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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Twenty-fifth Meeting
Montreal, 29-31 July 1998

COUNTRY PROGRAMME: YUGOSLAVIA

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 Yugoslavia
- Country Programme Cover Sheet
- Country Programme (Executive Summary)

YUGOSLAVIA COUNTRY PROGRAMME EVALUATION SHEET

Ozone Office, Federal Ministry for Development, Science and Environment

Status of ratification of the Vienna Convention and the Montreal Protocol

	Signature	Ratification	Entry into force
Vienna Convention (1985)		16-Apr-90	15-Jul-90
Montreal Protocol (1987)		03-Jan-91	03-Apr-91
London Amendment (1990)			
Copenhagen Amendment (1992)			

Production of controlled substances: No controlled substances produced

Consumption of controlled substances (1996) 1,083.8 metric tonnes
924.7 weighted tonnes (ODP)

(tonnes)	CFC-11	CFC-12	CFC-113	CFC-114	CFC-115	TOTAL Halon1211	Halon1301	TOTAL	CTC	MCF	TOTAL	Me-Br	
ODS	345.1	504.2	50.0	1.3	8.4	909.1	0.5	1.0	1.5	0.2	173.0	173.2	4.0
ODP	345.1	504.2	40.0	1.3	5.1	895.7	1.5	10.0	11.5	0.2	17.3	17.5	2.4

Distribution of ODP by substance: CFC 96.9% Halon 1.2% CTC and MCF 1.9%

Distribution of ODP by sector: Aerosol Foam Halon Refrigeration Solvent Other

Consumption (ODP tonnes): 66.3 352.1 11.5 437.3 57.5 0.0

Percent of total: 7.2% 38.1% 1.2% 47.3% 6.2%

Country Programme

Duration of country programme: 12 years (1998-2010)

ODS phase out target: Complete phase out by 2010

Phase out priority area: Foam and refrigeration sectors

Cost of activities in country programme: \$9,881,430

Strategy:

The Government strategy is based on freezing the consumption of CFC's by July 1, 1999 and Halons by January 1, 2002. Complete phaseout will occur by January 1, 2010 in accordance with the Montreal Protocol Phase-out schedules for Annex A controlled substances. Measures adopted to achieve these targets include import and licensing procedures as well as other administrative and economic instruments. Among these will be incentives, dialog with enterprises, implementation of investment projects and monitoring of the ODS consumption through the Ozone Office that is to be established.

COMMENTS AND RECOMMENDATIONS OF THE FUND SECRETARIAT

COMMENTS

1. The Country Programme conforms to the format of the approved guidelines. In the sector dealing with industry structure, the document provides information on the major ODS consuming industries.

2. The total consumption of the Federal Republic of Yugoslavia (hereafter referred to as FRY) in 1996 was 907 ODP tonnes. In terms of individual ODS, domestic production satisfied 49 per cent of CFC-11 and 35 per cent of CFC-12 requirements. There are two ODS producing enterprises, one of which produces CFC-11 and CFC 12, while the other produces carbon tetrachloride (CCl₄) and methyl chloroform. In 1993, over 8,000 tonnes of CCl₄ was produced of which over 6,300 tonnes (about 80 per cent) was exported to non-Article 5 countries. The CFC production which started in about 1989 has been characterized by severe declines caused by the preference of the domestic market for imported CFCs and lack of access to the export market. These are factors which could influence the phase-out strategy in the CFC production sector, i.e. whether the phase-out will take the conversion or closure pathways.

3. ODS consumption is in five sectors - aerosol, foam, refrigeration, solvent applications and fire extinguishants. Nearly 60 per cent of the consumption is due to the aerosol sector which is dominated by one company (Farmec) accounting for 97 per cent of domestic aerosol production and 40 per cent of the market share. The aerosol industry has also had a severe decline in CFC use due to cutbacks in production engendered by competition from foreign products.

4. Influenced inter alia by external market pressures, ODS consumption has steeply declined from the base consumption of 3,000 tonnes in 1986 to about half this quantity in 1993. The Government will accelerate this trend through the use of a mix of institutional, administrative and regulatory measures and investment in ODS phase-out projects to eliminate the use of ODS within a period of six years. Critical to this strategy is the successful phase-out of the ODS use in the aerosol sector controlled by only one company. The production sector phase-out also poses social, economic and political challenge to the government. The phase-out action will, however, be contingent on the successful phase-out in the consuming sectors so as not to create any dislocation in the supply system.

5. Fourteen investment projects had been identified as of June 1995, three of which are for retroactive funding. They include one refrigeration project reported to have been implemented in 1995, one aerosol project completed in 1992 and one cleaning/medical equipment completed in 1996. The funding to be requested retroactively amounts to US\$ 2.9 million.

6. The country programme also includes a project for the establishment of an Ozone Unit within the Ministry of Development, Science and Environment (institutional strengthening). The Government of Yugoslavia is requesting a total of US \$163,512 for the implementation of this

project. The Fund Secretariat's Comments and Recommendations on this request are presented under UNIDO work programme amendments (UNEP/OzL.Pro/ExCom/25/22).

RECOMMENDATIONS

The Fund Secretariat recommends as follows:

1. To approve the Yugoslavia Country Programme. Approval of the Country Programme does not denote approval of the projects identified therein or their funding levels.
2. To request the Government of Yugoslavia 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 August 1998 to 31 December 1999, should be submitted to the Fund Secretariat no later than 1 May 2000.

THE FEDERAL REPUBLIC OF YUGOSLAVIA
Federal Ministry For Development
Science and Environment

COUNTRY PROGRAMME

FOR

THE PHASING OUT OZONE DEPLETING SUBSTANCES

IN

THE FEDERAL REPUBLIC OF YUGOSLAVIA

UNITED NATIONS INDUSTRIAL DEVELOPMENT
ORGANIZATION
(UNIDO)

CP Југославија
FR Yugoslavia



Савезно министарство за развој, науку и животну средину
Federal Ministry for Development, Science and Environment

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No.

Date:

January 28.1998.g.

Dr. Omar E.El-Arini,
Chief Officer,
Multilateral Fund for the Implementation
of the Montreal Protocol,
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Dear Sir,

I have the honor to submit herewith the Country Programme for the Federal Republic of Yugoslavia for the consideration and approval of the Multilateral Fund for the Implementation of the Montreal Protocol. The Federal Republic of Yugoslavia ratified the Vienna Convention on 23 February 1990 and the Montreal Protocol on 18 October 1990. It is temporarily classified as operating under paragraph 1 of Article 5 of the Protocol.

This Country Programme was prepared with the assistance of the UNIDO and the Government is committed to the implementation of the action contained in it.

If deemed necessary, further action from those specified in the Country Programme will be updated and submitted for consideration to the Executive Committee of the Multilateral Fund.

We hope that the Executive Committee will approve this Country Programme as well as request for assistance in respect of the institutional strengthening hereto attached.

Please accept, Sir the assurance of my highest considerations.

Yours sincerely,

FEDERAL MINISTER

Prof. dr Jagoš Zelenović

Country programme cover sheet

Country: The Federal Republic of Yugoslavia
Lead national agency: Ozone office/Federal Ministry for
 Development, Science and Environment
Participating implementing agency: UNIDO

1. Phase-out schedule

Class	Substance	Current consumption (ODP Tons)	Percentage	ODP	Planned year of phase-out
Annex A/group 1					
CFC-11	CFC-11	345.1	38.04	1	2010
CFC-12	CFC-12	504.2	56.57	1	2010
CFC-113	CFC-113	40	4.40	0.8	2010
CFC-114	CFC-114	1.30	0.14	1	2010
CFC-115	CFC-115	5.07	0.55	0.6	2010
Subtotal 1		895.67	98.73		
Annex A/group 2					
Halons 1211	Halons 1211	1.5	0.16	3	2010
Halons 1301	Halons 1301	10	1.10	10	2010
Halons 2402	Halons 2402	-	-	6	2010
Subtotal 2		11.50	1.27		
Total Annex A		907.17	100		
Annex B					
Group 1	CFC-13	9		1	2010
Group 2	CTC	0.22		1.1	2010
Group 3	1,1,1 TCA	17.3		0.1	2010
Annex C					
Group 1	HCF-22	14.45		0.05	N.A.
Annex E	Methyl Bromide	2.8		0.7	N.A.

* R-502: blend of CFC-115 (51.2%) and HCFC-22 (48.8%)

2. Government action plan

Actions	Brief description	Commencement	Sector
Establishment of an ozone unit	To monitor the ODS phase-out programme	September 1997	All
Import of ODS	The issuing of permits to import ODS will be transferred to the ozone office	December 1998	All
Awareness	Awareness campaigns, seminars, workshops,...	mid-1997	All
Regulation	Adoption of legislation to encourage the introduction of new alternatives and gradually ban the import of ODS and ODS-based equipment	mid-1998	All
Projects	See list of projects attached	September 1998	Refrigeration, solvents, foam, methyl bromide, aerosols

information related to the ODS phase-out.

Consumption by sectors

Sectors	Substances	Consumption (metric tonnes)	Percentage
1. Refrigeration - domestic - commercial - industrial - transport - air-conditioning - servicing	CFC-12 CFC-12/R502 CFC-12/R502 CFC-12 CFC-12 CFC-12/R502	440.65	48.1
2. Foams RPU FPU MPU Extruded polystyrene	CFC-11 CFC-11 CFC-11 CFC-11/CFC-12	352.10	38.4
3. Aerosols/sterilants - pharmaceutical - cosmetics - household and industrial products	CFC-12/CFC-114 CFC-12/CFC-114 CFC-12/CFC-114	66.30	7.24
4. Solvents - medical equipment production	CFC-113	50	5.46
5. Fire extinguishers	Halons 1211 and Halons 1301	1.5	0.16
6. Agriculture	Methylbromide	4	0.43

To properly carry out the phase-out programme, the projects indicated in the list have been given first priority, and with the assistance of the Multilateral Fund a major reduction can be achieved in the next 6 to 7 years.

Project summary table

Project no.	Title	Cost (in US dollars)
1.	Institutional strengthening project	170,000
2.	Investment projects (see list attached)	6.6 million
3.	Recovery and recycling of refrigerants	to be estimated
4.	Methyl bromide demonstration project	300,000

Executive summary

The Federal Republic of Yugoslavia has an area of 102,173 km², with a population of 10,560,000. Industry accounts for 44.2%, agriculture for 21.7%, construction for 5.5% and trade for 12.6% of the total production.

The GDP has decreased since 1991 from US \$24.7 billion to US \$14.8 billion due to the UN sanctions imposed on the country. After the lifting of the UN sanctions, the economy showed some modest signs of recovery in 1996, and the gross social product growth rate is +6%.

The Federal Republic of Yugoslavia does not produce ODS and depend solely on imports.

The ODS use is mainly in the refrigeration and foam sectors. However, small amounts are being used in the solvents, halons, aerosols and methyl bromide sectors.

Through the financial assistance of the Multilateral Fund and in cooperation with UNIDO, the FRY has prepared the country programme containing the following features.

Current situation

The FRY had a high consumption of ODS until almost the end of the eighties with an average figure of 1,500 metric tonnes. Due to the deep economic crisis experienced in the early nineties, the overall consumption dropped to 480 metric tonnes in 1994 to increase again in 1996 to 910.55 metric tonnes.

Almost 50% of the consumption is in the refrigeration sector, including servicing and maintenance, and nearly 40% in the foam sector. The rest of the consumption is shared between the aerosols, solvents, halons and methyl bromide sectors.

Assuming that controls and restrictions are imposed, it is estimated that the total consumption of all the controlled substances will increase at an average of 5% to reach a figure of 1,820 metric tonnes.

However, the FRY is determined to comply with the Montreal Protocol obligations, and with the adequate financial assistance could phase out by the year 2005, 90% of its ODS consumption.

All importers of ODS are local importers and are mainly located in Belgrade.

The refrigeration industry has a long tradition in the FRY with a production of domestic, commercial and industrial equipment, as well as some type of compressors for commercial and industrial uses, with an average consumption of 300 metric tonnes (see

attached list of projects). The servicing is performed through a network linked to the major manufacturers or by several hundred of small workshops (both in the formal and informal sector). It is estimated that 130 to 160 metric tonnes are consumed in the servicing sector.

The foam sector is subdivided in five subsectors. Rigid polyurethane foam mainly for refrigeration, rigid polyurethane for the production of sandwich panels, flexible polyurethane "slabstocks" for furniture, flexible moulded PU for the car industry and extruded polystyrene sheets for packaging. The estimated consumption in this sector is 352 metric tonnes. In the aerosols sector an early conversion took place, which left very few enterprises still using CFCs. The current consumption is around 66 metric tonnes. In the solvent sector, only one enterprise (HEMOFARM) is still using CFC-113 with an average consumption of 50 metric tonnes. However, the company has already started the conversion by its own means, but is seeking financial compensation from the Multilateral Fund. Other solvents are still in use in the dry cleaning, metal cleaning and electronics industries, but in very low amount.

The largest company using Halons (VATROSPREM) has switched to non-ODS uses. However, important stocks of Halons have been identified and a "Bank of Halons" could be established.

Methylbromide is used as a fumigant and disinfectant in agriculture with an average consumption of 4 metric tonnes. (See table Consumption by Sectors)

A focal point within the Ministry of Science, Development and Environment has been established and works in cooperation with other institutions in the country such as the Federal Ministry for Foreign Trade, the Federal Ministry for Labour, Health and Social Policy, the Federal Ministry of Industry, the Federal Ministry of Agriculture, the Federal Chamber of Economy and the Federal Hydrometeorological Institute.

The Government and Industry responses to the Montreal Protocol have two aspects:

- (1) Reduction of ODS consumption: Apart from the economic crisis the country went through, the industry started to reduce the ODS consumption by introducing new alternatives in mainly four enterprises (ODOD: domestic refrigeration, HEMOFARM and EI-NIS: solvents and VATROSPREM: Halons).
- (2) Regulations, incentives and educational programmes: The Government is determined to put in place instruments to control the imports of ODS by establishing a licensing system, and to provide economic incentives such as the exemption of customs duties of any ozone friendly equipment. In addition, educational programmes will be carried out to sensitize the general public, and to provide enterprises with appropriate technical and economic