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# COMMISSION OF THE EUROPEAN COMMUNITIES

COM(82) 307 final

Brussels, 7 June 1982



## COMMUNICATION FROM THE COMMISSION TO THE COUNCIL

### Chlorofluorocarbons in the environment:

Progress report of the application of Community Policy

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COMMUNICATION FROM THE COMMISSION TO THE COUNCIL

Chlorofluorocarbons in the environment: Progress report of the application of Community Policy

- I. Introduction
- II. Current scientific situation
- III. Economic data
- IV. The action programme in the sectors of refrigeration, foam plastics and solvents.

## I. INTRODUCTION

The emission of Chlorofluorocarbons (CFCs) into the atmosphere is a potential source of disturbance to the atmosphere's equilibrium. Community policy in this area has focused on precautionary measures that seek a balance between the possible dangerous effect on man and the environment and the socioeconomic impacts of reducing the use of CFCs.

The steps of Community policy have been until now the following:

1. Council Resolution of 30 May 1978 (1);
2. Council Decision of 26 March 1980 (2)

The Commission has sent to the Council a number of Communications on this matter, the last one on 26 May 1981. That Communication (3), concerning chlorofluorocarbons in the environment, contained information and a basis for evaluation for the pursuit of Community policy. That Communication reviewed the available scientific and economic data and gave orientations toward further measures to be taken at Community level. Following the debate of the Ministers of the Environment on 11 June 1981, the Commission submitted on 8 October 1981 a proposal for a draft decision on the consolidation of precautionary measures concerning chlorofluorocarbons in the environment (4).

Finally, the Council authorized the Commission (5) to participate on behalf of the Community in the negotiations for the elaboration of a framework convention for the protection of the ozone layer in the framework of UNEP. One preparatory meeting took place in Stockholm on 20-29 January 1982.

The aim of the present Communication is to report on the progress made to date on the application of Community policy in this area. The topics treated will include the current scientific situation, the relevant economic data and the action programme in the sectors of refrigeration, foam plastics and solvents.

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(1) OJ C 133, 7.6.1978

(2) Decision 80/372/EEC - OJ L 90, 3.4.1980

(3) COM(81) 261, 26.5.1981

(4) OJ C 269, 21.10.1981

(5) Decision of the Council of 19.1.1982 (4132/82 ENV 4)

## II. CURRENT SCIENTIFIC SITUATION

Under the United Nations Environment Programme (UNEP) the Coordinating Committee on the Ozone Layer (CCOL) met in Copenhagen 12-16 October 1981 for its fifth session.

The Committee concluded that a risk of depletion of the ozone layer due to chlorofluorocarbon releases is still most likely, although natural variations and other compounds which may affect ozone, require increased consideration. If one considers only chlorofluorocarbons 11 and 12 releases at their present rates, current model calculations estimate an eventual ozone reduction in the range of 5 to 10 per cent, compared to about 10 per cent estimated in the 1980 CCOL report, and 15% in their 1979 report. The report (1) of the Commission workshop on the evaluation of the effects of chlorofluorocarbons on atmospheric ozone held in Brussels in January 1981 also supports these findings.

If releases of other chlorine containing trace gases are continued at present rates, then they could increase the eventual ozone depletion due to CFC 11 and 12 alone by about one third. The estimate of the present total column ozone depletion is less than one per cent, which is below the present detection limit.

In addition, multiple scenario models suggest that the distortion of the vertical ozone profile might become more important than changes in the total amount with respect to possible climatic consequences.

In conclusion, the progress made in the photochemical theory of stratospheric ozone and in observations has not changed substantially the uncertainties. In the current scientific situation a change in the policy of precautionary measures that the Community has pursued so far is not advisable.

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(1) Workshop Report "Evaluation of the Effects of Chlorofluorocarbons on Atmospheric Ozone: Present Status of Research", CEC, Brussels, Nov. 1981. (Doc. XII/CLI/9/81)

### III. ECONOMIC DATA

Since 1976, the Commission has been receiving total Community annual figures of production and sales of CFC 11 and 12, which the European chlorofluorocarbon producers provide using the CFC data collection mechanism described in the Communication of 26 May 1981.

The data for the five years since 1976 are presented in Annex I. The most significant figure in this table is the sale in 1981 of 116,139 tonnes of CFC 11 and 12 for aerosol use which is 34.4% less than the 1976 figure of 176,914. Thus, the reduction of 30% sought by the Council decision 80/372/EEC to be achieved by the end of 1981 by each Member State has been achieved and surpassed for the Community as a whole. It should also be pointed out that this goal has been exceeded in spite of the fact that the 1981 figure includes the contribution from Greece, while the figures for the previous years do not.

Some other figures also warrant mention. The sales of CFC 11 and 12 for refrigeration, foam plastics and solvents and other uses reached 93,626 tonnes in 1981, an increase of 40% since 1976, and have evolved from 28% in 1976 to 45% of all sales for aerosol and non-aerosol uses. Finally, the production of CFC 11 and 12 including imports reached 300,144 tonnes in 1981, a decrease of 8.1% since 1976, while the total sales were 209,765 tonnes in 1981, a decrease of 14% since 1976. These 1981 figures again include the contribution from Greece.

Using the same data collection mechanism it has been reported that the total production of CFC 113 and 114 in the EEC was less than 45,000 tonnes in 1981.

IV. THE ACTION PROGRAMME IN THE SECTORS OF REFRIGERATION, FOAM PLASTICS AND SOLVENTS

The Communication of 26 May 1981 outlined the action programme on the reduction of emissions of chlorofluorocarbons in the sectors of refrigeration, foam plastics and solvents. This programme was considered necessary because, as the latest statistics show, there has been a serious increase in the use of CFCs in sectors other than aerosols.

The action programme has been taking place with the help of national experts and representatives of industry. The results expected in each case are:

a) Refrigeration: A code of good practice is under preparation on the design, manufacture, use and servicing of refrigeration equipment, and the reclamation of refrigerants.

This code is intended to be applied by the relevant industries and users with the specific aim of reducing the losses of CFCs.

b) Flexible and rigid foam plastics: Research projects taking place in the Community on the recovery of CFCs from plant ventilation air by the absorption on active carbon during the manufacture of flexible foam are being coordinated. This is expected to lead eventually to the design of a pilot plant utilizing this improved cleaner technology. The possibilities for reducing the use of CFCs in the manufacture and conversion of rigid foams and methods for proper disposal procedures of these foams are being investigated. For flexible foams the use of "soft" polyols to reduce CFC usage as well as the use of alternative blowing agents such as methylene chloride are being examined.

c) Solvents: A code of good practice on the design, manufacture, use and servicing of equipment in which CFCs are being used as solvents is being prepared for application by the appropriate industries.

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## CFC 11 &amp; 12 PRODUCTION AND SALES BY EEC PRODUCERS : 1976 - 1981

Tonnes CFCs 11 &amp; 12

	1976	1977	1978	1979	1980	1981
PRODUCTION (including imports)	326 433	319 107	307 033	304 238	295 718	300 144
Change from 1976						
- tes		- 7 326	- 19 400	- 22 195	- 30 715	- 26 289
- %		- 2,2	- 5,9	- 6,8	- 9,4	- 8,1
SALES IN EEC MARKETS (excluding sales to co-producers)						
AEROSOLS	176 914	162 568	150 424	136 552	126 442	116 139
Change from 1976						
- tes		- 14 346	- 26 490	- 40 362	- 50 472	- 60 775
- %		- 8,1	- 15,0	- 22,8	- 28,5	- 34,4
REFRIGERATION	20 773	20 293	20 416	20 300	21 174	21 451
Change from 1976						
- tes		- 480	- 357	- 473	+ 401	+ 678
- %		- 2,3	- 1,7	- 2,3	+ 1,9	+ 3,3
FOAM PLASTICS	42 154	45 254	54 524	55 788	61 859	64 067
Change from 1976						
- tes		+ 3 100	+ 12 370	+ 13 634	+ 19 705	+ 21 913
- %		+ 7,4	+ 29,3	+ 32,3	+ 46,7	+ 52,0
SOLVENTS/OTHER USES	4 178	4 871	6 073	6 921	7 353	8 108
Change from 1976						
- tes		+ 693	+ 1 895	+ 2 743	+ 3 175	+ 3 930
- %		+ 16,6	+ 45,4	+ 65,7	+ 76,0	+ 94,1
TOTAL SALES IN EEC	244 019	232 986	231 437	219 561	216 828	209 765
Change from 1976						
- tes		- 11 033	- 12 582	- 24 458	- 27 191	- 34 254
- %		- 4,5	- 5,2	- 10,0	- 11,1	- 14,0
TOTAL EXPORTS OUTSIDE EEC	83 578	81 187	82 236	81 636	79 361	88 243
Change from 1976						
- tes		- 2 391	- 1 342	- 1 942	- 4 217	+ 4 665
- %		- 2,9	- 1,6	- 2,3	- 5,0	+ 5,6
TOTAL EEC AND EXPORT SALES	327 597	314 173	313 673	301 197	296 189	298 008
Change from 1976						
- tes		- 13 424	- 13 924	- 26 400	- 31 408	- 29 589
- %		- 4,1	- 4,3	- 8,1	- 9,6	- 9,0
PRODUCTION LESS SALES	- 1 164	- 4 934	- 6 640	+ 3 041	- 471	+ 2 136

Note: The 1981 data includes Greece whereas the earlier years do not!