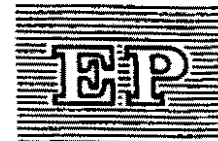




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Executive Committee of
the Multilateral Fund for the
Implementation of the Montreal Protocol

Ninth Meeting
Montreal, 8-10 March 1993

CONSOLIDATED 1993 WORK PROGRAMME

OVERVIEW

Introduction

1. The Consolidated 1993 work programme was prepared by the Fund Secretariat from information included in the 1993 work programmes of the implementing agencies. It contains an overview and two annexes: Parts I and II.
2. The overview describes those activities and projects for which funding is being requested at the Ninth Meeting of the Executive Committee and those projects that are expected to be presented to the Executive Committee during calendar year 1993, i.e., pipeline projects.
3. The two annexes are called: "Part I, Activities costing below US \$500,000", and "Part II, Projects costing above US \$500,000". The data in the annexes are arranged by sector, country and project title. A description, amount of ODS to be phased out, implementing agency, requested cost, project time frame, project type and comment is provided for each proposed project, where available.

Activities/projects requested for funding

4. At this meeting, the implementing agencies are requesting approximately US \$32.4 million for 1993 activities. This amount includes US \$30.7 million for projects and activities and US \$1.7 million for administrative and overhead costs.
5. Work programme budgets do not include projects costing above US \$500,000; they are submitted separately. Work programme activities total US \$11.5 million including US \$5.1 million for the World Bank; US \$3.7 million for UNDP; US \$2.2 million for UNEP; and, US \$500,000 for UNIDO. Table 1, "Summary of requested budget", presents the US \$30.7 million for 1993 projects and activities by country, region, sector, and implementing agency excluding administrative and overhead costs.
6. The World Bank is requesting the largest amount of resources from the Fund at the Ninth Meeting, i.e., more than US \$23.6 million. About US \$20 million of its requested funding is intended for the Asia and Pacific region. UNDP is requesting the second largest amount of funding, US \$5 million, with its largest programme in Egypt. Over 70 percent of UNEP's activities are associated with global information services. The balance of its request is shared among the three major regions. UNIDO's level of funding is the lowest among the four implementing agencies as it has only recently become an implementing agency.
7. On a country level, the highest levels of funding are requested for the Philippines, China, Egypt, and Ecuador in descending order. More than one-third of the funds are requested for projects in the foam sector. The lowest level of funding is for the fumigant sector, US \$97,000.
8. The sector entitled, "Several", refers to activities that impact multiple sectors. Table 2, "Distribution of proposed activities listed under several", presents the five categories of funding that would fall into the "Several" category: country programme preparation, project preparation, training, technical assistance, and institutional strengthening.

9. Funds for country programme preparation are being requested for 12 countries with the largest amounts for India (US \$200,000) and Argentina (US \$85,000). Excluding these two countries, most of the funds are for follow-up work in countries where funds have been previously allocated. Project preparation constitutes the largest share of funds in the "Several" category, US \$3.5 million. Project preparation is anticipated in 18 countries in 1993.

10. One training programme is being requested at this meeting. Four technical assistance projects totalling US \$1.3 million and eight institutional strengthening projects totalling almost US \$2.1 million are being requested. Most of the funds for technical assistance, US \$735,000, are for UNEP's information exchange programme.

11. Table 3, "Distribution of proposed activities by sector", shows the main types of activities by sector, country, and region. While most or all of the funds requested for the aerosol, foam, solvent, and other sectors are for investment projects, no funds are being requested for investment projects in the refrigeration sector. Funds in that sector are primarily requested for technical assistance and training. The investment funds requested for the halon sector approximate the level of funding for technical assistance and training combined.

Pipeline projects

12. The 1993 work programmes of the implementing agencies also indicated the extent of requests they expect to present to the Executive Committee during the year. Table 4, "Summary of pipeline project budget for 1993", presents this information by country, region, sector, and implementing agency. An additional US \$89 million is expected to be requested during 1993.

13. Pipeline projects are estimated at US \$61 million for the World Bank and US \$28 million for UNDP. Almost 90 per cent of the anticipated requests are expected to come from the Asia and the Pacific region with China, Thailand, and Malaysia the three largest would be recipients of future project funds.

14. On a sector basis, the vast majority of activities is expected to occur in the "Multiple Sectors" category. The main reason for this is the grouping of Multiple Sector activities into one project for China, Thailand, Indonesia, and Nigeria. The component activities within these groupings were not provided.

15. Aside from the "Multiple Sectors", the largest level of funding will be presented in the solvent sector (US \$12 million) followed closely by the refrigeration sector (US \$9.5 million). The lowest anticipated level of requests (excluding the fumigants sector where no activity is foreseen) will be in the aerosols sector.

16. If pipeline project budget activities were added to the project budget requests for the Ninth Meeting, almost US \$122 million would be requested in 1993 including administrative and overhead costs.

Table 1
SUMMARY OF REQUESTED BUDGET (US\$)
1993 WORK PROGRAMME

Region Country	SECTOR BUDGET								SECTOR BUDGET BREAK DOWN BY AGENCY				TOTAL BUDGET
	Aerosol	Foam	Fumigant	Halon	Refrigeration	Solvent	Other (1)	Several (2)	IBRD	UNDP	UNEP	UNIDO	
AFRICA													
Algeria								15,000			15,000		15,000
Botswana								10,000			10,000		10,000
Egypt		2,028,500						212,200	112,200	2,028,500		100,000	2,240,700
Ghana													
Kenya								222,900		222,900			222,900
Mauritius								10,000			10,000		10,000
Nigeria								397,600	87,600	300,000			397,600
Tunisia								174,000	174,000				174,000
Zambia								75,800			75,600		75,800
Zimbabwe								40,000			40,000		40,000
REGION													
Subtotal		2,028,500						1,157,300	383,800	2,551,400	150,600	100,000	3,185,800
ASIA AND THE PACIFIC													
China	679,000	5,820,000	87,000	547,000	203,280			1,166,000	7,557,000	795,280		150,000	8,502,280
India								200,000		200,000			200,000
Indonesia								456,000	456,000				456,000
Iran													
Jordan								131,400	131,400				131,400
Malaysia				80,000				350,720	28,200	322,520	80,000		430,720
Pakistan								15,000			15,000		15,000
Philippines		3,990,000				2,710,000	4,720,000	584,370	11,964,550	39,820			12,004,370
Syrian Arab Rep.								35,000				35,000	35,000
Thailand								614,000	190,000	424,000			614,000
REGION													
Subtotal	679,000	9,810,000	87,000	627,000	293,280	2,710,000	4,720,000	3,552,490	20,327,150	1,781,620	185,000	185,000	22,478,770
EUROPE													
Turkey								140,400	140,400				140,400
Subtotal													
								140,400	140,400				140,400
LATIN AMERICA AND THE CARIBBEAN													
Argentina								148,000	148,000				148,000
Brazil		150,000						142,000	142,000			150,000	292,000
Chile								82,890	82,890				82,890
Ecuador	700,000	665,000						422,000	1,787,000				1,787,000
Guatemala								47,000	47,000				47,000
Mexico								123,400	123,400				123,400
Venezuela				26,800	159,400			385,392	156,200	415,392			571,592
REGION													
Subtotal	700,000	815,000		26,800	159,400			1,480,682	2,486,490	415,392	130,000	150,000	3,181,882
GLOBAL													
	130,000			100,000	160,000			1,340,000	455,000		1,275,000		1,730,000
TOTAL	1,509,000	12,653,500	87,000	753,800	612,680	2,710,000	4,720,000	7,670,872	23,792,840	4,748,412	1,740,800	435,000	30,716,852

(1) Tobacco fluffing.

(2) Refers to activities that impact multiple sectors (country programme, project preparation, training, technical assistance and institutional strengthening).

Table 2
DISTRIBUTION OF PROPOSED ACTIVITIES LISTED UNDER SEVERAL (US\$) (*)
1993 WORK PROGRAMME

Region Country	Type of activity					TOTAL BUDGET
	Country programme	Project preparation	Training	Technical assistance	Institutional strengthening	
AFRICA						
Algeria	15,000					15,000
Botswana	10,000					10,000
Egypt		212,200				212,200
Ghana						
Kenya					222,900	222,900
Mauritius	10,000					10,000
Nigeria	35,100	82,500			300,000	397,600
Tunisia	8,200	165,800				174,000
Zambia					75,600	75,600
Zimbabwe	40,000					40,000
REGION						
Subtotal	118,300	440,500			598,500	1,157,300
ASIA AND THE PACIFIC						
China		576,000		290,000	300,000	1,166,000
India	200,000					200,000
Indonesia		456,000				456,000
Iran						
Jordan	8,200	123,200				131,400
Malaysia		28,200			322,520	350,720
Pakistan	15,000					15,000
Philippines	39,820	444,550		100,000		584,370
Syrian Arab Rep.		35,000				35,000
Thailand		190,000			424,000	614,000
REGION						
Subtotal	263,020	1,852,950		390,000	1,046,520	3,552,490
EUROPE						
Turkey		140,400				140,400
Subtotal		140,400				140,400
LATIN AMERICA AND THE CARIBBEAN						
Argentina	85,000	63,000				148,000
Brazil	30,000	112,000				142,000
Chile		82,890				82,890
Ecuador		68,000	150,000		204,000	422,000
Guatemala		47,000				47,000
Mexico		123,400				123,400
Venezuela		156,200			229,192	385,392
REGION				130,000		130,000
Subtotal	115,000	652,490	150,000	130,000	433,192	1,480,682
GLOBAL						
		455,000	150,000	735,000		1,340,000
TOTAL						
	496,320	3,541,340	300,000	1,255,000	2,078,212	7,670,872

(*) Refers to activities that impact multiple sectors (country programme, project preparation, training, technical assistance and institutional strengthening)

Table 3

**DISTRIBUTION OF PROPOSED ACTIVITIES BY SECTOR (US\$)
1993 WORK PROGRAMME**

Region Country	AEROSOL			FOAM			FUMIGANT	HALON			REFRIGERATION			SOLVENT	OTHER (1)
	Investment	Technical assistance	Training	Investment	Technical assistance	Project preparation	Technical assistance	Investment	Technical assistance	Training	Technical assistance	Training	Project preparation	Investment	Investment
AFRICA															
Algeria															
Botswana															
Egypt				2,028,500											
Ghana															
Kenya															
Mauritius															
Nigeria								200,000							
Tunisia															
Zambia															
Zimbabwe															
REGION															
Subtotal				2,028,500				200,000							
ASIA AND THE PACIFIC															
China	679,000			5,770,000	50,000		87,000	497,000	50,000		203,280				
India															
Indonesia															
Iran															
Jordan															
Malaysia										80,000					
Pakistan															
Philippines				3,990,000										2,710,000	4,720,000
Syrian Arab Rep.															
Thailand															
REGION												90,000			
Subtotal	679,000			9,760,000	50,000		87,000	497,000	50,000	80,000	203,280	90,000		2,710,000	4,720,000
EUROPE															
Turkey															
Subtotal															
LATIN AMERICA AND THE CARIBBEAN															
Argentina															
Brazil						150,000									
Chile															
Ecuador	700,000			665,000											
Guatemala															
Mexico															
Venezuela								26,800			139,600		19,800		
REGION															
Subtotal	700,000			665,000		150,000		26,800			139,600		19,800		
GLOBAL															
		40,000	90,000					100,000			160,000				
TOTAL	1,379,000	40,000	90,000	12,453,500	50,000	150,000	87,000	497,000	376,800	80,000	342,880	250,000	19,800	2,710,000	4,720,000

(1) Tobacco fluffing.

Table 4
SUMMARY OF PIPELINE PROJECT BUDGET FOR 1993 (US\$) (*)
1993 WORK PROGRAMME

Region Country	SECTOR BUDGET							SECTOR BUDGET BREAK DOWN BY AGENCY				TOTAL BUDGET
	Aerosol	Foam	Fumigant	Halon	Refrigeration	Solvent	Multiple (1)	IBRD	UNDP	UNEP	UNIDO	
AFRICA												
Algeria												
Botswana												
Egypt												
Ghana												
Kenya												
Mauritius												
Nigeria				200,000			5,000,000	5,000,000	200,000			5,200,000
Tunisia												
Zambia												
Zimbabwe												
REGION												
Subtotal				200,000			5,000,000	5,000,000	200,000			5,200,000
ASIA AND THE PACIFIC												
China		2,200,000		2,700,000	2,700,000	1,600,000	26,500,000	25,000,000	10,700,000			35,700,000
India												
Indonesia		1,000,000					5,000,000	5,000,000	1,000,000			6,000,000
Iran												
Jordan												
Malaysia	1,660,000				900,000	9,700,000	300,000		12,560,000			12,560,000
Pakistan												
Philippines				200,000	3,145,000			3,145,000	200,000			3,345,000
Syrian Arab Rep.												
Thailand				100,000			20,000,000	20,000,000	100,000			20,100,000
REGION												
Subtotal	1,660,000	3,200,000		3,000,000	6,745,000	11,300,000	51,800,000	53,145,000	24,560,000			77,705,000
EUROPE												
Turkey												
Subtotal												
LATIN AMERICA AND THE CARIBBEAN												
Argentina												
Brazil		2,500,000		200,000		1,000,000			3,700,000			3,700,000
Chile												
Ecuador												
Guatemala												
Mexico												
Venezuela												
REGION												
Subtotal		2,500,000		200,000		1,000,000			3,700,000			3,700,000
GLOBAL												
					2,740,000			2,740,000				2,740,000
TOTAL	1,660,000	5,700,000		3,400,000	9,485,000	12,300,000	56,800,000	60,885,000	28,460,000			89,345,000

(*) Excluding those projects submitted for approval at the Ninth Meeting of the Executive Committee.

(1) Refers to activities that could lead to investment projects in one or more sectors not yet defined.

CONSOLIDATED 1993 WORK PROGRAMME

PART I:

ACTIVITIES BELOW US \$500,000

AEROSOL

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
GLOBAL							
Global	<u>Preparation of training material for aerosol sector</u> Preparation of training materials for developing countries using existing manuals in developed countries. It will be performed in co-operation with advisers to the OORG of IBRD and the Co-Chair of the UNEP Technology and Economic Assessment Panel. The following manuals will be prepared: . Conversion manual/handbook. . Manual on safety issues. <u>Aerosol training workshop</u> Region to be determined.	-	UNEP	\$40,000	1 year	Technical assistance	Submitted for approval
		-	UNEP	\$90,000	4th quarter 1993	Training	Submitted for approval
TOTAL FOR GLOBAL		ODS	COST	\$130,000	NUMBER OF PROJECTS: 2		
TOTAL FOR AEROSOL SECTOR		ODS	COST	\$130,000	NUMBER OF PROJECTS: 2		

FOAM

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
AFRICA							
Egypt	<u>Phase-out of CFC-11 in the manufacturing of moulded, flexible, semi-rigid and rigid polyurethane foam at Taki Vita factory</u> The project was approved by the 8th ExCom Meeting. Requesting 40% of project cost as well as operating cost. US EPA will provide technical support during the project implementation.	50	UNDP	\$293,500	2 years (1992-1994)	Investment	Submitted for approval. Project was approved by 8th ExCom Meeting. Requesting 40% of project cost and operating cost
	<u>Phase-out of CFC-11 in the manufacturing of flexible polyurethane foam at Misr Foam Co.</u> The project is aimed at phasing-out the use of CFC in the manufacture of molded flexible polyurethane foam through modifications of the polyol system, replacement of a low pressure foaming unit to a high pressure unit, and conditioning of chemicals and molds. An oven for barrels and a mold heating system are required.	28	UNDP	\$275,000	10 months	Investment	Submitted for approval
TOTAL FOR EGYPT		ODS	78	COST	\$568,500	NUMBER OF PROJECTS: 2	
TOTAL FOR AFRICA		ODS	78	COST	\$568,500	NUMBER OF PROJECTS: 2	
ASIA AND THE PACIFIC							
China	<u>Technical assistance for the implementation of the Zhejiang foam plant conversion to butane</u>	-	IBRD	\$20,000	2 years (1992-1994)	Technical assistance	Submitted for approval. Project approved at the 7th ExCom Meeting (requesting additional incremental cost)
	<u>Technical assistance for the implementation of the 50% CFC foam reduction project</u>	-	IBRD	\$30,000	2 years (1992-1994)	Technical assistance	Submitted for approval. Project approved at the 7th ExCom Meeting (requesting additional incremental cost)
TOTAL FOR CHINA		ODS		COST	\$50,000	NUMBER OF PROJECTS: 2	
TOTAL FOR ASIA AND THE PACIFIC		ODS		COST	\$50,000	NUMBER OF PROJECTS: 2	

FOAM

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
LATIN AMERICA AND THE CARIBBEAN							
Brazil	<u>Preparation of investment projects</u> The project is aimed at developing a comprehensive programme to phase-out CFC-11 and CFC-12 in the foam sector.	-	UNIDO	\$150,000	6 months	Project preparation	Submitted for approval
TOTAL FOR BRAZIL		ODS	COST	\$150,000	NUMBER OF PROJECTS: 1		
TOTAL FOR LATIN AMERICA AND THE CARIBBEAN		ODS	COST	\$150,000	NUMBER OF PROJECTS: 1		
TOTAL FOR FOAM SECTOR		ODS	78	COST	\$768,500	NUMBER OF PROJECTS: 5	

FUMIGANT

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
ASIA AND THE PACIFIC							
China	<u>Survey/investigation of production and consumption of methyl bromide</u> To provide basic information on production and consumption of methyl bromide (actual production, capacity, number of producers, inventory of applications, consumers and local consumption), for a potential future phase-out programme.	-	UNDP	\$87,000	1 year	Technical assistance	Submitted for approval
TOTAL FOR CHINA		ODS	COST	\$87,000	NUMBER OF PROJECTS: 1		
TOTAL FOR ASIA AND THE PACIFIC		ODS	COST	\$87,000	NUMBER OF PROJECTS: 1		
TOTAL FOR FUMIGANT SECTOR		ODS	COST	\$87,000	NUMBER OF PROJECTS: 1		

HALON

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
ASIA AND THE PACIFIC							
China	<u>Technical assistance for the implementation of the Beijing ABC powder production and Zhejiang halon extinguisher conversion projects</u>	-	IBRD	\$50,000	2 years (1992-1994)	Technical assistance	Submitted for approval. Project approved at the 7th ExCom Meeting (requesting additional incremental cost)
TOTAL FOR CHINA		ODS	COST	\$50,000	NUMBER OF PROJECTS: 1		
Malaysia	<u>Support to a sub-regional workshop on halon and halon bank management</u> The workshop is targeted at senior fire service officers from industry and Government and senior insurance officers. Malaysia intends to use its expertise and recycling equipment which it procured and installed under the project approved by the sixth ExCom Meeting.	-	UNEP	\$80,000	N/A	Training	Submitted for approval
TOTAL FOR MALAYSIA		ODS	COST	\$80,000	NUMBER OF PROJECTS: 1		
TOTAL FOR ASIA AND THE PACIFIC		ODS	COST	\$130,000	NUMBER OF PROJECTS: 2		
LATIN AMERICA AND THE CARIBBEAN							
Venezuela	<u>Workshops for the recycling and banking of halons</u> To develop 4 workshops in different cities directed to enterprises and users of fire protection systems aimed at introducing the practice of recycling halons, the establishment of halon banks and elimination of halons as an option, in both portable equipment and in fixed new installations.	-	UNDP	\$26,800	1 year	Technical assistance	Submitted for approval
TOTAL FOR VENEZUELA		ODS	COST	\$26,800	NUMBER OF PROJECTS: 1		
TOTAL FOR LATIN AMERICA AND THE CARIBBEAN		ODS	COST	\$26,800	NUMBER OF PROJECTS: 1		
GLOBAL							
Global	<u>International halon bank clearing-house function</u>	-	UNEP	\$100,000	1 year	Technical assistance	Submitted for approval
TOTAL FOR GLOBAL		ODS	COST	\$100,000	NUMBER OF PROJECTS: 1		

HALON

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
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TOTAL FOR HALON SECTOR

ODS

COST

\$256,800

NUMBER OF PROJECTS: 4

REFRIGERATION

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
AFRICA							
Ghana	<u>Implementation of train the trainer programme and national demonstration programme</u> \$100,000 to be transferred from UNDP work programme.	-	UNEP		2nd quarter 1993	Training	From UNDP work programme
TOTAL FOR GHANA		ODS	COST		NUMBER OF PROJECTS: 1		
Kenya	<u>Support to a national workshop on refrigeration</u> \$110,000 to be transferred from UNDP work programme.	-	UNEP		4th quarter 1993	Training	From UNDP work programme
TOTAL FOR KENYA		ODS	COST		NUMBER OF PROJECTS: 1		
TOTAL FOR AFRICA		ODS	COST		NUMBER OF PROJECTS: 2		
ASIA AND THE PACIFIC							
China	<u>Import and promotion of applications for CFC substitute chemicals in the refrigeration sector in Southern China</u> To assist manufacturers in the refrigeration sector in Southern China to accomplish their 5-year CFC phase-out plan by using substitute chemicals.	-	UNDP	\$203,280	1 year	Technical assistance	Submitted for approval
TOTAL FOR CHINA		ODS	COST	\$203,280	NUMBER OF PROJECTS: 1		
Iran	<u>Preparation of investment projects</u> \$56,500 to be transferred from UNDP work programme.	-	UNIDO		3 months	Project preparation	From UNDP work programme
TOTAL FOR IRAN		ODS	COST		NUMBER OF PROJECTS: 1		
Regional	<u>Refrigeration training workshop for Asia and the Pacific</u>	-	UNEP	\$90,000	3rd quarter 1993	Training	Submitted for approval
TOTAL FOR REGIONAL		ODS	COST	\$90,000	NUMBER OF PROJECTS: 1		
TOTAL FOR ASIA AND THE PACIFIC		ODS	COST	\$293,280	NUMBER OF PROJECTS: 3		

REFRIGERATION

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
LATIN AMERICA AND THE CARIBBEAN							
Venezuela	<u>Workshops for identification of projects in the refrigeration and air conditioning sector</u> Develop 4 projects to substitute CFC-12 by other refrigerant (i.e., HFC-134a), and the reduction of CFC-11 in the insulation panels of domestic and commercial refrigerators.	-	UNDP	\$19,800	6 months	Project preparation	Submitted for approval
	<u>Workshops on conversion and installation of new central air conditioning systems using non-ODS</u> Six workshops in different cities with the purpose of motivating industries involved with central air-conditioning system design, to incorporate new non-ODS based equipment or retrofit equipment with substances that are not harmful to the ozone layer	-	UNDP	\$39,600	N/A	Technical assistance	Submitted for approval
	<u>Pilot programme in recovery and recycling of CFC-12 in domestic refrigeration</u> To train 200 technicians of MADOSA, the principal manufacturer of domestic refrigerators in Venezuela (located in nine cities), in the procedures for recovery and recycling of CFC-12, and in the use of recovery equipment. 50 recovery units will be procured. The recovered refrigerant will be placed in cylinders and sent to PRODUVEN, a local CFC manufacturer, for reclamation and reuse.	8	UNDP	\$100,000	1 year	Technical assistance	Submitted for approval
TOTAL FOR VENEZUELA		ODS	8	COST	\$159,400	NUMBER OF PROJECTS: 3	
TOTAL FOR LATIN AMERICA AND THE CARIBBEAN		ODS	8	COST	\$159,400	NUMBER OF PROJECTS: 3	

REFRIGERATION

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
GLOBAL							
Global	<u>Preparation of training material for refrigeration sector</u> Preparation of training materials for developing countries using existing manuals in developed countries. It will be performed in co-operation with advisers to the OORG of IBRD and the Co-Chair of the UNEP Technology and Economic Assessment Panel. The following manuals will be prepare: . Manuals for trainers, based on regional training courses. . Manuals/guidelines on good practices (for small and medium size systems and for MAC systems) . Technical directory on recovery/recycling machines.	-	UNEP	\$160,000	1 year	Technical assistance	Submitted for approval
TOTAL FOR GLOBAL		ODS	COST	\$160,000	NUMBER OF PROJECTS: 1		
TOTAL FOR REFRIGERATION SECTOR		ODS	8	COST	\$612,680	NUMBER OF PROJECTS: 9	

SEVERAL

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
AFRICA							
Algeria	<u>Country programme preparation</u>	-	UNEP	\$15,000	2nd quarter 1993	Country programme	Submitted for approval
<i>TOTAL FOR ALGERIA</i>		<i>ODS</i>	<i>COST</i>	<i>\$15,000</i>	<i>NUMBER OF PROJECTS: 1</i>		
Botswana	<u>Complement for country programme preparation</u>	-	UNEP	\$10,000	End-1993	Country programme	Submitted for approval
<i>TOTAL FOR BOTSWANA</i>		<i>ODS</i>	<i>COST</i>	<i>\$10,000</i>	<i>NUMBER OF PROJECTS: 1</i>		
Egypt	<u>Preparation of investment projects</u>	-	IBRD	\$112,200	N/A	Project preparation	Submitted for approval
	<u>Development of a strategy in refrigeration and foam sectors</u>	-	UNIDO	\$100,000	3 months	Project preparation	Submitted for approval
<i>TOTAL FOR EGYPT</i>		<i>ODS</i>	<i>COST</i>	<i>\$212,200</i>	<i>NUMBER OF PROJECTS: 2</i>		
Kenya	<u>Institutional strengthening</u>	-	UNDP	\$222,900	3 years (1993- 1995)	Institutional strengthening	Submitted for approval
<i>TOTAL FOR KENYA</i>		<i>ODS</i>	<i>COST</i>	<i>\$222,900</i>	<i>NUMBER OF PROJECTS: 1</i>		
Mauritius	<u>Complement for country programme preparation</u>	-	UNEP	\$10,000	N/A	Country programme	Submitted for approval
<i>TOTAL FOR MAURITIUS</i>		<i>ODS</i>	<i>COST</i>	<i>\$10,000</i>	<i>NUMBER OF PROJECTS: 1</i>		
Nigeria	<u>Country programme preparation</u>	-	IBRD	\$35,100	N/A	Country programme	Submitted for approval
	<u>Institutional strengthening</u>	-	UNDP	\$300,000	3 years (1993- 1995)	Institutional strengthening	Submitted for approval
	<u>Preparation of investment projects</u>	-	IBRD	\$62,500	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR NIGERIA</i>		<i>ODS</i>	<i>COST</i>	<i>\$397,600</i>	<i>NUMBER OF PROJECTS: 3</i>		
Tunisia	<u>Country programme preparation</u>	-	IBRD	\$8,200	N/A	Country programme	Submitted for approval
	<u>Preparation of investment projects</u>	-	IBRD	\$165,800	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR TUNISIA</i>		<i>ODS</i>	<i>COST</i>	<i>\$174,000</i>	<i>NUMBER OF PROJECTS: 2</i>		

N/A Not available
- Not applicable

SEVERAL

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
Zambia	<u>Institutional strengthening</u>	-	UNEP	\$75,600	2 years (1993-1994)	Institutional strengthening	Submitted for approval
TOTAL FOR ZAMBIA		ODS	COST	\$75,600	NUMBER OF PROJECTS: 1		
Zimbabwe	<u>Country programme preparation</u>	-	UNEP	\$40,000	N/A	Country programme	Submitted for approval
TOTAL FOR ZIMBABWE		ODS	COST	\$40,000	NUMBER OF PROJECTS: 1		
TOTAL FOR AFRICA		ODS	COST	\$1,157,300	NUMBER OF PROJECTS: 13		
ASIA AND THE PACIFIC							
China	<u>Institutional strengthening</u>	-	UNDP	\$300,000	N/A	Institutional strengthening	Project was approved by 6th ExCom Meeting. Request receiving the additional \$300,000
	<u>Preparation of invetsment projects</u> Preparation of projects in the foam and solvent sectors.	N/A	UNIDO	\$150,000	3 years	Project preparation	Project proposal is not available
	<u>Preparation of investment projects</u> Assistance to formulate the following 20 projects identified by China: (i) refrigeration and air conditioning (up to 6 projects), (ii) solvent (up to 4 projects), (iii) foam (up to 4 projects), (iv) halon (up to 5 projects), (v) MAC (1 project).	-	UNDP	\$100,000	1 year	Project preparation	Submitted for approval
	<u>Preparation of investment projects</u>	-	IBRD	\$326,000	N/A	Project preparation	Submitted for approval
	<u>Financial agent fee for the implementation of approved projects (two aerosols, two foams, two halons)</u>	-	IBRD	\$185,000	2 years	Technical assistance	Submitted for approval. Projects approved at the 7th ExCom Meet (requesting additional incremental cost)

SEVERAL

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
China	<u>Survey and assessment of small CFC plant conversion possibilities</u> To provide basic information on previously unknown CFC production in small towns and to assist the Government to achieve in time their phase-out CFC production strategy.	-	UNDP	\$105,000	1 year	Technical assistance	Submitted for approval
TOTAL FOR CHINA		ODS	COST	\$1,166,000	NUMBER OF PROJECTS: 6		
India	<u>Country programme preparation</u> The requested funding will be expended to meet the costs of, inter alia, meetings of sector working groups and an Inter-Ministerial Committee, workshops, seminars, recruitment of national sectoral experts, operational and telecommunication costs.	-	UNDP	\$200,000	1 year	Country programme	Submitted for approval
TOTAL FOR INDIA		ODS	COST	\$200,000	NUMBER OF PROJECTS: 1		
Indonesia	<u>Project preparation advance (I)</u>	N/A	IBRD	\$250,000	N/A	Project preparation	Documentation is under preparation
	<u>Preparation of investment projects</u>	-	IBRD	\$206,000	N/A	Project preparation	Submitted for approval
TOTAL FOR INDONESIA		ODS	COST	\$456,000	NUMBER OF PROJECTS: 2		
Jordan	<u>Country programme preparation</u>	-	IBRD	\$8,200	N/A	Country programme	Submitted for approval
	<u>Preparation of investment projects</u>	-	IBRD	\$123,200	N/A	Project preparation	Submitted for approval
TOTAL FOR JORDAN		ODS	COST	\$131,400	NUMBER OF PROJECTS: 2		
Malaysia	<u>Institutional strengthening in relation to projects on reduction of ozone depleting substances</u> To assist the Department of the Environment (under the Ministry of Science, Technology and the Environment) and industry to phase-out ODS through the adoption of policy, technological and monitoring measures in compliance with the Montreal Protocol.	-	UNDP	\$322,520	3 years (1993-1995)	Institutional strengthening	Submitted for approval

SEVERAL

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
Malaysia	<u>Preparation of investment projects</u>	-	IBRD	\$28,200	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR MALAYSIA</i>		<i>ODS</i>	<i>COST</i>	<i>\$350,720</i>	<i>NUMBER OF PROJECTS: 2</i>		
Pakistan	<u>Country programme preparation</u>	-	UNEP	\$15,000	N/A	Country programme	Submitted for approval
<i>TOTAL FOR PAKISTAN</i>		<i>ODS</i>	<i>COST</i>	<i>\$15,000</i>	<i>NUMBER OF PROJECTS: 1</i>		
Philippines	<u>Completion of country programme</u>	-	UNDP	\$39,820	1 year	Country programme	Submitted for approval (additional funding is requested)
	<u>Technical assistance for the financial institution</u> Build up the financial institution's technical expertise for the appraisal and supervision of ODS phase-out projects through training.	-	IBRD	\$100,000	1 year	Technical assistance	Submitted for approval
	<u>ODS phase-out investment project preparation</u> This project will prepare 10-12 technologically sound, cost-effective ODS phase-out projects. It will proceed in parallel with UNDP work programme to support development of the country programme.	-	IBRD	\$250,000	6 months	Project preparation	Submitted for approval
	<u>Preparation of investment projects</u>	-	IBRD	\$194,550	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR PHILIPPINES</i>		<i>ODS</i>	<i>COST</i>	<i>\$584,370</i>	<i>NUMBER OF PROJECTS: 4</i>		
Syrian Arab Republic	<u>Preparation of investment projects on phasing-out CFC 11 and CFC-12 at Al Hafez refrigerator manufacturing plant in Damascus</u>	N/A	UNIDO	\$35,000	6 months	Project preparation	Submitted for approval
<i>TOTAL FOR SYRIAN ARAB REPUBLIC</i>		<i>ODS</i>	<i>COST</i>	<i>\$35,000</i>	<i>NUMBER OF PROJECTS: 1</i>		

SEVERAL

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
Thailand	<u>Institutional strengthening of the Ozone Layer Protection Unit</u> To develop a capability within the Ozone Layer Protection Unit to implement projects for speedy and effective phase-out of ODS in compliance with the obligations stated in the Montreal Protocol. The responsibilities will be, inter alia: (i) to assist factories in developing and implementing ODS phase-out activities, (ii) to improve data collection and dissemination system and monitoring system, (iii) public awareness, (iv) to recommend policy and legislation, (v) to exchange experiences.	-	UNDP	\$424,000	3 years (1993-1995)	Institutional strengthening	Submitted for approval
	<u>Preparation of investment projects</u>	-	IBRD	\$190,000	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR THAILAND</i>	<i>ODS</i>	<i>COST</i>		<i>\$614,000</i>		<i>NUMBER OF PROJECTS: 2</i>	
<i>TOTAL FOR ASIA AND THE PACIFIC</i>	<i>ODS</i>	<i>COST</i>		<i>\$3,552,490</i>		<i>NUMBER OF PROJECTS: 21</i>	
EUROPE							
Turkey	<u>Preparation of investment projects</u>	-	IBRD	\$140,400	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR TURKEY</i>	<i>ODS</i>	<i>COST</i>		<i>\$140,400</i>		<i>NUMBER OF PROJECTS: 1</i>	
<i>TOTAL FOR EUROPE</i>	<i>ODS</i>	<i>COST</i>		<i>\$140,400</i>		<i>NUMBER OF PROJECTS: 1</i>	
LATIN AMERICA AND THE CARIBBEAN							
Argentina	<u>Country programme preparation</u>	-	IBRD	\$85,000	N/A	Country programme	Submitted for approval
	<u>Preparation of investment projects</u>	-	IBRD	\$63,000	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR ARGENTINA</i>	<i>ODS</i>	<i>COST</i>		<i>\$148,000</i>		<i>NUMBER OF PROJECTS: 2</i>	
Brazil	<u>Country programme preparation</u>	-	IBRD	\$30,000	N/A	Country programme	Submitted for approval
	<u>Preparation of investment projects</u>	-	IBRD	\$112,000	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR BRAZIL</i>	<i>ODS</i>	<i>COST</i>		<i>\$142,000</i>		<i>NUMBER OF PROJECTS: 2</i>	

N/A Not available
- Not applicable

SEVERAL

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
Chile	<u>Preparation of investment projects</u>	-	IBRD	\$82,890	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR CHILE</i>		<i>ODS</i>	<i>COST</i>	<i>\$82,890</i>	<i>NUMBER OF PROJECTS: 1</i>		
Ecuador	<u>Institutional strengthening</u> The objective of the project is to strengthen MICIP's operational capacity to establish and operate a Montreal Protocol Project Implementation Unit (MPPU). This unit will be responsible for the implementation of the country programmes' first and second phases.	-	IBRD	\$204,000	3 years (1993-1995)	Institutional strengthening	Submitted for approval
	<u>Preparation of investment projects</u>	-	IBRD	\$68,000	N/A	Project preparation	Submitted for approval
	<u>Training and technology dissemination</u> Organization of training activities for the Montreal Protocol Project Implementation Unit (MPPU) staff, for public entities interested in the elimination of ODS (Ministry of Health, local municipalities), for representatives of pertinent industries and for the public in general.	-	IBRD	\$150,000	1 year (1993)	Training	Submitted for approval through the World Bank
<i>TOTAL FOR ECUADOR</i>		<i>ODS</i>	<i>COST</i>	<i>\$422,000</i>	<i>NUMBER OF PROJECTS: 3</i>		
Guatemala	<u>Preparation of investment projects</u>	-	IBRD	\$47,000	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR GUATEMALA</i>		<i>ODS</i>	<i>COST</i>	<i>\$47,000</i>	<i>NUMBER OF PROJECTS: 1</i>		
Mexico	<u>Preparation of investment projects</u>	-	IBRD	\$123,400	N/A	Project preparation	Submitted for approval
<i>TOTAL FOR MEXICO</i>		<i>ODS</i>	<i>COST</i>	<i>\$123,400</i>	<i>NUMBER OF PROJECTS: 1</i>		

SEVERAL

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
Venezuela	<u>Institutional strengthening: initial costs for the establishment and operation of the Venezuelan Fund for Industrial and Technology Conversion (FONDOIN)</u> The Government of Venezuela, by a Presidential Decree (16/Oct/92), established the Venezuelan Fund for Industrial and Technical Conversion (FONDOIN). The objectives of FONDOIN are to implement conversion activities for management and/or elimination of substances that impact on the environment, to find inert-substitute substances, and to assist in securing financial resources for implementing these activities. FONDOIN will develop global/sectorial programmes, formulate policies to reduce and phase-out ODS, prepare project proposals, organize seminars, workshops and training sessions, and serve as the focal point for the implementation of the Montreal Protocol.	-	UNDP	\$229,192	3 years	Institutional strengthening	Submitted for approval. \$100,000 were advanced at 8th ExCom Meeting
	<u>Preparation of investment projects</u>	-	IBRD	\$156,200	N/A	Project preparation	Submitted for approval
TOTAL FOR VENEZUELA		ODS	COST	\$385,392	NUMBER OF PROJECTS: 2		
Regional	<u>Support to regional network for OzonAction/ODS focal points</u> The purposes of the workshops are to, inter alia: . Review the progress made on the implementation of country programmes. . Up-date participants on phase-out activities in other countries and on technical developments. . Identify areas of common interest and need. . Promote exchange of information.	-	UNEP	\$130,000	1 year	Technical assistance	Submitted for approval
TOTAL FOR REGIONAL		ODS	COST	\$130,000	NUMBER OF PROJECTS: 1		
TOTAL FOR LATIN AMERICA AND THE CARIBBEAN		ODS	COST	\$1,480,682	NUMBER OF PROJECTS: 13		
GLOBAL							
Global	<u>Preparation of investment projects</u>	-	IBRD	\$455,000	N/A	Project preparation	Submitted for approval

N/A Not available
- Not applicable

SEVERAL

Consolidated 1993 Work Programme
Part I: Activities below \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
Global	<u>Information Exchange Clearing-house System</u> The OzonAction programme will continue to collect and disseminate technical and programmatic information on sectoral data, case studies from developed and developing countries, finalize the technical brochures series, and publish the OzonAction newsletter. It will also provide a continuous query-respond service, undertake a pilot project on OAIC for Article 5 Parties (in co-operation with UNEP regional offices), and outreach to promote the OzonAction Programme. It will initiate data collection on ODS trade names, development of an information kit, preparation of information documents, development of an International Halon Bank Clearing-house, and data collection for the methyl bromide sector in co-operation with UNIDO.	-	UNEP	\$705,000	1 year	Technical assistance	Submitted for approval
	<u>Support to networking activities</u> Preparation of training materials for developing countries using existing manuals in developed countries. It will be performed in co-operation with advisers to the OORG of IBRD and the Co-Chair of the UNEP Technology and Economic Assessment Panel.	-	UNEP	\$30,000	1 year	Technical assistance	Submitted for approval
	<u>Support to other national training activities</u>	-	UNEP	\$50,000	N/A	Training	Submitted for approval
	<u>Development of a training strategy</u>	-	UNEP	\$100,000	1 year	Training	Submitted for approval
TOTAL FOR GLOBAL		ODS	COST	\$1,340,000	NUMBER OF PROJECTS: 5		
TOTAL FOR SEVERAL SECTOR		ODS	COST	\$7,770,872	NUMBER OF PROJECTS: 53		

CONSOLIDATED 1993 WORK PROGRAMME

PART II:

PROJECTS ABOVE US \$500,000

AEROSOL

Consolidated 1993 Work Programme
Part II: Projects above \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
ASIA AND THE PACIFIC							
China	<u>Shanghai CFC conversion to LPG propellant</u>	6300	IBRD	\$409,000	2 years (1992-1994)	Investment	\$1,900,000 were allocated at the 7th ExCom Meeting (requesting additional incremental cost)
	<u>Tianjin CFC conversion to LPG propellant</u>	6300	IBRD	\$270,000	2 years (1992-1994)	Investment	\$2,500,000 were allocated at the 7th ExCom Meeting (requesting additional incremental cost)
TOTAL FOR CHINA		ODS 12,600	COST	\$679,000	NUMBER OF PROJECTS: 2		
TOTAL FOR ASIA AND THE PACIFIC		ODS 12,600	COST	\$679,000	NUMBER OF PROJECTS: 2		
LATIN AMERICA AND THE CARIBBEAN							
Ecuador	<u>Conversion of aerosol plants to hydrocarbon propellants</u> The project is aimed at phasing-out CFC-12 in 18 aerosol manufacturing plants by introducing hydrocarbon propellants (HPs). The plants identified by IBRD are the following: 1. Laboratorios Windsor (60 tonnes of CFC-12/year); 2. Pro Quim (6 ton CFC-12/year); 3. Jabonería Nacional (50 ton CFC-12/year); 4. Camposa (5 ton CFC-12/year); 5. Other companies (about 14 plants) (169 ton CFC-12/year). The following sections of each plant will be modified as a result of the project: (i) propellant delivery and storage, (ii) filling system (i.e., room and equipment that injects the pressurized propellant), and (iii) final product warehouse. The filling station ("open-air filling room") will be adapted to minimize the risk of fire during propellant injection. Each plant will undergo a four-part training programme.	290	IBRD	\$700,000	2 years (1993-1994)	Investment	Submitted for approval
TOTAL FOR ECUADOR		ODS 290	COST	\$700,000	NUMBER OF PROJECTS: 1		
TOTAL FOR LATIN AMERICA AND THE CARIBBEAN		ODS 290	COST	\$700,000	NUMBER OF PROJECTS: 1		

AEROSOL

*Consolidated 1993 Work Programme
Part II: Projects above \$500,000*

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
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TOTAL FOR AEROSOL SECTOR

ODS 12,890

COST

\$1,379,000

NUMBER OF PROJECTS: 3

FOAM

Consolidated 1993 Work Programme
Part II: Projects above \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
AFRICA							
Egypt	<u>Elimination of CFC-12 in the manufacture of extruded polystyrene foam at Al-Sharif Plastic Factories</u> Replacement of CFC-12 use in Al Sharif, the largest plastic manufacturer in Egypt, and replaced it with butane. The technology is available through original equipment manufacturers. The project includes, in addition to machine modifications, the relocation of the supply tank, explosion proof electrical equipment and spark protectors, and an extensive production and safety training for the operators and maintenance crew. Operating cost (\$240,000) is also included.	75	UNDP	\$1,460,000	1 year	Investment	Submitted for approval
TOTAL FOR EGYPT		ODS	75	COST	\$1,460,000	NUMBER OF PROJECTS: 1	
TOTAL FOR AFRICA		ODS	75	COST	\$1,460,000	NUMBER OF PROJECTS: 1	
ASIA AND THE PACIFIC							
China	<u>50% CFC foam reduction</u>	2200	IBRD	\$5,770,000	2 years (1992-1994)	Investment	\$1,878,000 were allocated at the 7th ExCom Meeting (requesting additional incremental cost)
TOTAL FOR CHINA		ODS	2,200	COST	\$5,770,000	NUMBER OF PROJECTS: 1	
Philippines	<u>Application of a reduced CFC blowing agent and non-CFC application preparation at Sanvo Philippines</u> The project is aimed at reducing CFC-11 by 50% using available technology. Foaming operations will be converted to equipment capable of processing high-pressure foam formulations. The high-pressure equipment improves performance of the low-pressure foam formulation and will be required in future phases for a complete CFC phase-out in foam production through introduction of HCFC technology. It will also include a batch testing. The final phase of the project will be the conversion to a non-CFC foam formulation (i.e., HFC-134a) that would require high- pressure handling. Local ownership fraction of 70% was considered in the incremental cost analysis.	9	IBRD	\$660,000	4 years (1993-1996)	Investment	Submitted for approval

FOAM

Consolidated 1993 Work Programme
Part II: Projects above \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
Philippines	<u>Application of a reduced CFC blowing agent and non-CFC application preparation at Federal Electric Company</u> The project is aimed at reducing CFC-11 by 50% using available technology. Foaming operations will be converted to equipment capable of processing high-pressure foam formulations. The high-pressure equipment improves performance of the low-pressure foam formulation and will be required in future phases for a complete CFC phase-out in foam production through introduction of HCFC technology. It will also include a batch testing. The final phase of the project will be the conversion to a non-CFC foam formulation (i.e., HFC-134a) that would require high- pressure handling.	5	IBRD	\$770,000	4 years (1993-1996)	Investment	Submitted for approval
	<u>Application of a reduced CFC blowing agent and non-CFC application preparation at Philippines Appliance Corporation (Philacor)</u> The project is aimed at reducing CFC-11 by 50% using available technology. Foaming operations will be converted to equipment capable of processing high-pressure foam formulations. The high-pressure equipment improves performance of the low-pressure foam formulation and will be required in future phases for a complete CFC phase-out in foam production through introduction of HCFC technology. It will also include a batch testing. The final phase of the project will be the conversion to a non-CFC foam formulation (i.e., HFC-134a) that would require high- pressure handling. Local ownership fraction of 61% was considered in the incremental cost analysis.	120	IBRD	\$1,770,000	4 years (1993-1996)	Investment	Submitted for approval

FOAM

Consolidated 1993 Work Programme
Part II: Projects above \$500,000

Ann. Projects above \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
Philippines	<u>Application of a reduced CFC blowing agent and non-CFC application preparation at Concepcion Industries</u> The project is aimed at reducing CFC-11 by 50% using available technology. Foaming operations will be converted to equipment capable of processing high-pressure foam formulations. The high-pressure equipment improves performance of the low-pressure foam formulation and will be required in future phases for a complete CFC phase-out in foam production through introduction of HCFC technology. It will also include a batch testing. The final phase of the project will be the conversion to a non-CFC foam formulation (i.e., HFC-134a) that would require high-pressure handling.	35	IBRD	\$790,000	4 years (1993-1996)	Investment	Submitted for approval
TOTAL FOR PHILIPPINES		ODS	169	COST	\$3,990,000	NUMBER OF PROJECTS: 4	
TOTAL FOR ASIA AND THE PACIFIC		ODS	2,369	COST	\$9,760,000	NUMBER OF PROJECTS: 5	
LATIN AMERICA AND THE CARIBBEAN							
Ecuador	<u>Reduced CFC insulating foams in refrigerator manufacturing</u> The project is aimed at reducing CFC-11 with a new foam system containing CO2/water, in three refrigeration plants (Indurama, Electrodomesticos Durex (Durex), Ecuatoriana de Artefactos (Ecasa)). The existing plants require changes of some or all of the following equipment: (i) mold modifications, such as adding heaters; (ii) adding an oven to heat portions of the mold or refrigerator cabinet; (iii) replacing existing low-pressure foam injection machine with a high-pressure machine; (iv) new ancillary equipment, such as mixing equipment for the foam component. In addition, the change requires trials of the new technology on the plant assembly line. Training of plant managers and workers will be provided by both the suppliers of the equipment and the CO2/water system.	25.5	IBRD	\$665,000	1 year (1993)	Investment	Submitted for approval
TOTAL FOR ECUADOR		ODS	26	COST	\$665,000	NUMBER OF PROJECTS: 1	
TOTAL FOR LATIN AMERICA AND THE CARIBBEAN		ODS	26	COST	\$665,000	NUMBER OF PROJECTS: 1	

N/A Not available
- Not applicable

FOAM

*Consolidated 1993 Work Programme
Part II: Projects above \$500,000*

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
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TOTAL FOR FOAM SECTOR

ODS 2,470

COST

\$11,885,000

NUMBER OF PROJECTS: 7

HALON

Consolidated 1993 Work Programme
Part II: Projects above \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
ASIA AND THE PACIFIC							
China	<u>Beijing ABC powder production project</u>	400	IBRD	\$497,000	2 years (1992-1994)	Investment	\$403,000 were allocated at the 7th ExCom Meeting (requesting additional incremental cost)
TOTAL FOR CHINA		ODS 400	COST	\$497,000	NUMBER OF PROJECTS: 1		
TOTAL FOR ASIA AND THE PACIFIC		ODS 400	COST	\$497,000	NUMBER OF PROJECTS: 1		
TOTAL FOR HALON SECTOR		ODS 400	COST	\$497,000	NUMBER OF PROJECTS: 1		

SOLVENT

Consolidated 1993 Work Programme
Part II: Projects above \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
ASIA AND THE PACIFIC							
Philippines	<u>Conversion to semi-aqueous and aqueous cleaning solvents at Ionics Circuits, Inc.</u> The project is aimed at eliminating the use of CFC-113 (98 metric tonnes/year) and methyl chloroform (73 metric tonnes/year), in eight vapor degreasers use for cleaning electronic circuit cards, computer disk drives, and other equipment. The project consists of the following elements: . Process development and material handling. . Deionized water system installation. . Aqueous cleaning machine installation. . Batch semi-aqueous cleaning machines (4) installation. . Water recycling system installation. . Wastewater treatment system installation. . Improvement to 5 exhaust and ventilation systems. . System design and training. Local ownership fraction of 90% was considered in the incremental cost analysis.	114	IBRD	\$790,000	6 months (1993-1994)	Investment	Submitted for approval
	<u>Conversion to low-emission processing and organic solvents at Pacific Semiconductors, Inc.</u> The project is aimed at eliminating the use of CFC-113 and trichloroethane (TCA) in five vapor degreasers use for cleaning electronic components, metallic lead frames, and other metal parts. The project consists of the following elements: . Process development and material handling. . Low-emission vapor degreasers (using perchloroethylene, dichloromethane or another organic solvent). . Improvement to exhaust and ventilation systems. . System design and training. Local ownership fraction of 80% was considered in the incremental cost analysis.	15	IBRD	\$710,000	6 months (1993-1994)	Investment	Submitted for approval

SOLVENT

Consolidated 1993 Work Programme
Part II: Projects above \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
Philippines	<u>Conversion to low-emission processing and organic solvents at Electronic Assemblies, Inc.</u> The project is aimed at eliminating the use of CFC-113 in three vapor degreasers use for cleaning electronic circuit cards. The project consists of the following elements: . Process development and material handling. . Deionized water system installation. . High-volume aqueous cleaning machine installation. . High-volume semi-aqueous cleaning machine installation. . Ionic contamination tester installation. . Water decanter installation. . Water recycling system installation. . Wastewater treatment system installation. . Improvement to exhaust and ventilation systems. . Training.	5	IBRD	\$710,000	6 months (1993-1994)	Investment	Submitted for approval
	<u>Conversion to high-purity water cleaning at Integrated Microelectronic, Inc.</u> The project is aimed at eliminating the use of CFC-113 in one-in-line high-volume vapor degreaser and one-batch vapor degreaser for cleaning electronic devices and metal parts (pulse transformers, coils, hard disk drives). The project will replace the high-volume degreaser with one high-volume aqueous cleaning machine and retrofit the batch degreaser for use with non-ODS solvent (methylene chloride or trichloroethylene). The project will also provide for wastewater treatment system installation, improvement to exhaust and ventilation systems and training.	20	IBRD	\$430,000	6 months	Investment	Submitted for approval (a sub-project of projects on electronic component cleaning)

SOLVENT

Consolidated 1993 Work Programme
Part II: Projects above \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
Philippines	<u>Conversion to semi-aqueous cleaning solvents at Solid Circuits, Inc.</u> The project is aimed at eliminating the use of CFC-113 in one-batch vapor degreaser for cleaning of specialty electronic components. The project will replace the batch vapor degreaser with a batch semi-aqueous cleaning machine; will provide for a closed-loop water rising system, improvement to exhaust and ventilation systems, engineering support and training.	4	IBRD	\$70,000	6 months	Investment	Submitted for approval (a sub-project of projects on electronic component cleaning)
TOTAL FOR PHILIPPINES		ODS	158	COST	\$2,710,000	NUMBER OF PROJECTS: 5	
TOTAL FOR ASIA AND THE PACIFIC		ODS	158	COST	\$2,710,000	NUMBER OF PROJECTS: 5	
TOTAL FOR SOLVENT SECTOR		ODS	158	COST	\$2,710,000	NUMBER OF PROJECTS: 5	

OTHER

Consolidated 1993 Work Programme
Part II: Projects above \$500,000

Region Country	Project title Project description	ODS to be phased-out	I. A.	Requested cost	Time frame	Type of project	Comment
ASIA AND THE PACIFIC							
Philippines	<u>Conversion of tobacco fluffing process to carbon dioxide at Fortunate Tobacco corporation</u> The CFC-11 fluffing process will be replaced with a new dry ice expanded tobacco (AIRCO's-DIET) CO2 process. The patent holder and distributor of this process technology is AIRCO Industrial Gases (New Jersey, USA). Funding for this project will provide for the acquisition of AIRCO's services to design, plan and install a 2,500 lb/hr plant. The project will not enhance the manufacture or sale of tobacco products in any other way, nor does it represent an expansion of the production capacity. The project will also eliminate a negligible amount of HCFC-22 used as refrigerant in one component of the expansion process.	350	IBRD	\$4,720,000	3 years (1993-1995)	Investment	Submitted for approval
<i>TOTAL FOR PHILIPPINES</i>		<i>ODS</i>	<i>350</i>	<i>COST</i>	<i>\$4,720,000</i>	<i>NUMBER OF PROJECTS: 1</i>	
<i>TOTAL FOR ASIA AND THE PACIFIC</i>		<i>ODS</i>	<i>350</i>	<i>COST</i>	<i>\$4,720,000</i>	<i>NUMBER OF PROJECTS: 1</i>	
<i>TOTAL FOR OTHER SECTOR</i>		<i>ODS</i>	<i>350</i>	<i>COST</i>	<i>\$4,720,000</i>	<i>NUMBER OF PROJECTS: 1</i>	