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Implementation of the Montreal Protocol

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Montreal, 26-28 July 1995

COUNTRY PROGRAMME: PERU

This document consists of:

- Transmittal Letter from the Government of Peru
- Country Programme Cover Sheet
- Country Programme

COUNTRY PROGRAM COVER PAGE

Country:
Local Agency:
Implementing Agency:
Period covered by the Country Programme:

Peru
Grupo de Trabajo Ozono Perú
UNEP. IE
1995-1997

1. Phase-out Schedule

Substance	ODS Consumption Tons ODP (1993)	Cumulative consumption until elimination		
		Article 5 Phase-out Schedule ODP Tonnes	Accelerated Phase-out Schedule ODP Tonnes	Final Year for Consumption Phase-out
CFC 11	68.9	1458.1	774.0	2009
CFC 12	208.7	5011.7	2628.7	2009
CFC 113	1.28	26.9	14.28	2010
CFC 114 y 115	0.03	0.63	0.34	2010
CCI 4	14.74	309.7	158.8	2006
MCF	3.4	71.4	40.7	2008
Total	297.36	6878.5	3616.8	

2. Government Action Plan

Action	Description	Startup Date	Sector(s)
GOVERNMENT ACTION			
Regulations and Monitoring	Legislation, Public Awareness Program, Workshops, Other	End of 1995	All
Project	Institutional Strengthening. Creation of OTO	End of 1995	All
INDUSTRIAL SECTOR ACTION			
Project	Training	1996	Refrigeration
Project	Training	1996	Air conditioning
Project	Reconversion Study	1996	CCI4
Project	Reconversion Study	1996	MCF
Project	Halon Inventories Handling	1996	Halons

3. PROJECT SUMMARY

Proj.#	Title	Purpose	Sector(s)	US\$ Cost Estimate		
				1995	1996	1997
PI.1	Institutional Strengthening	Ozone Technical Office	All	66,000	44,000	44,000
P1.	Training*	Consumption Saving	Refrig.			
P2.	Training*	Consumption Saving	A/C			
P3.	Project Design	Project	CCl4	30,000		
P4.	Project Design	Project	MCF	30,000		
P5.	Inventories Management	Optimize Use	Halons	20,000		
	Total Annual Cost			146,000	44,000	44,000

* Only indicative

4. POTENTIAL PHASE-OUT INVESTMENT PROJECTS

COMPANY	Activity	Consumption (MT)	Estimated incremental cost based on cost-effectiveness thresholds adopted at 16th Excom
Cometa	Domestic refrigerator manufacturing	1.6	22016
Formetal	Domestic refrigerator manufacturing	2.1	28896
Master Service	Domestic refrigerator manufacturing	2.1	28896
Precision	Domestic refrigerator manufacturing	5.5	75680

Note : prioritization of the projects and identification of remaining projects will be carried out once the Institutional Strengthening Project is operational

5.INDUSTRIAL PROJECTS (Approved and being formulated)

PROJECTS	Presentation to the MPMF	Beneficiary	Sector	Agency	Approved Amount (US \$)	Consumption (MT)
CFC 11 and 12 Elimination	Approved Dec 1994	Alfa S.A.	Domestic Refrigeration	UNDP	252,727	7.5
CFC 11 and 12 Elimination	Approved Dec 1994	Andina Ind.	Domestic Refrigeration	UNDP	229,816	5.7
CFC 11 and 12 Elimination	Approved Dec 1994	Coldex SA	Domestic Refrigeration	UNDP	748,966	74.2
CFC 11 and 12 Elimination	Approved Dec 1994	Lenche SA	Domestic Refrigeration	UNDP	201,433	6.11
CFC 11 and 12 Elimination	Approved Dec 1994	Industrias Reunidas	Domestic Refrigeration	UNDP	267,641	18.1
CFC 11 and 12 Elimination	Approved Dec 1994	Industrial Selva	Domestic Refrigeration	UNDP	412,098	38.3
CFC 12 Elimination	Being finalized	Promola	Packaging	UNDP	319, 162	40

Note: The amount approved per project is comprised of the following two amounts: that of the project implementation and the implementation costs to the agency.

COUNTRY PROGRAMME PERU

IMPLEMENTATION OF THE MONTREAL PROTOCOL

**NATIONAL PROGRAMME FOR
PHASING OUT THE CONSUMPTION OF
OZONE DEPLETING SUBSTANCES**

COUNTRY PROGRAMME WORKING GROUP

LIMA

June, 1995.

EXECUTIVE SUMMARY.

The Peruvian Government is clearly committed to comply with the agreements in the Montreal Protocol and phase-out ozone depleting substances (ODS) consumption.

Peru ratified the Vienna Convention on 7 April 1989 by its Legislative Resolution N° 24931 effective on 6 July 1989. The Montreal Protocol, together with the London Amendment, was approved by the Peruvian Congress on 29 March 1993 through Legislative Resolution N° 26178, it becoming effective on 29 June 1993.

Peru operates under paragraph 1 of Article 5; thus, it is a country eligible to obtain funding from the Multilateral Fund for the Implementation of the Montreal Protocol.

The present document supports the request for US\$ 234,000 to fund the initial years of the Programme. It is anticipated that the implementation of this first stage of the Programme will result in a substantial reduction of current level of consumption, if the projects included indicatively are also developed.

The Government of Peru intends to pursue the following phase-out schedule with respect to the base year ODS consumption:

- for Annex A, group I substances, 20% reduction between years 1995-1998, 56% reduction between years 1999-2002, 78% reduction between years 2003-2006, and complete phase-out by year 2007;
- for Annex B, group II substances, 13% reduction between years 1995-1998, 53% reduction between years 1999-2002, and complete phase-out by year 2003;
- for MCF, 67% reduction between years 1999-2002, 34% reduction between years 2003-2006 and complete phase-out by year 2007.

The economic development policy of the Peruvian Government is based on the participation of private enterprise and the public sector.

In keeping with the Guidelines from the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol, the present document describes the consumption of controlled substances in Peru, best estimates for use and a proposed programme for the phasing out of such consumption in line with the obligations established by the Protocol and accepted by our country.

To implement this programme the year 1993 has been taken as a baseline. For 1993 there is a better breakdown of information on ODS, as Peru adopted the NANDINA tariffs code in mid-1992. Consumption in Peru is 326.69 M.T., equivalent to 297.36 M.T. de ODP.

Peru neither produces nor exports any substance listed in the Montreal Protocol and, accordingly, its total consumption corresponds to actual imports.

It should be noted that Peru has chosen a programme which, through Government actions, does not affect market supply and demand for goods and services using ODS.

ODS are used in Peru mainly in the domestic refrigerator manufacturing process (foams and refrigerants), commercial freezer production and domestic refrigerator maintenance, for a total of 73% in the refrigeration sector. The utilization in air conditioning is approximately 6.19%, in foams 13.5%, with a remaining 7.3% for other uses such as cleaning and solvents.

With regard to Halons, it should be noted that Peru has ceased to import those substances from 1991. Halons imported before that date are mainly the 1211 type and, in a lesser proportion 1301 and 2402; there is a current inventory of approximately 3 M.T. mainly Halon 1211. For 1301, a substitute (under the trade name of INERGEN) is being imported and in some cases 1211 has been replaced by carbon dioxide for some applications.

The national annual production for 1993 and 1994 in the refrigeration sector was approximately 150 000 units (domestic freezers and refrigerators) which were destined to the local market.

An estimate of the current number of refrigerators and freezers indicates this to be 2 500 000, including imports and locally manufactured units.

It should be emphasized that conversion projects will be implemented in this sector for six companies representing 93.7% of domestic refrigerator and freezer production. It is foreseen that by 1998 the sector will have ceased to consume 121 M.T. of CFC 11 and 32.2 M.T. of CFC 12.

As to the foam sector, it should be noted that mattress and shoe manufacturing where foams are used has already converted, with the only exception of Productos Moldeados América S.A. - PROMOLA, for which the relevant project formulation is presently in the technical evaluation stage.

In the air conditioning sector, consumption for 1993 was 20.2 M.T. of CFC 12, representing 6.19 % of total ODS consumption. Sixty per cent of this consumption corresponds to central and window units and the remaining 40% (8 M.T.) applies to mobile air conditioning.

The automotive stock in the country is 30 000 units, 30% of which are equipped with air conditioning.

Collected data show that during 1993 13.4 M.T. of CFC-14 and 33.58 M.T. of $C_2H_3CL_3$ were imported, which were used mainly as solvents for the recovery and cleaning of fat and for dye and veterinary products manufacturing.

According to surveys and statements by the Chemical Industry Committee of the National Industries Association, chlorofluorocarbons are no longer used in Peru as aerosol propellants, having been replaced by butane - propane.

In order to control and monitor the tasks specified in the Country Programme, a Technical Ozone Office (OTO) will be created with headquarters located physically in the Environmental Monitoring and Control Branch, an executive body of the Vice-Ministry of Industries.

This Office will have a complement of two professional officers with financial support for their operations, and who will act as technical officers for the Government, being assigned to those duties for three years.

The role of OTO will be to coordinate with the Government Sector and Government bodies the projects presented in this Country Programme, for which purpose it shall liaise activities of different organizations and ministries connected with the subject.

It will also submit periodically data on ODS consumption to the Ozone Secretariat and report on the status of the projects included in the Country Programme to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol and to other bodies involved in the Montreal Protocol and the Vienna Convention.

In this context, the Peruvian Government will encourage voluntary agreements in the business sector to promote industrial conversion, publicize commitments related to the Protocol, promote public awareness, encourage training and technology transfer and support any effort contributing to the decrease of ODS consumption.

The companies most involved in import, consumption and use of ODS belong to the private sector, most of them with a high proportion of local ownership. The Peruvian Government has not foreseen the application of restrictive fiscal mechanisms or other measures affecting market transparency.

The Working Group for the implementation of the Country Programme for the phase-out of ODS consumption, aware that the annual national ODS consumption nears 326.69 tons, that the growth in national production created an even greater consumption in 1994 and that the use of those substances are applied basically in the refrigeration, foams, solvents, cleaning and air conditioning sectors, undertakes to channel its future operation through conventions and agreements with Government Organizations and the national private sector.

The application of economic policy mechanisms, such as quotas, tariffs and taxes, to achieve a reduction in consumption has not been foreseen.

This country programme is presenting to the Executive Committee, the following projects for approval and funding:

- Institutional strengthening project;
- Design of Investment Projects in the Carbon Tetrachloride sector;
- Design of Investment projects in the Methyl/Chloroform sector;
- Design of Halon Management project.

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1. INTRODUCTION.

1.0 GENERAL

Since August 1990 Peru applies a Programme for Stabilization and Structural Reform orientated to reduce inflation, correct imbalances in the external sector and establish the basis for a medium-term sustained economic growth.

The Stabilization Programme has been based in maintaining a strict fiscal and monetary discipline.

These economic policy measures have led to a reduction in inflation from 7,650 % in 1990 to 15.4 % in 1994.

The Structural Reforms are orientated to stabilize the economy, achieve a more efficient resource assignment and to transform the market mechanisms and private initiative in driving forces for production and investment. These reforms include, inter alia, the restructuring of the State sector, the trade liberalization, market liberalization, tax reform and incentives to foreign investment.

The Government has established an economic programme for 1993-1995 with the following objectives:

- (a) Reduction of inflation to one digit
- (b) Reinsertion of the country in the international financial system
- (c) Achieve national pacification
- (d) Enhance conditions for GNP real growth
- (e) Alleviate extreme poverty
- (f) Restore external sector viability
- (g) Increase net international reserves
- (h) Enhance the infrastructure of the social sectors (education and health)

SIGNIFICANT DATA - 1994

Area	:	1,285,000 km ₂
Population	:	22.6 million inhabitants
Urban	:	70%
Rural	:	30%
Rate of growth	:	2.1%
Economically active population	:	8,046,000 inhabitants
Agriculture	:	33%
Industry	:	37%
Services	:	27%
Direct foreign investment (2-94)	:	US \$1,608 million
Investment index	:	21.4% of GDP
 GDP	:	 US \$26,500 million
GDP per capita	:	US \$1,199
GDP growth rate:		
1992	:	-2.9%
1993	:	7.0%
1994 (estimated)	:	4.2%
Inflation rate:		
1992	:	56.7%
1993	:	39.5%
1994	:	15.4%
Exports	:	US \$3,436 million
Traditional	:	US \$2,307 million
Non traditional	:	US \$1,129 million
Imports	:	US \$3,970 million
Consumer goods	:	US \$ 826 million
Raw materials	:	US \$1,788 million
Capital goods	:	US \$1,150 million
 Illiteracy Rate	:	 11% (Adult)

Data estimates to November 1994. **INEL.**

1.1 OBJECTIVE

1. The will of the Peruvian Government to generate a policy for environmental protection has been expressed in the development of a Code for the Environment and Natural Resources, and relevant regulations as well as the promulgation of a recent Act (Law N° 26410), establishing the National Council for the Environment (CONAM), which is the governing body for the country's national environmental policy.
2. In keeping with this policy, Peru has been monitoring through different sectors the damage that can be inflicted upon the environment by the emission of contaminants of solid, liquid or gaseous sources.
3. This an indication of the commitment of the Government of Peru to implement programmes or projects for the protection of the environment through private organizations and the Government itself, through the public sector as well as the Commission for the Environment and the Amazon Area of the Peruvian Congress.
4. The Government of Peru is specifically committed to comply with the agreement in the Montreal Protocol to phase out the consumption of ozone depleting substances (ODS). For that purpose it has requested the cooperation of the Implementation Agencies of the Multilateral Fund for the Implementation of the Montreal Protocol.
5. The multinational agreement of the Montreal Protocol and the technical and financial support coincide with the programmematic lines of the Peruvian Government, taking in account the interest and concern of our government to find an integral solution to the environment related problems.
6. Peru ratified the Vienna Convention of 7 April 1989, by Legislative Resolution N° 24931 effective on 6 July 1989. The Peruvian Congress endorsed the Montreal Protocol on 29 March 1993 by Legislative Resolution N° 26178, together with the London Amendment, which became effective on 29 June 1993. Our Government has undertaken to meet its commitments under the provisions established by the above international instruments.
7. Peru operates under paragraph 1 of Article 5; thus it is a country eligible for funding by the Multilateral Fund for the Implementation of the Montreal Protocol.
8. In keeping with the procedures established by the Executive Committee of the Multilateral Fund, the programme records and presents both the information and the analysis on which the Action Plan developed by the Peru Country Programme is based.

9. This document presents the programme of activities that the country will implement during the first stage of the phase-out of ozone depleting substances.
10. The action plan designed by the Country Programme for the 1995-1998 period aims at the phase-out of ozone depleting substances (ODS) ahead of the grace periods granted to developing countries by paragraph 1 of Article 5 of the Montreal Protocol.
11. The main aspects that will be handled during the first three years include the institutional strengthening and the training projects for the technological reconversion of the refrigeration sector as well as the design of reconversion project in other areas of use.
12. Peru meets the requirements for the presentation of the programme to the Multilateral Fund and the request for funding, based on its annual per capita consumption of 0.014 Kg.
13. The amount of funding required for this programme has been estimated at US\$234,000.

1.2 NATURE OF THE PROGRAMME

14. This programme has been prepared by the Government of Peru through the Vice Ministry of Industries of the Ministry of Industry, Tourism, Integration and Trade and International Negotiations (MITINCI).
15. A professional team was involved in its preparation in order to develop the survey phase at the national level under the supervision of a programme coordinator.
16. The Country Programme presented by the Government of Peru is the outcome of a review and analysis of the information, interviews, discussions with the members of the Working Group for the Implementation of the Country Programme as well as discussions with specialists in the field of public and private sector of our country.
17. The version hereby presented has been approved by the MITINCI and endorsed by both the Working Group for the Implementation of the Country Programme of the Montreal Protocol and the Ministry of Foreign Affairs.
18. The final report on consumption and utilization data was prepared by the Environmental Monitoring and Control Branch, headed by Carmen Mora Donayre, Eng. and Edgard Porras, Eng. Robles.

1.3 ASSISTANCE RECEIVED.

19. In preparing the programme the Government of Peru has requested and obtained technical and financial assistance from UNEP as the Implementation Agency for the Multilateral Fund.

20. Peru has submitted through the UNDP reconversion programmes in the refrigeration sector approved by the Fund for a total consideration of US \$2,112,691.

21. The following entities have cooperated considerably in the preparation of the Country Programme: the Ministry of Economy and Finances, the National Customs Superintendence, the National Meteorological and Hydrological Services, the National Institute for Natural Resources, the National Industries Association, the Chamber of Commerce of Lima and the Ministry of Foreign Affairs.

2. CURRENT STATUS.

2.1. CURRENT LEVEL OF CONSUMPTION.

22. Peru neither produces nor exports any kind of controlled substances and, therefore, in keeping with the existing provisions of the Montreal Protocol, consumption in Peru equals to its imports.

23. There are some limitations in the available data for past imports as the entry of such substances up to 1991 was processed under a single tariff code of the NABANDINA nomenclature (based on the NCCA), thus the exact quantity of imports of the controlled substances cannot be known because it was comprised within that of other non-controlled substances. The best estimates establish an average figure of 937.56 MT for the past seven (7) years. However, the figures under this tariff code include imports of other substances which are not controlled by the Montreal Protocol. (See Table #1).

24. The following tables (Tables #1 and #2) show the records of imports for ODS between 1986 and 1992. In March 1992, the National Tariff Catalogue based on NANDINA (which is based on the Harmonized System) includes a recommendation of 26 July 1990 by the Customs Corporation Council (Brussels) on a breakdown for products that have in impact on the ozone layer, thus facilitating a higher accuracy for the statistical control of these substances. A breakdown is already provided for the imports pertaining to the second half of 1992. (See Tariff Codes in the Annexes).

TABLE # 1.
PAST ODS CONSUMPTION
METRIC TON.

ODS	Year/	1986	1987	1988	1989	1990	1991
CFC11 CFC12 HCFC22		589	580	415	285	317	415
CFC113 CFC114 CFC115 HALON1211 HALON1301 HALON2402		561	674	393	461	621	299
CCL4		44	58	54	48	24	32
MCF		41	27	43	39	27	24
TOTAL		1235	1339	905	833	990	770

SOURCE: Systems and Statistics Office, National Customs Superintendency

Note: Figures have been rounded up to the nearest integer.

TABLE # 2.
ODS CONSUMPTION 1992
IN METRIC TON.

ODS	1992/1 st Sem.	ODS	1992/2 nd Sem.
CFC11	42.8	CFC11	79.4
CFC12			
HCFC22			
		CFC12	122.5
		HCFC22	139.6
CFC113	18.6	CFC113	0.9
CFC114			
CFC115			
HALON1211			
HALON1301			
HALON2402			
		CFC114 and 115	0.1
		502 mix	5.1
CCL4	2.2	CCL4	35.0
MCF	4.9	MCF	39.8
TOTAL	68.5	TOTAL	422.4

SOURCE: Systems and Statistics Office, National Customs Superintendency

25. ODSs are used in Peru mainly in the household refrigerator manufacturing (foam and refrigerants), commercial freezer production and refrigeration equipment maintenance sectors which account for a total of 73%. The utilization in the air conditioning sector is approximately 6,9%, foams involve 13,5% and the remaining 7,3% pertains to other uses such as cleaning and solvents.

26. Data presented in the Country Programme were developed on the basis of information for 1993 from the Systems and Statistics Office, National Customs Superintendency.

27. With reference to Halons, it should be noted that Peru has ceased to import them since 1991. Halons imported up to that date are mainly 1211 and, in a lesser proportion, 1301 and 2402. At present there is a stock of approximately 3 MT mainly of halon 1211. For halon 1301 a trademark INERGEN substitute has been imported and, for some applications, 1211 has been replaced by carbon dioxide.

28. PRESENT LEVEL OF CONSUMPTION

Consumption for 1993 by substance: (Import = Consumption)

TABLE # 4: ODS CONSUMPTION FOR 1993

Substance	Consumption MT	ODP	ODP T. Consumption
GROUP 1 ANNEX A			
CFC 11	68.90	1.0	68.90
CFC 12	208.70	1.0	208.70
CFC 113	1.60	0.8	1.28
CFC 114 - CFC 115	0.03	1.0	0.03
CFC 115 (502 at 51%)	0.51	0.6	0.31
SUB-TOTAL	279.7		279.22
GROUP 2 ANNEX A			
HALON 1211	0.00	3.0	0.00
HALON 1301	0.00	10.0	0.00
HALON 2402	0.00	6.0	0.00
SUB-TOTAL	0.00		0.00
GROUP 2 ANNEX B			
CARBON TETRACHLORIDE	13.40	1.1	14.74
GROUP 3 ANNEX B			
1,1,1 TRICHLOROETHANE	33.58	0.1	3.40
TOTAL CONSUMPTION TONS	326.69		297.36

SOURCE: Systems and Statistics Office, National Customs Superintendency

Notes:

(1) Consumption for 502 mix in 1993 was 0.98 MT, 51.2% of which was assigned to CFC 115.

(2) Peru's consumption of HCFC22 is 183.3 MT, and for that reason there is an important difference in consumption data presented in previous opportunities.

(3) Upton a total consumption of item 3823.90.99.00 the remaining 67 MT are for 502 mix (0.98 MT)

TABLE # 5. DISTRIBUTION OF SUBSTANCE USE, 1993
CONSUMPTION = 326.69 MT

ODS	USE	M.T.	%
CFC 11	-Refrigeration	24.8	7.59
	Foams used in:	33.6	10.28
	-Mattresses		
	-Inject. insulator		
	Others in:	10.5	3.22
	-Aerosols, Medical, Cleaning		
CFC 12	Aerosols.....	0	0
	Refrigeration	177.8	54.43
	-Household, Commerc.,Industr. Air conditioning in:.....	12.12	3.71
	-Central and window units		
	-Cars		
	Maintenance in:.....		
	-Refrigeration	8.08	2.47
	-Air conditioning		
	Other (polystyrene foam).....	10.7	3.28
CFC 113	Cleaning	1.5	
	Sterilization	0.025	0.46
CFC 115	Refrigerant in 502 mixture	0.51	0.16
OTHER (NON SPECIFIED)	Air conditioning for airplanes	0.075	0.02
C CL4	Solvents	9.600	2.94
	Veterinary products manufacturing	3.200	0.98
	Laboratories	0.6	0.18
MCF	Metal cleaning	4.050	1.24
	Fat emulsions	11.320	3.47
	Ink and paper production	18.130	5.55
	Other cleaning	0.081	0.02
Total		326.690	100.00

SOURCE: Prepared by the local Ozone Peru Team.

29. Peru imported 550 kg of methylbromide in 1993, mainly as an insecticide for grain storage but also a fungicide, nematocide, acaricide, herbicide and rodenticide (Table #3).

TABLE # 3.
METHYLBROMIDE USE AND CONSUMPTION

CH ₃ Br(Methylbromide)	QUANTITY (metric kilograms)	%
a) For disinfecting agricultural products stored in silos, holds and warehouses: flour, wheat, barley, grains, rice, corn, cocoa beans, chestnuts, tobacco, etc.; can be applied to all states of development of insects and acarid.	500.00	96.00
b) In soils, seed beds, horticultural, fruit growing and tobacco nurseries and in greenhouses.	20.00	4.00
TOTAL	550.00	100.00

The distributing companies are: Bayer Perú S.A. and Commercial Agrícola del Perú S.A.(CADEPSA).

Two products for agricultural use are registered with the Ministry of Agriculture: BROM-O-GAS, made in the U.S. and MEBROM 98, made in Belgium.

30. Data for imports was gathered by the Environmental Monitoring and Control Branch of MITINCI, from import information provided by the National Customs Superintendency and based on them discussions were carried out with 90% of importers and the main distributors of these substances, as well as with the main users.

2.1.2 Anticipated consumption levels

31. In order to establish a projection of the consumption in a non Protocol scenario up to year 2010, we have considered the following aspects:

- (a) Past consumption trends
- (b) Consumption for 1993
- (c) Rate of demographic growth
- (d) Rate of GDP growth since an important part of the consumption of ODS related products has a direct bearing with the increase in quality of life.

32. According to the most recent census figures the Peruvian population numbers 22,480,356 inhabitants with a average annual growth rate of 2.4% for the current decade. Quality of life can

be related to population growth, literacy (younger generations have more schooling). Literacy for adults above the age 40 is 78.8% whereas for the 15-19 year bracket is 94%.

33. Based on this information, it is considered that ODS consumption in 1993 was 326,69 MT, with a GDP growth of 7% for 1993 y 4.2% for 1994. For 1994 the refrigeration industry had an estimated growth of 15%, although consumption for 1994 can be considered to be 375,7 MT.

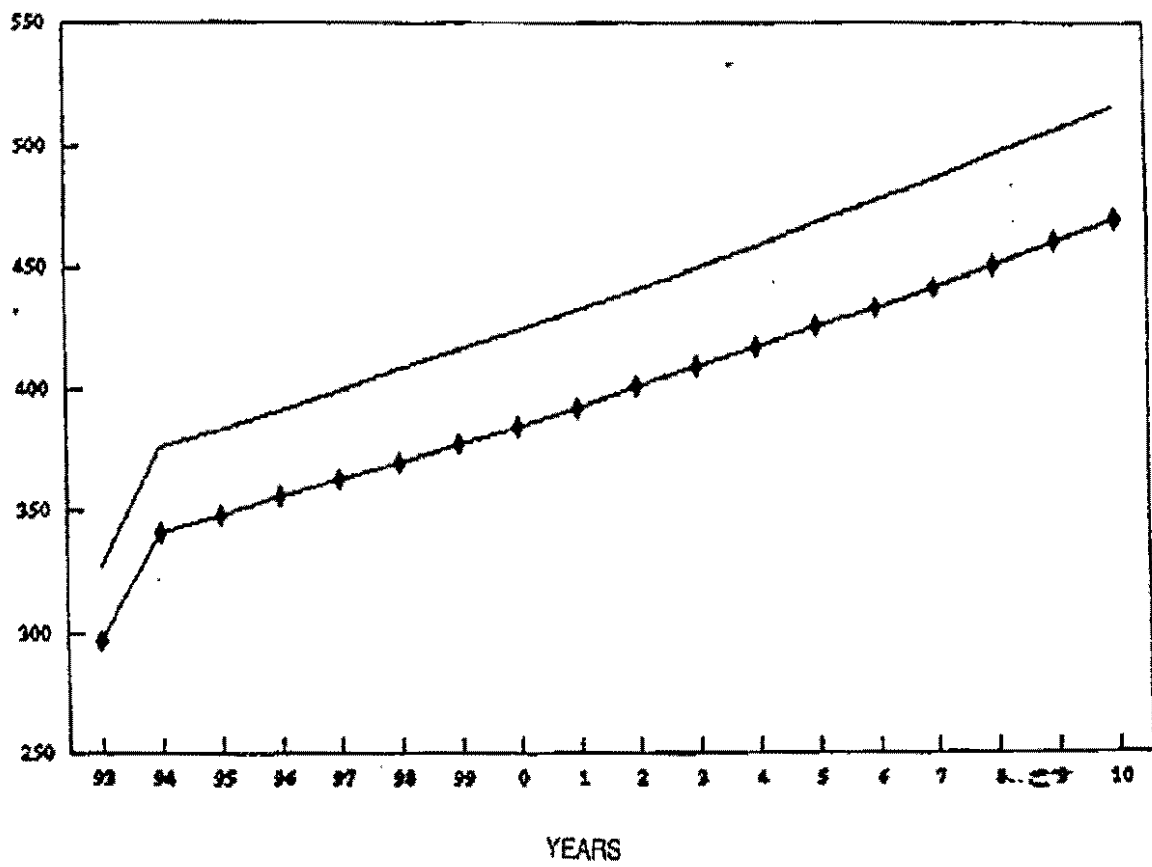
34. If, for the subsequent years, we assume that the GDP will tend to grow at the rate of 4% (a rather conservative figure) and that the quality of life will rise at a higher rate (see education statistics), bearing in mind that many of the uses of the ODS are directly related to the possibility of acquiring refrigerators, automobiles, etc. (estimated at 4%), with an average demographic growth of 2.4% p.a. and an income distribution similar to the rising of standards of living, then the growth rate of the demand for ODS can be assumed to be 2% annually from 1994 on. (See Table #6 and Graph # 1).

**TABLE # 6. PROJECTED CONSUMPTION WITHOUT THE MONTREAL PROTOCOL
(IN METRIC TONNES)**

YEAR	ODS CONSUMPTION (MT)	YEAR	ODS CONSUMPTION (MT)
1993	327	2002	441
1994	376	2003	449
1995	383	2004	458
1996	391	2005	468
1997	399	2006	477
1998	407	2007	486
1999	415	2008	496
2000	423	2009	506
2001	432	2010	516

GRAPH # 1.
PERU
ODS CONSUMPTION WITHOUT THE MONTREAL PROTOCOL

M.T.



2.2 INDUSTRIAL STRUCTURE

PRODUCTION SECTOR

35. In Peru, manufacturing industries play a major role in the processing of local and imported raw materials, in the use of manpower and its contribution, as well, to the GDP (22.1%).

36. According to data from the Ministry for Industries, there are 45,742 industrial establishments in the country, which generate a total of 257,932 jobs. These are concentrated basically in the cities of Lima-Callao, Arequipa, Trujillo and Piura. Eighty six percent of these establishments are businesses with less than 5 workers, 11% are enterprises with 5 to 20 workers and the remaining 3% have more than 20 workers.

37. As regards the Country Programme and the commitment to phase out the consumption of ozone depleting substances, the most important companies involved are the domestic and industrial refrigeration manufacturers.

REFRIGERATION SECTOR

38. The 1993-1994 annual production in the domestic line of the sector was around 150,000 units (domestic freezers and refrigerators). It was provided to supply the local demand.

39. It is estimated that the total number of both the locally manufactured and imported refrigerators and freezers currently in use amounts to 2,500,000 units.

40. It is worthwhile to note that reconversion projects for six companies will be implemented in this sector, covering 93.7% of the domestic refrigerators and freezers. It is estimated that by 1997 the sector will cease to consume 121 MT of CFC 11 and 32.2 MT of CFC 12, or 161.2 MT of PAO.

TABLE #6
DOMESTIC REFRIGERATOR AND FREEZER PRODUCTION
(July 1993 to June 1994)

COMPANY	Units	%	Refrigerators	Freezers	Consumption (MT)	
					CFC-12	CFC-11
Industrial Selva S.A.	36,000	24	23,000	13,000	61.9	12.3
Industrias Reunidas S.A.	24,050	16	24,050	-----	31.1	7.2
Industrias Alfa S.A.	6,400	4	4,438	1,962	13.3	4.8
Industrias Lenche S.A.	8,700	6	4,105	4,595	6.2	1.3
Andina Industrial S.A.	4,454	3	223	4,231	3.4	2.7
Other*	10,497	7	5,248	5,249	4.4	1.3
Total	149,958	100	102,883	47,075	120.3	29.6

SOURCE: Country Programme Surveys

* (for further breakdown of companies under this category, please refer to table 6-A)

TABLE #6-A
OTHER COMPANIES IN DOMESTIC REFRIGERATORS
AND FREEZER PRODUCTION

COMPANY	Units	Consumption (MT)	
		CFC-12	CFC-11
Cometa	1,350	1.2	0.4
Formetal	1,500	1.6	0.5
Master Service	1,800	1.6	0.5
Precision	4,800	4.3	1.2
Total	9,450	8.7	2.6

41. Major manufacturing companies in the sector

42. The six companies for which ODS phase out projects have been prepared, represent 93.7% of the domestic freezer/refrigerator production and 93.3% of the CFC 11 consumption and 91.9% of CFC 12, respectively, in the domestic freezer/refrigerator manufacturing in Perú in the July 93 - June 94 period.

43. It must be emphasized that whereas all domestic freezer/refrigerator manufacturers use polyurethane foam as an isolating material, two companies, Industrias Lenche S.A. and Industrias Reunidas S.A. utilize fiberglass for some of their production.

44. Furthermore, it should be noted that for the remaining companies in the domestic refrigeration sector not included initially in the proposal for ODS phaseout projects, further evaluation is pending to define their eligibility for financial support from the Multilateral Fund.

45. In general, industries involved with activities in which ODS considerations are to be borne in mind are aware of the country's commitment to environmental matters. Agents in these markets concur in expressing the true and feasible possibility of a major reduction.

46. They request more technical information on world developments in refrigerant substitutes and recovery and recycling units.

ODS importers

47. Major importers of chemicals that are or that contain ODS:

<u>Name</u>	<u>Supplier</u>	<u>Country</u>	<u>Approximate %</u>
CFC Cold Import	Produven	Venezuela	70%
Atlas Técnico Commercial S.A.	QuimoBasic	Mexico	20%
Duquímica S.A.	DuPont	Argentina USA	9%

48. The largest importing company with headquarters in Lima has representatives in three of the major cities of the country (Trujillo, Iquitos and Arequipa). Upon all its imports of CFC 12 it uses 75% to maintenance/repair servicing, 15% is destined to refrigeration and air conditioning equipment manufacturers and the remaining 10% is for ships of foreign registry. It has been determined that this company supplies over 2,000 refrigeration shops which could benefit from training programmes.

49. From the information collected it has been established that Cold Import, Duquímica and Ateco imported in 1993, 25.3% of the CFC11, 69.7% of the CFC12, 66% of the HCFC22 and 22% of the R502; in addition to these companies, Industrial Frigor S.A. imported 26% of the CFC12 and 14% of the CFC11 and Zetaflex S.A., 48% of the CFC 11.

50. Other importers, for their own consumption, are: Iredi (.635 MT of CFCs), Internacional del Oriente S.R.L., Laboratorios Biovet (3.15 MT of CCL4), Occidental Petroleum Corporation Perú (3.89 MT of CFCs), SERIN SCRL (5.04 MT of MCF), A.N. Faber Castell Peruana S.A. (4.05 MT of MCF), Carbolán S.A. (12.69 MT of MCF), PETROPERU S.A. (6.28 MT of MCF), Frio Mercantil S.A. (0.098 MT of CFCs), Zicrón Perú S.A. (1.38 MT of Blends).

51. Tariffs applied in Peru to ODS imports range about 15%. The reason for importing preferably from Latin American countries is that Peru has subscribed to bilateral agreements within the context of ALADI [Latin American Trade Association] (duty on products imported from Argentina is 9%, from Mexico, 14.1%) and the Andean Group (duty for imports from Venezuela is 0%).

2.2.1 Utilization:

52. Main CFC users are refrigeration companies (see sector description); there are suppliers for small shops, which entails good possibilities for training projects. Example: Cold Import.

53. Peru has produced 144,958 refrigeration units in the July 1993 to June 1994 time period; it is estimated there are presently some 2,500,000 refrigeration units.

54.Import and consumption figures for 1993, do not truly reflect the situation for CFC 11 and CFC 12 consumption, basically because inventories were increased in 1993 and in part of 1994.

55.It must be said that the domestic refrigeration companies import mainly raw materials and parts and that compressors are supplied basically by EMBRACO and SICOM of Brazil and, in a lesser degree, by L'Unité Hermétique, France and Unidad Hermética, Spain.

56.The social and political stability of the country and its consequential effect on the national economy has had an impact on the domestic refrigeration manufacturing sector, which shows a high level of growth in 1994, as compared with 1993, with a tendency to revert to its initial, peak levels of production of 1986. Forecasts indicate an annual growth rate of 15%. The projects submitted by the UNDP reflect part of this anticipated level. The production figures shown in Table #6 relate to the July 93 - June 94 production.

57.Peru's annual consumption in refrigeration is 202.6 MT of CFC 11 and CFC 12; 79.38 MT of HCFC22 as a refrigerant for cold rooms y nearly 1 MT of R502 as a refrigerant for cold rooms.

58.With regard to CFC 12 usage breakdown, Peru's consumption is 177.8 MT for domestic, commercial and industrial refrigeration, 20.2 MT for air conditioning and 10.7 MT in the foam sector; CFC 11 usage is 24.8 MT for refrigeration and 33.6 MT in the foam sector.

59.A 73% of the consumption is in the domestic refrigerator/freezer manufacturing sector and for replacement of leaked material in cold storage systems, as well as for repairs of domestic refrigerators and commercial freezers.

FOAM SECTOR

60.Basically, 10.3 % of the total consumption of ODS in 1993, was used in polyurethane as an isolating material for the manufacturing of rigid foams for domestic refrigeration and 3.28% in the manufacturing of flexible foams (molded products, mostly food packaging).

61.It should be noted that foam based mattress and shoe manufacturing has already been reconverted, with the exception of Productos Moldeados América S.A. - PROMOLA whose project is currently in the technical evaluation phase.

AIR CONDITIONING SUB SECTOR

62.Consumption for 1993 in the air conditioning sector was 20.2 TM of CFC 12, which represents 6.19 % of ODS total consumption.

63.Of this, 60% was utilized in central and window equipment and the remaining 40% (8 TM) in automobiles.

64.There are 30,000 automotive units in the country, of which 30% is equipped with air conditioning.

65. With regard to imported cars, all secondhand units are air conditioned, as well as 75% of all new cars. It should be mentioned that from 1994 on HFC 134a will be used in all new models.

66. As to air conditioning equipment, there is little manufacturing and most of the ODS is used for recharging. The consumption of CFC12 in this sector is estimated to be 6.19%

67. There are no figures available on ODS consumption in aircraft, most of which are being supplied outside the country; information available is for imports of controlled substances in 1993 for aircraft air conditioning consisting of 75 kg of CFC 114, 115, 124 and 133.

68. Collected data show that in 1993 13.4 MT of CCl₄ and of C₂H₃Cl₃ 33.58 MT were imported, for use mainly as solvents in fat recovery and cleaning, as well as for the manufacturing of inks and veterinary products.

69. CFC 113 is used as a cleaner for electrical and electronic contact elements; 1.06 MT were used for this purpose, as well as for sterilization of medical instruments (0.025 MT) and cleaning of metals (0.48 MT) in 1993.

HALONS SECTOR.

70. With regard to Halon consumption, Peru does not import Halons any more since 1991. Until that year, Halons brought in were: 1301, 1211 and 2402; currently there is a Halon stock of approximately 3 tons.

71. Last import of Halón 1301 was 8 years ago; a substitute is being imported now, a mixture of 40% of argon and nitrogen and 8% of CO₂ under the trade name of INERGEN.

AEROSOL SECTOR

72. As per surveys conducted and the opinion of the Chemical Industry Committee of the National Industries Association, chlorofluorocarbons are not used any more in Peru as propellants for aerosols and they have been replaced by butane - propane.

73. Companies in this sector, such as BAYER Químicas Unidas S.A. and Hoechst Peruana S. A., do not use CFCs as propellants since 1976, upon instructions from their head offices.

74. In this sector, products imported from Chile and other countries contain ODS substitutes, including perfumes.

2.3 INSTITUTIONAL FRAMEWORK

In Government and Parliament:

75. The leadership of the Government of Peru in connection with the implementation of the Montreal Protocol is entrusted to the Environment Monitoring and Control Branch of the Vice Ministry of Industries.

76. For the implementation of the Country Programme with regard to the commitment for the phase-out of the consumption of substances that deplete the ozone layer, the Government of Peru (Resolution N° 359-93-RE of November 19, 1993) created the Commission on Climate Changes, chaired by the Director of the Special Department, Ministry of Foreign Affairs and under its jurisdiction a Working Group for the Country Programme was created.

77. The Working Group is governed by the Ministry of Industry, Tourism, Integration and International Trade Negotiations, MITINCI, through Environment Monitoring and Control Branch. Through Resolution N° 0932/93 of 22 November 1993 it designated the sectors and institutions to comprise the Working Group. This Group has actively participated in promoting awareness of the country's commitment to the ozone related matters.

78. The Working Group, which will be under the aegis of the Commission on Climate Changes, will be the coordinating body in charge of ensuring the implementation of the Country Programme. Membership of the Working Group, in addition to its Chair, will include representatives from the following entities:

- Ministry of Economy and Finance, National Customs Superintendency to promote procedures for international trade registration of ODS
- National Defence Ministry (Meteorology and Hydrology National Service). Ozone Network.
- Ministry of Agriculture (National Institute of Natural Resources)
- National Industries Association
- Chamber of Commerce of Lima

and will have the participation of the Ministry of Foreign Affairs.

79. In order to monitor and follow up the tasks specified by the Country Programme, a Technical Office for Ozone (OTO) will be created, to be located in the premises of the Environment Monitoring and Control Branch, as an executive body of the Vice Ministry of Industries. The Office will have a complement of two (2) professionals, with financial support for their operations and they will be the technical officers of the Government, assigned to this field for three years.

80. OTO's role will be that of coordinating with the Government Sector and the Government entities, the projects comprised in this Country Programme. For this purpose, it will liaise the activities of the various agencies and ministries involved in this field. At the same time, the Office will submit periodically data on ODS consumption to the Ozone Secretariat and report the status of the projects comprised in the Country Programme to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol and to other agencies connected with the Montreal Protocol and the Vienna Convention.

81. The OTO will be responsible for the implementation of the projects, as well as for the establishment of the terms of reference for the calls for tenders for each project, the purpose being that of generating an institutional environment easy to handle, without becoming an administrative burden or a hindrance to the quick achievement of the Protocol objectives.

82. It will report periodically, as required, to the Working Group in charge of the implementation of the Montreal Protocol, as well as quarterly to the UNEP Ozone Secretariat on the consumption levels.

Industrial Associations

83. The main industrial association from the private sector is the **Sociedad Nacional of Industrias - SNI** which has a membership of 2,500 Peruvian industrial enterprises. It has 79 sectorial committees which are autonomous and are represented in the Board of Directors through their own chairs or representatives. Its Chairman is Mr. Roberto Nesta.

84. The SNI created at the end of 1993, the Environment Commission, a consultative organ of the Executive Committee of the association, with the main purpose of modernizing the industrial sector as well as protecting the environment. It particularly channels all information pertaining to the ozone subject, and it develops and serves as a focal point for these trends in the corporate environment.

85. The SNI Environment Commission is chaired by Mr. Hans Flury. This corporate association is fully prepared and willing to participate in the Government actions and to cooperate with the initiatives destined to the implementation of the Country Programme. It maintains a close coordination with the Working Group for the Implementation of the Montreal Protocol, of which it is a member.

Business associations

86. The main importers, distributors and users of the ozone depleting substances in each sub-sector are affiliated to the Chamber of Commerce of Lima, which has an active role in the National Commission on Climate Changes. They also are members of the Working Group on the Implementation of the Country Programme, in view of the importance of having an awareness of the views of the business sector and private enterprise on the scope and objectives of the Montreal Protocol. Its chair is Mr. Juan Musso Torres.

87. The Chamber of Commerce of Lima is the business institution of the oldest private enterprise sector in the country. It was established in 1888, it currently has a membership of 3,000 associated entities. It has a Commission on the Environment and Enterprise, currently chaired by Mr. Carlos Carbo, whereas its Vice President, Ing. Miguel A. Planas, is a member of the above mentioned Working Group for the Implementation of the Montreal Protocol.

88. Import companies, as representatives of transnational companies, have a significant level of information on substitute technology and control of the local market, as well as on the various aspects related to the Protocol.

Other agencies.

89. Other agencies that can contribute to this effort are the Health Department, the National Institute for the Defense of Competition and the Protection of Intellectual Property (INDECOP), various NGOs (Peruvian Society for Environment Law, Proterra, etc.), Academic organizations (National Engineering University, Universidad Nacional Mayor de San Marcos, Universidad Católica del Perú).

90. There is a sure interest in the country for environmental issues and for the ozone by the media whereby the public awareness programme can be more effective.

2.4 POLICY FRAMEWORK

91. Peru is applying since August 1990 a stabilization and structure reform programme aimed at reducing inflation, correcting imbalances of the external sector and establishing the basis for a sustained economical growth at the medium term.

92. The structure reforms are orientated to stabilize the economy, achieve a more efficient assignment of resources and that the market mechanisms and private initiative become the motors of production and investments. Among these reforms the redimensionning of the state apparatus, the liberalization of business, the liberalization of market, tax reform and incentive to foreign investment stand out.

93. Within this framework the Peruvian Government shall stimulate the voluntary agreements of the business sector in order to promote industrial retrofitting, shall publicize these commitments, will make public opinion aware, shall promote training, the transfer of technology and shall encourage all efforts contributing to the achievement of the reduction in the consumption of ODS.

94. The enterprises that are most involved in the import, consumption and use of the ODS, are those from the private sector. Most of them with major ownership of local capital.

95. The Peruvian Government has not anticipated the utilization of restrictive fiscal mechanisms or other measures that could affect market transparencies.

96. The working group for the implementation of the country programme which commits to a phase out of ODS consumption, aware that the amount of the national consumption of ODS is near to 326.69 tons per annum, that the growth of national production contributed to the highest consumption in 1994 and that its applications are related basically to refrigeration, foams, solvents, cleaning and air conditioning pledges to carry out its future action through the agreement and complementary conventions with government organizations and the national private sector. It has not been anticipated the use of mechanisms of economic policy such as quotas, custom controls and taxes to achieve a reduction in consumption.

97. Within the state framework, a coordination and information mechanism will be created in order to carry out a control of import data, technical transfer and implementation through OTO.

98. The greatest effort from the OTO and the working group will be the data handling and collecting, distribution of technical information, public awareness. It will carry out the coordination task for training workshops and seminars for the private sector, which will be implemented in the companies and maintenance technical services, coordinating the technical reports for education and training aimed at reducing the consumption and or the emission of controlled substances.

2.5 RESPONSE FROM THE GOVERNMENT AND THE INDUSTRIES TO THE PROTOCOL

99. Peru ratified the Vienna Convention on April 7, 1989 through legislative resolution no. 24931 which became effective on July 6, 1989. The signature of the Montreal protocol was approved by Congress on March 29, 1993 through legislative resolution no. 26178, together with the London Amendment and became effective on June 29, 1993.

100. As to tariffs, by supreme decree no. 002-91-1-ICTI/IG, of January 22, 1991, the Nandina customs tariff was approved and it became effective on the second half of 1992. This nomenclature made possible establishing a greater identification of the substances controlled by the Montreal protocol, making possible from 1993 on to obtain a more detailed information of those substances.

101. It is worthwhile to mention that since January 1995 a new nomenclature with an even greater level of identification for the ODS will become effective for the Andian Sub-Region (Andian Group).

102. In Peru, no standard or legal provisions have been proclaimed restricting or banning the use of aerosol, halon or other types of ODS. The change in the production process of these companies in the country have basically derived from the technological dependency of the transnational companies from abroad.

103. For the implementation of the Country Programme in the commitment of the phase-out of the consumption of substances that deplete the ozone layer, the Government of Peru (Resolution N° 359-93-RE, November 19, 1993) created the commission on climate changes, presided by the Director of Environment of the Foreign Affairs Ministry and within it a Working Group for the Country Programme was appointed.

104. For the follow-up of the Country Programme a Technical Office for Ozone, OTO, will be created located physically in the offices of the Environmental Supervision and Control Branch, in executive body of the Department of the Industries.

105. Technical and financial assistance has been received from the following implementation organization.

UNEP, Assistance for the development of the Country Programme.
UNDP, Technical Assistance for Retrofitting Projects.

The Multilateral Fund for implementation of the Protocol approved the following amounts for the preparation of these projects in the country.

UNEP, US\$ 50,000
UNDP, US\$ 100,000

Additionally the Multilateral Fund provided the funds to implement six conversion projects in the domestic refrigeration sector for a total amount of US\$ 2,112,681.00

3. PHASEOUT IMPLEMENTATION

3.1 STATEMENT ON GOVERNMENT STRATEGY

106. The strategy objectives considered in the Action Plan for the ODS phase-out are consistent with the current economical policy which encourages a change of the industrial structure so that it indicates an intention to achieve the limit established by the Protocol for the consumption of the ODS in the countries that operate under paragraph 1 of Article 5.

107. The aspects of this strategy are :

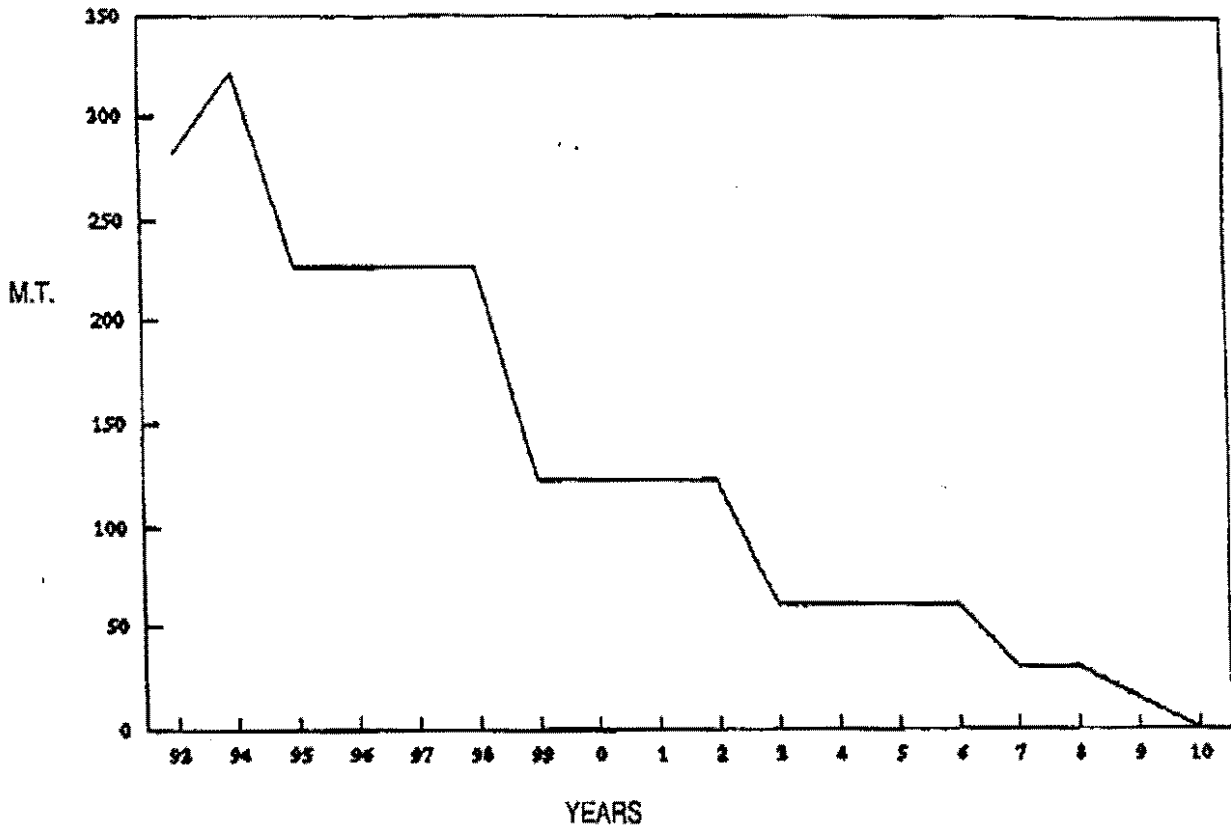
- To support policies which are consistent with the industrial and economic development of the country. To ensure the free functioning of private enterprises and to stimulate its competitiveness and technological reconversion. (Information, tax mechanisms, standard, etc.)
- To keep the 1993 consumption levels through 1996.
- To reach 1998 with a substantial reduction in ODS consumption.
- To carry out the phase-out programme within the limits established in the phase-out schedule included hereunder.
- Complete phase-out by beginning of 2007

108. Phase-out Schedule (in ODP TONNES)

Substance	1993	1994	1995 1998	1999 2002	2003 2006	2007 2010
CFC Group I Annex A	280	322	227	122	61	0
Halon Group II Annex B	0	0	0	0	0	0
CCl ₄ Group II Annex B	15	17	13	7	0	0
MCF Group 3 Annex B	3	4	3	2	1	0

CONSUMPTION REDUCTION

GROUP I ANNEX A



M.T. OF ODP

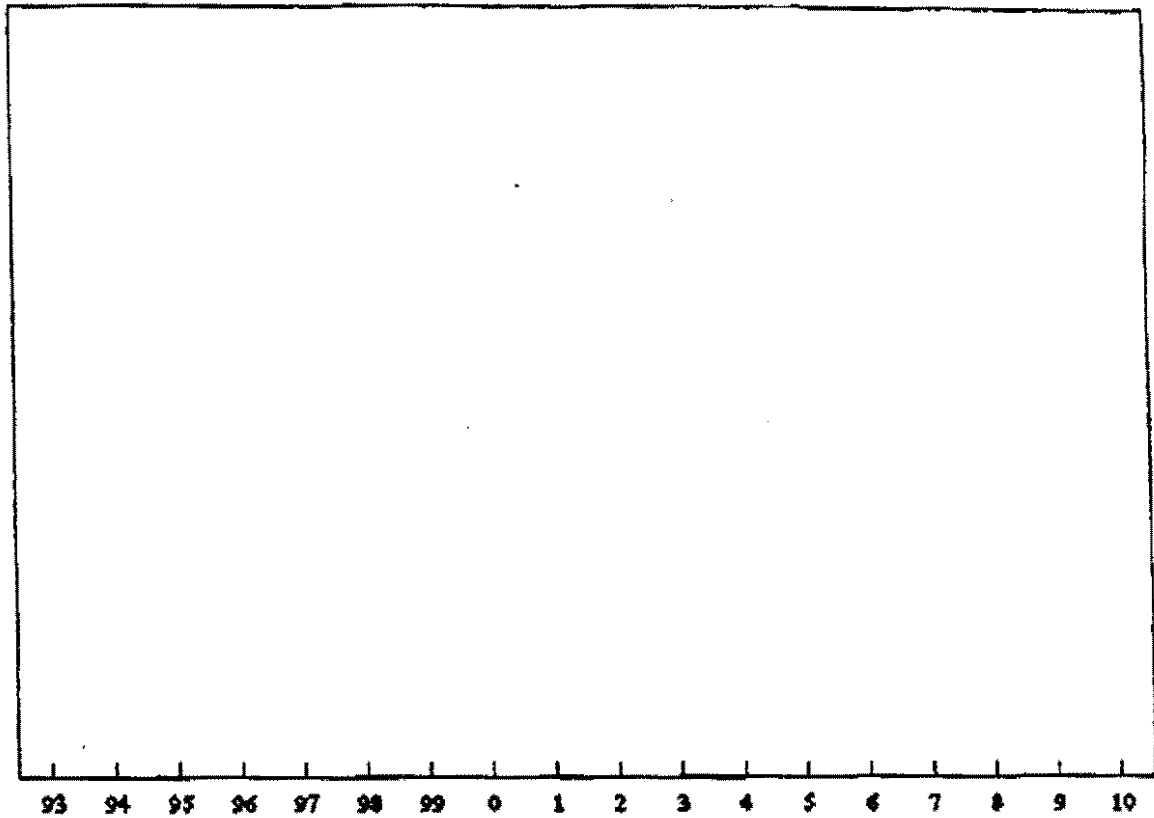
- 27 a -

CONSUMPTION REDUCTION

GROUP II ANNEX A

GRAPH #3

M.T.



M.T. OF ODP

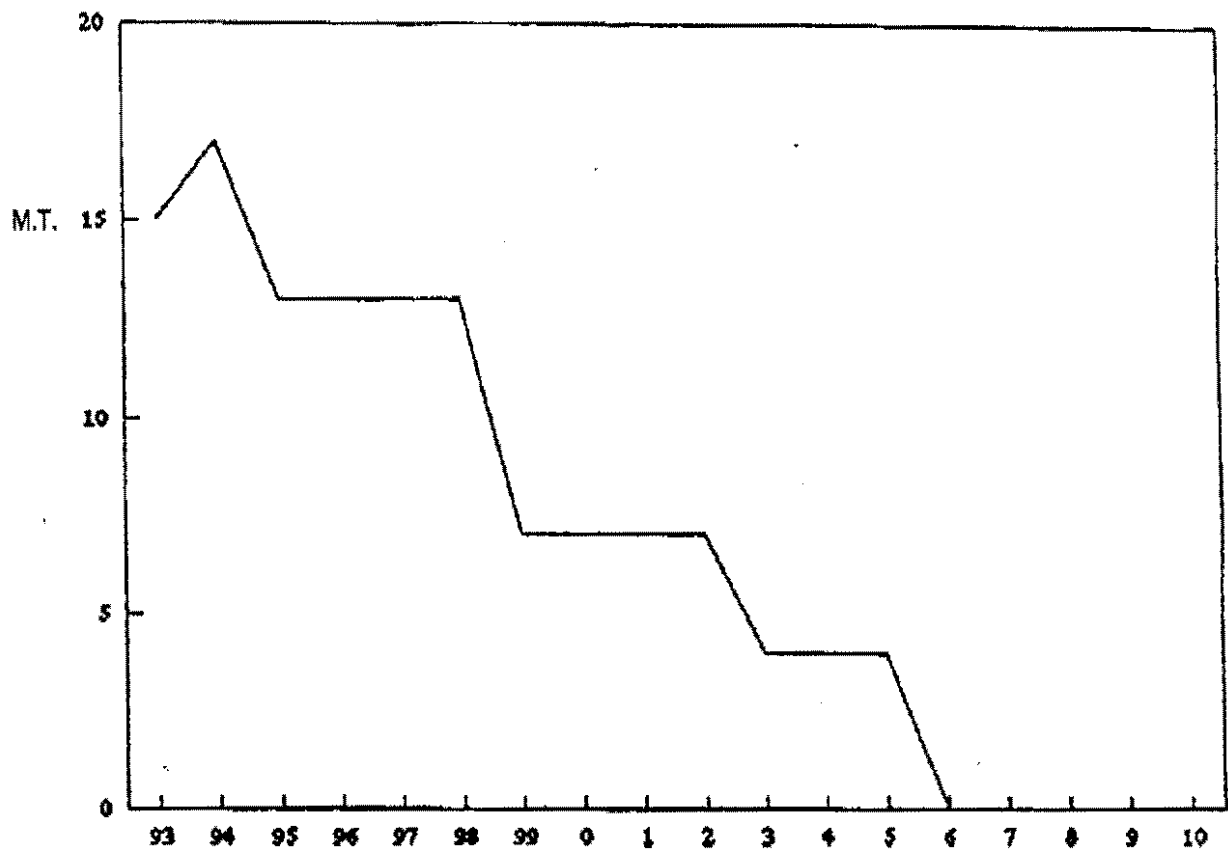
THERE IS NO CONSUMPTION OF HALONS IN PERU

-276-

CONSUMPTION REDUCTION

GROUP II ANNEX B

GRAPH #4



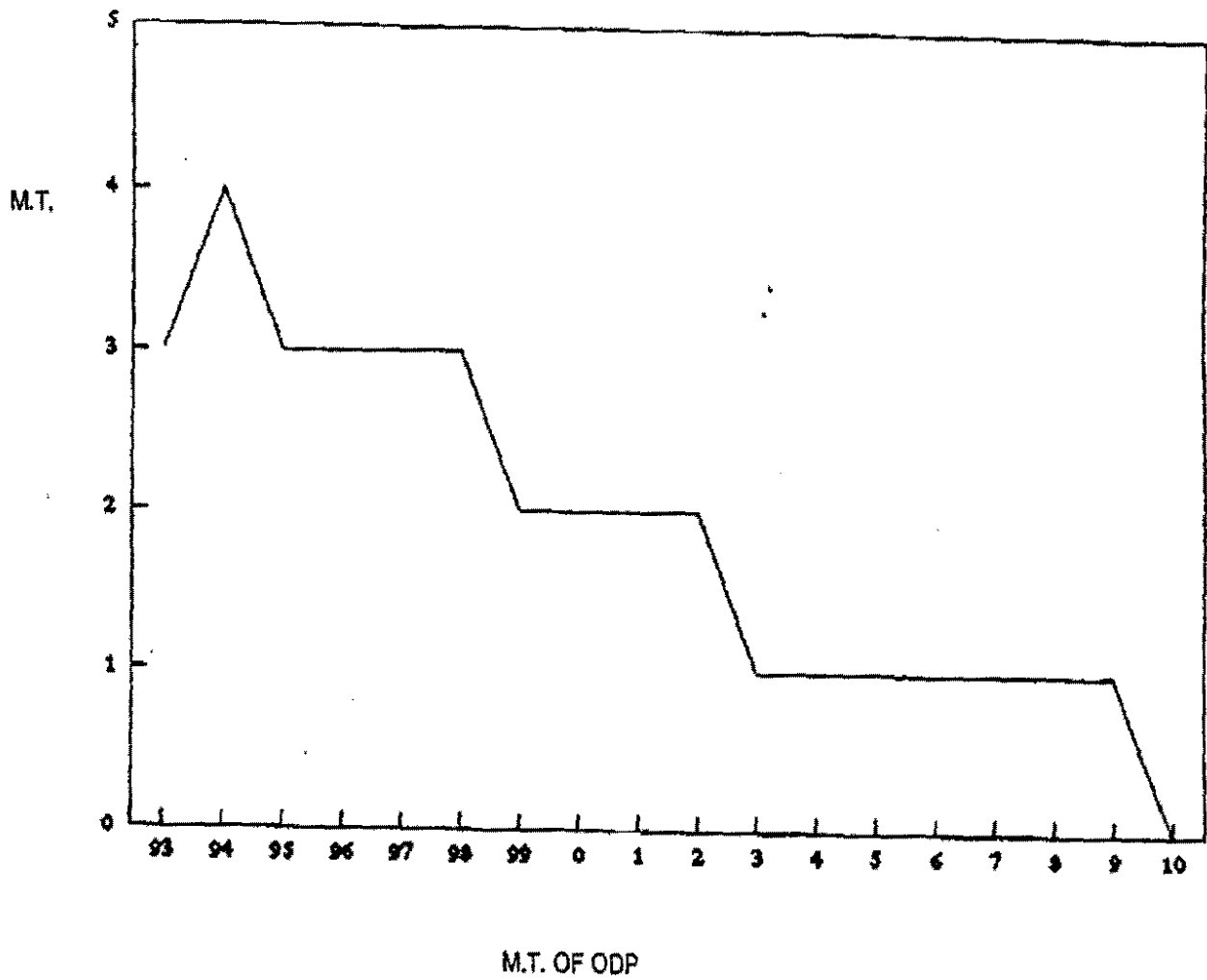
M.T. OF ODP

- 27c -

CONSUMPTION REDUCTION

GROUP III ANNEX B

GRAPH #5



3.2 ACTION PLAN (1995-1997)

3.2.1 Government Action

109. Within the established provisions there are actions aimed at influencing the consumer behavior (training, public awareness, ozone seal) and on the other hand, those aimed at encouraging the supply to phase-out the use of ODS (technical and financial assistance). These actions are considered in the institutional strengthening projects.

110. The Government actions will be the essence of the Action Plan

- Diagnostic and implementation of technical project for reconversion in each sector.
- Training programmes for a better handling of ODS.
- The training of the specific sectors which involves workshops, seminars, technical assistance and information for each industrial sector.
- Institutional strengthening through the implementation of laws and programmes coordinated with the different areas of the economy.
- Public awareness programme.
- Encouragement of voluntary agreement with the companies.
- The creation, jointly with the private enterprise, of an ozone certificate seal consisting in making available to the public consumer an adequate information on the final products that do not harm the ozone layer, thus having an impact on demand.

111. We consider that the implementation of these actions will affect the supply and demand in a manner that reduction in the consumption of the ozone layer depleting substances can be achieved.

112. All these measures of the action plan require the Institutional Strengthening by the Government (Project Proposal).

PROJECT PROPOSALS COMPRISED IN THIS Programme:

3.2.2 Institutional projects: (see Annex I for Institutional Strengthening Project)

3.2.3 Specific projects in the industrial and service sector

<i>Number:</i>	P1 (only indicative)
<i>Project title:</i>	TRAINING IN THE USE OF CFC 12 - Domestic and Commercial Refrigeration
<i>Target Sector:</i>	Small users that utilize CFC 12 for repairs and replacement of refrigerant. Mainly domestic and commercial refrigeration.
<i>Start-up Year:</i>	1996
<i>Duration of the project:</i>	2 years
<i>Estimated amount:</i>	US\$ 80,500
<i>Cost of phase-out per KG:</i>	US\$ 13,417
<i>Implementing Agency:</i>	UNEP
<i>National Implementing Agency:</i>	MITINCI
<i>Project Description:</i>	Project consists of carrying out training courses on how to save CFC 12 gas and how to handle the gas recovery machines. Practical demonstrations will be carried out to practitioners. Main business networks of retailers will be invited. Sector is fully prepared to cooperate.
<i>Objective:</i>	To reduce the consumption of CFC 12 through avoidance of product emissions during maintenance (due to lack of training).
<i>Expected Outcome:</i>	It is estimated that six (6) MT can be saved in a three (3) year period by better handling of the product.
<i>Support Actions:</i>	Dissemination of information to a large number of users. Acquisition of gas recovery machines. Use of importers' premises.

DETAILS OF THE COSTS

Equipment	Machinery:	
	20 machines x US\$ 1,500	US\$ 30,000
Human Resources	International Experts	US\$ 20,000
	Local Training	US\$ 10,000
Project Administration		US\$ 9,700
Costs	Travel and Other	US\$ 10,000
Contingencies	1%	US\$ 800
TOTAL		US\$ 80,500

DEGREE OF COMMITMENT OF THE PARTICIPATING ENTERPRISES

Total: The (3) main importers.

TRAINING IN THE USE OF CFC 12

<i>Number:</i>	P2 (only indicative)
<i>Project title:</i>	CFC 12 SAVING IN THE AIR CONDITIONING SECTOR
<i>Target Sector:</i>	Mobile air conditioning sector. Recharge and replacement.
<i>Start-up Year:</i>	1996
<i>Duration of the project:</i>	5 years
<i>Estimated amount:</i>	US\$ 55,250
<i>Cost of phase-out per KG:</i>	US\$ 22,00
<i>Implementing Agency:</i>	UNEP
<i>National Implementing Agency:</i>	MITINCI
<i>Project Description:</i>	The project consists in carrying out training courses on how to save CFC 12 gas and how to handle the gas recovery machines. Practical demonstrations will be carried out to practitioners. Main business networks of retailers will be invited. Sector is fully prepared to cooperate. Also contemplates the training on new replacement techniques.
<i>Objective:</i>	To reduce the consumption of CFC 12 through avoidance of product emissions during maintenance (due to lack of training).
<i>Expected Outcome:</i>	It is estimated that in a five (5) year period 2.5 MT can be saved by better utilization of the product.
<i>Support Actions:</i>	Dissemination of information to a large number of users. Visit and Training course by international expert. Use of locations for mobile air conditioning charging.

DETAILS OF COSTS

Equipment	Machinery: 10 machines x US\$ 1,000	US\$ 10,000
Human Resources	International Experts (2) Local training	US\$ 15,000 US\$ 5,000
Project Administration		US\$ 10,000
Costs	Travel and other Dissemination of information	US\$ 10,000 US\$ 4,700
Contingencies	1%	US\$ 550
TOTAL		US\$ 55,250

DEGREE OF COMMITMENT OF THE PARTICIPATING ENTERPRISES

All of the main recharging mobile air conditioning companies.

<i>Number:</i>	P3
<i>Project title:</i>	DESIGN OF RECONVERSION PROJECTS IN THE CARBON TETRACHLORIDE SECTOR
<i>Target Sector:</i>	User sector, basically as a solvent.
<i>Start-up Year:</i>	1996
<i>Duration of the project:</i>	1 year (studies)
<i>Estimated amount:</i>	US\$ 30,000 Experts Travel Studies
<i>Cost of phase-out per KG:</i>	Undeterminate
<i>Implementing Agency:</i>	UNIDO
National Implementing Agency:	MITINCI
<i>Project Description:</i>	Project consists of diagnostic and design through the assistance of an expert on potential reconversion projects in these sector mainly for the use of ODSs as solvents.
<i>Objective:</i>	Design reconversion projects in the use of carbon tetrachloride sector.
<i>Expected Outcome:</i>	In Peru approximately 9,6 tons of Carbon Tetrachloride are used as solvents. Projects consists of designing potential industrial projects to phase-out the use of CFC14 as a solvent.

DEGREE OF COMMITMENT OF THE PARTICIPATING ENTERPRISES:

User enterprises indicated interest.

<i>Number:</i>	P4
<i>Project title:</i>	DESIGN OF RECONVERSION PROJECTS IN THE METHYL CHLOROFORM SECTOR
<i>Target Sector:</i>	User sector, basically metal cleaning.
<i>Start-up Year:</i>	1996
<i>Duration of the project:</i>	1 year (studies)
<i>Estimated amount:</i>	US\$ 30,000 Experts (2) Travel Studies
<i>Cost of phase-out per KG:</i>	Undeterminate
<i>Implementing Agency:</i>	UNIDO
<i>National Implementing Agency:</i>	MITINCI
<i>Project Description:</i>	Project consists of diagnostic and design through the assistance of an expert on potential reconversion projects in this sector mainly for the use of ODSs in metal cleaning.
<i>Objective:</i>	Reconversion projects designed for the use of methyl chloroform.
<i>Expected Outcome:</i>	In Peru approximately 4 tons of MCF are used for metal cleaning, and in the production of ink and paper and fatty emulsions a total of 30 MT Projects consists of designing potential industrial projects to phase-out the use of MCF.

DEGREE OF COMMITMENT OF THE PARTICIPATING ENTERPRISES:

User enterprises indicated interest.

<i>Number:</i>	P5								
<i>Project title:</i>	HALON MANAGEMENT PROJECT DESIGN								
<i>Target Sector:</i>	Halon Sector								
<i>Start-up Year:</i>	1996								
<i>Duration of the project:</i>	1 year (studies)								
<i>Estimated amount:</i>	US\$ 20,000								
<i>Implementing Agency:</i>	UNEP								
<i>National Implementing Agency:</i>	MITINCI								
<i>Project Description:</i>	In Peru there is no Halon importation, however there is a 3 MT inventory. Project consists of establishing ways to handle these inventories without harming the ozone layer.								
<i>Objective:</i>	To register the existing stock of halons and propose a management system for these stocks.								
<i>Expected Outcome:</i>	Register of halon stocks and proposal for a management system.								
<i>Budget:</i>	<table> <tr> <td>- International Expert</td><td>10,000</td></tr> <tr> <td>- Travel and expenses</td><td>5,000</td></tr> <tr> <td>- Projects and Communications</td><td>3,000</td></tr> <tr> <td>- Local Expert</td><td>2,000</td></tr> </table>	- International Expert	10,000	- Travel and expenses	5,000	- Projects and Communications	3,000	- Local Expert	2,000
- International Expert	10,000								
- Travel and expenses	5,000								
- Projects and Communications	3,000								
- Local Expert	2,000								

DEGREE OF COMMITMENT OF THE PARTICIPATING ENTERPRISES:

User enterprises indicated interest.

Industrial Projects (Not included in the programme)

PROJECTS	Presentation to the MPMF	Beneficiary	Sector	Agency	Approved Amount (US \$)	Amount for Administration(US\$)
CFC 11 and 12 Elimination	Approved Dec 1994	Alfa S.A.	Domestic Refrigeration	UNDP	252,727	32,855
CFC 11 and 12 Elimination	Approved Dec 1994	Andina Ind.	Domestic Refrigeration	UNDP	229,816	29,876
CFC 11 and 12 Elimination	Approved Dec 1994	Coldex SA	Domestic Refrigeration	UNDP	748,966	97,366
CFC 11 and 12 Elimination	Approved Dec 1994	Lenche SA	Domestic Refrigeration	UNDP	201,433	26,188
CFC 11 and 12 Elimination	Approved Dec 1994	Industrias Reunidas	Domestic Refrigeration	UNDP	267,641	34,793
CFC 11 and 12 Elimination	Approved Dec 1994	Industrial Selva	Domestic Refrigeration	UNDP	412,098	53,573
CFC 12 Elimination	Being finalized	Promota	Packaging	UNDP	319,162	41,491

Note: The amount approved per project is comprised of the following two amounts: that of the project implementation and the implementation costs to the agency.

3.3 AGENCIES THAT WILL HAVE A ROLE IN THE IMPLEMENTATION OF THE STRATEGY.

113. In order to ensure the implementation of this Country Programme it has been considered desirable to develop a technical institutional structure that makes possible expediting and de-bureaucratizing the project implementation in the best possible way.

114. An Ozone Technical Office (OTO) will be created, which will be located physically in the premises of the Environmental Monitoring and Control Branch, an executive body of the Ministry of Industry.

115. This technical office will implement the measures comprised in the Country Programme that have been approved by the Ozone Working Group chaired by MITINCI, the membership of which includes the National Industries Association (SNI), the Chamber of Commerce of Lima, the Ministry of Economy and Finance, the National Customs Superintendency, the National Institute of Natural Resources (INRENA) and the National Meteorology and Hydrology Service (SENAMHI).

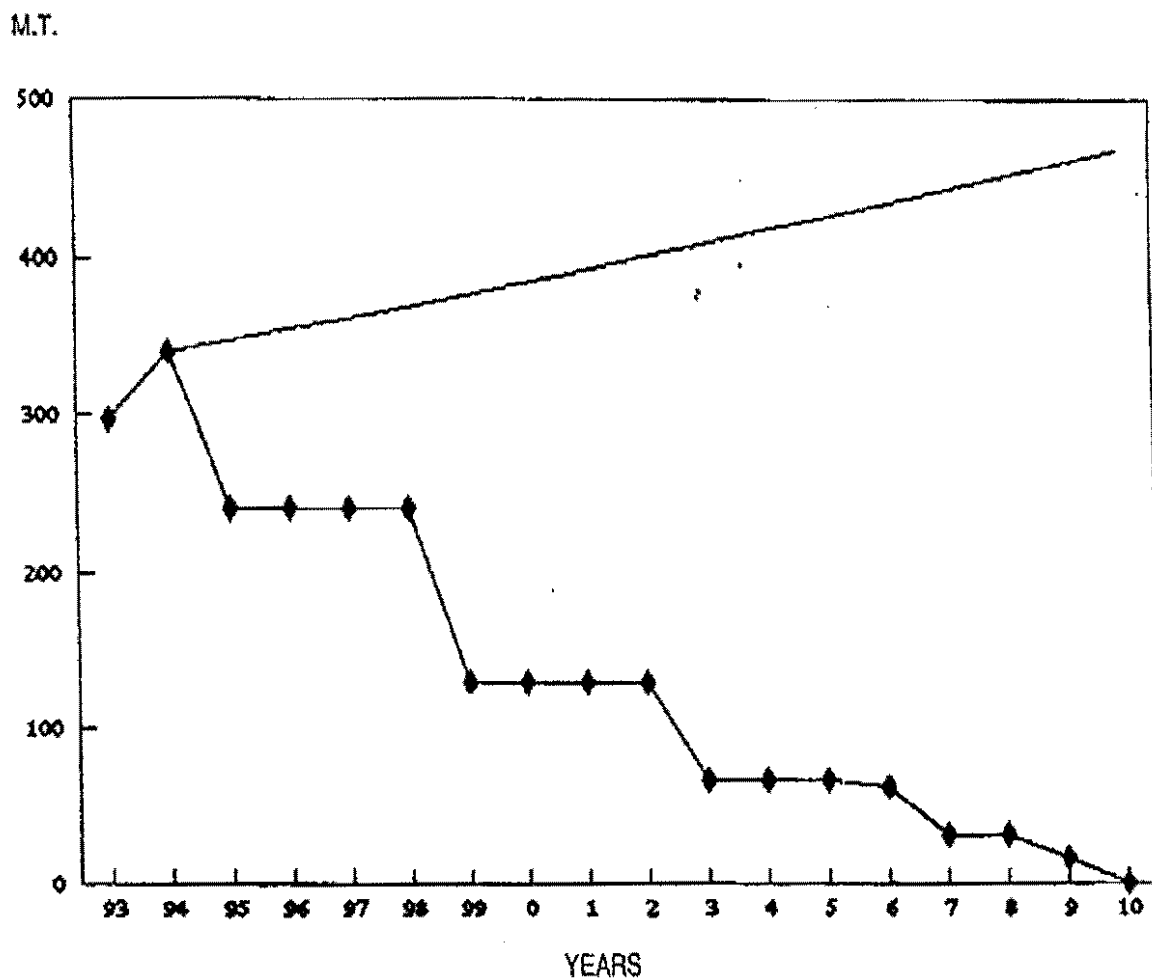
116. The Ozone Technical Office will have a complement staff of two technicians and an adequate infrastructure to carry out their operations with the support of the Multilateral Fund of the Montreal Protocol.

117. The management of the resources from the Multilateral Fund, for the acquisition of the machinery and investments will be handled through the UNDP-Peru.

118. The Ozone Technical Office will require for its operation the support of the Government (offices) and the financing of its expenses over three (3) years. (Included in 3.5)

3.4 CONSUMPTION SCHEDULES AND CONSEQUENCES.

Graph #6



PERU COUNTRY Programme

FINAL VERSION

3.5 FINANCING BUDGET AND SCHEDULE

1. INSTITUTIONAL PROJECTS:

Year	Type of Project	Sector	Description	Cost	Organization
1995/ 1997	Institutional Strengthening	All	Creation of OTO	US\$ 154,000	UNEP

2. NEW RECONVERSION PROJECTS:

Year	Type of Project	Sector	Description	Cost	Agencies
1995/ 1998	Training*	Refrig.	Saving of CFC 12		UNEP
1995/ 1998	Training*	Air Condition.	Saving of CFC 12		UNEP
1995/ 1996	Project Design	CCl4	Retrofitting study	US\$ 30,000	UNIDO
1995/ 1996	Project Design	MCF	Retrofitting study	US\$ 30,000	UNIDO
1995/ 1996	Project Design	Halons	Inventory Management	US\$ 20,000	UNEP
TOTAL				US\$80,000	

SUMMARY OF THE COST OF ACTIVITIES:

1. Government action plan	US\$ 154,000
2. New projects and designs	80,000
Total PERU COUNTRY Programme	US\$ 234,000

* (Only indicative)

3.6 AGREEMENT MONITORING.

119. In this respect, Peru intends to monitor the agreements through the OTO by means of:

- a) Quarterly reports on ODS imports.
- b) Semi-annual reports from the main ODS suppliers, importers.
- c) Semi-annual progress reports on the industrial retrofitting projects from the beneficiary companies.
- d) Government of Peru centralized data bases and reports through which information will be provided to the Multilateral Fund.

Number: PL.1

Project Title: Establishment of a governmental ozone technical office.
Institutional Strengthening, under the MITINCI.

Sectors Involved:
All

ODS Consumption in the Country:
326.7 MT (equivalent to 297.3 MT of ODP)

Duration of the Project:
3 years

Total Cost:
US\$ 154,000

Implementing Agency:
UNEP

National Implementing Agency:
Ministry of Industries, Tourism, Integration and Commercial and International
Negotiation. MITINCI.

Description of the Project:

Peru has decided to implement an Action Plan as specified in this Country Programme Report in order to achieve the phasing out of the consumption of ozone depleting substances before the target date established for developing countries.

In order to fulfill this mission the Government will create an Ozone Technical Office (OTO).

The OTO will carry out the control and follow-up for the tasks involved in the Country Programme. The office will be physically located in the premises of the Environment Monitoring and Control Branch, an executive body of the Ministry of Industries. This office will have a complement of two (2) professionals who will have financial support for their operations and will act as technical officers for the Government, with a three (3) year appointment.

The OTO function will be to coordinate with the Government Sector and Government Agencies the project for the present country programme and for this purpose it will coordinate the activities of various bodies and ministries involved in this field. Furthermore this office will report data on the consumption control and the status of the projects which are part of the country programme to the Executive Committee of the Multilateral Fund and other bodies related to the Montreal Protocol and the Vienna Convention periodically.

The OTO will be responsible for the implementation of the projects as well as for the preparation of the terms of reference for each call for tenders. This is consistent with the fact that the aim is

to create an institutional environment that is easy to handle and that doesn't create an administrative burden to the process, or a hindrance to the achievement of the Montreal Protocol's objectives.

The agency will report, with an appropriate frequency, to the Working Group in charge of the implementation of the Montreal Protocol and will report quarterly to the Ozone Secretariat of UNEP on consumption levels.

Among the anticipated tasks there is that of carrying out the government actions specified in this plan:

- Reporting of data on the consumption of controlled substances to the Ozone Secretariat as required by Article 7 of the Montreal Protocol (UNEP/OzL.Pro/ExCom/13/47 paras. 98-99);
- Reporting to the Executive Committee, on a yearly basis, on progress being made in the implementation of the country programme (UNEP/OzL.Pro/ExCom/10/40 para. 135). Following the format approved by the Executive Committee (UNEP/OzL.Pro/ExCom/13/47 Annex II);
- Serve as a focal point for the implementing agencies, Fund secretariat as well as other bilateral and multilateral agencies.
- Diagnostic and Implementation of the technical projects for reconversion in each sector.
- Training Programmes for better handling of ODSs.
- A training programme for the specific sectors, which involves workshops, seminars, technical assistance and information for each industrial sector.
- Institutional strengthening for the implementation of laws and programmes coordinated among the different areas of the economy.
- Public awareness programmes.
- Encouragement of voluntary agreement of the enterprises.
- The creation, in conjunction with private enterprises, of an Ozone Certification Seal consisting in making available to the consumer adequate information on final products which are not harmful to the ozone layer and thereby influencing the demand.

The cost of the project for Institutional Strengthening is as follows:

BUDGET FOR INSTITUTIONAL STRENGTHENING.
(in US\$ dollars)

ITEM	1995		1996		1997		TOTAL	
	MF	GOV	MF	GOV	MF	GOV	MF	GOV
1. Infrastructure								
- Computer	5,000						5,000	
Equipment		12,000		12,000		12,000		36,000
- Office	2,000						2,000	
- Fax and telephone		10,000						10,000
- Other (typewritten, furniture, etc)								
2. Personnel								
- Ozone Technical Office (Salaries for 2 technicians)	25,400		25,400		25,400		76,200	
- Research and Training Support		8,000		8,000		8,000		24,000
- Administrative Personnel								
3. Awareness Programmes and Other Seminars	20,000		5,000		5,000		30,000	
4. Operating Costs								
- Communications	3,000		3,000		3,000		9,000	
- Stationery	3,600		3,600		3,600		10,800	
- Travels	7,000		7,000		7,000		21,000	
- Maintenance, office housekeeping and other		1,200		1,200		1,200		3,600
TOTAL	66,000	31,200	44,000	21,200	44,000	21,200	154,000	73,600
REQUESTED FROM THE MPMF							154,000	