



**United Nations
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Programme**



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

Nineteenth Meeting
Montreal, 8-10 May 1996

COUNTRY PROGRAMME: VIETNAM

This document consists of:

- Country Programme Evaluation Sheet (prepared by the Fund Secretariat)
- Comments and Recommendations of the Fund Secretariat
- Transmittal Letter from the Government of Vietnam
- Country Programme Cover Sheet
- Country Programme (Executive Summary)

VIETNAM COUNTRY PROGRAMME EVALUATION SHEET

Status of ratification of the Vienna Convention and the Montreal Protocol

	Signature	Ratification	Entry into force
Vienna Convention (1985)		26/Jan/94	26/Apr/94
Montreal Protocol (1987)		26/Jan/94	26/Apr/94
London Amendment (1990)		26/Jan/94	26/Apr/94
Copenhagen Amendment (1992)		26/Jan/94	14/Jun/94

Production of controlled substances: No controlled substances produced

Consumption of controlled substances (1993) 330.1 metric tonnes
348.0 weighed tonnes (ODP)

(tonnes)	CFC-11	CFC-12	CFC-113	CFC-114	CFC-115	TOTAL	Halon1211	Halon1301	TOTAL	CTC	MCF	TOTAL	Me-Br
ODS	42.0	268.0			13.0	323.0				1.6	5.5	7.1	
ODP	42.0	268.0			7.8	317.8				1.8	0.6	2.3	

Distribution of ODP by substance: CFC 91.3% Halon 6.9% CTC and MCF 1.8%

Distribution of ODP by sector:	Aerosol	Foam	Halon	Refrigeration	Solvent	Other
Consumption (ODP tonnes):	200.0	40.3	24.0	77.4	6.3	
Percent of total:	57.5%	11.6%	6.9%	22.2%	1.8%	

Country Programme

Duration of country programme: 5 years (1993-1997)

ODS phase out target: Complete phase out of controlled substances in all sectors by 1997 except use in servicing of refrigeration equipment. Phase out in servicing sector by 2006

Phase out priority area: Aerosol, foam, refrigeration and solvent sectors

Cost of activities in country programme: \$2,807,598

Strategy:

Adoption of action plan comprising institutional and regulatory measures, public awareness programmes and investment activities for earliest possible phase out of ODS contingent on availability of funds and expeditious transfer of appropriate technologies. Use of ODS in foams, halon as solvent and in greater part of aerosol to be phased out by 1997. Medical application of aerosol to remain at current levels until 1997 while the use of methyl bromide will be made to comply strictly with the provisions of the Montreal Protocol.

COMMENTS AND RECOMMENDATIONS OF THE FUND SECRETARIAT

COMMENTS

1. The Country Programme conforms to the approved guidelines. The total consumption of ODS in 1993 was 348 tonnes ODP. Nearly 60 per cent was consumed in the aerosol sector, mainly in cosmetic products, while about 20 per cent and 10 per cent were consumed in the refrigeration and foam sectors respectively. Three cosmetic companies consumed about 98 per cent of the sector consumption. The use of CFC-11 in the foam sector is solely for producing insulation foam panels. In the refrigeration sector, CFC-12 is used mainly for servicing commercial, transport and domestic refrigeration equipment and air conditioning. Only a negligible quantity was consumed in MAC at an assembly plant. Solvent sector consumption is confined to about two enterprises with a total consumption of about 3 tonnes ODP.
2. The Government has adopted a vigorous strategy to phase out ODS in most sectors by 1997. The Executive Committee approved at its Seventeenth Meeting, under UNEP's work programme, a project for the establishment of the ozone unit, within the Hydrometeorological Service of Vietnam.
3. The Executive Committee also approved three aerosol investment projects representing 96 per cent of the sectoral consumption. The implementation of the three projects by UNDP will be completed between November 1996 and May 1997. Two projects for the complete phase out in the foam sector which are being implemented by UNIDO were also approved. UNIDO is currently preparing a recovery and recycling project for the domestic refrigeration sector and a conversion and refrigerant conservation project for the commercial and industrial refrigeration sector.
4. Subject to expeditious implementation of approved projects and successful completion of projects under preparation, the Government could meet its phase-out targets. The strategy adopted in the country programme is aimed at phasing out a large part of current consumption.

RECOMMENDATIONS

The Fund Secretariat recommends as follows:

1. To approve the Vietnam Country Programme. Approval of the country programme does not denote approval of the project proposals not yet considered by the Executive Committee or their funding levels.
2. To request the Government of Vietnam to present annually information to the Executive Committee on progress being made in the implementation of the country programme, in accordance with the decision of the Executive Committee on implementation of country programmes (UNEP/OzL.Pro/ExCom/10/40, para 135). Using the approved format, the initial report, covering the period 1 June 1996 to 31 December 1996, should be submitted to the Fund Secretariat not later than 31 March 1997.

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HYDROMETEOROLOGICAL SERVICE OF VIETNAM

4, Dang Thai Than Str., Hanoi, Vietnam

Tel : (84-4) 8228974, 8253343

Fax : (84-4) 8260779

No *H4/HITQT*

Date: *20 March 1996*

To : The Chief Officer
Secretariat of the Multilateral Fund
for the Implementation of the Montreal Protocol
1800 McGill College
27th floor
Montreal, Canada H3A 3J6

Dear Sir,

I have the honour to submit herewith the Country Programme of Vietnam for the consideration and approval of the Multilateral Fund for the Implementation of the Montreal Protocol.

The Vietnam adhered to the Protocol on 7 January 1994 and became a Party on 1 April 1994. It is classified as operating under Paragraph 1 of Article 5 of the Montreal Protocol.

I would like to place on record the appreciation of the Government of Vietnam for the assistance extended to it through the UNEP IE Ozone Action programme for the preparation of the Country programme which started on September 1994. I am pleased to say that the Government is committed to the implementation of actions contained in the Country Programme.

I further assert that it is the Government's intention to monitor compliance with the Protocol. If necessary, further and different action from those specified in the Country Programme will be updated and submitted to the Executive Committee of the Multilateral Fund.

Please accept, Sir, the assurance of my highest consideration.

Sincerely



Prof. Dr. Nguyen Due Ngu

DIRECTOR-GENERAL
HYDROMETEOROLOGICAL SERVICE
OF VIETNAM

COUNTRY PROGRAMME COVER SHEET

Country : Socialist Republic of Vietnam

Date received:

Lead National Agency : Hydrometeorological Service of Vietnam

Period Covered by
the Country Programme : 1993 - 1997

1. Phase-Out Schedule

Substances	%	Current consumption (tonnes x ODP)	Planned total consumption till phaseout (tonnes x ODP)	Planned year of phaseout*
CFC-11	12.14	42.24 x 1.0 = 42.24	171.20 x 1.0 = 171.20	1997
CFC-12	76.97	267.81 x 1.0 = 267.81	1139.05 x 1.0 = 1139.05	1997
CFC-115	2.21	12.81 x 0.6 = 7.69	63.54 x 0.6 = 38.12	1997
Halon 2402	6.90	4.0 x 6.0 = 24.00	16.00 x 6.0 = 96.00	1997
Methyl Chloroform	0.05	1.56 x 0.1 = 0.16	6.24 x 0.1 = 0.62	1997
Carbon tetrachloride	1.74	5.50 x 1.1 = 6.05	22.00 x 1.1 = 24.20	1997
		Total = 347.95	Total = 1469.19	

* Except for the servicing
and maintenance sector

2. Government Action Plan

Year(s) Started/Ended	Description of Action	Sector	Intended Effect
1. INSTITUTIONAL MEASURES			
1996	1.1 Establishment of National Steering Committee of government ministries and agencies	all	Creation of institutional mechanism to facilitate ODS phaseout
1995/98	1.2 Establishment of Ozonaction Office	all	Creation of institutional mechanism to facilitate ODS phaseout
1996	1.3 Formation of Industrial Sector Experts Committee (including chemical suppliers)	all	Creation of institutional mechanism to facilitate ODS phaseout
1996/97	1.4 Enhancing customs regulations and procedures, and equipment/training of personnel	all	Facilitation of ODS phaseout
1996	1.5 Establishment of Information and Resource Centre on Ozone Layer Protection	all	Facilitation of ODS phaseout
1996	1.6 Capacity building of Government Ministries in preventing the creation of new source of ODS consumption	all	Creation of institutional mechanism to facilitate ODS phaseout
2. REGULATORY MEASURES			
1996/97	2.1 Amendment to existing regulations of Customs Department to monitor ODS and follow-up enforcement activities	all	Introduce control measures to facilitate ODS phaseout
1996/97	2.2 Formulation of regulations under the Environmental Protection Law to control the use of ODS	all	Introduce control measures to facilitate ODS phaseout
1996/97	2.3 Establishment of Application Permit system to control import/export and use of ODS	all	Introduce control measures to facilitate ODS phaseout
1996/97	2.4 Drawing up of guidelines to assist State Planning Committee and State Committee on Co-operation and Investment in the approval of Investment Projects	all	Introduce control measures to facilitate ODS phaseout
1996/97	2.5 Formulation of incentive schemes such as tax reduction and import duty exemption for activities related to the reduction of ODS consumption	all	Facilitation of ODS phaseout

2. Government Action Plan (continued)

1996/97	2.6 Initiate voluntary agreements with companies/industry groups under which they commit to change to substitutes/alternatives without further action from the government	all	Creation of institutional mechanism to facilitate ODS phaseout
3. REPORT/STUDIES			
1994/96	3.1 Preparation of ODS Country Programme (CP)	all	Formulate Action Plan for ODS phaseout
1996/97	3.2 Preparation of a National Strategy for the protection of the ozone layer as a follow-up to the preparation of the CP	all	Crystallising the National Strategy for ODS phaseout
1999/2000	3.3 Preparation of ODS Country Programme Update 1999	all	Updating the CP in the light of implementation
1997/98	3.4 Study/Documentation of ODS alternatives/substitutes applicable to Vietnam	all	To facilitate ODS phaseout in the sector
4. ODS REDUCTION PLANS			
1996/97	4.1 Formulation of Reduction Plan for Solvent Cleaning Sector	Solvent Cleaning	To facilitate ODS phaseout in the sector
1996/97	4.2 Formulation of Reduction Plan for Foams Sector	Foams	To facilitate ODS phaseout in the sector
1996/97	4.3 Formulation of Reduction Plan for Refrigeration Sector	Refrigeration	To facilitate ODS phaseout in the sector
1996/97	4.4 Formulation of Reduction Plan for Air-Conditioning Sector	Air-Conditioning	To facilitate ODS phaseout in the sector
1996/97	4.5 Formulation of Reduction Plan for Fire-Fighting Sector	Fire-Fighting	To facilitate ODS phaseout in the sector
1996/97	4.6 Formulation of Reduction Plan for Aerosols Sector	Aerosols	To facilitate ODS phaseout in the sector
1996/97	4.7 Formulation of Reduction Plan for Agriculture (Methyl Bromide) Sector	Agriculture (Methyl Bromide)	To facilitate ODS phaseout in the sector

2. Government Action Plan (continued)

5. PUBLIC AWARENESS PROGRAMME			
1996/97	5.1 Organising conferences/seminars on ozone layer protection	all	To facilitate ODS phaseout in the sector
1996/97	5.2 Organising sector seminars/conferences on CFC alternatives/substitutes	all	To facilitate ODS phaseout in the sector
1996/97	5.3 Organising training seminars for repair/servicing workshop operators	all	To build national capacity for ODS phaseout
1996/97	5.4 Organizing project preparation assistance seminars/workshops	all	To build national capacity for ODS phaseout

3. Projects and Activities Summary

TYPE OF PROJECT (SECTOR)	YEAR	PROJECT DESCRIPTION	PROJECT COST (US DOLLARS)	IMPLEMENTING AGENCIES PARTICIPATION	Tonnes x ODP Phaseout
PROJECTS ALREADY APPROVED					
<u>Refrigeration</u>	1995 (6 months)	Preparation of project proposals for the reduction of refrigerant emission and establishment of collection and reclaiming network in domestic refrigeration sector	\$15,000	UNIDO	-
	1995 (6 months)	Preparation of investment project for reduction of refrigerant emissions and conversion of food processing and other industrial refrigeration and air-con equipment to suitable alternatives	\$20,000	UNIDO	-
	1994 - 1996 (1.5 years)	Phasing out ODS at the Searefeco and Searee industrial refrigeration plants of Seaprodex Co.	\$497,070	UNIDO	40
	Sub-total for refrigeration sector:		3 projects	\$532,070	40
<u>Aerosol</u>	1995 (1.5 years)	Conversion to hydrocarbon aerosol propellant technology at Saigon Cosmetics Company	\$238,430	UNDP	80
	1995 (1 year)	Conversion to CFC-free hydrocarbon aerosol propellant technology at Daso Company Ltd	\$124,684	UNDP	27
	1995 (1.5 years)	Conversion to CFC-free hydrocarbon propellant technology at Cosmetics Producing and Trading Company (CP & T)	\$322,186	UNDP	85
	Sub-total for aerosol sector		3 projects	\$685,300	192
<u>Several</u>	1994 (1 year)	Project preparation assistance	\$100,000	UNDP	-
	1994 - 1996 (2 years)	Country Programme preparation	\$30,000	UNEP	-
	1995 (1 year)	Country Programme preparation	\$30,000	France	-
	1995 - 1998 (3 years)	Establishment of the ozone unit (institutional strengthening)	\$137,280	UNEP	-
	1995 - 1996 (6 months)	Technology cooperation workshop for ODS elimination	\$27,000	UNEP	-
	Sub-total for several sector		5 projects	\$324,280	

3. Projects and Activities Summary (continued)

PROJECTS TO BE PREPARED				
<u>Refrigeration and Air-conditioning</u>	Project proposals for reducing refrigerant emission and establishment of collection and reclaiming network in domestic refrigeration sector			
	Investment project for reducing refrigerant emissions and conversion of food processing and other industrial refrigeration and air-conditioning equipment to suitable alternatives	Total for both projects: \$1,069,702	UNIDO	CFC-11 = 2.24 CFC-12 = 67.81 CFC-115 = 7.69
	Sub-total for refrigeration and air-conditioning sectors:	2 projects	\$1,069,702*	77.74
<u>Aerosol</u>	Investment projects for aerosol phaseout	\$35,200	UNIDO	CFC-12 = 8.00
	Sub-total for aerosol sector:	1 project	\$35,200*	8.00
<u>Halons</u>	Investment project for the establishment of Halon Bank with recovery and recycling equipment	\$35,520	UNDP	H2402 = 24.00
	Sub-total for Halons sector:	1 project	\$35,520*	24.00
<u>Solvents</u>	Investment project for phasing out the use of CTC in existing equipment and in cleaning work	\$82,471	UNDP	CTC = 4.18
	Investment project for the phasing out of the use of solvents in cleaning	\$43,055	UNDP	CTC = 1.87 MTC = 0.16
	Sub-total for solvents sector:	2 projects	\$125,526*	6.21

* above figures have been calculated according to the cost-effectiveness threshold

TOTAL COST

USD 2,807,598

4. SUPPORT ACTIVITIES : PROJECT SUMMARY TABLE (Only indicative)

Year	Project	Project Description	Sector	Place
1997	Training	Training course on recovery and recycling ODS	Domestic refrigerators	- Ha Noi - Ho Chi Minh - Da Nang cities
1997	Training	Training course on recovery and recycling ODS	Mobile air-conditioning	- Ha Noi - Ho Chi Minh - Da Nang cities
1997	Training	Training course on recovery and recycling ODS	Centrifugal chillers	- Ha Noi - Ho Chi Minh
1997	Training	Training course on recovery and recycling ODS	Cold storage	- Ha Noi - Ho Chi Minh - Da Nang cities
1997	Training	Training course on recovery and recycling ODS	Transport	- Ha Noi - Ho Chi Minh - Da Nang cities
1997	Training	Training courses to assure safety convention to HAP		
1997	Training	Training courses to improve the knowledge of public media on M.P and the ozone layer protection	All	
1997	Training	Training courses to improve the knowledge and skill of managers and policy makers on the ozone layer issue	All	- Ha Noi - Ho Chi Minh
1997 1998	Translation	Translating and publication UNEP's ozone layer protection documents	All	

5. Costs

Costs of Projects and Activities in the Country Programme: US\$ 2,807,598

Estimated cost effectiveness : US\$ 8,079 per tonne x ODP