



United Nations Environment Programme



Distr.
LIMITED



UNEP/OzL.Pro/ExCom/6/3/Corr.3
26 February 1992

ORIGINAL: ENGLISH

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

Sixth Meeting
Montreal, 27-28 February 1992

Corrigendum

CONSOLIDATED WORK PROGRAMMES OF UNDP, UNEP, AND THE WORLD BANK

This corrigendum is being issued to replace:

Overview

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OVERVIEW

Introduction

1. Pursuant to the request of The Executive Committee (UNEP/OzL.Pro/ExCom/5/16, paragraph 46), The Fund Secretariat prepared this document from information provided by the implementing agencies in their 1992 Work Programmes. This 1992 Consolidated Work Programme Document incorporates the "sectoral approach" through the presentation of the activities by sector, country, and region with associated costs.

2. The format of the fact sheets included in the Consolidated Document was developed by The Fund Secretariat. Data from the draft work programmes were compiled into fact sheets listing activities and budgets by sector and agency for each country covered by the Work Programmes. The fact sheets were submitted to the implementing agencies for review and updating. A synthesis was subsequently made from these fact sheets which yielded the information included in Tables 1 - 5.

3. The components of the document were determined at the Third Co-Ordination Meeting of the implementing agencies and The Fund Secretariat and include the following sections:

- . Overview
- . Budget Summary
- . Activity Tables by Sector and Region
- . Annex I - Country Activity Tables
- . Annex II - Agency Work Programmes

4. An account of all expenditures is presented in the Budget Summary. There are two sets of "Activity Tables." One provides an account of all activities/projects by sector, and the other, by country in Annex I. The individual Work Programmes of the implementing agencies are found in Annex II.

General

5. The cost of activities in the Work Programmes of the implementing agencies amounts to approximately \$105 million for 1992 activities: \$3.18 million for UNDP, \$1.92 million for UNEP, and about \$100 million for the World Bank. The Bank has emphasized that it is not requesting approval of the \$93.9 million budget for project financing in 1992.

6. By region, most of the budget is allocated to countries in Asia and the Pacific (\$56 million), followed by Latin America and the Caribbean (\$36 million), Africa (\$4 million), and Europe (\$4 million). By country, the two largest consuming nations, China and Brazil, receive

the two largest country allocations (about \$16 million each). The next largest allocations are for:

<u>Country</u>	<u>Allocation</u>	<u>ODS Consumption</u>
Thailand	\$15.8 million	7,500 MT
Malaysia	\$13.1 million	6,675 MT
The Philippines	\$10.5 million	4,150 MT
Venezuela	\$10.2 million	5,500 MT

Initial studies are foreseen for other comparatively high ODS-consuming countries such as Iran (4,400MT ODS), Argentina (4,000MT ODS), and Nigeria (3,500MT ODS). Civil unrest in Yugoslavia (7,400MT ODS) will preclude activities there in the short term.

Cross Sector Activities

7. The term, "cross sector," refers to activities that impact upon multiple sectors. Cross Sector activities include project financing; project preparation; country programmes; and multi-sectoral workshops, seminars, and public awareness projects. All of the World Bank and UNEP activities are found in this Cross Sector category (excluding Administrative Costs). About 23 percent of the UNDP budget is found in this category.

Country Programme Preparation

8. Country Programmes are important in the development of a co-ordinated approach to implementing the Montreal Protocol. Table 3, "Cross Sectors: Country Programmes," indicates that provisions are being made for the preparation and/or completion of 23 country programmes in CY92: 11 by the Bank (\$1.2 million), seven by UNDP (\$285,000), and six by UNEP (\$180,000). In most instances, additional funds are requested beyond that which was provided for the completion of these tasks in the CY91 budget.

Project Preparation and Financing

9. Almost \$2.1 million is requested for the completion of project preparation studies in 14 countries; 12 of the 14 countries were funded in the CY91 budget. Additional funding requests in CY92 (\$1.8 million) exceed the amount allocated for their completion in CY91 (\$1 million).

10. The largest amount of funds was allocated for the twelve project financing programmes of the World Bank. All but \$6.1 million of the approximate \$100 million Bank budget will be allocated for project financing with the remainder going to country programmes, project

preparation, and \$1.4 million¹ for demonstration and engineering projects. For the most part, these activities have been listed under the category of cross sector projects. Per Bank request, the investment projects for China are included by sector for projects totalling \$14,338,000.²

11. As shown in Table 4, "Cross Sectors: Project Preparation and Project Financing," the majority of project financing is for the Asia and the Pacific region (\$54.4 million) with China and Thailand receiving approximately \$15 million each. The country projected to receive the largest allocation of project financing funds is Brazil with \$16 million.

Workshops, Seminars, and Public Awareness

12. Table 5, "Cross Sectors: Workshops and Seminars," shows the distribution of workshops and seminars by region and country. The UNDP budget provides funds for 14 countries to participate in international/regional meetings at a total cost of \$140,000. It also allocates funds for three national policy-maker workshops (\$45,000), two study tours for officials and industry (\$50,000), and institutional strengthening linked to demonstration/investment projects (\$150,000). UNEP plans to convene its fourth regional workshop in Africa. UNEP is also requesting \$365,000 for support of training activities for unspecified Article 5 countries. Public awareness and information dissemination will be provided through the \$750,000 request from UNEP for information exchange activities.

Sector Activities

13. As mentioned above, most of the funds in the CY92 budget request are for project financing. Since few descriptions of these projects are linked to a budgetary figure or an industrial sector, the sectoral analysis is very limited. Projects identified as pertaining to one industrial sector represent only 15.7 percent of the total amount of funding requested in the Work Programme budgets. In fact, without the \$14.9 million allocated by sector for China, less than \$1.2 million is allocated by sector in total.

14. The 1992 Work Programmes provide for co-ordination and technical assistance on a sectoral basis. UNDP is planning to retain 'sector experts' at a total cost of \$460,000. Sector experts will co-ordinate activities with other implementing agencies, governments and industry, organize demonstration projects, assist in the design of national programmes and feasibility studies, and prepare training and outreach programmes.

¹ This amount was actually disbursed under the 1991 Work Programme.

² Since the Bank's Work Programme requests \$15 million for investment projects, the \$662,000 unidentified balance is included in the cross sector category.

15. The following is a brief analysis of the activities of each sector:

Aerosols

16. More than \$6.9 million is requested in this sector. The \$6.8 million investment project in Shanghai represents the lion's share of funds requested for this sector. An investment project for Ecuador has been identified in the Bank's Work Programme. UNDP is planning to conduct technical assistance and demonstration projects in China. UNDP is also requesting \$60,000 for a sector expert and forecasting technical assistance for the design and implementation of pre-investment feasibility studies in seven countries. A hydrocarbon deodorization feasibility study is planned for Jordan.

Refrigeration

17. Projects in this sector are planned for three countries. The majority of the investment projects are for recovery and recycling. Five refrigeration recovery, recycling, and redesign projects are envisioned for Egypt but the funding is part of the Bank's project financing and thus their costs are not known. A prefeasibility study on the commercialization of portable recycling equipment for domestic refrigeration is planned for Brazil through UNDP assistance.

18. Most of the funds requested in this sector will also go to China. A \$1.75 million investment project in Nanjing to convert from CFCs to HCFC-22 is foreseen. Projects such as the installation of purge units for chillers are planned. Quality control testing projects on CFC-12 substitutes are foreseen for China. Also, a feasibility study on the application of CFC-134a technology in MACs in China will be undertaken by UNDP.

19. Training materials on the use of recovery and recycling equipment will be developed by UNDP in connection with planned investment projects. Regional programmes on centrifugal chillers are planned for East Asia, South Asia, Africa, Latin America, and the Caribbean at a cost of \$40,000 each. Regional training in MACs is planned for Latin America, Middle East, and Asia. UNEP workshops planned for Latin America and Africa will provide technical information to participants from these two regions in this sector.

Foams

20. Over \$5 million is requested for this sector. Two investment projects in China account for most of the funding. One project will reduce the CFC formulation in polyurethane insulation by 50 percent at a cost of about \$3.6 million. The other Chinese investment project is for the conversion from CFCs to butane in polystyrene and polyethylene packaging. This project is projected to cost \$960,000. Projects are, nevertheless, foreseen in the Philippines and Tunisia in this sector as part of the Bank's project financing. Demonstration programmes on CFC substitutes in polyurethane foams are foreseen in Latin America, and one for Africa and the

Middle East. UNEP workshops planned for Latin America and Africa will provide technical information to participants from these two regions in this sector. Two consultants are requested for this sector by UNDP at a cost of \$100,000.

Solvents

21. Only \$110,000 is requested for this sector with \$70,000 allocated for a consultant. A feasibility study on the phase-out of CFC-113 in the electronics industry in China is anticipated. A UNDP sector expert will be assigned, among other things, to provide technical assistance to China and other interested Article 5 countries. UNEP workshops planned for Latin America and Africa will provide technical information to participants from these two regions in this sector. UNEP workshops planned for Latin America and Africa will provide technical information to participants from these two regions in this sector.

Halons

22. Three investment projects are planned by the World Bank in the sector for China. Two projects will be for the conversion from Halon 1211 and the third, for Halon 1211 production. The cost for the three projects is \$1.4 million. Other sector activities pertain primarily to training and workshops. Inventory/standards projects in China and Mexico will be undertaken by UNDP which will also stage two regional workshops in Latin America and the Middle East. UNEP plans to convene its fourth regional workshop in Africa. UNEP is also requesting \$365,000 for support of training activities for unspecified Article 5 countries.

Regional and Demonstration Activities

23. Regional activities involve training programmes and demonstration projects for replication in other countries. Most regional activities involve training workshops such as the African workshop planned by UNEP and patterned after the two workshops already staged by UNEP during 1991. UNEP's work programme indicates that it will also assist other Agencies in their training programmes.

24. **Some projects are slated as model projects for replication in other countries. The following demonstration projects are candidates for replication elsewhere:**

- . The Mexican CFC-12 aerosol conversion to hydrocarbons project and associated safety program (funded in CY91 World Bank Work Programme);
- . Training materials developed for the Mexican mobile air conditioning training programme (funded in CY91 World Bank Work Programme);
- . Refrigeration recovery, recycling, and redesign projects are envisioned for Egypt and China;
- . A training workshop for service managers and technicians for centrifugal chillers and domestic refrigeration planned for China;
- . The Malaysian and Mexican halon recycling projects; and,
- . The Thai solvent substitution project.

Table 1

BUDGET SUMMARY (US \$)

Region Country	ODS (Mton)	Sector Budget (SB)						TOTAL COST	SB Breakdown by Agency		
		Cross sector	Aerosols	Foams	Halons	Refrig.	Solvents		UNDP	UNEP	World Bank
AFRICA											
Burkina F.		30,000						30,000		30,000	
Botswana		30,000						30,000		30,000	
Cameroon	175	30,000						30,000		30,000	
Egypt	1,830	3,025,353						3,025,353			3,025,353
Gambia		30,000						30,000		30,000	
Ghana	140	10,000						10,000	10,000		
Kenya	420	35,000						35,000	35,000		
Malawi		30,000						30,000		30,000	
Nigeria	3,500	425,333						425,333	10,000		415,333
Togo	300	30,000						30,000		30,000	
Tunisia	720	175,000						175,000			175,000
Uganda											
Zambia											
Region		210,000		52,500		80,000		342,500	132,500	210,000	
Subtotal	7,085	4,080,886		52,500		80,000		4,193,386	187,500	390,000	3,615,886
ASIA AND THE PACIFIC											
Bangladesh	200	35,000						35,000	35,000		
China	40,000	952,000	6,875,000	4,803,000	1,430,000	1,935,000	40,000	16,035,000	855,000		15,180,000
Fiji	70										
Iran	4,400	235,000						235,000	45,000		190,000
Jordan	500	80,000	12,000					92,000	22,000		70,000
Malaysia	6,875	13,120,000						13,120,000			13,120,000
Maldives											
Philippines	4,150	10,510,000						10,510,000	10,000		10,500,000
Sri Lanka	100	40,000						40,000	40,000		
Syrian A. R.											
Thailand	7,500	15,760,000						15,760,000	10,000		15,750,000
Region				52,500		125,000		177,500	177,500		
Subtotal	83,595	40,732,000	6,887,000	4,855,500	1,430,000	2,060,000	40,000	54,904,500	1,194,500		54,810,000
EUROPE											
Turkey	4,267	3,741,202						3,741,202	10,000		3,731,202
Yugoslavia	7,400										
Region											
Subtotal	11,667	3,741,202						3,741,202	10,000		3,731,202
LATIN AMERICA AND THE CARIBBEAN											
Argentina	4,000	149,337						149,337			149,337
Brazil	10,647	16,325,666				15,000		16,340,666	25,000		16,315,666
Chile	1,030	1,191,878				25,000		1,216,878	25,000		1,191,878
Costa Rica	300	20,000						20,000	20,000		
Ecuador	700	4,171,128						4,171,128			4,171,128
Guatemala		30,000						30,000		30,000	
Mexico	8,388	4,292,076			25,000			4,317,076	25,000		4,292,076
Panama		30,000						30,000		30,000	
Trinidad & T	380	25,000						25,000	25,000		
Uruguay	430	10,000						10,000	10,000		
Venezuela	5,500	10,178,649						10,178,649	10,000		10,168,649
Region				52,500	60,000	125,000		237,500	237,500		
Subtotal	31,375	36,423,734		52,500	85,000	185,000		36,726,234	377,500	60,000	36,288,734
Other Costs											
Experts		35,000	60,000	100,000	80,000	150,000	70,000	495,000	460,000	35,000	
Other act(*)		1,310,000			60,000	45,000		1,415,000	200,000	1,215,000	
Subtotal		1,345,000	60,000	100,000	140,000	195,000	70,000	1,810,000	660,000	1,250,000	
Tot. sector	113,722	86,302,622	6,947,000	5,060,500	1,655,000	2,500,000	110,000	102,575,122	2,429,500	1,700,000	98,445,622
ADMINISTRATIVE COST								2,319,468	749,895	221,000	1,347,550
Total Agency Cost									3,179,395	1,921,000	99,793,172
TOTAL COST								104,894,590			

(*) Other activities refer to budgetary allocations that are not specific to a geographic unit. They include workshops, information services, and networking. The total cost includes about US \$79.4 for most of the project financing proposals by the World Bank, which is listed under cross sector for lack of information on its specific sector distribution

Table 2

CROSS SECTORS: BUDGET SUMMARY (US \$)

Region Country	ODS (Mton)	Agencies			Total cost
		UNDP	UNEP	WB	
AFRICA					
Burkina Faso			30,000		30,000
Botswana			30,000		30,000
Cameroon	175		30,000		30,000
Egypt	1,830			3,025,353	3,025,353
Gambia			30,000		30,000
Ghana	140	10,000			10,000
Kenya	420	35,000			35,000
Malawi			30,000		30,000
Nigeria	3,500	10,000		415,333	425,333
Togo	300		30,000		30,000
Tunisia	720			175,000	175,000
Uganda					
Zambia					
Region			210,000		210,000
Subtotal	7,085	55,000	390,000	3,615,686	4,060,686
ASIA AND THE PACIFIC					
Bangladesh	200	35,000			35,000
China	40,000	310,000		15,180,000	15,490,000
Fiji	70				
Iran	4,400	45,000		190,000	235,000
Jordan	500	10,000		70,000	80,000
Malaysia	6,675			13,120,000	13,120,000
Maldives					
Philippines	4,150	10,000		10,500,000	10,510,000
Sri Lanka	100	40,000			40,000
Syrian Arab Rep.					
Thailand	7,500	10,000		15,750,000	15,760,000
Region					
Subtotal	63,595	460,000		54,810,000	55,270,000
EUROPE					
Turkey	4,267	10,000		3,731,202	3,741,202
Yugoslavia	7,400			170,000	170,000
Region					
Subtotal	11,667	10,000		3,901,202	3,911,202
LATIN AMERICA AND THE CARIBBEAN					
Argentina	4,000	25,000		149,337	174,337
Brazil	10,647	10,000		16,315,666	16,325,666
Chile	1,030			1,191,878	1,191,878
Costa Rica	300	20,000			20,000
Ecuador	700			4,171,128	4,171,128
Guatemala			30,000		30,000
Mexico	8,388			4,292,076	4,292,076
Panama			30,000		30,000
Trinidad & Tobago	380	25,000			25,000
Uruguay	430	10,000			10,000
Venezuela	5,500	10,000		10,168,649	10,178,649
Region					
Subtotal	31,375	100,000	60,000	36,288,734	36,448,734
ALL REGIONS					
Subtotal (*)		95,000	1,250,000		1,345,000
Sector total	113,722	720,000	1,700,000	98,615,622	101,035,622

(*) Includes 2 study tours; and 3 national policy workshops, by UNDP. It also includes information exchange; training/networking; and an advisory group meeting by UNEP

Table 3

CROSS SECTORS: COUNTRY PROGRAMME

Region Country	ODS (Mton)	Project description	Timetable	Agency	Cost (US \$)		
					Project	Country total	\$/Mton
AFRICA							
Burkina Faso		Country Programme		UNEP	30,000	30,000	
Botswana		Country Programme		UNEP	30,000	30,000	
Cameroon	175	Country Programme		UNEP	30,000	30,000	171
Egypt	1,830	Country Programme	04/91-01/92	WB	27,526	27,526	15
Gambia		Country Programme		UNEP	30,000	30,000	
Ghana	140	Country Programme		UNEP	(*)		
Kenya	420	Country Programme formulation		UNDP	25,000	25,000	60
Malawi		Country Programme		UNEP	30,000	30,000	
Nigeria	3,500	Country Programme	07/92-04/93	WB	271,255	271,255	78
Togo	300	Country Programme		UNEP	30,000	30,000	100
Tunisia	720	Country Programme	01/92-08/93	WB	125,000	125,000	174
Uganda		Country Programme		UNEP	(*)		
Zambia		Country Programme		UNEP	(*)		
Subtotal	7,085					628,781	
ASIA AND THE PACIFIC							
Bangladesh	200	Country Programme formulation		UNDP	25,000	25,000	125
China	40,000	Country Programme formulation		UNDP	150,000	300,000	8
		Clearing house for NEPA		UNDP	150,000		
Fiji	70	Country Programme		UNEP	(*)		
Iran	4,400	Country Programme	04/92-07/92	WB	150,000	185,000	42
		Country Programme formulation		UNDP	35,000		
Jordan	500	Country Programme	01/91-04/92	WB	70,000	70,000	140
Malaysia	6,675						
Maldives		Country Programme		UNEP	(*)		
Philippines	4,150						
Sri Lanka	100	Country Programme, reconn. study		UNDP	30,000	30,000	300
Syrian Arab Rep.		Country Programme		UNEP	(*)		
Thailand	7,500	Country Programme		WB	160,000	160,000	21
Subtotal	63,595					260,000	
EUROPE							
Turkey	4,257	Country Programme		WB	13,515	13,515	3
Yugoslavia	7,400						
Subtotal	11,667					13,515	
LATIN AMERICA AND THE CARIBBEAN							
Argentina	4,000	Country Programme	01/92-03/93	WB	149,337	149,337	37
		Assistance Country Programme prep.		UNDP	(*)		
Brazil	10,647	Country Programme	02/91-07/92	WB	123,788	123,788	12
Chile	1,030	Country Programme		WB	(*)		
Costa Rica	300	Country Programme		UNDP	20,000	20,000	67
Ecuador	700	Country Programme		WB	76,102	76,102	109
Guatemala		Country Programme		UNEP	30,000	30,000	
Mexico	8,388						
Panama		Country Programme		UNEP	30,000	30,000	
Trinidad & Tobago	380	Country Programme (**)		UNDP	25,000	25,000	66
Uruguay	430	Country Programme		UNDP	(*)		
Venezuela	5,500	Country Programme	02/92-03/92	WB	61,591	61,591	11
Subtotal	31,375					515,818	
Sector total	113,722					1,418,114	

(*) Allocations approved in 1991 Work Programmes.

(**) \$53,000 were allocated in 1991.

Table 4

CROSS SECTORS: PROJECT PREPARATION, PROJECT FINANCING (*)

Region Country	ODS (Mton)	Project description	Timetable	Agency	Cost (US \$)	
					Project	Country total
AFRICA						
Burkina Faso						
Botswana						
Cameroon	175					
Egypt	1,830	Project preparation Project financing Demonstration	03/92-06/92	WB WB WB	227,827 2,400,000 370,000	2,997,827
Gambia						
Ghana	140					
Kenya	420					
Malawi						
Nigeria	3,500	Project preparation	09/92-12/92	WB	144,078	144,078
Togo	300					
Tunisia	720	Project preparation	06/92-11/92	WB	50,000	50,000
Uganda						
Zambia						
Subtotal	7,085					3,191,905
ASIA AND THE PACIFIC						
Bangladesh	200					
China	40,000	Project preparation Project financing		WB WB	180,000 662,000	842,000
Fiji	70					
Iran	4,400	Project preparation	06/92-09/92	WB	40,000	40,000
Jordan	500					
Malaysia	6,675	Project preparation Project financing		WB WB	120,000 13,000,000	13,120,000
Maldives						
Philippines	4,150	Project preparation Project financing Engineering design		WB WB WB	100,000 10,000,000 400,000	10,500,000
Sri Lanka	100					
Syrian Arab Rep.						
Thailand	7,500	Project preparation Project financing Engineering design		WB WB WB	120,000 15,000,000 470,000	15,590,000
Subtotal	63,595					54,430,000
EUROPE						
Turkey	4,267	Project preparation Project financing		WB WB	217,687 3,500,000	3,717,687
Yugoslavia	7,400					
Subtotal	11,667					3,717,687
LATIN AMERICA AND THE CARIBBEAN						
Argentina	4,000					
Brazil	10,647	Project preparation Project financing	03/92-09/92	WB WB	191,878 16,000,000	16,191,878
Chile	1,030	Project preparation Project financing	02/92-05/92 02/92-12/92	WB WB	191,878 1,000,000	1,191,878
Costa Rica	300					
Ecuador	700	Project preparation Project financing	07/92-12/92	WB WB	95,026 4,000,000	4,095,026
Guatemala						
Mexico	8,388	Project preparation Project financing	11/91	WB WB	292,076 4,000,000	4,292,076
Panama						
Trinidad & Tobago	380					
Uruguay	430					
Venezuela	5,500	Project preparation Project financing	07/92-12/92	WB WB	107,058 10,000,000	10,107,058
Subtotal	31,375					35,877,916
Sector total	113,722					97,217,508

(*) Undetermined.

CROSS SECTORS: WORKSHOPS AND SEMINARS

Region Country	ODS (Mton)	Project description	Timetable	Agency	Cost (US \$)	
					Project	Country total
AFRICA						
Burkina Faso						
Botswana						
Cameroon	175					
Egypt	1,830					
Gambia						
Ghana	140	Participation intern./regional meetings		UNDP	10,000	10,000
Kenya	420	Participation intern./regional meetings		UNDP	10,000	10,000
Malawi						
Nigeria	3,500	Participation intern./regional meetings		UNDP	10,000	10,000
Togo	300					
Tunisia	720					
Uganda						
Zambia						
Region		Regional workshop		UNEP	210,000	210,000
Subtotal	7,085					240,000
ASIA AND THE PACIFIC						
Bangladesh	200	Participation intern./regional meetings		UNDP	10,000	10,000
China	40,000	Participation intern./regional meetings		UNDP	10,000	10,000
Fiji	70					
Iran	4,400	Participation intern./regional meetings		UNDP	10,000	10,000
Jordan	500	Participation intern./regional meetings		UNDP	10,000	10,000
Malaysia	6,675					
Maldives						
Philippines	4,150	Participation intern./regional meetings		UNDP	10,000	10,000
Sri Lanka	100	Participation intern./regional meetings		UNDP	10,000	10,000
Syrian Arab Rep.						
Thailand	7,500	Participation intern./regional meetings		UNDP	10,000	10,000
Region						
Subtotal	63,595					40,000
EUROPE						
Turkey	4,267	Participation intern./regional meetings		UNDP	10,000	10,000
Yugoslavia	7,400					
Region						
Subtotal	11,667					10,000
LATIN AMERICA AND THE CARIBBEAN						
Argentina	4,000					
Brazil	10,647	Participation intern./regional meetings		UNDP	10,000	10,000
Chile	1,030					
Costa Rica	300					
Ecuador	700					
Guatemala						
Mexico	8,388					
Panama						
Trinidad & Tobago	380					
Uruguay	430	Participation intern./regional meetings		UNDP	10,000	10,000
Venezuela	5,500	Participation intern./regional meetings		UNDP	10,000	10,000
Region		Regional workshop	May 1992	UNEP	(*)	
Subtotal	31,375					30,000
ALL REGIONS						
		Advisory group meeting		UNEP	75,000	75,000
Subtotal						75,000
Sector total	113,722					395,000

(*) Allocation approved in UNEP 1991 Work Programme.

Table 6

AEROSOLS

Region Country	ODS (Mton)	Project description	Timetable	Agency	Cost (US \$)	
					Project	Country total
AFRICA						
Burkina Faso						
Botswana						
Cameroon	175					
Egypt	1,830					
Gambia						
Ghana	140					
Kenya	420					
Malawi						
Nigeria	3,500					
Togo	300					
Tunisia	720	Conversion from CFC to LPG		WB		
Uganda						
Zambia						
Region						
Subtotal	7,085					
ASIA AND THE PACIFIC						
Bangladesh	200					
China *	40,000	(see below)				6,875,000
Fiji	70					
Iran	4,400					
Jordan	500	Feasib. study: deodorization of local gas		UNDP	12,000	12,000
Malaysia	6,675					
Maldives						
Philippines	4,150					
Sri Lanka	100					
Syrian Arab Rep.						
Thailand	7,500					
Region						
Subtotal	63,595					87,000
EUROPE						
Turkey	4,267					
Yugoslavia	7,400					
Region						
Subtotal	11,667					
LATIN AMERICA AND THE CARIBBEAN						
Argentina	4,000					
Brazil	10,647					
Chile	1,030					
Costa Rica	300					
Ecuador	700					
Guatemala						
Mexico	8,388					
Panama						
Trinidad & Tobago	380					
Uruguay	430					
Venezuela	5,500					
Region						
Subtotal	31,375					
Support costs						
		Expert retainer fees, travel, etc.		UNDP	60,000	60,000
Subtotal						60,000
Sector total	113,722					147,000

*Demonstration Project
Conversion to LPG

UNDP 75,000
WB 6,800,000

Table 7

FOAMS

Region Country	ODS (Mton)	Project description	Timetable	Agency	Cost (US \$)	
					Project	Country total
AFRICA						
Burkina Faso						
Botswana						
Cameroon	175					
Egypt	1,830					
Gambia						
Ghana	140					
Kenya	420					
Malawi						
Nigeria	3,500					
Togo	300					
Tunisia	720	Non--CFC blowing agent		WB		
Uganda						
Zambia						
Region		Low--CFC foam demonstration program		UNDP	52,500	52,500
Subtotal	7,085					52,500
ASIA AND THE PACIFIC						
Bangladesh	200					
China *	40,000	Tech. assistance demo. plant: rigid foam		UNDP	70,000	4,803,000
		Tech assistance demo plant: flexible		UNDP	70,000	
		Quality control test CFC-11 sub. tech		UNDP	65,000	
Fiji	70					
Iran	4,400					
Jordan	500					
Malaysia	6,675					
Maldives						
Philippines	4,150					
Sri Lanka	100					
Syrian Arab Rep.						
Thailand	7,500					
Region		Low--CFC foam demonstration program		UNDP	52,500	52,500
Subtotal	63,595					257,500
EUROPE						
Turkey	4,267					
Yugoslavia	7,400					
Region						
Subtotal	11,667					
LATIN AMERICA AND THE CARIBBEAN						
Argentina	4,000					
Brazil	10,647					
Chile	1,030					
Costa Rica	300					
Ecuador	700					
Guatemala						
Mexico	8,388					
Panama						
Trinidad & Tobago	380					
Uruguay	430					
Venezuela	5,500	Substitution of CFC12 as blowing agent		WB		
Region		Low--CFC foam demonstration program		UNDP	52,500	52,500
Subtotal	31,375					52,500
Support costs						
		Expert retainer fees, travel, etc.		UNDP	100,000	100,000
Subtotal						100,000
Sector total	113,722					462,500

*Polyurethane Insulation

WB 3,638,000

Polysterene and Polyethelene packaging

WB 960,000

Table 8

HALONS

Region Country	ODS (Mton)	Project description	Timetable	Agency	Cost (US \$)	
					Project	Country total
AFRICA						
Burkina Faso						
Botswana						
Cameroon	175					
Egypt	1,830	Demo. prog. on reduction/recycling (*)		UNDP	15,000	15,000
Gambia						
Ghana	140					
Kenya	420					
Malawi						
Nigeria	3,500					
Togo	300					
Tunisia	720					
Uganda						
Zambia						
Region						
Subtotal	7,085					15,000
ASIA AND THE PACIFIC						
Bangladesh	200					
China **	40,000	Preparatory study: inventory, standards		UNDP	40,000	1,430,000
Fiji	70					
Iran	4,400	Demo. prog. on reduction/recycling (*)		UNDP	15,000	15,000
Jordan	500	Demo. prog. on reduction/recycling (*)		UNDP	15,000	15,000
Malaysia	6,675					
Maldives						
Philippines	4,150					
Sri Lanka	100					
Syrian Arab Rep.						
Thailand	7,500					
Region						
Subtotal	63,595					70,000
EUROPE						
Turkey	4,267	Demo. prog. on reduction/recycling (*)		UNDP	15,000	15,000
Yugoslavia	7,400					
Region						
Subtotal	11,667					15,000
LATIN AMERICA AND THE CARIBBEAN						
Argentina	4,000					
Brazil	10,647					
Chile	1,030					
Costa Rica	300					
Ecuador	700					
Guatemala						
Mexico	8,388	Inventory, revision of existing standards		UNDP	25,000	25,000
Panama						
Trinidad & Tobago	380					
Uruguay	430					
Venezuela	5,500					
Region		Demo. program on reduction/recycling		UNDP	60,000	60,000
Subtotal	31,375					85,000
Support costs						
		Expert retainer fees, travel, etc.		UNDP	80,000	80,000
Subtotal						80,000
Sector total	113,722					265,000

(*) For Middle East countries.

**Zhejiang conversion to ABC and AFT Powder

Foshan emission reduction

Beijing production ABC powder

WB 720,000

WB 200,000

WB 470,000

Table 9

REFRIGERATION

Region Country	ODS (Mton)	Project description	Timetable	Agency	Cost (US \$)	
					Project	Country total
AFRICA						
Burkina Faso						
Botswana						
Cameroon	175					
Egypt	1,830	Demo. programme on recycling (*)		UNDP	11,250	11,250
Gambia						
Ghana	140					
Kenya	420					
Malawi						
Nigeria	3,500					
Togo	300					
Tunisia	720	Improve service procedure Modified foam insulation		WB WB		
Uganda						
Zambia						
Region		2 Demo prog on com./Industrial chillers		UNDP	80,000	80,000
Subtotal	7,085					91,250
ASIA AND THE PACIFIC						
Bangladesh	200					
China **	40,000	Feas.: application of HFC134a in MAC Demo: technician service, home/chiller Quality control CFC-12 substitution		UNDP UNDP UNDP	40,000 75,000 70,000	1,935,000
Fiji	70					
Iran	4,400	Demo. programme on recycling (*)		UNDP	11,250	11,250
Jordan	500	Demo. programme on recycling (*)		UNDP	11,250	11,250
Malaysia	6,675					
Maldives						
Philippines	4,150					
Sri Lanka	100					
Syrian Arab Rep.						
Thailand	7,500					
Region		Demo. programme on recycling 2 Demo prog on com./Industrial chillers		UNDP UNDP	45,000 80,000	125,000
Subtotal	63,595					332,500
EUROPE						
Turkey	4,267	Demo. programme on recycling (*) Recovery and recycling facility Modified foam insulation Recovery and recycling of CFC-12		UNDP WB WB WB	11,250	11,250
Yugoslavia	7,400					
Region						
Subtotal	11,667					11,250
LATIN AMERICA AND THE CARIBBEAN						
Argentina	4,000					
Brazil	10,647	Prefeas: recycling equip for home ref.		UNDP	15,000	15,000
Chile	1,030	Model demo prog. for technician serv.		UNDP	25,000	25,000
Costa Rica	300					
Ecuador	700					
Guatemala						
Mexico	8,388					
Panama						
Trinidad & Tobago	380					
Uruguay	430					
Venezuela	5,500					
Region		Demo. programme on recycling 2 Demo prog on com./Industrial chillers		UNDP UNDP	45,000 80,000	125,000
Subtotal	31,375					165,000
Support costs						
		Expert retainer fees, travel, etc.		UNDP	150,000	150,000
Subtotal						150,000
Sector total	113,722					750,000

(*) For Middle East countries.

**Nanjing CFC conversion HCFC-22

WB 1,750,000

Table 10

SOLVENTS

Region Country	ODS (Mton)	Project description	Timetable	Agency	Cost (US \$)	
					Project	Country tota
AFRICA						
Burkina Faso						
Botswana						
Cameroon	175					
Egypt	1,830					
Gambia						
Ghana	140					
Kenya	420					
Malawi						
Nigeria	3,500					
Togo	300					
Tunisia	720					
Uganda						
Zambia						
Region						
Subtotal	7,085					
ASIA AND THE PACIFIC						
Bangladesh	200					
China	40,000	Feasib. study: phase-out CFC-113		UNDP	40,000	40,000
Fiji	70					
Iran	4,400					
Jordan	500					
Malaysia	6,675					
Maldives						
Philippines	4,150					
Sri Lanka	100					
Syrian Arab Rep.						
Thailand	7,500					
Region						
Subtotal	63,595					40,000
EUROPE						
Turkey	4,267					
Yugoslavia	7,400					
Region						
Subtotal	11,667					
LATIN AMERICA AND THE CARIBBEAN						
Argentina	4,000					
Brazil	10,647					
Chile	1,030					
Costa Rica	300					
Ecuador	700					
Guatemala						
Mexico	8,388					
Panama						
Trinidad & Tobago	380					
Uruguay	430					
Venezuela	5,500					
Region						
Subtotal	31,375					
Support costs						
		Expert retainer fees, travel, etc.		UNDP	70,000	70,000
Subtotal						70,000
Sector total	113,722					110,000

CHINA

ODS consumption in 1990						
ODS	Aerosols	Foams	Halons	Refriger.	Solvents	TOTAL
M ton			4,000			40,000
Per cent (%)			10.00			

Source: UNDP, May 1990, May 1990, UNDP.

ODS consumption in 1992						
ODS	Aerosols	Foams	Halons	Refriger.	Solvents	TOTAL
M ton			4,000			40,000
Per cent (%)			10.00			

Source:

SECTOR BY SECTOR ACTIVITIES

SECTOR	WORLD BANK				UNDP				UNEP				TOTAL COST
	Project description	Timetable	Impacts	Cost	Project description	Timetable	Impacts	Cost	Project description	Timetable	Impacts	Cost	
Cross sectors					Country Programme form.			150,000					
	Projects preparation (*)			180,000	Clearing House for NEPA		Coordination	150,000					
	Project financing (*)			462,000	Participat. int./reg. meetings			10,000					
				642,000				310,000					
Aerosols	Conversion to LPG			6,800,000	Demonstration project			75,000					852,000
				6,800,000				75,000					
Foams	Polyurethane insulation			3,638,000	Tech assistance demo plant in rigid foam			70,000					4,003,000
	Polystyrene and polyethylene packaging			960,000	Tech assistance demo plant in flexible foam			70,000					
					Quality control test. CFC11 sub. home refrig. product.			65,000					
				4,558,000				205,000					
Halons	Zhejiang conversion to ABC and AFT powder			720,000	Prep study for halon control inventory, standard, subst.			40,000					1,430,000
	Foshan emission reduction			200,000									
	Beijing prod.: ABC powder			470,000									
				1,390,000				40,000					
Refriger.	Nanjing CFC conversion to HCFC-22			1,750,000	Feas-study HFC-134a applicat./recycling in MAC			40,000					1,835,000
					Demo. program for technic. servicing chillers/home refrig.			75,000					
					Quality control CFC12 sub. Flammab. tes			70,000					
				1,750,000				185,000					
Solvents					Feas-study: phase-out CFC113 in 4 product. lines		Evaluation	40,000					40,000
								40,000					
TOTAL				15,180,000				855,000					16,035,000

OTHER AGENCIES: FINIDA (Finnish Government)

Country study: Available, May 1990 (Cost \$53,230)

(*) Undetermined.