Uses and Balances
(In US\$ million)

	CY91 Actual	CY92 Actual a/	CY93 Plan b/	Cumulative from Inception through CY93 (Actuals + Estimates)
I. FUND RECEIPTS (through 12/31/92)				
Contributions	\$5.000	\$37.315		\$42.315
Investment Income	\$0.117	\$0.631		\$0.747
TOTAL FUND RECEIPTS	\$5.117	\$37.946	\$0.000	\$43.062
II. FUND USES				
A. Workprogram Costs				
- CPs and Studies	\$0.677	\$0.339	\$0.167	\$1.182
- Project Preparation	\$0.545	\$1.460	\$2.656	\$4.662
- Administrative Costs	\$0.285	\$0.899	\$1.019	\$2.204
- OORG		\$0.080	\$0.160	\$0.240
Sub-total WP Costs	<u>\$1.507</u>	<u>\$2.778</u>	<u>\$4.002</u>	<u>\$8.286</u>
B. Project Commitments				
- Pre-inv. Activities/Inst.Dev.		\$2.470	\$0.550	\$3.020
- Project Financing		\$5.630	\$114.199	\$119.829
Sub-total Project Costs	<u>\$0.000</u>	<u>\$8.100</u>	<u>\$114.749</u>	<u>\$122.849</u>
TOTAL FUND USES	\$1.507	\$10.878	\$118.751	\$131.137
III. FUND BALANCES				
EXCESS OF RECEIPTS (USES)	\$3.609	\$27.067	(\$118.751)	(\$88.074)
FUND BALANCE AT BEGINNING OF PERIOD	\$0.000	\$3.609	\$30.677	\$0.000
FUND BALANCE AT END OF PERIOD	\$3.609	\$30.677	(\$88.074)	(\$88.074)

a/ Preliminary results; final report will be available by March 1993.

b/ Includes commitments for projects approved by the MP Executive Committee and Bank requested funding for projects in the Pipeline.

Multilateral Fund under the Montreal Protocol: World Bank Work Program, 1993

TABLE 2

INTERIM MULTILATERAL FUND OF THE MONTREAL PROTOCOL

World Bank Work Program

WORK PROGRAM BUDGET SUMMARY

I. Country Work Programs	CY92 Budget & Actuals a/			CY93 Projections b/		
	Revised Plan	Preliminary Results	Budget Balance	Work Program Budget (US\$)		
				CP/Studies d/	Proj.Preparation	Total
Argentina	\$149,337	\$4,718	\$144,619	\$85,000	\$63,000	\$148,000
Brazil	\$315,666	\$103,166	\$212,500	\$30,000	\$112,000	\$142,000
Chile	\$191,878	\$47,250	\$144,628		\$82,890	\$82,890
China	\$180,000	\$337,576	(\$157,576)		\$326,000	\$326,000
Ecuador	\$171,128	\$162,856	\$8,272		\$68,000	\$68,000
Egypt	\$255,353	\$3,248	\$252,105		\$112,200	\$112,200
Guatemala	\$25,000	\$11,359	\$13,641		\$47,000	\$47,000
Indonesia	\$54,000	\$41,068	\$12,932		\$206,000	\$206,000
Iran	\$190,000		\$190,000			\$0
Jordan	\$70,000	\$103,454	(\$33,454)	\$8,200	\$123,200	\$131,400
Malaysia	\$120,000	\$108,849	\$11,151		\$28,200	\$28,200
Mexico	\$292,076	\$80,322	\$211,754		\$123,400	\$123,400
Nigeria	\$415,332	\$56,417	\$358,915	\$35,100	\$62,500	\$97,600
Philippines	\$100,000	\$48,681	\$51,319		\$194,550	\$194,550
Thailand	\$280,000	\$193,878	\$86,122		\$190,000	\$190,000
Tunisia	\$175,000	\$122,600	\$52,400	\$8,200	\$165,800	\$174,000
Turkey	\$231,202	\$190,433	\$40,769		\$140,400	\$140,400
Venezuela	\$168,649	\$182,534	(\$13,885)		\$156,200	\$156,200
Global Projects	\$320,000		\$320,000		\$455,000	\$455,000
TOTAL-Country WP	\$3,704,621	\$1,798,409	\$1,906,212	\$166,500	\$2,656,340	\$2,822,840
II. Administration, Legal and Financial Costs c/	\$1,347,550	\$978,960	\$368,590			\$1,179,100
TOTAL BUDGET	\$5,052,171	\$2,777,369	\$2,274,802			\$4,001,940

a/ Revised Plan following decisions reached at the October 1992 Montreal Protocol Executive Committee meeting.

Preliminary estimates of actual expenditures; final report will be available by March, 1993. IPC CY92 actuals will be included in the final report.

b/ Budget amounts reflect costs of project preparation and country programmes and associated overhead costs.

c/ Planned manweeks for World Bank higher level staff, international and local consultants.

d/ Includes country programmes and supporting technical studies, these underpin project preparation.

e/ Budget amounts for operations coordination, related policy analysis and review, legal and financial administration and associated overhead costs.

Multilateral Fund under the Montreal Protocol: World Bank Work Program, 1993

TABLE 3

Montreal Protocol Interim Multilateral Fund

World Bank Work Program

CY93 PLANNED APPROVALS/COMMITMENTS

(In US\$ million)

Country	No. of Projs.	Project Type	Project Status	Total Project Cost		CY93 Planned Bank Approval/Commitment				TOTAL CY93	APPROVED IN CY92	
				Estimate	EC Auth. a/	Jan-Mar	Apr-June	Jul-Sept	Oct-Dec			
I. EC AUTHORIZED/PROJECTS IN WORK PROGRAM												
Brazil	1	Project Financing I	WP	2.93	2.93				2.93	2.93		
Chile	1	Project Financing I	WP	1.21	1.21	1.21				1.21		
China	1	Project Financing I	WP	7.02	7.02		7.02			7.02		
China		Project Financing I (PPA)	WP	1.50	1.50						1.50	
China		Project Financing II (PPA)	WP	0.30	0.30		0.30			0.30		
Egypt	1	Project Financing I	WP	2.80	2.80			2.80		2.80		
Jordan	1	Project Financing I	WP	1.40	1.40		1.40			1.40		
Jordan		Institutional Dev.	WP	0.10	0.10		0.10			0.10		
Malaysia	1	Proj. Financing-Phase I	WP	1.63	1.63						1.63	
Mexico	1	Demonstration Proj.	WP	0.18	0.18						0.18	
Mexico	1	Project Financing I	WP	4.00	4.00						4.00	
Philippines	1	Engineering Proj.	WP	0.40	0.40						0.40	
Thailand	1	Engineering Proj.	WP	0.39	0.39						0.39	
Tunisia	1	Project Financing I	WP	1.51	1.51		1.51			1.51		
Tunisia		Institutional Dev.	WP	0.28	0.28		0.28			0.28		
Turkey	1	Project Financing I	WP	5.87	5.87		5.87			5.87		
Turkey		Institutional Dev.	WP	0.30	0.30		0.30			0.30		
Venezuela	1	Project Financing I	WP	1.30	1.30	1.30				1.30		
Venezuela	1	Project Financing II	WP	1.10	1.10		1.10			1.10		
Global	2	Project Design	WP	0.32	0.32							
WP Sub-total	16			34.53	34.53							
II. PROJECT PIPELINE												
China		Project Financing I (Add'l)	PP	7.83								
China	1	Project Financing II	PP	25.00								
Ecuador	1	Project Financing I	PP	1.82								
Indonesia	1	Project Financing I	PP	5.00								
Indonesia		Project Financing I (PPA)	PP	0.25								
Nigeria	1	Project Financing I	PP	5.00								
Philippines	1	Project Financing I	PP	20.00								
Thailand	1	Project Financing I	PP	21.00	1.00		1.00			1.00		
Global	1	Solvents/Refrigeration	PP	2.74								
PP Sub-total	7			88.64	1.00							
GRAND TOTAL	23			123.17	35.53	a/	2.51	18.87	2.80	2.93	27.11	8.10

a/ These amounts include institutional development and adjustments to previously EC approved projects (China - \$0.48 m which was transferred to UNDP; Egypt - \$0.37 m for the dropped demonstration project, and reduction of \$0.08 m from the Thailand demonstration project; non-utilization of \$0.4 m for Ecuador feasibility studies—cost was funded from the Bank's workprogram budgetary resources).
Excluding the institutional development funding and the foregoing adjustments, the total is \$35.86 m
as reported in the UNEP Doc. No. OzL.Pro.4/8/Rev.1 dated October 22, 1992.

Legend for Project Status:

- WP Projects which have been authorized by the MP Executive Committee for processing and funding by the Bank and included in the MP Work Program
PP Projects which have been proposed by the Bank and awaiting MP Executive Committee authorization and are included in the MP Project Pipeline.

Definition of Project Types

Project Financing: Relatively large, multi-million dollar, multi-project, investment packages, meeting Montreal Protocol project criteria and implementation guidelines, which will often be disbursed through financial intermediaries on terms to be determined by country Governments, within the context of the country's Country Program, related policies and institutional arrangements.

Pre-inv. Activities:

Activities preceding major project identification and design which are effectively engineering design projects, demonstration or pilot projects or research and development.

Multilateral Fund under the Montreal Protocol: World Bank Work Program, 1993

Table 4

INTERIM MULTILATERAL FUND OF THE MONTREAL PROTOCOL

World Bank Work Program

FINANCIAL STATUS OF IMFMP PROJECTS

(US\$ MILLION)

		Authorized Investment Proj. Funding a/	Approved Commitments b/ thru 31-Dec-92	Disbursements thru 31-Dec-92 c/ Current Cumulative Calendar Year Total	
PRE-INVESTMENT ACTIVITIES					
China	PPA for ODS Phase out Project I	1.50	1.50	0.25	0.25
China	PPA for ODS Phase out Project II	0.30			0.00
Mexico	Ozone Pilot Recycling and Training Project	0.18	0.18		0.00
Philippines	Controlled Substances Engineering Project	0.40	0.40	0.20	0.20
Thailand	Controlled Substances Engineering Project	0.39	0.39	0.06	0.06
Sub-total Pre-Investment Activities		2.77	2.47	0.51	0.51
PROJECT FINANCING					
Brazil	ODS Elimination Project	2.93			0.00
Chile	ODS Phase-out	1.21			0.00
China	ODS Phase Out Project I	7.02 d/			0.00
Egypt	MCMC Compressor (IFC)	2.80			0.00
Jordan	ODS Reduction Project	1.50			0.00
Malaysia	ODS Phase Out Project	1.63	1.63		0.00
Mexico	Line of Credit	4.00	4.00		0.00
Thailand	ODS Phase Out Project	1.00			0.00
Tunisia	Ozone Layer Protection	1.79			0.00
Turkey	Ozone Layer Protection	6.17			0.00
Venezuela	Plásticos Molanca	1.30			0.00
Venezuela	Substitution of HFC	1.10			0.00
Sub-total Project Financing		32.44	5.63	0.00	0.00
GRAND TOTAL		35.21	8.10	0.51	0.51

a/ Project funding authorized by the IMFMP Executive Committee for the World Bank.

b/ Projects approved by the World Bank management.

c/ Project disbursements commence after signing of the Grant Agreement by the Bank and the recipient country.

d/ Originally funded at \$9.0 m; Of this, \$1.5 m was set aside for the PPA and \$0.48 m was transferred to UNDP for the BHEARI component of the project.

ANNEXES

- Annex I:** Sectoral Summary of Bank-Implemented Montreal Protocol Operations
- Annex II:** Country Level CY93 Work Programs of Planned Bank-Implemented Montreal Protocol Activities
- Annex III:** Proposed Projects Costing Below \$500,000



Annex I

SECTORAL SUMMARY

BANK-IMPLEMENTED MONTREAL PROTOCOL OPERATIONS

(as of January 18, 1993)

Global Environment Coordination Division, Environment Department

THE WORLD BANK



Annex I
Sectoral Summary of the Work Program

Background

9. The Vice-Chair of the Executive Committee presented a paper at the November 1991 meeting of the Committee entitled "Integrating the Sector-based Approach into Implementing Agency Work Programs". This paper stimulated a sector-based representation of implementing agency work programs and concomitant revisions in each agencies work program to ensure consistency and coherence in approaches to ODS phase-out by sector. This philosophy is also reflected in the Bank's CY93 work program.

Global Multi-Country ODS Phase-Out Projects

10. The EC's review of the above paper also stimulated the Bank's development of proposals for four Global ODS Projects by the World Bank: (1) Multi-Country ODS Phase-Out in Solvent Applications (World Bank); (2) Multi-Country ODS Domestic Refrigeration Project (World Bank); (3) Multi-Country Halon Control Project; and (4) Multi-Country Mobile Air Conditioning System (MACS) Project. The latter two were prepared by the World Bank for UNDP execution. Initial funding for these projects, totalling \$1.149 million, was approved by the EC at its October 1992 meeting. A fifth global project, in aerosols, is under preparation by the World Bank and a sixth, in airline ODS solvent phase-out, is possible based upon work undertaken by USEPA/Swedish EPA.

Table 1. World Bank Global Sector Project^{4/}

Multi-Country Global Projects	Proposed Beneficiary Countries	Executing Agency	Initial Amount
Solvents	Brazil, China, India, Malaysia, Mexico, Thailand, Turkey	World Bank	\$0.26 million
Refrigeration	China, India, Thailand, Philippines, Indonesia, Malaysia, Egypt, Brazil, Venezuela, Mexico	World Bank	\$0.06 million (preparation only)
Halons	Brazil, Philippines, Mexico, Thailand, Turkey	UNDP	\$0.39 million

^{4/} A contract is being negotiated with the Industry Cooperative for Ozone Layer Protection (ICOLP) for implementation of the global solvent project. Under the global refrigeration project, 2 provisional proposals in India and 2 proposals in Thailand, are being developed jointly by local enterprises and their suppliers.

Multilateral Fund under the Montreal Protocol: World Bank Work Program, 1993

MACS	China, Malaysia, Thailand, Indonesia, Egypt, Turkey, Nigeria, Brazil, Venezuela, Mexico, Peru, Argentina, Iran	UNDP	\$0.36 million
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The purpose of Global Multi-Country ODS Phase-Out Projects is to define, sector-by-sector, the most cost-effective, commercially ready technologies which are clear-cut options for consideration by client countries and to develop standard technical packages to facilitate and hasten their implementation. A major aim of such efforts is to ensure that the necessary institutional structure is in place and that local enterprises are willing and able to adapt the new technologies.

For example, the proposed Multi-Country ODS Phase-Out in Solvent Applications project will establish a coordinated phase-out of ODS use in solvent applications by sharing existing technology and non-proprietary information on substitute technologies, processes and substances with the participation of industries in countries eligible for consideration under the MP and with the assistance of the Industry Cooperative for Ozone Layer Protection (ICOLP), the U.S. Environmental Protection Agency (USEPA) and the Bank. Project activities include the conduct of initial baseline surveys, phase-out planning, demonstration projects, workshops, and assistance in the preparation of investment projects.

Sectoral Overview of Investment Projects

11. The Bank's \$36.1 million Montreal Protocol investment project portfolio is divided roughly evenly between the three regions of Asia (35%), Latin America (31%), and Europe/North Africa/Middle East (34%) (see Table 2, and pie chart). The first Africa region MP investments are anticipated late in CY93. However, this broad regional equivalence belies a significant sectoral variability. Although differences in the unallocated amounts (Mixed column) may obscure the comparison to some extent, it is clear that the leading sectors in the Asia region are aerosols (35%) and foams (28%); in the Latin America region, refrigeration (36%); and in the Europe and North Africa/Middle East region, also refrigeration (77%).

These Asia data reflect the fact that China has been insulated from the economic incentives which led other countries to shift out of CFC use in aerosols and into commercially attractive alternatives such as deodorized LPG. This, together with China's relatively larger economy, explains the substantial weight accorded to aerosols in Asia. By contrast, the need for North African and Middle Eastern exporters of domestic refrigerators to maintain market share in Europe as European manufacturers shift rapidly out of CFC's, has led to the relatively large emphasis on the refrigeration sector in that region.

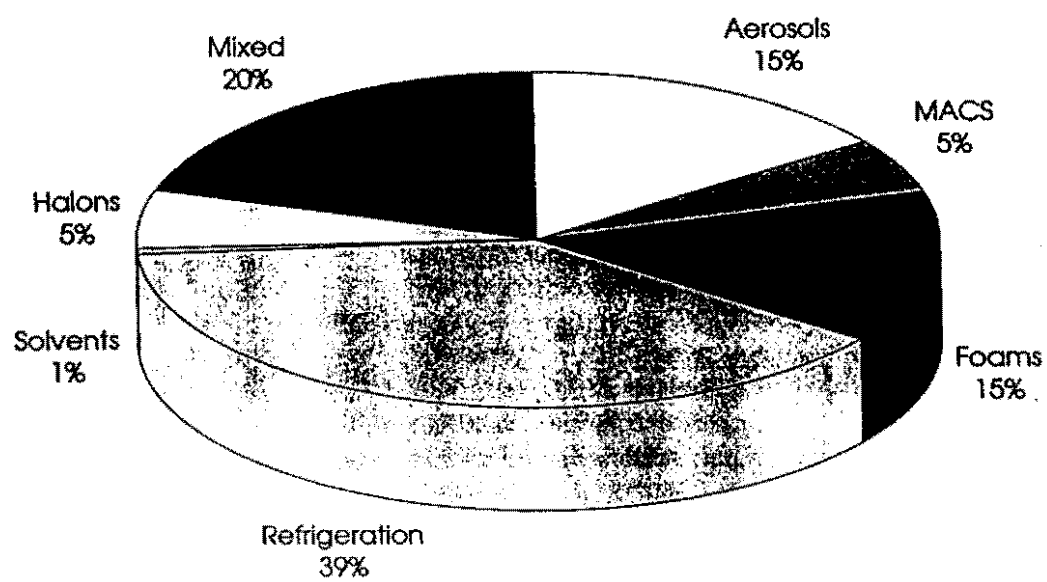
Globally, the Bank's Montreal Protocol investment portfolio reflects major activity in refrigeration (39%), aerosols (15%), and foams (15%). The least amount of activity has been in solvents (1%), followed by halons (5%) and mobile air conditioning systems (MACS) (5%).

Multilateral Fund under the Montreal Protocol: World Bank Work Program, 1993

Table 2. WORLD BANK MP INVESTMENT PROJECTS BY COUNTRY AND SECTOR (as of January 18, 1993)

Region	Country	ODS(MT)	Aerosols	MACS	Foams	Refrigeration	Solvents	Halons	Mixed	Total (in \$)	Total (in%)	\$/kg ODS
Asia												
	China	49,753	\$4,400,000		\$3,400,000	\$300,000		\$1,200,000		\$9,300,000	26%	\$0.19
	Malaysia	3,891		\$910,000				\$720,000		\$1,630,000	5%	\$0.42
	Philippines	3,850			\$100,000	\$160,000	\$100,000		\$40,000	\$400,000	1%	\$0.10
	Thailand	7,370		\$900,000			\$100,000		\$390,000	\$1,390,000	4%	\$0.19
	Total	64,864	\$4,400,000	\$1,810,000	\$3,500,000	\$460,000	\$200,000	\$1,920,000	\$430,000	\$12,720,000	35%	\$0.20
	Percent		35%	14%	28%	4%	2%	15%	3%	100%		
LAC												
	Brazil	10,647				\$2,930,000				\$2,930,000	8%	\$0.28
	Chile	1,120							\$1,206,000	\$1,206,000	3%	\$1.08
	Ecuador	748							\$400,000	\$400,000	1%	\$0.53
	Mexico	18,388	\$74,000	\$106,000					\$4,000,000	\$4,180,000	12%	\$0.23
	Venezuela	3,820			\$1,300,000	\$1,100,000				\$2,400,000	7%	\$0.63
	Total	34,723	\$74,000	\$106,000	\$1,300,000	\$4,030,000	\$0	\$0	\$5,606,000	\$11,116,000	31%	\$0.32
	Percent		1%	1%	12%	36%	0%	0%	50%	100%		
EMN/ECA												
	Egypt	1,897				\$2,800,000				\$2,800,000	8%	\$1.48
	Jordan	625	\$700,000		\$150,000	\$525,000		\$25,000	\$100,000	\$1,500,000	4%	\$2.40
	Turkey	3,628				\$5,365,000			\$800,000	\$6,165,000	17%	\$1.70
	Tunisia	1075	\$350,000		\$400,000	\$760,000			\$280,000	\$1,790,000	5%	\$1.67
	Total	7,225	\$1,050,000	\$0	\$550,000	\$9,450,000	\$0	\$25,000	\$1,180,000	\$12,255,000	34%	\$1.70
	Percent		9%	0%	4%	77%	0%	0%	10%	100%		
All Regions		106,812	\$5,524,000	\$1,916,000	\$5,350,000	\$13,940,000	\$200,000	\$1,945,000	\$7,216,000	\$36,091,000	100%	\$0.34
Sector			Aerosols	MACS	Foams	Refrigeration	Solvents	Halons	Mixed	Total		
Sector %			15%	5%	15%	39%	1%	5%	20%	100%		

Sector Distribution



1. Aerosols

EC-approved Bank assistance to date for aerosol projects/sub-projects is \$5,524,000. General assistance in this sector has been conversions from CFC to LPG propellants and includes the establishment of LPG purification plants to produce deodorized LPG and to demonstrate associated safety programs.

Specific operations include:

- o \$4,400,000 for a project in Tianjin and another in Shanghai for CFC aerosol conversions to LPG, which will contribute to the total phase out of CFC-12 use in the aerosol sector of China.
- o A Mexico pilot demonstration project for CFC-12 aerosol conversion to hydrocarbons and an associated safety program.
- o A World Bank pre-investment study in Ecuador for hydrocarbon conversion of the CFC-using aerosol industry.
- o Project development in the Tunisian aerosol sector, including \$350,000 in support for technical seminars and consultations in the aerosol sector.
- o Support to Jordan of \$700,000 for establishment of an LPG purification plant to produce aerosol-quality LPG as an alternative aerosol propellant.

2. Mobile Air Conditioning (MACs)

EC-approved Bank assistance to date in MACS projects/sub-projects is \$1,916,000 . The major emphasis has been on mobile air-conditioning recycling/recovery demonstration projects.

Specific operations include:

- o A mobile air-conditioning recycling demonstration project for Mexico was cleared by the Bank in October 1991 and signed in March 1992.
 - o The automobile air-conditioning CFC recycling projects under development in Thailand and the Philippines were approved by the Bank in January 1992, the Grant Agreements signed and projects under implementation by mid-year.
 - o The Bank proposed a mobile air-conditioning recovery/recycling demonstration project for Egypt as a part of Egypt's Country Program which was presented to the Executive Committee at its February 1992 meeting. It was approved by the EC on the Bank's recommendation that the UNDP undertake implementation of the project.
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Multilateral Fund under the Montreal Protocol: World Bank Work Program, 1993

- o A mobile air-conditioning recovery and recycling demonstration project in Malaysia which was approved by the EC at its February 1992 meeting, the Grant Agreement was signed in November 1992.

3. Refrigeration (& Chillers)

EC-approved Bank assistance to date in refrigeration projects/sub-projects is \$13,940,000. Projects have principally been directed at the first stage of preparation for conversion to production of domestic refrigeration compressors and appliances using the non-ODS refrigerant, HFC-134a, in parallel with the timing of the conversion in the international market.

Specific operations include:

- o With assistance from the Bank and UNDP, China embarked upon a major program to phase out CFC-12 use in domestic refrigeration. The program calls for substitute testing and development involving pilot-scale production and demonstration, technical assessment, evaluation, and standards development, as well as eventual promotion and large scale adoption of non-ODS technologies. First stage development work for HFC-134a, HFC-152a, and HCFC-22/HFC-152a is essentially complete. A pilot demonstration project at a refrigerator factory for conversion to HCFC-22 has been identified and the EC has approved a project preparation advance of \$300,000 for that purpose.
- o Bank investment projects involving domestic refrigerator compressor and/or assembly plant conversions to HFC-134a, or chiller conversions, were also approved by the EC for Brazil, Venezuela, Egypt, Turkey, and Tunisia. Other refrigeration projects involving recycling and/or preparation were approved in Brazil, the Philippines, Mexico, and Jordan.

4. Foams

EC-approved Bank assistance to date in foam projects/sub-projects is \$5,350,000. Consistent with commercially available technology alternatives, most Bank activity in the foams sector has concerned the introduction of 50% reduced CFC applications which are relatively simple, low cost, and proven short-term adjustments.

Specific operations include:

- o An engineering design feasibility project for the Philippines was approved by the Bank in January 1992, and the project was effective by mid-year.
- o A February 1992 mission to Tunisia prepared a plan of action to develop projects for the foam sector and \$400,000 was approved by the EC in CY92 for these projects.



- o Substantial progress has been made in China as a consequence of joint Bank and UNDP missions to identify near-term investment projects in the foam sector. The first project being proposed would lead to reduction in CFC-11 emissions of 2200 tonnes per year by 1995. A second project is for conversion to butane in the polystyrene and polyethylene packaging industry. The China projects may be adopted as model projects for the MP Investment Portfolio in terms of technical design parameters and implementation arrangements.

5. Solvents

EC-approved Bank assistance to date in solvent projects/sub-projects is \$200,000. The primary role played by multinational corporations (MNCs) in this sector, in conjunction with the innovative role being played by the Industry Cooperative for Ozone Layer Protection (ICOLP) and its associated enterprises, has meant that a major part of the activity in this sector has been undertaken directly through the private sector and with only minimal assistance through the Fund, primarily to support cooperative project design activities through the Global Solvents Project prepared by the Bank.

Specific operations include:

- o The design engineering projects for Thailand and the Philippines, which included solvents, were approved by the Bank in January 1992, and the projects became effective in mid-year.
- o The Bank's Thailand solvent sector work program activities have been designed in conjunction with a similar tri-lateral project being undertaken simultaneously with bi-lateral assistance from Japan (MITI) and the United States (USEPA). The necessary collaboration has been taken to ensure that all of these activities dovetail one another, building on their comparative strengths. The relatively large size of Thailand's solvents sector makes it a natural focal point for activities in this area, which will be conducive to development of a model solvent sector program for demonstration and example to other countries and regions.
- o A Thai Airway solvents project is being developed by the USEPA and the Swedish EPA plus several aircraft firms. Since this project may be replicated in all other eligible airlines, the basic design parameters and eligible incremental costs are being carefully defined.

6. Halons

EC-approved Bank assistance to date in halons projects/sub-projects is \$1,945,000. Thus far, Bank assistance in the halons sector has principally been concerned with promoting recycling and improved maintenance procedures as well as conversions of fire extinguishing system production to non-halon alternatives. A Global Halons Project has also been prepared by the Bank.



Specific operations include:

- o China and Malaysia are the only countries at this time in which the Bank envisages investment projects within the halon sector. Recent joint Bank and UNDP missions have identified three (3) halon projects in China to reduce halon emissions in production and use leading to estimated short term reduction of 1400 tonnes per year.
- o The Bank sent a mission to Malaysia in February 1992 to review and prepare a servicing, maintenance and recovery charging kit for portable halon 1211 extinguisher, including a halon sector training project. This project should become the model for such interventions in other beneficiary countries.



Annex II

COUNTRY LEVEL
CY93
WORK PROGRAMS

BANK-IMPLEMENTED
MONTREAL PROTOCOL OPERATIONS

(as of January 18, 1993)

Global Environment Coordination Division, Environment Department

THE WORLD BANK



ARGENTINA

1. Status of Montreal Protocol Implementation

Argentina ratified the Montreal Protocol in January 1990, which entered into force in April 1990.

2. Status of World Bank Assistance

No work has been undertaken to date in Argentina. However, a reconnaissance mission is planned for February 1993 to review Argentina's plans for its Country Program and associated investment project development.

3. CY93 Investment Project Pipeline

There are no Bank-led investment projects for Argentina in the pipeline for CY93 at this time. Adjustments to the investment pipeline will be proposed as amendments to the Work Program during the course of the year.

BRAZIL

1. Status of Montreal Protocol Implementation

Brazil's Country Program will be completed in May 1993, for presentation subsequently to the Executive Committee for approval. Preparation of financial intermediation arrangements for investment projects has recently resumed. The Government of Brazil (GOB) has advised the Bank that requiring separate legal agreements for a series of small single project investments is an unworkable arrangement in Brazil. Accordingly, groups of sub-projects will be presented to the EC for approval within single "umbrella" grant agreements.

2. Status of World Bank Assistance

- a) **Country Program** - The Bank assisted in a preliminary assessment. The GOB is now preparing terms of reference for preparation of the Country Program, its strategy, program and plans for government and industry responses.
 - b) **Investment Projects** - The following projects were approved "in principle" by the EC in June 1992:
 - i. **CFC Recycling Initiative:** a first stage pilot project has been prepared for presentation to the EC during CY93.
 - ii. **Assembly Line Refitting for HFC-134a Refrigerator Compressors and Refrigerators Project** is prepared and ready for implementation as soon as the decision has been taken to initiate commercial production.
 - iii. The identification of additional sub-projects and preparation of arrangements for financial intermediation under an umbrella legal agreement continues. Submission of the initial tranche is planned for presentation to the second EC meeting in 1993. Arrangements for collaboration between the financial intermediary, FINEP, relevant industry associations and the Ozone Technical Group (GTO) for project identification and preparation is being worked out.
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MFMP, World Bank Annex II - Country Level CY93 Work Programs

- iv. Institutional Strengthening - A proposal to fund technical advisors to be located in Brasilia and Sao Paulo will be presented to the second EC meeting in 1993. The former will work with the GTO, the latter with FINEP's Sao Paulo agency.

3. **CY93 Investment Project Pipeline**

There are no Bank-led investment projects for Brazil in the pipeline for CY93 at this time.

CHILE

1. Status of Montreal Protocol Implementation

Chile's Montreal Protocol Country Program was approved by the EC at its meeting of June 1992. The Program consists of five sub-components for \$1.206 million. The project was appraised in July 1992, and negotiations are expected to be completed by the beginning of 1993. Signing of the project documents is expected to be completed by the end of February 1993.

2. Status of World Bank Assistance

- a) **Country Program** - The Country Program was prepared with technical assistance which was coordinated by the Bank. UNEP contributed with technical information and training.
- b) **Pre-investment Activities** - With the \$1.206 million Program now approved, the Bank has processed the five sub-components (TECFIN, Ozone Seal, Public Awareness, and institutional support to CONAMA) as a single project which is expected to be signed by the end of February 1993.
- c) **Investment Projects** - The above sub-projects in refrigeration, flexible foams, sterilants and solvents sectors will begin implementation during 1993.

3. CY93 Investment Project Pipeline

There are no Bank-led investment projects in the pipeline for CY93.

CHINA

1. Status of Montreal Protocol Implementation

China's MP Country Program is scheduled to be presented to the EC at its March 1993 meeting.

2. Status of World Bank Assistance

- a) **Country Program** - The UNDP is leading the CP development effort, with Bank participation and assistance in investment planning and policy analysis.
 - b) **Investment Projects** - A first project, composed of six sub-projects for \$9 million, in the aerosols, halons, and foams sectors was approved by the EC in June 1992. However, the original estimation of incremental costs for these projects is currently under revision as a result of unforeseen changes in the way GOC has estimated capital costs and output prices (revenues) for several of the sub-projects, and more complete documentation. A December 1992 mission reached agreement with the GOC on the basis of revised project and incremental costs. The 6 sub-projects are now estimated to require \$16 million in incremental costs, with most of the increase in the 50% reduced CFC foam projects covering 13 enterprises. The revised request, covering all of the present 6 sub-projects, will be submitted to the March 1993 meeting of the EC for approval.
 - c) **A Project Preparation Advance** for \$1.5 million for the initial six sub-projects (CFC conversions to LPG in Tianjin and Shanghai, Zhejian extruded foam conversion to butane, 50 % reduced CFC use in rigid foams, Zhejian halon extinguisher conversion, and Beijing ABC powder production) was signed with the Government in August 1992, to enable them to start implementation of the first six (6) sub-projects.
 - d) Preparation work on a larger second project has begun and will be presented for EC approval in mid-1993.
 - e) **Pre-investment activities** - With \$300,000 approved for project preparation by the EC in October, the Bank is preparing work for an HCFC-22 refrigeration conversion project in Nanjing, plus four additional industrial refrigeration projects. A Project Preparation Advance (PPA) will be prepared. Another PPA will be requested to
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MFMP, World Bank Annex II - Country Level CY93 Work Programs

prepare an additional 8 to 10 sub-projects under a second investment project. In addition, the GOC will develop another 8 sub-projects using its own resources.

3. CY93 Investment Project Pipeline

INVESTMENT PROJECT PIPELINE	
Project: ODS Investment Project (II) Sub-Projects include: - one aerosol - 6-10 refrigerator/AC - 4-5 foam - 2 halon - 3-4 non-ODS chemical substitute production sub-projects \$ Amount: \$25 million	Planned Bank Appraisal Date: Dec. 1993

ECUADOR

1. Status of Montreal Protocol Implementation

In support of Ecuador's Country Program (Phase 1), a project will be presented to the Executive Committee at its first meeting in 1993. The project consists of investment sub-projects in the aerosols and foam insulation use sectors, institutional strengthening, and training. Coordination with UNDP on training activities is underway. The project was pre-appraised at the end of 1992. Final appraisal would take place immediately following Executive Committee approval.

2. Status of World Bank Assistance

- (a) **Country Program** - The Country Program for Ecuador was prepared with Bank and USEPA assistance which began in March 1991 and was approved by the Executive Committee in March 1992. EPA participated in Bank preparatory and pre-appraisal missions and assisted in the conduct of feasibility studies in the foams sector.
 - (b) **Pre-investment Activities** - The Bank has completed an initial set of feasibility studies for the investment projects identified in the Country Program, including sub-projects in the aerosol and rigid foams sectors. The USEPA assisted in preparation of the technical documentation for the foams insulation project.
 - (c) **Investment Projects** - The Bank is working with the Government of Ecuador to complete establishment of the institutional and legal framework required for successful project implementation. A comprehensive project package has been prepared which includes components for (i) institutional strengthening; (ii) training and dissemination of information; and (iii) technology conversions for 18 aerosol and 3 rigid foams sub-projects.
-

3. **CY93 Investment Project Pipeline**

INVESTMENT PROJECT PIPELINE	
Project: ODS Phase-Out Investment Project Sub-projects include: - Institutional Strengthening - Training and Information Dissemination - Technology Conversion in the Aerosol Sector - Technology Conversion in the Rigid Foams Sector \$ Amount: \$ 1.819 million	Planned Bank Appraisal Date: 3/93

ARAB REPUBLIC OF EGYPT

1. Status of Montreal Protocol Implementation

Egypt's Country Program was finalized in December 1991, at which time it was presented to the Government of Egypt, which completed its review, with Bank assistance, in August 1992. The Country Program was presented to the Eighth Meeting of the Executive Committee in October 1992, at which time it was reviewed and approved.

2. Status of World Bank Assistance

- a) **Country Program** - World Bank support for Country Program preparation was completed in August 1992.
- b) **Investment Projects** - UNDP is acting as implementing agency for investment projects in the foam sector. IFC will be the implementing agency for a \$2.8 million investment project for the conversion of compressor manufacturing to non-ODS refrigerant (HFC-134a). IFC anticipates the project will be appraised in April 1993.

3. CY93 Investment Project Pipeline

There are no Bank-led investment projects in the pipeline for CY93.

GUATEMALA

1. Status of Montreal Protocol Implementation

Work on the Country Program is underway and the GOG anticipates presenting it to the EC in March 1993. The CP support is a joint effort of the Bank and UNEP. UNEP will have responsibility for drafting the CP, getting GOG comments and completing the document. The Bank will have responsibility for establishing the policy framework, project preparation and financing. These arrangements have been endorsed by all parties involved.

2. Status of World Bank Assistance

Development of the project pipeline will be initiated in January 1993.

3. CY93 Investment Project Pipeline

The pipeline will be defined in January 1993 in conjunction with Guatemala's Country Program development. Adjustments to the investment pipeline will be proposed as amendments to the Work Program during the course of the year.

INDIA

1. Status of Montreal Protocol Implementation

The UNDP received initial funding at the October 1992 meeting of the Executive Committee, to support project preparation work in India. India is well advanced with preparation of its own Country Program and has sought UNDP assistance with its completion and presentation to the EC.

2. Status of World Bank Assistance

India has yet to seek Bank group assistance with MP implementation, hence, the Bank has not sought an administrative budget. However, it has participated in two informal ODS workshops (aerosols and domestic refrigeration) in India in connection with other work in Asia. Both of these activities will receive local support from Tata Energy Research Institute, a local consulting group, with the participation of the Government of India's ODS task force.

3. CY93 Investment Project Pipeline

Bank assistance to GOI to finance the incremental costs of ODS phase-out activities is not yet programmed as the GOI had not requested Bank assistance with MP implementation.

INDONESIA

1. Status of Montreal Protocol Implementation

After ratifying the Montreal Protocol in June 1992, the Government of Indonesia has begun MP implementation activities. A preliminary study of ODS consumption has been completed by a local consultant and Country Program preparation will begin in early 1993.

2. Status of World Bank Assistance

- (a) **Country Program** - UNDP is assisting KLH (Ministry of Population and Environment) in Country Program preparation with Bank participation similar to the approach taken in China. To launch its ODS program, KLH hosted a ODS seminar for industry and government in December 1992 at which the Bank made presentation on the MP Fund and technical alternatives to ODS.
 - (b) **Pre-investment Activities** - The Bank is working with the Government of Indonesia to draft terms of reference (TOR) for an engineering project to develop ODS phaseout investment projects (10 to 12 sub-projects) in priority ODS-using sectors, including refrigeration, foams, solvents and aerosols. The funding for the engineering project, for \$250,000, will be included in the Bank Work Program for submission to the Executive Committee at its first meeting in 1993 and will be processed as a Project Preparation Advance (PPA). The approach will be similar to Thailand/Philippines except that we plan to use a local consultant in the lead role with foreign experts brought in as needed. Agreement is expected with the Government of Indonesia on TOR and approach in January 1993.
 - (c) **Investment Projects** - No investment projects have yet been approved for Indonesia. A Project Preparation Advance (PPA) for the first set of investment projects will be presented to the EC in March 1993.
-

3. **CY93 Investment Project Pipeline**

INVESTMENT PROJECT PIPELINE	
Project: ODS Phase-out Project Sub-projects include: - Refrigeration - Foams - Solvents - Aerosols \$ Amount: \$5 million	Planned Bank Appraisal Date: late 1993

HASHEMITE KINGDOM OF JORDAN

1. Status of Montreal Protocol Implementation

Jordan's Country Program, which was undertaken during the fourth quarter of 1991, was finalized and presented to the Government of Jordan in April 1992 where it has been under review. Projects identified and prepared in the course of Country Program preparation were presented to the Executive Committee in June 1992 and approved for funding at \$1.5 million.

2. Status of World Bank Assistance

- a) **Country Program** - The Bank undertook an ODS assessment in Jordan in 1991. At the request of the Government of Jordan, continued support will be provided for reviewing and completing the Country Program.
- b) **Investment Projects** - In CY92, \$1.5 million was allocated for investment projects of which \$0.7 million is designated for an LPG purification sub-project to phaseout the use of ozone-depleting substances in the aerosol sector. The remaining funds will be used in the various ODS-using sectors for both demonstration activities and ODS-phaseout activities. Project preparation and appraisal is tentatively scheduled for the first quarter of 1993.

3. CY93 Investment Project Pipeline

There are no investment projects in the pipeline for CY93.

MALAYSIA

1. Status of Montreal Protocol Implementation

The Government of Malaysia completed its Country Program and had it approved by the EC in 1992 without outside support. The GOM has signed a Grant Agreement with the Bank for two ODS recycling sub-projects and a Bank mission visited Malaysia in early December 1992 to complete implementation arrangements.

2. Status of World Bank Assistance

- a) **Country Program** - No World Bank assistance was involved.
- b) **Investment Projects** - The Bank assisted GOM in appraising an initial ODS Phase-Out Project for Malaysia which included halon recycling and CFC conservation and recycling in MACS sub-projects.

3. CY93 Investment Project Pipeline

The forementioned Bank mission expressed its interest in cooperating with the GOM on preparation of a follow-on investment project for Malaysia ODS reduction, if requested by the GOM.

MEXICO

1. Status of Montreal Protocol Implementation

Mexico's Bank-assisted Country Program was the first to be completed, reviewed and approved by the Executive Committee in CY92. Two projects, namely, the Ozone Pilot Recycling and Training Project (\$180,000) was approved by the EC June 1991 and signed in April 1992, and the Ozone Protection Policy and Institutional Strengthening Project (\$4million) was approved in February 1992 and signed in December 1992. It includes allocations for a marketable permit system, project feasibility studies, public awareness programs, as well as investment sub-projects.

2. Status of World Bank Assistance

- a) **Country Program** - Mexico's Country Program was approved by the EC in February 1992. Bank assistance in CP preparation is now complete.
- b) **Investment Projects** - Project disbursements are expected to begin in January 1993, pending completion of internal legal agreements between the Government of Mexico and NAFIN, the financial intermediary. Bank activities in CY93 will be mainly supervision. Likely projects to be financed include centralized CFC recycling and material handling systems, expanded use of recycling in MACS, chiller purge device conversions, low-CFC foam insulation alternatives, and training and plant conversion in the electronic industry.

3. CY93 Investment Project Pipeline

There are no Bank-led investment projects in the pipeline for CY93.

NIGERIA

1. Status of Montreal Protocol Implementation

Nigeria ratified the Montreal Protocol and Vienna Convention by accession on October 31, 1988, and is commencing development of a Country Program and associated ODS phase-out projects.

2. Status of World Bank Assistance

- (a) **Country Program** - An identification mission in August 1992 assisted the Federal Republic of Nigeria (FRN) Federal Environmental Protection Agency (FEPA) with preparation to select a qualified consulting firm for Country Program development and phase-out project identification. The present Request for Proposal (RFP) is expected to be completed in January 1993 and the contract award is planned for April 1993, leading to anticipated completion of the draft Country Program by September 1993, and a final Country Program by April 1994.
- (b) **Investment Projects** - Projects for phase-out of ODS's in Nigeria are to be identified and prepared as a part of the Country Program development contract. Preliminary projects are expected to be focussed upon the aerosol, foams, MACS and refrigeration sub-sectors.

3. CY93 Investment Project Pipeline

INVESTMENT PROJECT PIPELINE	
Project: ODS Phase-Out Investment Project Sub-projects include: - Aerosols - Foams - Mobile Air Conditioning (MACS) - Refrigeration \$ Amount: \$ 5 million	Planned Bank Appraisal Date: 9/93

PHILIPPINES

1. Status of Montreal Protocol Implementation

In December 1992, the Government of the Philippines completed a draft Country Program (based upon the earlier 1991 COWI Country Study) but it may not be complete for presentation to the Executive Committee until after its first meeting in 1993. Two engineering studies for 16 projects are almost complete and an initial \$20 million investment project, with 16 sub-projects, will be presented to the Executive Committee at its first meeting in 1993. Ten of the sub-projects will be fully documented, including household refrigerator compressor and foam sub-projects, in preparation for a request for final approval by the EC. Six additional refrigeration and air conditioning projects will be submitted with a brief description for permission to proceed. Once full documentation is available, those sub-projects which require more than \$500,000 will be submitted to the EC for final approval.

2. Status of World Bank Assistance

- (a) **Country Program** - The Government of the Philippines is leading the Country Program preparation with the Bank's support. UNDP is providing some supplemental funding for the effort.
 - (b) **Pre-investment Activities** - Two Bank-supported engineering studies are complete. The studies produced a \$20 million investment program of 16 ODS phase-out projects: 2 refrigerant recycling (MAC and central), 4 household refrigerator refrigeration circuit, 4 household refrigerator foam, 1 tobacco and 5 solvent projects. Three household refrigerator foams and three household refrigerator compressor projects require further documentation which is being prepared by the enterprises.
 - (c) **Investment Projects** - The above-mentioned project will be the first investment project for the Philippines. An Executive Project Summary (EPS) is included with the project document submitted by the Bank for the Philippines.
-

3. **CY93 Investment Project Pipeline**

INVESTMENT PROJECT PIPELINE	
Project: ODS Phase-Out Investment Project (I) Sub-projects include: - 2 Refrigerant recycling (MAC and central) - 4 Household refrigeration - 4 Household refrigerator foams - 1 Tobacco fluffing application - 5 Solvent projects \$ Amount: \$ 20 million	Planned Bank Appraisal Date: (I) 4/93

THAILAND

1. Status of Montreal Protocol Implementation

Thailand plans to present its Country Program to the Executive Committee at its second meeting in 1993. Preparatory work on an initial \$ 1 million in investment projects is underway.

2. Status of World Bank Assistance

- (a) **Country Program** - The Bank assisted in preparation of a draft Country Program that was presented to the Government of Thailand in October 1992. The Government is preparing the Country Program without additional Montreal Protocol assistance.
- (b) **Pre-investment Activities** - A Bank-supported engineering study to develop about 17 ODS phase-out investment sub-projects for submission to the Executive Committee, is nearing completion.
- (c) **Investment Project** - A line-of-grant investment project for about \$15 million was proposed to the Executive Committee at its June 1992 meeting, however, only \$ 1 million was approved for two sub-projects, mobile air conditioning (MAC) recycling and Thai Airways. Preparation for these two projects are now being completed.

The MAC recycling project is being prepared by COWI Consult. The project is being developed to include: (i) MAC service shops; and (ii) a central facility for all refrigeration sectors.

The Thai Airway project is being developed by the USEPA and the Swedish EPA plus several aircraft firms. The total project cost is now estimated at \$1-2 million. The \$100,000 already allocated will cover the cost of preparing the feasibility study for the full project. Since this project may be replicated in all other eligible airlines, the basic design parameters and eligible incremental costs are being carefully defined.

- (d) Two refrigeration projects are being developed in Thailand to be included in the Bank's multi-country **Global Refrigeration Project**. A solvent project is being developed in Thailand by ICOLP under the Bank's multi-country **Global Solvent Project**.

MFMP, World Bank Annex II - Country Level CY93 Work Programs

- (e) Additional project preparation assistance of about \$250,000 will be required during 1993 to assist in developing the Second ODS Investment Project.

3. CY93 Investment Project Pipeline

The Executive Project Summary (EPS) is being revised to reflect current eligibility criteria and will include the full Project Summaries for at least 70% of the proposed sub-projects and a list of sub-projects for the remainder, plus 10 - 15 % contingency for flexibility in subsequent processing.

INVESTMENT PROJECT PIPELINE	
Project: ODS Phase-Out Investment Project (I) Sub-projects include: - Refrigerant recycling (MACS) - Household refrigeration - Household refrigeration foams - Solvents ODS Phase-Out Investment Project (II) \$ Amount: (I) \$ 20 million; (II) \$ To be determined	Planned Bank Appraisal Date: (I) 6/93 (II) early 1994

TUNISIA

1. Status of Montreal Protocol Implementation

Tunisia's Country Program was undertaken in early 1992 and completed in May 1992, at which time it was presented to the Government of Tunisia, where it remains under review. Design and preparation work on investment projects on the order of \$1.79 million has been undertaken.

2. Status of World Bank Assistance

- a) **Country Program** - The Bank undertook an ODS assessment for Tunisia in 1991. This was closely followed up by a Country Program which was presented to the Government of Tunisia in May 1992 and which has been under Government review since then. At the request of the Government of Tunisia, continued assistance will be provided for the finalization of the Country Program.
- b) **Investment Projects** - In CY92, following project identification and preparation, \$1.79 million was allocated by the Executive Committee for investment projects in the following ODS-using sectors: aerosols, flexible and rigid foams and refrigeration, including both production-related (domestic refrigerators) and recycling (domestic, commercial and industrial maintenance) components. Project preparation will be advanced in early 1993 with appraisal planned for the second quarter of 1993.

3. CY93 Investment Project Pipeline

There are no additional investment projects in the pipeline for CY93.

TURKEY

1. Status of Montreal Protocol Implementation

Turkey's Country Program was completed in CY92 and presented to the Eighth Meeting of the Executive Committee where it was strongly supported and approved. Also in CY92, a total of \$6.165 million was approved by the Executive Committee for investment projects for which preparation activities are underway.

2. Status of World Bank Assistance

- a) **Country Program** - The Bank undertook an ODS assessment in 1991. World Bank support to Country Program preparation was completed and presented to the Government of Turkey in January 1992. The CP was approved by the EC at their eighth meeting in October 1992.
- b) **Investment Projects** - In CY92, \$6.2 million was obtained to fund five (5) project sub-components: (1) Introduction of non-ODS technology in the production of domestic refrigerators and compressors (\$4.9 million), (2) Recovery/recycling of refrigerant in a domestic refrigerator production plant (\$0.06 million), (4) various ODS phaseout activities and demonstrations (\$0.5 million) and (5) institutional strengthening (\$0.3 million). Project preparation is underway and appraisal is planned for 1993.

3. CY93 Investment Project Pipeline

There are no CY93 investment projects in the pipeline.

VENEZUELA

1. Status of Montreal Protocol Implementation

Venezuela's Country Program is expected to be presented to the EC at its second meeting in CY93. The Legal Agreement for the Plasticos Molanca C. A. CFC-12 to hydrocarbon blowing agent conversion project (US \$1.3 million) is expected to be signed in January 1993. Preparation for implementation of the Central Air Conditioning Project, approved by the EC in October 1992, continues. FONDOIN, an autonomous foundation, has been established to implement the Montreal Protocol in Venezuela. An institutional strengthening component financed by the Fund to assist FONDOIN will be managed by the UNDP.

2. Status of World Bank Assistance

- a) **Country Program** - Bank assistance has not been requested. USEPA is assisting in preparation.
- b) **Investment Projects** - Plasticos Molanca project is already approved; and additional investment project identification and preparation of more systematic arrangements for processing investment projects utilizing FONDOIN as coordinating agency will continue.
- c) **Institutional Strengthening** - UNDP has assumed the lead role.

3. CY93 Investment Project Pipeline

There are no CY93 investment projects in the pipeline.

Annex III

PROJECT PROPOSALS
COSTING BELOW
\$500,000

BANK-IMPLEMENTED
MONTREAL PROTOCOL OPERATIONS

(as of January 18, 1993)

Global Environment Coordination Division, Environment Department

THE WORLD BANK

MONTREAL PROTOCOL

INSTITUTIONAL STRENGTHENING PROJECT

PROJECT COVER SHEET

COUNTRY:	Ecuador
PROJECT TITLE:	Institutional Strengthening
ODS CONSUMPTION:	570 t (1992 estimate)
PROJECT DURATION:	3 YEARS
TOTAL PROJECT COSTS:	US\$ 280,000
PROPOSED GRANT:	US\$ 204,000
LOCAL COUNTER FUNDING:	US\$ 76,000
NATIONAL EXECUTING AGENCY:	Ministry of Industries
IMPLEMENTING AGENCIES:	World Bank, UNDP
APPRAISAL DATE:	March 1993

ECUADOR

MONTREAL PROTOCOL

Institutional Strengthening Project

BACKGROUND

1. Ecuador ratified the Montreal Protocol (MP) on Substances that Deplete the Ozone Layer on April 30, 1990. In March 1991 the country began preparation of its Country Program (CP) for implementing the Protocol with the assistance of the World Bank and the U.S. EPA. The CP was submitted to and approved by the Executive Committee during its March 1992 meeting. Under the Protocol, Ecuador is required to phase out production and consumption of CFCs, halons, and carbon tetrachloride by the year 2010 and methyl chloroform by the year 2015. However, in line with the country's overall commitment for environmental protection, the CP proposes to accelerate phasing out the substances controlled under the MP to the year 2000, thus waiving the grace period which Ecuador is permitted as a Party operating under Article 5 of the Protocol.

2. Ecuador imports all of the ODSs to meet domestic needs and depends on external sources for innovations in existing technology. In 1990 the country consumed approximately 723 metric tons of CFCs, halons, methyl chloroform, and carbon tetrachloride. Weighted by the ozone depleting potential (ODP) of each substance total consumption in 1990 amounted to 742 t. Of this total, consumption of CFCs accounted for 94 percent (694 t) and was distributed in five end uses: aerosols 464 t (67 percent), refrigeration 134 t (19 percent), foams 58 t (8 percent), air conditioning 19 t (3 percent), and miscellaneous uses 19 t (3 percent). In addition, 45 t of halons were used as fire extinguishing agents, 1 t of methyl chloroform for solvent cleaning, and 2 t of carbon tetrachloride for miscellaneous applications. Since 1990 there has been a reduction of CFC use in the aerosol sector because some manufacturers introduced carbon dioxide (CO₂) as a substitute propellant in response to ozone depletion concerns. However, CO₂ is effective in only a few products and is not a long term replacement for CFCs. Total use of CFCs in the aerosol sector in 1992 is estimated at about 290 t. Thus, total 1992 use for all sectors is estimated at 568 t.

3. The CP includes an action plan which comprises two phases. The first phase covers the period January 1993 through December 1995 and entails the following activities: i) establishment of the legal, institutional, and policy framework; ii) introduction of technological improvements to reduce use of 316 t of ODSs in the sectors dealing with aerosols (290 t) and with rigid foams (26 t); and iii) implementation of a training and information dissemination component to be executed by UNDP. The second phase includes reduction in all remaining industries (flexible foams, refrigeration, air conditioning, and solvents) leading to additional annual reductions of 252 t of ODSs, thus, completing a total phase out by the year 2000.

4. **Institutional and Legal Organization.** There is no institution in Ecuador dealing with the use of substances that deteriorate the ozone layer. Presently there is no central official entity responsible for overall environmental protection. Issues dealing with pollution problems in general are usually dealt on a project by project basis by pertinent sectoral ministries. However, not all sectors are covered since only the ministries of Health, Energy, and Public Works have established environmental units within their organizational structure, because of

budgetary constraints and lack of trained staff. To overcome this problem government authorities are considering various actions leading to the definition of the legislative and institutional framework that would be required to deal with environmental protection and resource management issues. To this effect the Government of Ecuador (GOE) requested World Bank assistance for an Environmental Technical Assistance Project which is currently in advanced stage of preparation.

5. To comply with the stipulations of the Protocol and the activities proposed in the CP, GOE designated the Ministry of Industries, Commerce, and Fisheries (MICIP) by to be the leading implementing and coordinating entity (Presidential Decree signed on April 28, 1992). Since MICIP has no provisions within its organization to deal with environmental issues, an institutional analysis was commissioned by the Bank to assist MICIP determine the most efficient institutional arrangements needed to implement the CP. The proposed institutional strengthening project is based on the recommendations of the analysis report and on the agreements reached with MICIP authorities during project preparation.

The Project

6. **Objectives.** The main objective of the project would be to strengthen MICIP's operational capacity to establish and operate a Montreal Protocol Project Implementation Unit (MPPU) within MICIP's organizational structure. This unit would be responsible, in the short and long term, for the implementation of the CP's first and second phase respectively. Grant funds would be required to organize and operate this unit.

7. **Scope of the Project.** Geographically the proposed MPPU would cover all industries that would participate in the ODS phase out program and which are located in or near the three most important cities of the country (Quito, Guayaquil and Cuenca).

8. **Justification.** During project preparation it became evident that the single most important element for successful implementation of the MP would be the availability of a small and highly efficient MPPU. Given the lack of previous experience of MICIP in issues dealing with ODSs and with MP activities, and in view of the lack of familiarization of the firms in the private sector regarding alternative technologies, it would be imperative to strengthen MICIP to carry out the functions envisaged under the MP. Implementation of proposed activities under the project would require a minimum of staff support and of logistic services. However, under the current administration's austerity program based on a determination to scale down the size of government, MICIP would not be successful in obtaining sufficient budgetary support to implement the CP in an effective and timely manner. By the same token, any delay of Government action for lack of operational capacity would tend to discourage participation of the private sector in the implementation of the MP. Thus the need for MICIP to rely on external resources to strengthen its ability to implement the CP.

9. **Project Beneficiaries.** In the immediate and medium term the main beneficiaries would be private sector industries interested in participating in the CP's first phase. At least 18 firms of the aerosol sector and three firms producing foams for refrigerators are expected to participate in this phase. Implementation of the second phase would be greatly facilitated by having an already established MPPU with experienced staff.

10. Proposed Organizational Structure. The MPPU would be established under the umbrella of MICIP's existing Directorate of Industries (DI). Its only function would be the implementation of the CP. The DI is responsible for advising the Minister in matters dealing with industrial policy and strategy. It is also responsible for providing technical assistance and guidance to private firms or individuals interested in setting up new industrial initiatives.

11. The MPPU is to be staffed with three industrial engineers who have already been transferred from MICIP's technical assistance unit. A support staff position has also been allocated to provide administrative and secretarial support to the unit.

12. While the PU's high level staff would work as a team, one of them would be responsible for coordinating the its activities within MICIP, and with other related entities of the public and private sector. The MPPU's staff would report to the DI's chief and in his absence directly to the Subsecretary of Industries.

13. PU's Functions. The main function of the MPPU's staff would be to promote and supervise implementation of the phaseout sub projects. This would include dissemination of information, proposing ozone-related policy decisions to Government authorities, providing coordination between MICIP and executing agencies such as the World Bank and UNDP, design and implementation of monitoring and evaluation system for ODS phase out activities, preparing progress reports for the ExCom and GOE authorities, and creating awareness among ODSs users and the public in general. To fulfill this function the unit's staff would be trained in technical and administrative aspects dealing with MP before implementation of sub projects for phase out initiatives start. This would be done through the training portion of the program currently being designed by MICIP with UNDP's assistance.

14. Human Resources and Logistic Support. To carry out proposed functions MICIP has already allocated to the MPPU three positions for professional staff and one for administrative and secretarial services. Staff for these positions have now been officially designated. In addition, a training coordinator has been selected jointly by MICIP and UNDP.

15. Office space has already been allocated. However, procurement of furniture and office equipment would be done once grant funds for the proposed project are approved.

16. Project Costs and Budget. Start up and operational cost for three years is estimated at US\$280,000. This cost would be covered with local counterpart funding (US\$76,000) for staff salaries and benefits, accounting and record keeping, and reconditioning of office facilities. The balance (US\$204,000) corresponds to incremental costs to MICIP and would be financed with grant funding for procurement of office equipment and for operation and maintenance of the MPPU.

17. The three-year budget is shown in table one. Procurement of equipment and supplies, and disbursement of operational funds would be carried out according to World Bank guidelines to be agreed with MICIP during appraisal of the project.

Table 1

ECUADOR
MONTREAL PROTOCOL
PHASE 1
ESTIMATED COSTS OF INSTITUTIONAL STRENGTHENING

ITEM		US \$		
		Year 1	Year 2 & 3	Total
1.	CAPITAL EXPENDITURE*			
	Office Equipment (as appropriate)	20,000	-----	20,000
	Personal Computer with Disk Drive, Monitor, Printer & Software	25,000	-----	25,000
	Modem			
	Photocopier			
	Typewriter			
	Fax machine			
	Sub-Total	45,000	-----	45,000
2.	RECURRENT EXPENDITURE			
2.1	Personnel**	21,600	43,200	64,800
	a) Professional Staff (3)			
	b) Supporting Staff (1)			
	Sub-Total	21,600	43,200	64,800
2.2	Operational Costs including:			
	Official travel	15,000	30,000	45,000
	Communications charges	10,000	20,000	30,000
	Miscellaneous service charges (incl. utilities)	5,160	10,320	15,480
	Office supplies, maintenance of equipment	20,000	40,000	60,000
	Subtotal	50,160	100,320	150,480
	Contingencies (10% of 1 and 2.2)	9,516	10,032	19,548
	T O T A L	126,276	153,552	279,828

* One time set-up cost for the first year.

** Financed by local counterpart funding

MONTREAL PROTOCOL

TRAINING and TECHNOLOGY DISSEMINATION

PROJECT COVER SHEET

COUNTRY:	Ecuador
PROJECT TITLE:	Training and Technology Dissemination
ODS CONSUMPTION:	570 t (1992 estimate)
PROJECT DURATION:	1 YEAR
TOTAL PROJECT COSTS:	US\$ 250,000
PROPOSED GRANT:	US\$ 150,000
LOCAL CONTRIBUTION:	In kind: office space
NATIONAL EXECUTING AGENCY:	Ministry of Industries
IMPLEMENTING AGENCY:	UNDP
APPRAISAL DATE:	March 1993

ECUADOR

MONTREAL PROTOCOL

Training and Technological Dissemination

BACKGROUND

1. Ecuador ratified the Montreal Protocol (MP) on Substances that Deplete the Ozone Layer on April 30, 1990. In March 1991 the country began preparation of its Country Program (CP) for implementing the Protocol with the assistance of the World Bank and the U.S. EPA. The CP was submitted to and approved by the Executive Committee during its March 1992 meeting. Under the Protocol, Ecuador is required to phase out production and consumption of CFCs, halons, and carbon tetrachloride by the year 2010 and methyl chloroform by the year 2015. However, in line with the country's overall commitment for environmental protection, the CP proposes to accelerate phasing out the substances controlled under the MP to the year 2000, thus waiving the grace period which Ecuador is permitted as a Party operating under Article 5 of the Protocol.

2. Ecuador imports all of the ODSs to meet domestic needs and depends on external sources for innovations in existing technology. In 1990 the country consumed approximately 723 metric tons of CFCs, halons, methyl chloroform, and carbon tetrachloride. Weighted by the ozone depleting potential (ODP) of each substance total consumption in 1990 amounted to 742 t. Of this total, consumption of CFCs accounted for 94 percent (694 t) and was distributed in five end uses: aerosols 464 t (67 percent), refrigeration 134 t (19 percent), foams 58 t (8 percent), air conditioning 19 t (3 percent), and miscellaneous uses 19 t (3 percent). In addition, 45 t of halons were used as fire extinguishing agents, 1 t of methyl chloroform for solvent cleaning, and 2 t of carbon tetrachloride for miscellaneous applications. Since 1990 there has been a reduction of CFC use in the aerosol sector because some manufacturers introduced carbon dioxide (CO₂) as a substitute propellant in response to ozone depletion concerns. However, CO₂ is effective in only a few products and is not a long term replacement for CFCs. Total use of CFCs in the aerosol sector in 1992 is estimated at about 290 t. Thus, total 1992 use for all sectors is estimated at 568 t.

3. The CP includes an action plan which comprises two phases. The first phase covers the period January 1993 through December 1995 and entails the following activities: i) establishment of the legal, institutional, and policy framework; ii) introduction of technological improvements to reduce use of 316 t of ODSs in the sectors dealing with aerosols (290 t) and with rigid foams (26 t); and iii) implementation of a training and information dissemination component to be executed by UNDP. The second phase includes reduction in all remaining industries (flexible foams, refrigeration, air conditioning, and solvents) leading to additional annual reductions of 252 t of ODSs, thus, completing a total phase out by the year 2000.

4. **Institutional Capacity.** There is no institution in Ecuador dealing with the use of substances that deteriorate the ozone layer. Presently there is no central official entity responsible for overall environmental protection. Issues dealing with pollution problems in general are usually dealt on a project by project basis by pertinent sectoral ministries. However, not all sectors are covered since only the ministries of Health, Energy, and Public Works have

established environmental units within their organizational structure. The main constraints preventing other ministries from active participation in solving their sectoral environmental issues are inadequate budgetary allocation and lack of trained staff in environmental protection and impact assessment.

5. To comply with the stipulations of the Protocol and the activities proposed in the CP, GOE designated the Ministry of Industries, Commerce, and Fisheries (MICIP) by to be the leading implementing and coordinating entity (Presidential Decree signed on April 28, 1992). For this purpose MICIP authorities has decided to establish under the Industries Directorate a small unit to be responsible for implementing the activities proposed in the CP (MPPU). Three professionals and one support staff have already been designated for this unit. However, MICIP has no previous experience with MP technical and administrative issues, thus, a training program is needed for the unit's staff. Moreover, during project preparation it has been evident that industries working with ODSs have little access to up-to-date information dealing technological alternatives to reduce use of these substances. Thus, dissemination of information to private sector industries and ultimately to the final consumers would be imperative for successful implementation of the CP.

The Project

6. Objectives. The main objective of the project would be to organize training activities for the MPPU's staff, for members of other public entities interested in elimination of ODSs such as the Ministry of Health and local municipalities, for representatives of pertinent industries and for the public in general.

7. Features of the Training and Dissemination Program. Training activities would consist of a series of conferences, seminars and workshops to be held in the three main cities (Quito, Guayaquil, and Cuenca) where most industries using ODSs are located. Because of lack of local expertise, external specialists would be recruited for events dealing with technical aspects of the phaseout program. The logistic organization of these events would be contracted out to experienced local private firms. The program would be supplemented with the preparation of printed material, and with films and videos. It has been envisaged that the entire process of design, production and implementation of the program would be completed in about one year.

8. Executing Agency. The project would be executed by MICIP's MPPU under the coordination and guidance of the UNDP office in Quito. An operational agreement between the two entities has already been approved. A training coordinator has been jointly designated and one of the MPPU's staff would act as counterpart to the coordinator on a part-time basis. Both would report directly to the Director of Industries (DI) who would act as counterpart to UNDP's project officer. Training strategy and needs would be identified jointly by the coordinator and members of the MPPU and approved by DI and UNDP's project officer.

9. Justification. Because of MICIP's lack of previous experience in MP operating principles and guidelines, the success of the technological conversion sub projects, and the efficient use of grant funds would depend to a large extent on the ability and capacity of MICIP to provide technical assistance to enterprises interested in participating in the Government's program to phase out ODSs.

10. Project Beneficiaries. In the immediate and medium term the main beneficiaries would be MICIP's MPPU's staff and officials of other pertinent public sector entities, members of private sector industries interested in participating in the CP's first and second phase, and ultimately the public in general.

11. Training Coordinator Functions. The main functions would be the identification of training needs, identification, selection, and recruitment of technical experts for training events, selection and contracting of firms to be responsible for the organization and execution of training events and for the preparation of printed and electronic dissemination material, for evaluation of the effectiveness of training activities, and for reporting progress to executing agencies and to the ExCom.

12. Project Costs and Budget. Training estimate costs shown in the CP (US\$100,000) were under estimated because of insufficient data available at the time of initial program formulation. However, during project preparation a detailed revision of the proposed program, carried out jointly by UNDP and the Bank, revealed that actual total cost required to design and implement a training and technological dissemination program would be \$250,000. This amount represents the entire incremental cost for which a grant is requested. Table 1 attached shows detailed budget costs of the proposed program.

Table 1

ECUADOR

MONTREAL PROTOCOL

PHASE 1

TRAINING AND TECHNOLOGY DISSEMINATION

Total Estimated Cost
(US\$)

<u>Item</u>	<u>Unit Cost</u>	<u>Total</u>
Refrigeration Expert (fees and travel expenses)	10,000	10,000
Aerosols Expert (" " ")	10,000	10,000
Foams Expert (" " ")	10,000	10,000
Secretary (salary one year)	4,000	4,000
Training Coordinator (salary one year)	10,400	10,400
Translations	5,000	5,000
Internal travel	<u>8,000</u>	<u>8,000</u>
Sub total	57,400	57,400
<u>Service Contracts:</u>		
Organization of seminars/workshops (6)	6,000	36,000
Preparation and Presentation of Audio/visual dissemination programs (4)	32,000	128,000
<u>Equipment Purchase:</u>		
Word Processor, printer, projector	6,600	6,600
Equipment Maintenance	5,500	5,500
Materials for Seminars	9,500	9,500
Internal/External communications	7,000	7,000
Sub total	<u>66,600</u>	<u>192,600</u>
TOTAL	<u>124,000</u>	<u>250,000</u>

**The Montreal Protocol on
Substances that Deplete the Ozone Layer**

Indonesia ODS Phase Out Investment Program

Project Cover Sheet

COUNTRY: Indonesia

PROJECT TITLE: ODS Phase Out Investment Project Preparation

SECTORS COVERED: All ODS consuming sectors

PROJECT DURATION: Six months

PROJECT IMPACT: Development of 10-12 High Priority ODS Phase Out Projects

PROPOSED BUDGET: \$250,000 (all incremental costs)

NATIONAL
COORDINATING AGENCY: Ministry of Population and Environment (KLH)

IMPLEMENTING AGENCY: The World Bank

PROJECT SUMMARY

This project will prepare 10-12 technologically sound, cost effective ODS phase out projects for Indonesia. As agreed with UNDP, this activity will proceed in parallel with their work to support development of the ODS Country Program. No provision for project preparation is included in the CP preparation terms of reference and simultaneous development of the CP and specific projects has worked well in other Article 5 countries. Several Asian developing countries have, with assistance from the World Bank, developed ODS phase out projects for submission to the EC in sectors that are high ODS consumers in Indonesia. The consultant selected for this project will therefore draw on the experience of other countries and adapt project models to Indonesian conditions. Based on the findings of an ODS reconnaissance study, completed with UNDP assistance, the consultant will target high ODS use sectors and identify 18-20 potential investment projects. In addition, an analysis of the prospects for refrigerant recycling will be undertaken. From the identified projects, The National Committee on Ozone Layer Protection and CFC Phase Out, lead by KLH and overseeing CP preparation, will select 10-12 priority projects for further development. These projects will be prepared for submission to the EC following its guidelines for ODS phase out projects.

**The Montreal Protocol on
Substances that Deplete the Ozone Layer**

Philippines ODS Phase Out Investment Program

Project Cover Sheet

COUNTRY: Philippines

PROJECT TITLE: Technical Assistance for the Financial Institution (FI)

SECTORS COVERED: All ODS consuming sectors

PROJECT DURATION: One year

PROJECT IMPACT: Development of local project appraisal and supervision capabilities for ODS phaseout investment projects financed with OTF funds

PROPOSED BUDGET: \$100,000 (all incremental costs)

**NATIONAL
COORDINATING AGENCY:** Department of Environment and Natural Resources (DENR)

IMPLEMENTING AGENCY: The World Bank

PROJECT SUMMARY

The objective of the proposed TA is to build up the financial institution (FI)'s technical expertise for the appraisal and supervision of ODS phaseout projects through training of the FI's staff. Training will include on the job training, in-house seminars, external seminars and consulting services for special technical issues in ODS phaseout projects.

PHILIPPINES - OZONE DEPLETING SUBSTANCES PHASE OUT INVESTMENT PROGRAM

Annex 5: Proposal for Technical Assistance to the Financial Institution

Background

1. Under the proposed Project the Financial Institution will be responsible for channeling funds from the World Bank administered Ozone Trust Fund to eligible subprojects. The proposed scheme will entail three principal functions to be performed by the FI:

- i. Appraisal of subproject proposals;
- ii. Disbursement of OTF grants to subprojects;
- iii. Supervision of subproject implementation.

2. While the FI has substantial experience with the financial aspects and the general technical aspects of subprojects, it lacks technical capability in the specific field of ODS phaseout projects to adequately appraise and supervise such projects. The proposed TA would address this issue.

Objectives of TA

3. The objectives of the proposed TA is to build up the FI's technical expertise for the appraisal and supervision of ODS phaseout projects through training of FI's staff.

Scope of TA

4. Under the proposed TA the following activities would be funded:

- i. On the job training of FI staff: Hiring of local ODS consultants who would work with FI staff on the job, assisting them in ODS specific aspects of their appraisal and supervision work, and initially supervising the quality of their work.
- ii. In-house seminars for FI staff: Design and implementation of in-house seminars on Montreal Protocol Projects and ODS specific technical aspects.
- iii. External seminars for FI staff: Sponsoring of the participation of concerned project officers in relevant seminars and international conferences.
- iv. Consulting services of expatriate experts: Hiring of short-term experts on a case-by-case basis to address highly specialized

technical issues in ODS phase out projects. Those experts would always work with FI staff for transfer of their know how.

Selection of Consultants

5. Local and international experts will be selected and contracted following World Bank guidelines.

Cost Estimate

6. The TA component will have the following estimated costs:

	Person Months and Cost	Total Cost (US \$)
a) ODS local experts	13 months a US\$ 2000	26,000
b) ODS international experts	3 months a US\$ 10,000	30,000
c) In-house seminars	4 seminars a US\$ 5,000	20,000
d) Participation in External seminars and conferences	6 conferences a US\$ 4,000	24,000

TOTAL TA COMPONENT		100,000

**The Montreal Protocol on
Substances that Deplete the Ozone Layer**

Philippines Institutional Strengthening Program

Project Cover Sheet

COUNTRY: Philippines

PROJECT TITLE: Institutional Strengthening for Ozone Desk Operations

SECTORS COVERED: All ODS consuming sectors

PROJECT DURATION: Three years

PROJECT IMPACT: Facilitation and coordination of ODS phaseout projects and policies

PROPOSED BUDGET: \$425,000 (all incremental costs)

NATIONAL
COORDINATING AGENCY: Department of Environment and Natural Resources (DENR)

IMPLEMENTING AGENCY: The World Bank

PROJECT SUMMARY AND FUNDING JUSTIFICATION

The DENR Montreal Protocol Secretariat (the "Ozone Desk") was established on August 10, 1992, to facilitate and coordinate projects and policies to meet the Philippines' MP obligations. Ozone Desk activities are supported by a Program Steering Committee (PSC) and a Technical Working Group (TWG), each comprised of relevant government and industry representatives. To develop and facilitate the execution of the cost effective ODS phaseout program which is being drafted by the TWG (Country Program submission to EC expected in early 1993) and to meet MP ODS monitoring and reporting requirements, the Ozone Desk will require additional financial resources including salaries for three dedicated staff, telecommunications and information dissemination expenses, office supplies, and local and international travel funds.

EC "Institutional Strengthening" guidelines (UNEP/OzL.Pro/ExCom/7/20) recommend \$300k to fund such operations in category 2 countries such as the Philippines. DENR, however, has determined that this amount is insufficient given the country's ODS consumption patterns and limited government resources available for this unprecedented global environmental protection effort. The 1993 investment program for the Philippines, which targets large ODS consumers in the Metro Manila area, in combination with ODS phaseout measures that are being undertaken without MP funding support, will result in ODS reductions of about 40% to about 1,600 MT ODP by 1995. The next phase of reductions will be much more difficult to achieve as remaining consumers are small and medium sized firms and servicing operations located through-out the archipelago. To inform these users of Philippines' ODS phaseout policies and disseminate information on technical options DENR requests that an additional \$75k be added to the first year budget and \$50k to second and third year budgets. The World Bank concurs with DENR's judgement and believes that the additional \$125k allocation would minimize overall incremental costs to the Philippines and limit potential economic hardship to small enterprises should ODS become prematurely in short supply. The proposed budget is attached.

MFMP, World Bank Annex III - Project Proposals Costing below \$500,000

Proposed Budget for Philippines Ozone Desk

One-Time Setup Costs	1st Year	2nd & 3rd Years
Office Equipment - computer - software including phaseout cost model - printer - fax machine - photocopy machine - telephone - modern	14,000	
Annual Operating Costs		
Salaries and Benefits Director Technical/Institutional Coordinator Industry Outreach Coordinator Supporting Staff	32,000	64,000
Travel and Conferences Domestic travel International travel Conferences	30,000	30,000
Communications Information dissemination Mail Phone service and maintenance	100,000	100,000
Office supplies	10,000	10,000
Contingencies (10% of Total)	18,000	20,000
Annual Total	204,000	224,000
Total Budget	US\$428,000	

**MULTILATERAL FUND
under the
MONTREAL PROTOCOL**

WORLD BANK 1993 WORK PROGRAM
for Investment Project Preparation and Related Studies

(as of January 18, 1993)

Global Environment Coordination Division, Environment Department

THE WORLD BANK

Introduction

1. This calendar year 1993 (CY93) work program and budget for assistance to developing countries in reducing their emissions of ozone depleting substances (controlled substances) ^{1/} has been prepared for consideration by the Executive Committee (EC) of the Multilateral Fund for the implementation of the Montreal Protocol (MFMP) at its March 8-10, 1993 meeting in Montreal.

Work Program Scope

2. With the recent addition of Argentina, Indonesia, and provisionally India (written confirmation from the Government requesting Bank assistance is still required), and the temporary suspension of activities in Yugoslavia, the World Bank work program covers eighteen (18) countries^{2/}. While the Bank's primary role as an implementing agency of the MFMP is to manage the investment project cycle, in collaboration with other implementing agencies the Bank will also assist eligible developing countries to prepare Country Programs and pre-investment studies.

The CY93 work program makes provision for:

- (i) assisting Governments in the preparation of five (5) Country Programs (Argentina, Brazil, Nigeria, Thailand, and Venezuela); three (3) Country Programs (China, Guatemala and Indonesia) in collaboration with other implementing agencies; the completion of three (3) Country Programs (Jordan, Philippines and Tunisia) and,
- (ii) six (6) new investment projects in China, Ecuador, Indonesia, Nigeria, Philippines, and Thailand, comprised of a number of sub-projects; and,
- (iii) a global refrigeration project consisting of twelve (12) sub-projects in several countries yet to be determined.
- (iv) global solvent projects in seven (7) countries.

The appended country work program summaries (Annex III) reports:

- (i) on each country's status of Montreal Protocol Implementation;

^{1/} The use of the term "controlled substance", in this context, should be understood to refer only to those ozone depleting substances specifically controlled by the Protocol.

^{2/} All countries included in the CY93 work program have ratified the Protocol.

- (ii) the status of World Bank assistance to that country; and,
- (iii) the Bank's best estimate of that portion of the investment project pipeline which is expected will be presented for final approval by the Executive Committee of the Montreal Protocol within the CY93 period.

The financial dimensions of the CY93 work program (Table 1) are as follows:

Programmed project commitments	US\$ 114.06 million
Work Program project preparation activities	US\$ 2.20 million
Pre-investment studies	US\$.55 million
Work Program Country Program preparation	US\$.35 million
Operations coordination, policy analysis, financial and legal administration	US\$ 1.18 million
Total	US\$ 118.33 million

Country Programs, supporting studies and policy analyses, and pre-investment studies are all part of a continuum culminating in the preparation, approval and implementation of investment projects. Such studies are only undertaken by the Bank in so far as they advance and facilitate investment project funding under the MFMP and establish clear operational guidelines. Activities not completed during CY92 have been deferred to CY93. Savings realized through not undertaking these activities will accrue to finance part of the CY93 work program^{3/}.

Investment Project Pipeline Projected for CY93

3. The Table below presents, by country, a summary of investment projects presently anticipated for presentation to the Executive Committee for approval during CY93.

^{3/} Provisional CY92 Expenditure Estimate As of January 18, 1993, the provisional estimate of expenditures under the CY92 MP administrative budget for Bank operations was \$2.7 million compared with a budget of \$4.4 million. A final balance sheet for CY92 will be provided at the Ninth Executive Committee meeting on March 8 - 10, 1993.

Summary of World Bank CY93 Investment Project Pipeline (in \$ millions)

Country	Investment Project Title & Sub-Projects, by Sector	ODS Phase-Out/Year (MT)	Incremental Cost (\$ m)
China (I) (increase)	ODS Investment Project (I): cost adjustment (total is now \$16.35 m) for 2 aerosols, 2 foams, 2 halons, 1 refrigeration.	N/A	\$7.83
China (II)	ODS Investment Project (II): 1 aerosol, 6-10 refrigerator/AC, 4-5 foam, 2 halon, and 3-4 non-ODS chemical substitute production sub-projects.	TBD	\$25.0
Ecuador (I)	ODS Investment Project (I): 12 aerosol sub-projects	290	\$0.7
	ODS Investment Project (I): Institutional Strengthening sub-project	N/A	\$0.204
	ODS Investment Project (I): Training and Technology Dissemination sub-project	N/A	\$0.25
	ODS Investment Project (I): Reduced CFC Insulating Foams in Refrigerator Manufacturing sub-project	25.5	\$0.665
Indonesia (PPA)	Project Preparation Advance (I): High priorities include recycling, refrigeration and foams.	N/A	\$0.250
Indonesia (I)	ODS Phase-Out Investment Project (I):	TBD	\$5.0
Nigeria (I)	ODS Phase-Out Investment Project (I): Sub-projects in aerosols, foams, MACS and refrigeration.	TBD	\$5.0
Philippines (I)	ODS Phase-Out Investment Project (I): refrigerant recycling, household refrigeration, household refrigeration foam, tobacco and solvent sub-projects.	826	\$20.0
Thailand (I)	ODS Phase-Out Investment Project (I):	800	\$20.0
Global Projects	Multi-Country Non-ODS Domestic Refrigeration Project: preparation of 12 sub-projects.	TBD	\$2.74
CY93 Total	Total Projected CY93 Investment Project Pipeline	TBD	\$87.639

Work Program and Budget

4. The tables listed below and presented in the succeeding five pages, present the status of the World Bank's work program budget and financing:

1. Table 1: Fund Receipts, Uses and Balances
2. Table 2: Work Program Budget Summary
3. Table 3: CY93 Planned Approvals/Commitments
4. Table 4: Financial Status of IMFMP Projects

5. Since the last Executive Committee meeting the Bank has received transfers of \$ 11.5 m for project investments and work program activities from the IMFMP. Of this, \$ 1.2 m was transferred to UNDP for the BHEARI component of the China project (\$.48m) and the Global MAC and Halons Projects (\$.36m and \$.39m, respectively).

6. The CY93 Work Program budget summary in Table 2 accounts for variances which occurred during CY92 in country program or project preparation activities as well as for new initiatives in Argentina.

7. Table 4 presents the financial status of Montreal Protocol projects which already have been approved by the Executive Committee. Nearly \$2.8 million in pre-investment project activities in China, Mexico, Philippines and Thailand have been approved by the EC, and roughly \$ 32 million in project financing has been authorized for Brazil, Chile, China, Egypt, Jordan, Malaysia, Mexico, Thailand, Tunisia, Turkey and Venezuela. As of December 31, 1992, World Bank Montreal Protocol project disbursements for projects in China, the Philippines, and Thailand have totalled \$513,589.

Structure of the Report

8. The Bank's CY93 work program report includes: (1) a summary overview of program and project activities by ODS sub-sector (Annex I); (2) a progress report summarizing the status of activities and achievement of operational goals to date (Annex II); and, (3) a country-by-country description of planned activities (Annex III). Country activity descriptions identify, wherever possible, the country implementing agency, collaboration between the MFMP implementing agencies, Country Programs and related studies, and the CY93 investment project pipeline in the particular country.

Table 1

INTERIM MULTILATERAL FUND OF THE MONTREAL PROTOCOL

World Bank Work Program

Fund Receipts, Uses and Balances

(In US\$ million)

	CY81 Actual	CY92 Actual a/	CY93 Plan b/	Cumulative from Inception through end -CY93
I. FUND RECEIPTS (through 12/31/92)				
Contributions	\$5.000	\$37.315		\$42.315
Investment Income	\$0.117	\$0.612		\$0.729
TOTAL FUND RECEIPTS	\$5.117	\$37.927	\$0.000	\$43.044
II. FUND USES				
A. Workprogram Costs				
- CPs and Studies	\$0.677	\$0.229	\$0.345	\$1.250
- Project Preparation	\$0.546	\$1.460	\$2.196	\$4.202
- Administrative Costs	\$0.285	\$0.899	\$1.019	\$2.204
-OORG		\$0.086	\$0.160	\$0.246
Sub-total WP Costs	<u>\$1.507</u>	<u>\$2.674</u>	<u>\$3.720</u>	<u>\$7.901</u>
B. Project Commitments				
- Pre-Inv. Activities/Inst. Dev.		\$2.470	\$0.550	\$3.020
- Project Financing		\$5.630	\$114.060	\$119.690
Sub-total Project Costs	<u>\$0.000</u>	<u>\$8.100</u>	<u>\$114.610</u>	<u>\$122.710</u>
TOTAL FUND USES	\$1.507	\$10.774	\$118.330	\$130.611
III. FUND BALANCES				
EXCESS OF RECEIPTS (USES)	\$3.609	\$27.153	(\$118.330)	(\$87.567)
FUND BALANCE AT BEGINNING OF PERIOD	\$0.000	\$3.609	\$30.762	\$0.000
FUND BALANCE AT END OF PERIOD	\$3.609	\$30.762	(\$87.567)	(\$87.567)

a/ Preliminary results; final report will be available by March 1993.

b/ Includes commitments for projects approved by the MP Executive Committee and Bank requested funding for projects in the Pipeline.

TABLE 2

INTERIM MULTILATERAL FUND OF THE MONTREAL PROTOCOL

World Bank Work Program

WORK PROGRAM BUDGET SUMMARY

I. Country Work Programs	CY92 Budget & Actuals a/			CY93 Projections b/			
	Revised Plan	Preliminary Results	Budget Balance	No. of Manwks c/	Work Program Budget (US\$)		
					CP/Studies d/	Proj. Prep.	Total
Argentina		\$4,718	(\$4,718)	32.0	\$85,000	\$63,000	\$148,000
Brazil	\$315,666	\$103,166	\$212,500	31.0	\$30,000	\$112,000	\$142,000
Chile	\$191,878	\$47,250	\$144,628	12.0		\$82,890	\$82,890
China	\$180,000	\$337,576	(\$157,576)	62.0		\$326,000	\$326,000
Ecuador	\$171,128	\$162,856	\$8,272	16.0		\$68,000	\$68,000
Egypt	\$255,353	\$3,248	\$252,105	24.8		\$112,200	\$112,200
Guatemala	\$25,000	\$11,359	\$13,641	18.0	\$37,600	\$47,000	\$84,600
Indonesia	\$54,000	\$41,068	\$12,932	34.0		\$206,000	\$206,000
Iran	\$20,000		\$20,000				\$0
Jordan	\$70,000	\$174,954	(\$104,954)	26.0	\$8,200	\$123,200	\$131,400
Malaysia	\$120,000	\$108,849	\$11,151	6.0		\$28,200	\$28,200
Mexico	\$292,076	\$80,322	\$211,754	26.0		\$123,400	\$123,400
Nigeria	\$100,000	\$56,417	\$43,583	22.0	\$35,100	\$62,500	\$97,600
Philippines	\$100,000	\$48,681	\$51,319	36.0		\$194,550	\$194,550
Thailand	\$280,000	\$193,878	\$86,122	36.0		\$190,000	\$190,000
Tunisia	\$175,000	\$12,600	\$162,400	36.0	\$8,200	\$165,800	\$174,000
Turkey	\$231,202	\$118,933	\$112,269	28.0	\$140,400		\$140,400
Venezuela	\$168,649	\$182,534	(\$13,885)	36.0		\$156,200	\$156,200
Global Projects	\$320,000		\$320,000	30.0		\$135,000	\$135,000
TOTAL-Country WP	\$3,069,952	\$1,688,409	\$1,381,543	511.8	\$344,500	\$2,195,940	\$2,540,440
II. Administration, Legal and Financial Costs e/	\$1,347,550	\$985,360	\$362,190				\$1,179,100
TOTAL BUDGET	\$4,417,502	\$2,673,769	\$1,743,733				\$3,719,540

a/ Revised Plan following decisions reached at the October Montreal Protocol Executive Committee meeting. Preliminary estimates of actual expenditures; final report will be available by March, 1993. IFC CY92 actuals will be included in the final report.

b/ Budget amounts reflect costs of project preparation and country programmes and associated overhead costs.

c/ Planned manweeks for World Bank higher level staff, international and local consultants.

d/ Includes country programmes and supporting technical studies, these underpin project preparation.

e/ Budget amounts for operations coordination, related policy analysis and review, legal and financial administration and associated overhead costs.

TABLE 3

Montreal Protocol Interim Multilateral Fund

World Bank Work Program

CY93 PLANNED APPROVALS/COMMITMENTS

(in US\$ million)

Country	No. of Projs.	Project Type	Project Status	Total Project Cost		CY93 Planned Bank Approval/Commitment				TOTAL CY93	APPROVED IN CY92
				Estimate	EC Auth. a/	Jan-Mar	Apr-June	Jul-Sept	Oct-Dec		
Brazil	1	Project Financing	WP	2.93	2.93				2.93	2.93	
Chile	1	Project Financing	WP	1.21	1.21	1.21				1.21	
China	1	Project Financing I	WP	14.52	7.02		7.02			7.02	1.50
		Project Financing I (PPA)	WP	1.50	1.50						
	1	Project Financing II	PP	25.00							
		Project Financing II (PPA)	WP	0.30	0.30		0.30			0.30	
Ecuador	1	Project Financing	WP	2.01							
Egypt	1	Project Financing	WP	2.80	2.80		2.80			2.80	
Indonesia	1	Project Financing I	PP	5.00							
		Project Financing I (PPA)	PP	0.25							
Jordan	1	Project Financing	WP	1.40	1.40		1.40			1.40	
		Institutional Dev.	WP	0.10	0.10		0.10			0.10	
Malaysia	1	Proj. Financing-Phase I	WP	1.53	1.53						1.53
Mexico	1	Demonstration Proj.	WP	0.18	0.18						0.18
	1	Project Financing	WP	4.00	4.00						4.00
Nigeria	1	Project Financing	PP	5.00							
Philippines	1	Engineering Proj.	WP	0.40	0.40						0.40
	1	Project Financing	PP	20.00							
Thailand	1	Engineering Proj.	WP	0.39	0.39						0.39
	1	Project Financing	PP	21.00	1.00		1.00			1.00	
Tunisia	1	Project Financing	WP	1.51	1.51		1.51			1.51	
		Institutional Dev.	WP	0.28	0.28		0.28			0.28	
Turkey	1	Project Financing	WP	5.87	5.87		5.87			5.87	
		Institutional Dev.	WP	0.30	0.30		0.30			0.30	
Venezuela	1	Project Financing I	WP	1.30	1.30	1.30				1.30	
	1	Project Financing II	WP	1.10	1.10		1.10			1.10	
Global	1	Solvents/Refrigeration	PP	2.74							
TOTAL	21	TOTAL		122.71	35.21	a/ 2.51	21.87		2.93	27.11	8.10

WORLD BANK ADDITIONAL FUNDING REQUEST FOR PROJECTS IN CY93
ESTIMATED TOTAL CY93 PLANNED APPROVALS/COMMITMENTS

87.50

114.61

a/ These amounts include institutional development and adjustments to previously EC approved projects (China - \$0.48 m which was transferred to UNDP; Egypt - \$0.37 m for the dropped demonstration project, and reduction of \$0.08 m from the Thailand demonstration project; non-utilization of \$0.4 m for Ecuador feasibility studies--cost was funded from the Bank's workprogram budgetary resources).
Excluding the institutional development funding and the foregoing adjustments, the total is \$35.86 m as reported in the UNEP Doc. No. OzL.Pro.4/8/Rev.1 dated October 22, 1992.

Legend for Project Status:

WP

Projects which have been authorized by the MP Executive Committee for processing and funding by the Bank and included in the MP Work Program

PP

Projects which have been proposed by the Bank and awaiting MP Executive Committee authorization and are included in the MP Project Pipeline.

Definition of Project Types

Project Financing:

Relatively large, multi-million dollar, multi-project, investment packages, meeting Montreal Protocol project criteria and implementation guidelines, which will often be disbursed through financial intermediaries on terms to be determined by country Governments, within the context of the country's Country Program, related policies and institutional arrangements.

Pre-inv. Activities:

Activities preceding major project identification and design which are effectively engineering design projects, demonstration or pilot projects or research and development.

Table 4

INTERIM MULTILATERAL FUND OF THE MONTREAL PROTOCOL

World Bank Work Program

FINANCIAL STATUS OF IMFMP PROJECTS

(US\$ MILLION)

		Authorized Work Program Funding a/	Approved Commitments b/ thru 31-Dec-92	Disbursements thru 31-Dec-92 c/ Current Cumulative Calendar Year Total	
PRE-INVESTMENT ACTIVITIES					
China	PPA for ODS Phase out Project I	1.50	1.50	0.25	0.25
China	PPA for ODS Phase out Project II	0.30			0.00
Mexico	Ozone Pilot Recycling and Training Project	0.18	0.18		0.00
Philippines	Controlled Substances Engineering Project	0.40	0.40	0.20	0.20
Thailand	Controlled Substances Engineering Project	0.39	0.39	0.06	0.06
Sub-total Pre-Investment Activities		2.77	2.47	0.51	0.51
PROJECT FINANCING					
Brazil	ODS Elimination Project	2.93			0.00
Chile	ODS Phase-out	1.21			0.00
China	ODS Phase Out Project I	7.02 d/			0.00
Egypt	MCMC Compressor (IFC)	2.80			0.00
Jordan	ODS Reduction Project	1.50			0.00
Malaysia	ODS Phase Out Project	1.63	1.63		0.00
Mexico	Line of Credit	4.00	4.00		0.00
Thailand	ODS Phase Out Project	1.00			0.00
Tunisia	Ozone Layer Protection	1.79			0.00
Turkey	Ozone Layer Protection	6.17			0.00
Venezuela	Plásticos Molanca	1.30			0.00
Venezuela	Substitution of HFC	1.10			0.00
Sub-total Project Financing		32.44	5.63	0.00	0.00
GRAND TOTAL		35.21	8.10	0.51	0.51

a/ Project funding authorized by the IMFMP Executive Committee for the World Bank.

b/ Projects approved by the World Bank management.

c/ Project disbursements commence after signing of the Grant Agreement by the Bank and the recipient country.

d/ Originally funded at \$9.0 m; Of this, \$1.5 m was set aside for the PPA and \$0.48 m was transferred to UNDP for the BHEARI component of the project.

ANNEXES

- Annex I:** Sectoral Summary of Bank-Implemented Montreal Protocol Operations
- Annex II:** Progress Report on Bank-Implemented Montreal Protocol Operations
- Annex III:** Country Level CY93 Work Programs of Planned Bank-Implemented Montreal Protocol Activities



Annex I

SECTORAL SUMMARY

BANK-IMPLEMENTED MONTREAL PROTOCOL OPERATIONS

(as of January 18, 1993)

Global Environment Coordination Division, Environment Department

THE WORLD BANK



Annex I

Sectoral Summary of the Work Program

Background

10. The Vice-Chair of the Executive Committee presented a paper at the November 1991 meeting of the Committee entitled "Integrating the Sector-based Approach into Implementing Agency Work Programs". This paper stimulated a sector-based representation of implementing agency work programs and concomitant revisions in each agencies work program to ensure consistency and coherence in approaches to ODS phase-out by sector. This philosophy is also reflected in the Bank's CY93 work program.

Global Multi-Country ODS Phase-Out Projects

11. The EC's review of the above paper also stimulated the Bank's development of proposals for four Global ODS Projects by the World Bank: (1) Multi-Country ODS Phase-Out in Solvent Applications (World Bank); (2) Multi-Country ODS Domestic Refrigeration Project (World Bank); (3) Multi-Country Halon Control Project; and (4) Multi-Country Mobile Air Conditioning System (MACS) Project. The latter two were prepared by the World Bank for UNDP execution. Initial funding for these projects, totalling \$1.149 million, was approved by the EC at its October 1992 meeting. A fifth global project, in aerosols, is under preparation by the World Bank and a sixth, in airline ODS solvent phase-out, is possible based upon work undertaken by USEPA/Swedish EPA.

Table 1. World Bank Global Sector Project^{4/}

Multi-Country Global Projects	Proposed Beneficiary Countries	Executing Agency	Initial Amount
Solvents	Brazil, China, India, Malaysia, Mexico, Thailand, Turkey	World Bank	\$0.26 million
Refrigeration	China, India, Thailand, Philippines, Indonesia, Malaysia, Egypt, Brazil, Venezuela, Mexico	World Bank	\$0.06 million (preparation only)
Halons	Brazil, Philippines, Mexico, Thailand, Turkey	UNDP	\$0.39 million

^{4/} A contract is being negotiated with the Industry Cooperative for Ozone Layer Protection (ICOLP) for implementation of the global solvent project. Under the global refrigeration project, 2 provisional proposals in India and 2 proposals in Thailand, are being developed jointly by local enterprises and their suppliers.

MACS	China, Malaysia, Thailand, Indonesia, Egypt, Turkey, Nigeria, Brazil, Venezuela, Mexico, Peru, Argentina, Iran	UNDP	\$0.36 million
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The purpose of Global Multi-Country ODS Phase-Out Projects is to define, sector-by-sector, the most cost-effective, commercially ready technologies which are clear-cut options for consideration by client countries and to develop standard technical packages to facilitate and hasten their implementation. A major aim of such efforts is to ensure that the necessary institutional structure is in place and that local enterprises are willing and able to adapt the new technologies.

For example, the proposed Multi-Country ODS Phase-Out in Solvent Applications project will establish a coordinated phase-out of ODS use in solvent applications by sharing existing technology and non-proprietary information on substitute technologies, processes and substances with the participation of industries in countries eligible for consideration under the MP and with the assistance of the Industry Cooperative for Ozone Layer Protection (ICOLP), the U.S. Environmental Protection Agency (USEPA) and the Bank. Project activities include the conduct of initial baseline surveys, phase-out planning, demonstration projects, workshops, and assistance in the preparation of investment projects.

Sectoral Overview of Investment Projects

12. The Bank's \$36.1 million Montreal Protocol investment project portfolio is divided roughly evenly between the three regions of Asia (35%), Latin America (31%), and Europe/North Africa/Middle East (34%) (see Table 2, and pie chart). The first Africa region MP investments are anticipated late in CY93. However, this broad regional equivalence belies a significant sectoral variability. Although differences in the unallocated amounts (Mixed column) may obscure the comparison to some extent, it is clear that the leading sectors in the Asia region are aerosols (35%) and foams (28%); in the Latin America region, refrigeration (36%); and in the Europe and North Africa/Middle East region, also refrigeration (77%).

These Asia data reflect the fact that China has been insulated from the economic incentives which led other countries to shift out of CFC use in aerosols and into commercially attractive alternatives such as deodorized LPG. This, together with China's relatively larger economy, explains the substantial weight accorded to aerosols in Asia. By contrast, the need for North African and Middle Eastern exporters of domestic refrigerators to maintain market share in Europe as European manufacturers shift rapidly out of CFC's, has led to the relatively large emphasis on the refrigeration sector in that region.

Globally, the Bank's Montreal Protocol investment portfolio reflects major activity in refrigeration (39%), aerosols (15%), and foams (15%). The least amount of activity has been in solvents (1%), followed by halons (5%) and mobile air conditioning systems (MACS) (5%).

1. Aerosols

EC-approved Bank assistance to date for aerosol projects/sub-projects is \$5,524,000. General assistance in this sector has been conversions from CFC to LPG propellants and includes the establishment of LPG purification plants to produce deodorized LPG and to demonstrate associated safety programs.

Specific operations include:

- o \$4,400,000 for a project in Tianjin and another in Shanghai for CFC aerosol conversions to LPG, which will contribute to the total phase out of CFC-12 use in the aerosol sector of China.
- o A Mexico pilot demonstration project for CFC-12 aerosol conversion to hydrocarbons and an associated safety program.
- o A \$400,000 World Bank pre-investment study for hydrocarbon conversion of the CFC-using aerosol industry.
- o Project development in the Tunisian aerosol sector, including \$350,000 in support for technical seminars and consultations in the aerosol sector.
- o Support to Jordan of \$700,000 for establishment of an LPG purification plant to produce aerosol-quality LPG as an alternative aerosol propellant.

2. Mobile Air Conditioning (MACs)

EC-approved Bank assistance to date in MACS projects/sub-projects is \$1,916,000 . The major emphasis has been on mobile air-conditioning recycling/recovery demonstration projects.

Specific operations include:

- o A mobile air-conditioning recycling demonstration project for Mexico was cleared by the Bank in October 1991 and became effective in March 1992.
- o The automobile air-conditioning CFC recycling projects under development in Thailand and the Philippines were approved by the Bank in January 1992, the Grant Agreements signed and projects under implementation by mid-year.
- o The Bank proposed a mobile air-conditioning recovery/recycling demonstration project for Egypt as a part of Egypt's Country Program which was presented to the Executive Committee at its February 1992 meeting. It was approved by the EC on the Bank's recommendation that the UNDP undertake implementation of the project.



- o A mobile air-conditioning recovery and recycling demonstration project in Malaysia which was approved by the EC at its February 1992 meeting, became effective with signing of the Grant Agreement in November 1992.

3. Refrigeration (& Chillers)

EC-approved Bank assistance to date in refrigeration projects/sub-projects is \$13,940,000. Projects have principally been directed at the first stage of preparation for conversion to production of domestic refrigeration compressors and appliances using the non-ODS refrigerant, HFC-134a, in parallel with the timing of the conversion in the international market.

Specific operations include:

- o With assistance from the Bank and UNDP, China embarked upon a major program to phase out CFC-12 use in domestic refrigeration. The program calls for substitute testing and development involving pilot-scale production and demonstration, technical assessment, evaluation, and standards development, as well as eventual promotion and large scale adoption of non-ODS technologies. First stage development work for HFC-134a, HFC-152a, and HCFC-22/HFC-152a is essentially complete. A pilot demonstration project at a refrigerator factory for conversion to HCFC-22 has been identified and the EC has approved a project preparation advance of \$300,000 for that purpose.
- o Bank investment projects involving domestic refrigerator compressor and/or assembly plant conversions to HFC-134a, or chiller conversions, were also approved by the EC for Brazil, Venezuela, Egypt, Turkey, and Tunisia. Other refrigeration projects involving recycling and/or preparation were approved in the Philippines, Mexico, and Jordan.

4. Foams

EC-approved Bank assistance to date in foam projects/sub-projects is \$5,350,000. Consistent with commercially available technology alternatives, most Bank activity in the foams sector has concerned the introduction of 50% reduced CFC applications which are relatively simple, low cost, and proven short-term adjustments.

Specific operations include:

- o An engineering design feasibility project for the Philippines was approved by the Bank in January 1992, and the project was effective by mid-year.
- o A February 1992 mission to Tunisia prepared a plan of action to develop projects for the foam sector and \$400,000 was approved by the EC in CY92 for these projects.



- o Substantial progress has been made in China as a consequence of joint Bank and UNDP missions to identify near-term investment projects in the foam sector. The first project being proposed would lead to reduction in CFC-11 emissions of 2200 tonnes per year by 1995. A second project is for conversion to butane in the polystyrene and polyethylene packaging industry. The China projects may be adopted as model projects for the MP Investment Portfolio in terms of technical design parameters and implementation arrangements.

5. Solvents

EC-approved Bank assistance to date in solvent projects/sub-projects is \$200,000. The primary role played by multinational corporations (MNCs) in this sector, in conjunction with the innovative role being played by the Industry Cooperative for Ozone Layer Protection (ICOLP) and its associated enterprises, has meant that a major part of the activity in this sector has been undertaken directly through the private sector and with only minimal assistance through the Fund, primarily to support cooperative project design activities through the Global Solvents Project prepared by the Bank.

Specific operations include:

- o The design engineering projects for Thailand and the Philippines, which included solvents, were approved by the Bank in January 1992, and the projects became effective in mid-year.
- o The Bank's Thailand solvent work program has been designed in conjunction with a similar tri-lateral project being undertaken simultaneously with bi-lateral assistance from Japan (MITI) and the United States (USEPA). The necessary collaboration has been taken to ensure that all of these activities dovetail one another, building on their comparative strengths. The relatively large size of Thailand's solvents sector makes it a natural focal point for activities in this area, which will be conducive to development of a model solvent sector program for demonstration and example to other countries and regions.

6. Halons

EC-approved Bank assistance to date in halons projects/sub-projects is \$1,945,000. Thus far, Bank assistance in the halons sector has principally been concerned with promoting recycling and improved maintenance procedures as well as conversions of fire extinguishing system production to non-halon alternatives. A Global Halons Project has also been prepared by the Bank.

Specific operations include:

- o China and Malaysia are the only countries at this time in which the Bank envisages investment projects within the halon sector. Recent joint Bank and UNDP missions have



identified three (3) halon projects in China to reduce halon emissions in production and use leading to estimated short term reduction of 1400 tonnes per year.

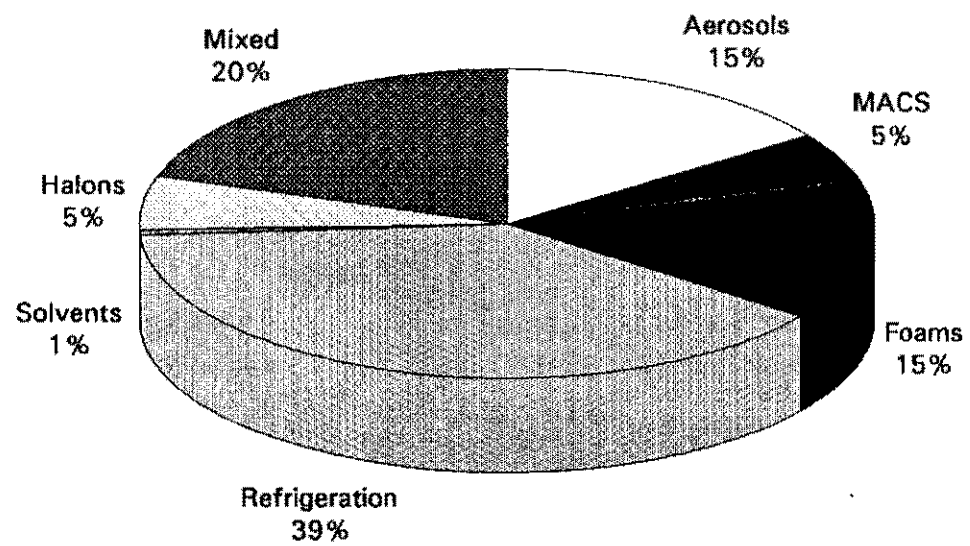
- o The Bank sent a mission to Malaysia in February 1992 to review and prepare a servicing, maintenance and recovery charging kit for portable halon 1211 extinguisher, including a halon sector training project. This project should become the model for such interventions in other beneficiary countries.
- o A demonstration project in new recycling and maintenance procedures for halons systems was also initiated in Jordan.



Table 2. WORLD BANK MP INVESTMENT PROJECTS BY COUNTRY AND SECTOR (as of January 18, 1993)

Region	Country	ODS(MT)	Aerosols	MACS	Foams	Refrigeration	Solvents	Halons	Mixed	Total	%	\$/kg ODS
Asia												
	China	40,000	\$4,400,000		\$3,400,000	\$300,000		\$1,200,000		\$9,300,000	26%	\$0.23
	Malaysia	4,027		\$910,000				\$720,000		\$1,630,000	5%	\$0.40
	Philippines	4,150			\$100,000	\$160,000	\$100,000		\$40,000	\$400,000	1%	\$0.10
	Thailand	7,500		\$900,000			\$100,000		\$390,000	\$1,390,000	4%	\$0.19
	Total	55,677	\$4,400,000	\$1,810,000	\$3,500,000	\$460,000	\$200,000	\$1,920,000	\$430,000	\$12,720,000	35%	\$0.23
	Percent		35%	14%	28%	4%	2%	15%	3%	100%		
LAC												
	Brazil	10,647				\$2,930,000				\$2,930,000	8%	\$0.28
	Chile	1,030							\$1,206,000	\$1,206,000	3%	\$1.17
	Ecuador	700							\$400,000	\$400,000	1%	\$0.57
	Mexico	8,388	\$74,000	\$106,000					\$4,000,000	\$4,180,000	12%	\$0.50
	Venezuela	5,500			\$1,300,000	\$1,100,000				\$2,400,000	7%	\$0.44
	Total	26,265	\$74,000	\$106,000	\$1,300,000	\$4,030,000	\$0	\$0	\$5,606,000	\$11,116,000	31%	\$0.42
	Percent		1%	1%	12%	36%	0%	0%	50%	100%		
EMN/ECA												
	Egypt	3,180				\$2,800,000				\$2,800,000	8%	\$0.88
	Jordan	625	\$700,000		\$150,000	\$525,000		\$25,000	\$100,000	\$1,500,000	4%	\$2.40
	Turkey	4,267				\$5,365,000			\$800,000	\$6,165,000	17%	\$1.44
	Tunisia	720	\$350,000		\$400,000	\$760,000			\$280,000	\$1,790,000	5%	\$2.49
	Total	8,792	\$1,050,000	\$0	\$550,000	\$9,450,000	\$0	\$25,000	\$1,180,000	\$12,255,000	34%	\$1.39
	Percent		9%	0%	4%	77%	0%	0%	10%	100%		
All Regions		90,734	\$5,524,000	\$1,916,000	\$5,350,000	\$13,940,000	\$200,000	\$1,945,000	\$7,216,000	\$36,091,000	100%	\$0.40
Sector			Aerosols	MACS	Foams	Refrigeration	Solvents	Halons	Mixed	Total		
Sector %			15%	5%	15%	39%	1%	5%	20%	100%		

Sector Distribution



Annex II

PROGRESS REPORT

BANK-IMPLEMENTED MONTREAL PROTOCOL OPERATIONS

(as of January 18, 1993)

Global Environment Coordination Division, Environment Department

THE WORLD BANK

Annex II: Progress Report

I. OPERATIONAL AND POLICY ISSUES

A. Major Developments, September through December, 1992

13. Eighth Executive Committee Meeting - During its October 1992 meeting, the Montreal Protocol Executive Committee approved the World Bank's request for additional funding through amendments to its CY 1992 Montreal Protocol Work Program for support to new program and project preparation activities in Guatemala and Indonesia, and for development of four global multi-country projects which will target the solvents, halons, mobile air conditioning, and refrigeration sectors. The EC also approved World Bank investment proposals for OORG Refrigeration Working Group-endorsed (see below) HFC-134a conversion projects in refrigeration for Egypt, Tunisia, Turkey, and Venezuela.

14. Fourth Meeting of the Parties to the Montreal Protocol - The Bank participated as an observer in the Fourth Meeting of the Parties to the Montreal Protocol which took place from November 23-25, 1992, in Copenhagen, Denmark. It was preceded by meetings of the Open-Ended Working Group of Parties to the Montreal Protocol as well as the Preparatory Committee for the Fourth Meeting of the Parties to the Montreal Protocol. Major outcomes of the meeting were that the financial mechanism and governance structure of the Montreal Protocol were confirmed. Funding for 1993, and 1994, will be at least \$113.34 million. A review of the financial mechanism, including the capacity and performance of the Implementing Agencies will be made in 1993 for presentation to the Fifth Meeting of the Parties in October/November 1993. Norway, France and Mauritius will replace Finland, Germany and Mexico, respectively, on the Executive Committee of the MP.

In addition, the Bank confirmed its willingness to cooperate with UNEP, at the request of the Parties, to develop a system of promissory notes for contributions to the Multilateral Fund by major donors, including France and the United Kingdom, to facilitate the planning, budgeting and flow of their contributions to the Fund.

Finally, Dr. Mostafa Tolba, Executive Director, UNEP, recommended that Parties that are countries in transition to a market economy in Eastern Europe and the CIS seek assistance for ODS phase-out activities from the Global Environment Facility (GEF), which he pointed out, was designed in part to be able to respond to countries which have special needs such as theirs, and that it specifically has ozone protection as one of its goals. The Bank also conveyed this message to the recent GEF Participants Meeting.

B. Progress on Key Operational & Policy Issues Affecting Bank assistance with MP Implementation

15. Second Ozone Operations Resource Group Meeting - The Bank's Ozone Operations Resource Group (OORG) met for the second time on September 28, 1992, in Washington. Key outcomes from the meeting included confirmation of the utility and modus operandus of the OORG and recognition of

its formalization as the source of technical opinion for the Montreal Protocol Executive Committee on investment projects proposed for funding from the Multilateral Fund.

16. First OORG Refrigeration Working Group Meeting - The First OORG Refrigeration Working Group Meeting, chaired by OORG Refrigeration advisor Dr. Lambert Kuijpers, which reached agreement upon a set of "Definitive Recommendations" to guide the Bank's Montreal Protocol project task managers in the identification and preparation of suitable refrigeration-based ODS-reduction investment projects. Prior to clearing the final version, the Working Group circulated the draft recommendations to an outside group of reviewers for additional comments and suggestions.

Other members of the Refrigeration Working Group included Mr. Kent Anderson, Mr. James F. Gordon, Dr. Poul Erik Hansen (represented by Mr. Peter Steensen), Dr. Mike Jeffs, Dr. Ing. H. Kruse, and Dr. K. S. Sanvordenker. Observers included representatives from the Montreal Protocol Secretariat, UNEP, UNDP, USEPA, as well as industry.

17. First OORG Foams Working Group Meeting - The First Ozone Operations Resource Group/Foams Working Group Meeting took place in Copenhagen, Denmark, on December 11, 1992, hosted by the Danish Minister of the Environment, Mr. Per Stig Moeller. Members of the committee included Dr. Mike Jeffs (OORG advisor on foams), Mr. Thomas Broennum, Mr. Jaakko Karvinen, Mr. Pekka Kuivalainen, Mr. Hans Norgaard Pedersen, and Dr. Frieder Schmitt. Observers included representatives from Logstor Ror A/S, Tarco Energi, ABB I.C. Moller A/S, Greenpeace, Bruun & Soerensen Group A/S, A/S Dansk Rorindustri, the European District Heating Pipe Manufacturers Association, Herning Municipal Works, the Danish Institute of Environmental Energy, the Danish Environmental Protection Agency, and the Danish Ministry of Environment.

The purpose of the meeting was to seek an informed consensus view on the status of low and non-ODS foam-blown pre-insulated pipe technologies used in central heating systems and, on the basis of such findings, propose for the Government of Poland (which is a Party to the Montreal Protocol obliged to phase-out of CFCs by January 1, 1996) a set of alternative foam-blown pre-insulated pipe procurement strategies which might be considered at this time.

The final outcome of the meeting was agreement on a statement of findings of the Working Group which the Bank will share in the course of its on-going project dialogue with the Government of Poland. The meeting concluded with an address by Mr. Per Stig Moeller, Danish Minister of the Environment, which included an offer, accepted by the Bank representative and the Chairman of the OORG Foams Working Group, to host a follow-up meeting in 1994 and review progress during 1993 in the development of standards and the outcome of tests of non-ODS foam blown pipes against these standards.

18. Sourcebook of Benchmark Unit Abatement Costs - The final version of the Bank-prepared Policy Document, "Sourcebook of Benchmark Unit Abatement Costs", a notebook-formatted guide to commercially available technology alternatives to ODS use, was published in December 1992 and is currently being distributed to users.

C. Montreal Protocol Events to the Six Months Horizon

19. MP meetings and other events of importance to Bank operations are provided below for a six months horizon:

Meeting/Event	Place and Date
Implementing Agency Coordinating Meeting	Montreal, February 4-5, 1993
Ninth Executive Committee Meeting	Montreal, March 8-10, 1993
Fifth Meeting of the Implementation Committee	Geneva, March 9, 1993
Third Ozone Operations Resource Group Meeting	Washington, May 18, 1993

II. STATUS OF WORLD BANK MONTREAL PROTOCOL ACTIVITIES

A. Status of Bank-assisted Country Program Preparation

20. The following table includes on-going Country Program (CP) activities for those countries in which the Bank either has the lead or is assisting its Government in CP preparation, is collaborating with another implementing agency, or is maintaining a watching brief in support of its investment project preparation activities.

Country Program	Transmittal Date from Bank to Govt.	Comments/Explanations
Argentina	TBD	An initial reconnaissance mission is planned for February 1993.
Brazil	July 1992	GOB has lead. Brazil's CP is scheduled for completion in May 1993.
China	N/A	UNDP has lead, WB is collaborating.
Guatemala	N/A	UNEP has lead responsibility. GOG anticipates presentation to EC in March 1993.
Indonesia	N/A	UNDP has lead and will begin preparation in early 1993. WB is collaborating.
Iran	N/A	UNDP has lead. WB is maintaining a watching brief.
Jordan	April 1992	Anticipated completion of GOJ review by March 1993 and delivery to EC by June 1993.
Nigeria	September 1993	Anticipated completion of first draft by September 1993, final version by April 1994.
Philippines	December 1992	CP has been completed and is being reviewed. Tentative EC submission date is first quarter of 1993.
Thailand	October 1992	GOT has lead. The GOT intends to present its CP to the EC at its second meeting in 1993.
Tunisia	May 1992	Anticipated completion of GOT review by March 1993 and delivery to EC by June 1993.

B. World Bank Investment Project Disbursements

21. The following Montreal Protocol investment projects, amounting to a total of \$1,040,000, began disbursement during 1992, by country:

World Bank Investment Project Disbursements, as of December 31, 1992

Country	Project	Project Amount (\$)	Amount Disbursed (\$)
Thailand (I)	Design Engineering Project (I)	\$390,000	\$ 61,380
Philippines (I)	Design Engineering Project (I)	\$400,000	\$202,209
China (I)	Project Preparation Advance (I)	\$250,000	\$250,000
Total		\$1,040,000	\$513,589

C. World Bank Investment Projects Prepared for Submission to the March 1993 Meeting of the Executive Committee

22. The following investment projects, totalling \$25.164 million, will be submitted to the March 1993 meeting of the Executive Committee, by type of decision requested, as shown in the following table:

Summary of World Bank Investment Projects being Submitted to the EC in March 1993

Country	Project Title & Sub-Projects by Sector	ODS Phase-Out per Year (MT)	Type of EC Decision Requested	Incremental Cost (\$ m)
China (I) (increase)	<u>ODS Investment Project (I)</u> : cost adjustment for 2 aerosols, 2 foams, 2 halons, 1 refrigeration.	N/A	Final Approval	\$7.83
Ecuador (I)	<u>ODS Investment Project (I)</u> : 12 aerosol sub-projects	290	Permission to Proceed	\$0.7
	<u>ODS Investment Project (I)</u> : Institutional Strengthening sub-project	N/A	Final Approval	\$0.204
	<u>ODS Investment Project (I)</u> : Training and Technology Dissemination sub-project	N/A	Final Approval & Transfer to UNDP	\$0.25
	<u>ODS Investment Project (I)</u> : Reduced CFC Insulating Foams in Refrigerator Manufacturing sub-project	25.5	Final Approval	\$0.665
Indonesia (PPA)	<u>Project Preparation Advance (I)</u> : High priorities include recycling, refrigeration and foams.	N/A	Final Approval as Work Program Amend.	\$0.250
Philippines (I)	<u>ODS Phase-Out Investment Project (I)</u> : refrigerant recycling, household refrigeration, household refrigeration foam, tobacco and solvents. Ten (10) pre-appraised sub-projects.	826	Final Approval	\$11.42
	<u>ODS Phase-Out Investment Project (I)</u> : Technical Assistance project for MP training in financial intermediary institution.	N/A	Final Approval	\$0.1
	<u>ODS Phase-Out Investment Project (I)</u> : Six (6) investment projects which have been identified, reviewed but not yet pre-appraised.	N/A	Permission to Proceed	\$3.32

	<u>Institutional Strengthening Project:</u> (as Work Program Ammendment)	N/A	Final Approval as Work Program Amend.	\$0.425
Sub-Total			Approval	\$20.219
Sub-Total			WP Amend	\$ 0.675
Sub-Total			Transfer	\$ 0.250
Sub-Total			Permission	\$ 4.020
Grand Total			Total All Decisions	\$25.164

D. OORG Reviews of Proposed MP Projects in the Period September - December, 1992

23. The following project proposals have been reviewed by members of the Ozone Operations Resource Group during the September through December 1992 period.

Country - Project	Bank Task Manager (TM)	OORG-Roster Outside Specialist(s)
<u>China</u> - ODS Investment Project (I) (for 50% Foams sub-project up-date only)	Don Brown	Mike Jeffs, Geno Nardini
<u>Ecuador</u> - ODS Investment Project (I)	Cesar Plaza	Mike Jeffs, Geno Nardini
<u>Philippines</u> - ODS Phase-Out Investment Project (I)	Konrad von Ritter	Mike Jeffs, Lambert Kuijpers, Art Fitzgerald, Simon Oulouhojian
<u>Thailand</u> - ODS Phase-Out Investment Project (I)	Konrad von Ritter	Mike Jeffs, Lambert Kuijpers, Art Fitzgerald, Simon Oulouhojian

E. Milestone Achievements through December 1992

24. The following table of the Bank's Montreal Protocol Milestone Achievements presents a summary of the status of Country Program activities in which the Bank has either participated as lead agency, provided assistance to Governments, or collaborated with other Implementing Agencies in their preparation.

Of the five (5) Grant Agreements signed thus far in Malaysia, the Philippines, Thailand, and Mexico, the actual processing period from EC approval to Grant Agreement signing has ranged from 9 months to 14 months with an average period of 11 months. For six Grant Agreements yet to be signed, and for which we have complete data on task manager expectations, projected processing periods range from 2 months (China) to 12 months (Jordan, Tunisia and Turkey) and the average is 8 months.

REGION Country	Status	Country Program*			Project Title	Investment Project				Pipeline CY93 (millions)
		Main Mission	Final Report	Gov. Approval		EPS	EC Approval	Bank Appraisal	Grant Agreement	
AFRICA										
Nigeria	Plan	Jul-92	Oct-92	Dec-92		Sep-92	Nov-92	Apr-93	Jun-93	\$5.00
	Variance	Feb-93	Sep-93	Apr-94		Jun-93		Sep-93	Dec-93	
ASIA										
China (I)	Plan	UNDP			ODS Phase-out Project	Jan-92	Feb-92	May-92	Jul-92	\$7.83
	Variance						Mar-93	Dec-92	May-93	
China (II)	Plan				ODS Phase-out Project		Jun-93	Sep-93	Dec-93	\$25.00
	Variance									
Indonesia	Plan	UNDP			Design-Engineering Project	Dec-92	Mar-93			\$0.25
	Variance									
(I)	Plan				ODS Phase-out Project		Jun-93	Sep-93	Dec-93	\$5.00
	Variance									
Malaysia (I)	Plan	GOM			MACS recycling and Halon control, recovery and recycling	Oct-91	Feb-92	Feb-92	Apr-92	
	Variance								Nov-92	
(II)	Plan				ODS Phase-out Project	Oct-91	Apr-92	Jun-92	Aug-92	
	Variance									
Philippines	Plan	GOP			Controlled Substances Engineering Project	May-91	Jun-91	Jan-92	Apr-92	
	Variance								Jun-92	
(I)	Plan				ODS Phase Out Investment Project	Oct-91	Apr-92	Aug-92	Sep-92	\$20.00
	Variance						Mar-93	Jun-93	Sep-93	
Thailand	Plan	GOT			Controlled Substances Engineering Project		Jun-91	Jan-92	Apr-92	
	Variance								Aug-92	
(I)	Plan				ODS Phase Out Investment Project	Oct-91	Apr-92	May-92	Jul-92	\$20.00
	Variance							Jun-93	Sep-93	
EMENA										
Egypt	Plan	Approved			MCMC Compressor Project	Mar-92	Apr-92	May-92	Sep-92	
	Variance									
Jordan	Plan	Sep-91	Feb-92	Mar-92	TA & Investment Project for Reduction of Consumption of ODS		Jun-92	Sep-92	Dec-92	
	Variance		Apr-92	Mar-93		Apr-92		Oct-92	Jun-93	
Tunisia	Plan	Feb-92	May-92	Jun-92	Ozone Layer Protection through the Reduction of Consumption of ODS		Jun-92	Jul/Aug-92	Aug/Sep-92	
	Variance			Mar-93				Apr-93	Jun-93	
Turkey	Plan	Approved			Protection of the Ozone Layer Through the Reduction of Consumption of ODS	Mar-92	Apr-92	May-92	Jul-92	
	Variance						Jun-92	Sep-92	Jun-93	
LAC										
Argentina	Plan	Jan-93			TBD					
	Variance									
Brazil	Plan	GOB			MP ODS Elimination Project	Mar-92	Apr-92	Jun-92	Aug-92	
	Variance						Jun-92		?	
Chile	Plan	Approved			TBD (possibly no investment projects)	Mar-92	Apr-92	Jun-92	Dec-92	
	Variance								Feb-93	
Ecuador	Plan	Approved				Feb-92	Apr-92	May-92	Oct-92	\$1.82
	Variance						Mar-93	Jun-93	Sep-93	
Guatemala	Plan	UNEP			TBD					
	Variance									
Mexico (I)	Plan	Approved			Ozone Pilot Recycling & Training Project	Aug-91	Jun-91	Nov-91	Feb-92	
	Variance								Apr-92	
(II)	Plan				Line of Credit I	Oct-91	Feb-92	Apr-92	Jun-92	
	Variance								Dec-92	
Venezuela (I)	Plan	GOV			Plastics Molanca Foam conversion project	May-92	Jun-92	Jul-92	Sep-92	
	Variance								?	
(II)	Plan				MP ODS Elimination Project	Mar-92	Apr-92	Jun-92	Aug-92	
	Variance					May-92			?	
GLOBAL	Plan				Refrigeration/Solvents	Dec-92	Mar-93			\$2.74
	Variance									
Total										\$87.64

Mo.-92 Connotes a variance (shown when known) from planned target date

* Other lead agencies: capitalized.

Annex III

COUNTRY LEVEL CY93 WORK PROGRAMS

BANK-IMPLEMENTED MONTREAL PROTOCOL OPERATIONS

(as of January 18, 1993)

Global Environment Coordination Division, Environment Department

THE WORLD BANK



ARGENTINA

1. Status of Montreal Protocol Implementation

Argentina ratified the Montreal Protocol in January 1990, which entered into force in April 1990.

2. Status of World Bank Assistance

No work has been undertaken to date in Argentina. However, a reconnaissance mission is planned for February 1993 to review Argentina's plans for its Country Program and associated investment project development.

3. CY93 Investment Project Pipeline

There are no Bank-led investment projects for Argentina in the pipeline for CY93 at this time. Adjustments to the investment pipeline will be proposed as amendments to the Work Program during the course of the year.

BRAZIL

1. Status of Montreal Protocol Implementation

Brazil's Country Program will be completed in May 1993, for presentation subsequently to the Executive Committee for approval. Preparation of financial intermediation arrangements for investment projects (which activities were in abeyance due to uncertainties following the EC's June decision not to approve "line of grant" umbrella financing) has recently resumed. The Government of Brazil (GOB) has advised the Bank that requiring separate legal agreements for a series of small single project investments is an unworkable arrangement in Brazil. Accordingly, groups of sub-projects will be presented to the EC for approval within single "umbrella" grant agreements.

2. Status of World Bank Assistance

- a) **Country Program** - The Bank has prepared a baseline study. The GOB is now preparing terms of reference for preparation of the Country Program, its strategy, program and plans for government and industry responses.
 - b) **Investment Projects** - The following projects were approved "in principle" by the EC in June 1992:
 - i. **CFC Recycling Initiative:** a first stage pilot project has been prepared for presentation to the EC during CY93.
 - ii. **Assembly Line Refitting for HFC-134a Refrigerator Compressors and Refrigerators Project** is prepared and ready for implementation as soon as the decision has been taken to initiate commercial production.
 - iii. The identification of additional sub-projects and preparation of arrangements for financial intermediation under an umbrella legal agreement continues. Submission of the initial tranche is planned for presentation to the second EC meeting in 1993. Arrangements for collaboration between the financial intermediary, FINEP, relevant industry associations and the Ozone Technical Group (GTO) for project identification and preparation is being worked out.
 - iv. **Institutional Strengthening** - A proposal to fund technical advisors to be located in Brasilia and Sao Paulo will be
-

presented to the second EC meeting in 1993. The former will work with the GTO, the latter with FINEP's Sao Paulo agency.

3. CY93 Investment Project Pipeline

There are no Bank-led investment projects for Brazil in the pipeline for CY93 at this time.

CHILE

1. Status of Montreal Protocol Implementation

Chile's Montreal Protocol Country Program was approved by the EC at its meeting of June 1992. The Program consists of five sub-components for \$1.206 million. The project was appraised in July 1992, and negotiations are expected to be completed by the beginning of 1993. Signing of the project documents is expected to be completed by the end of January 1993.

2. Status of World Bank Assistance

- a) **Country Program** - The Country Program was prepared with technical assistance which was coordinated by the Bank. UNEP contributed with technical information and training.
- b) **Pre-investment Activities** - With the \$1.206 million Program now approved, the Bank has processed the five sub-components (TECFIN, Ozone Seal, Public Awareness, and institutional support to CONAMA) as a single project which is expected to be signed by the end of February 1993.
- c) **Investment Projects** - The above sub-projects in refrigeration, flexible foams, sterilants and solvents sectors will begin implementation during 1993.

3. CY93 Investment Project Pipeline

There are no Bank-led investment projects in the pipeline for CY93.

CHINA

1. Status of Montreal Protocol Implementation

China's MP Country Program is scheduled to be presented to the EC at its March 1993 meeting.

2. Status of World Bank Assistance

- a) **Country Program** - The UNDP is leading the CP development effort, with Bank participation and assistance in investment planning and policy analysis.
 - b) **Investment Projects** - A first project, composed of six sub-projects for \$9 million, in the aerosols, halons, and foams sectors was approved by the EC in June 1992. However, the original estimation of incremental costs for these projects is currently under revision as a result of unforeseen changes in the way GOC has estimated capital costs and output prices (revenues) for several of the sub-projects, and more complete documentation. A December 1992 mission reached agreement with the GOC on the basis of revised project and incremental costs. The 6 sub-projects are now estimated to require \$16 million in incremental costs, with most of the increase in the 50% reduced CFC foam projects covering 13 enterprises. The revised request, covering all of the present 6 sub-projects, will be submitted to the March 1993 meeting of the EC for approval.
 - c) **A Project Preparation Advance** for \$1.5 million for the initial six sub-projects (CFC conversions to LPG in Tianjin and Shanghai, Zhejian extruded foam conversion to butane, 50 % reduced CFC use in rigid foams, Zhejian halon extinguisher conversion, and Beijing ABC powder production) was signed with the Government in August 1992, to enable them to start implementation of the first six (6) sub-projects.
 - d) Preparation work on a larger second project has begun and will be presented for EC approval in mid-1993.
 - e) **Pre-investment activities** - With \$300,000 approved by the EC in October, the Bank is preparing work for an HCFC-22 refrigeration conversion project in Nanjing, plus four additional industrial refrigeration projects. A separate Project Preparation Advance (PPA) for this project will be prepared. A third PPA will be requested to prepare an additional 8 to 10 sub-projects under a second investment project. In addition, the GOC will develop another 8 sub-projects using its own resources.
-

3. CY93 Investment Project Pipeline

INVESTMENT PROJECT PIPELINE	
Project: ODS Investment Project (II) Sub-Projects include: - one aerosol - 6-10 refrigerator/AC - 4-5 foam - 2 halon - 3-4 non-ODS chemical substitute production sub-projects \$ Amount: \$25 million	Planned Bank Appraisal Date: Dec. 1993

ECUADOR

1. Status of Montreal Protocol Implementation

In support of Ecuador's Country Program (Phase 1), a project will be presented to the Executive Committee at its first meeting in 1993. The project consists of investment sub-projects in the aerosols and foam insulation use sectors, institutional strengthening, and training. Coordination with UNDP on training activities is underway. The project was pre-appraised at the end of 1992. Final appraisal would take place immediately following Executive Committee approval.

2. Status of World Bank Assistance

- (a) **Country Program** - The Country Program for Ecuador was prepared with Bank and USEPA assistance which began in March 1991 and was approved by the Executive Committee in March 1992. EPA participated in Bank preparatory and pre-appraisal missions and assisted in the conduct of feasibility studies in the foams sector.
 - (b) **Pre-investment Activities** - The Bank has completed an initial set of feasibility studies for the investment projects identified in the Country Program, including sub-projects in the aerosol and rigid foams sectors. The USEPA assisted in preparation of the technical documentation for the foams insulation project.
 - (c) **Investment Projects** - The Bank is working with the Government of Ecuador to complete establishment of the institutional and legal framework required for successful project implementation. A comprehensive project package has been prepared which includes components for (i) institutional strengthening; (ii) training and dissemination of information; and (iii) technology conversions for 18 aerosol and 3 rigid foams sub-projects.
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3. CY93 Investment Project Pipeline

INVESTMENT PROJECT PIPELINE	
Project: ODS Phase-Out Investment Project Sub-projects include: - Institutional Strengthening - Training and Information Dissemination - Technology Conversion in the Aerosol Sector - Technology Conversion in the Rigid Foams Sector \$ Amount: \$ 2.009 million	Planned Bank Appraisal Date: 3/93

ARAB REPUBLIC OF EGYPT

1. Status of Montreal Protocol Implementation

Egypt's Country Program was finalized in December 1991, at which time it was presented to the Government of Egypt, which completed its review, with Bank assistance, in August 1992. The Country Program was presented to the Eighth Meeting of the Executive Committee in October 1992, at which time it was reviewed and approved.

2. Status of World Bank Assistance

- a) **Country Program** - World Bank support for Country Program preparation was completed in August 1992.
- b) **Investment Projects** - UNDP is acting as implementing agency for investment projects in the foam and aerosol sectors. IFC will be the implementing agency for a \$2.8 million investment project for the conversion of compressor manufacturing to non-ODS refrigerant (HFC-134a).

3. CY93 Investment Project Pipeline

There are no Bank-led investment projects in the pipeline for CY93.

GUATEMALA

1. Status of Montreal Protocol Implementation

Work on the Country Program is underway and the GOG anticipates presenting it to the EC in March 1993. The CP support is a joint effort of the Bank and UNEP. UNEP will have responsibility for drafting the CP, getting GOG comments and completing the document. The Bank will have responsibility for establishing the policy framework, project preparation and financing. These arrangements have been endorsed by all parties involved.

2. Status of World Bank Assistance

Development of the project pipeline will be initiated in January 1993.

3. CY93 Investment Project Pipeline

The pipeline will be defined in January 1993 in conjunction with Guatemala's Country Program development. Adjustments to the investment pipeline will be proposed as amendments to the Work Program during the course of the year.

INDIA

1. Status of Montreal Protocol Implementation

The UNDP received initial funding at the October 1992 meeting of the Executive Committee, to support Country Program work in India. India is well advanced with preparation of its own Country Program and has sought UNEP assistance with its completion and presentation to the EC.

2. Status of World Bank Assistance

India has yet to seek Bank group assistance with MP implementation, hence, the Bank has not sought an administrative budget. However, it has participated in two informal ODS workshops (aerosols and domestic refrigeration) in India in connection with other work in Asia. Both of these activities will receive local support from Tata Energy Research Institute, a local consulting group, with the participation of the Government of India's ODS task force.

3. CY93 Investment Project Pipeline

Bank assistance to GOI to finance the incremental costs of ODS phase-out activities is not yet programmed as the GOI had not requested Bank assistance with MP implementation.

INDONESIA

1. Status of Montreal Protocol Implementation

After ratifying the Montreal Protocol in June 1992, the Government of Indonesia has begun MP implementation activities. A preliminary study of ODS consumption has been completed by a local consultant and Country Program preparation will begin in early 1993.

2. Status of World Bank Assistance

- (a) **Country Program** - UNDP is assisting KLH (Ministry of Population and Environment) in Country Program preparation with Bank participation similar to the approach taken in China. To launch its ODS program, KLH hosted a ODS seminar for industry and government in December 1992 at which the Bank made presentation on the MP Fund and technical alternatives to ODS.
 - (b) **Pre-investment Activities** - The Bank is working with the Government of Indonesia to draft terms of reference (TOR) for an engineering project to develop ODS phaseout investment projects (10 to 12 sub-projects) in priority ODS-using sectors, including refrigeration, foams, solvents and aerosols. The funding for the engineering project, for \$250,000, will be included in the Bank Work Program for submission to the Executive Committee at its first meeting in 1993 and will be processed as a Project Preparation Advance (PPA). The approach will be similar to Thailand/Philippines except that we plan to use a local consultant in the lead role with foreign experts brought in as needed. Agreement is expected with the Government of Indonesia on TOR and approach in January 1993.
 - (c) **Investment Projects** - No investment projects have yet been approved for Indonesia. A Project Preparation Advance (PPA) for the first set of investment projects will be presented to the EC in March 1993.
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3. CY93 Investment Project Pipeline

INVESTMENT PROJECT PIPELINE	
Project: ODS Phase-out Project Sub-projects include: - Refrigeration - Foams - Solvents - Aerosols \$ Amount: \$5 million	Planned Bank Appraisal Date: late 1993

HASHEMITE KINGDOM OF JORDAN

1. Status of Montreal Protocol Implementation

Jordan's Country Program, which was undertaken during the fourth quarter of 1991, was finalized and presented to the Government of Jordan in April 1992 where it has been under review. Projects identified and prepared in the course of Country Program preparation were presented to the Executive Committee in June 1992 and approved for funding at \$1.5 million.

2. Status of World Bank Assistance

- a) **Country Program** - The Bank undertook an ODS assessment in Jordan in 1991. At the request of the Government of Jordan, continued support will be provided for reviewing and completing the Country Program.
- b) **Investment Projects** - In CY92, \$1.5 million was allocated for investment projects of which \$0.7 million is designated for an LPG purification sub-project to phaseout the use of ozone-depleting substances in the aerosol sector. The remaining funds will be used in the various ODS-using sectors for both demonstration activities and ODS-phaseout activities. Project preparation and appraisal is tentatively scheduled for the first quarter of 1993.

3. CY93 Investment Project Pipeline

There are no investment projects in the pipeline for CY93.

MALAYSIA

1. Status of Montreal Protocol Implementation

The Government of Malaysia completed its Country Program and had it approved by the EC in 1992 without outside support. The GOM has signed a Grant Agreement with the Bank for two ODS recycling sub-projects and a Bank mission visited Malaysia in early December 1992 to complete implementation arrangements.

2. Status of World Bank Assistance

- a) **Country Program** - No World Bank assistance was involved.
- b) **Investment Projects** - The Bank assisted GOM in appraising an initial ODS Phase-Out Project for Malaysia which included halon recycling and CFC conservation and recycling in MACS sub-projects.

3. CY93 Investment Project Pipeline

The forementioned Bank mission expressed its interest in cooperating with the GOM on preparation of a follow-on investment project for Malaysia ODS reduction, if requested by the GOM.

MEXICO

1. Status of Montreal Protocol Implementation

Mexico's Bank-assisted Country Program was the first to be completed, reviewed and approved by the Executive Committee in CY92. Two projects, namely, the Ozone Pilot Recycling and Training Project (\$180,000) was approved by the EC June 1991 and signed in April 1992, and the Ozone Protection Policy and Institutional Strengthening Project (\$4million) was approved in February 1992 and signed in December 1992. It includes allocations for a marketable permit system, project feasibility studies, public awareness programs, as well as investment sub-projects.

2. Status of World Bank Assistance

- a) **Country Program** - Mexico's Country Program was approved by the EC in February 1992. Bank assistance in CP preparation is now complete.
- b) **Investment Projects** - Project disbursements are expected to begin in January 1993, pending completion of internal legal agreements between the Government of Mexico and NAFIN, the financial intermediary. Bank activities in CY93 will be mainly supervision. Likely projects to be financed include centralized CFC recycling and material handling systems, expanded use of recycling in MACS, chiller purge device conversions, low-CFC foam insulation alternatives, and training and plant conversion in the electronic industry.

3. CY93 Investment Project Pipeline

There are no Bank-led investment projects in the pipeline for CY93.

NIGERIA

1. Status of Montreal Protocol Implementation

Nigeria ratified the Montreal Protocol and Vienna Convention by accession on October 31, 1988, and is commencing development of a Country Program and associated ODS phase-out projects.

2. Status of World Bank Assistance

- (a) **Country Program** - An identification mission in August 1992 assisted the Federal Republic of Nigeria (FRN) Federal Environmental Protection Agency (FEPA) with preparation to select a qualified consulting firm for Country Program development and phase-out project identification. The present Request for Proposal (RFP) is expected to be completed in January 1993 and the contract award is planned for April 1993, leading to anticipated completion of the draft Country Program by September 1993, and a final Country Program by April 1994.
- (b) **Investment Projects** - Projects for phase-out of ODS's in Nigeria are to be identified and prepared as a part of the Country Program development contract. Preliminary projects are expected to be focussed upon the aerosol, foams, MACS and refrigeration sub-sectors.

3. CY93 Investment Project Pipeline

INVESTMENT PROJECT PIPELINE	
Project: ODS Phase-Out Investment Project Sub-projects include: - Aerosols - Foams - Mobile Air Conditioning (MACS) - Refrigeration	Planned Bank Appraisal Date: 9/93
\$ Amount: \$ 5 million	

PHILIPPINES

1. Status of Montreal Protocol Implementation

In December 1992, the Government of the Philippines completed a draft Country Program (based upon the earlier 1991 COWI Country Study) but it may not be complete for presentation to the Executive Committee until after its first meeting in 1993. Two engineering studies for 16 projects are almost complete and an initial \$20 million investment project, with 16 sub-projects, will be presented to the Executive Committee at its first meeting in 1993. Ten of the sub-projects will be fully documented, including household refrigerator compressor and foam sub-projects. Six additional projects - three household refrigerator foam and three household refrigerator compressor sub-projects, based upon the same design, will be submitted with a brief description for approval in principle. Once full documentation is available, those sub-projects which require more than \$500,000 will be submitted to the EC for final approval.

2. Status of World Bank Assistance

- (a) **Country Program** - The Government of the Philippines is leading the Country Program preparation with the Bank's support. UNDP is providing some supplemental funding for the effort.
 - (b) **Pre-investment Activities** - Two Bank-supported engineering studies are complete. The studies produced a \$20 million investment program of 16 ODS phase-out projects: 2 refrigerant recycling (MAC and central), 4 household refrigerator refrigeration circuit, 4 household refrigerator foam, 1 tobacco and 5 solvent projects. Three household refrigerator foams and three household refrigerator compressor projects require further documentation which is being prepared by the enterprises.
 - (c) **Investment Projects** - The above-mentioned project will be the first investment project for the Philippines. An Executive Project Summary (EPS) has been prepared and will be available by mid-January 1993.
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3. CY93 Investment Project Pipeline

INVESTMENT PROJECT PIPELINE	
Project: ODS Phase-Out Investment Project (I) Sub-projects include: - 2 Refrigerant recycling (MAC and central) - 4 Household refrigeration - 4 Household refrigerator foams - 1 Tobacco fluffing application - 5 Solvent projects \$ Amount: \$ 20 million	Planned Bank Appraisal Date: (I) 4/93

THAILAND

1. Status of Montreal Protocol Implementation

Thailand plans to present its Country Program to the Executive Committee at its second meeting in 1993. Preparatory work on an initial \$ 1 million in investment projects is underway.

2. Status of World Bank Assistance

- (a) **Country Program** - The Bank assisted in preparation of a Country Study that was presented to the Government of Thailand in October 1992. The Government is preparing the Country Program without additional Montreal Protocol assistance.
- (b) **Pre-investment Activities** - A Bank-supported engineering study to develop about 17 ODS phase-out investment sub-projects for submission to the Executive Committee, is nearing completion.
- (c) **Investment Project** - A line-of-grant investment project for about \$15 million was proposed to the Executive Committee at its June 1992 meeting, however, only \$ 1 million was approved for two sub-projects, mobile air conditioning (MAC) recycling and Thai Airways. Preparation for these two projects are now being completed.

The MAC recycling project is being prepared by COWI Consult. The project is being developed following the Philippine model of: (i) MAC service shops; and (ii) a central facility for all refrigeration sectors.

The Thai Airway project is being developed by the USEPA and the Swedish EPA plus several aircraft firms. The total project cost is now estimated at \$1-2 million. The \$100,000 already allocated will cover the cost of preparing the feasibility study for the full project. Since this project may be replicated in all other eligible airlines, the basic design parameters and eligible incremental costs are being carefully defined.

- (d) Two refrigeration projects are being developed in Thailand to be included in the Bank's multi-country **Global Refrigeration Project**. A solvent project is being developed in Thailand by ICOLP under the Bank's multi-country **Global Solvent Project**.
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- (e) Additional project preparation assistance of about \$250,000 will be required during 1993 to assist in developing the Second ODS Investment Project.

3. CY93 Investment Project Pipeline

The Executive Project Summary (EPS) is being revised to reflect current eligibility criteria and will include the full Project Summaries for at least 70% of the proposed sub-projects and a list of sub-projects for the remainder, plus 10 - 15 % contingency for flexibility in subsequent processing.

INVESTMENT PROJECT PIPELINE	
Project: ODS Phase-Out Investment Project (I) Sub-projects include: - Refrigerant recycling (MACS) - Household refrigeration - Household refrigeration foams - Solvents ODS Phase-Out Investment Project (II) \$ Amount: (I) \$ 20 million; (II) \$ To be determined	Planned Bank Appraisal Date: (I) 6/93 (II) early 1994

TUNISIA

1. Status of Montreal Protocol Implementation

Tunisia's Country Program was undertaken in early 1992 and completed in May 1992, at which time it was presented to the Government of Tunisia, where it remains under review. Design and preparation work on investment projects on the order of \$1.79 million has been undertaken.

2. Status of World Bank Assistance

- a) **Country Program** - The Bank undertook an ODS assessment for Tunisia in 1991. This was closely followed up by a Country Program which was presented to the Government of Tunisia in May 1992 and which has been under Government review since then. At the request of the Government of Tunisia, continued assistance will be provided for the finalization of the Country Program.
- b) **Investment Projects** - In CY92, following project identification and preparation, \$1.79 million was allocated by the Executive Committee for investment projects in the following ODS-using sectors: aerosols, flexible and rigid foams and refrigeration, including both production-related (domestic refrigerators) and recycling (domestic, commercial and industrial maintenance) components. Project preparation will be advanced in early 1993 with appraisal planned for the second quarter of 1993.

3. CY93 Investment Project Pipeline

There are no additional investment projects in the pipeline for CY93.

TURKEY

1. Status of Montreal Protocol Implementation

Turkey's Country Program was completed in CY92 and presented to the Eighth Meeting of the Executive Committee where it was strongly supported and approved. Also in CY92, a total of \$6.165 million was approved by the Executive Committee for investment projects for which preparation activities are underway.

2. Status of World Bank Assistance

- a) **Country Program** - The Bank undertook an ODS assessment in 1991. World Bank support to Country Program preparation was completed and presented to the Government of Turkey in January 1992. The CP was approved by the EC at their eighth meeting in October 1992.
- b) **Investment Projects** - In CY92, \$6.2 million was obtained to fund five (5) project sub-components: (1) Introduction of non-ODS technology in the production of domestic refrigerators and compressors (\$4.9 million), (2) Recovery/recycling of refrigerant in a domestic refrigerator production plant (\$0.06 million), (4) various ODS phaseout activities and demonstrations (\$0.5 million) and (5) institutional strengthening (\$0.3 million). Project preparation is underway and appraisal is planned for 1993.

3. CY93 Investment Project Pipeline

There are no CY93 investment projects in the pipeline.

VENEZUELA

1. Status of Montreal Protocol Implementation

Venezuela's Country Program is expected to be presented to the EC at its second meeting in CY93. The Legal Agreement for the Plasticos Molanca C. A. CFC-12 to hydrocarbon blowing agent conversion project (US \$1.3 million) is expected to be signed in January 1993. Preparation for implementation of the Central Air Conditioning Project, approved by the EC in October 1992, continues. FONDOIN, an autonomous foundation, has been established to implement the Montreal Protocol in Venezuela. An institutional strengthening component financed by the Fund to assist FONDOIN will be managed by the UNDP.

2. Status of World Bank Assistance

- a) **Country Program** - Bank assistance has not been requested. USEPA is assisting in preparation.
- b) **Investment Projects** - Plasticos Molanca project is already approved; and additional investment project identification and preparation of more systematic arrangements for processing investment projects utilizing FONDOIN as coordinating agency will continue.
- c) **Institutional Strengthening** - UNDP has assumed the lead role.

3. CY93 Investment Project Pipeline

There are no CY93 investment projects in the pipeline.
