

COMMISSION OF THE EUROPEAN COMMUNITIES

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COMMUNICATION FROM THE COMMISSION TO THE COUNCIL
CONCERNING THE PREPARATION OF DIRECTIVES ON HEPTACHLOR AND
CHLORDANE UNDER COUNCIL DIRECTIVE 76/464/EEC

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COMMUNICATION FROM THE COMMISSION TO THE COUNCIL

concerning the preparation of directives on heptachlor and chlordane
under Council Directive 76/464/EEC

1. The Council directive of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community (76/464/EEC) establishes two lists of families and groups of substances.

Article 6.1 of this directive states that the Council, acting on a proposal from the Commission, shall lay down the limit values which the emission standards must not exceed for the various dangerous substances included in the families and groups of substances within List I. These limit values shall be laid down mainly on the basis of toxicity, persistence and bioaccumulation, taking into account the best technical means available.

Article 6.2 of the directive makes corresponding provisions for the setting of water quality objectives as an exception to limit values provided for in Article 6.1.

2. This directive will be brought into operation by means of Council directives relating to individual substances or groups of substances. The proposals for these directives will be prepared by the Commission, after it has taken advice from consultants and experts.
3. A meeting of national experts was held in Brussels on 26 September 1977 (ENV.487/77). This meeting agreed that chlordane (1), heptachlor (1) and heptachlor epoxide (1) should be included in the list of organo-chlorine compounds to be studied by the Commission with a view to the preparation of proposals for directives. Heptachlor epoxide is not usually used as a pesticide but it was important to study it because it is a relatively stable product of the degradation of heptachlor in the environment.

(1) The systematic names of chlordane, heptachlor and heptachlor epoxide are respectively : 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-4,7-endo-methanoindane : 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-4,7-endo-methanoindene : 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro-4,7-methanoindane.

4. Following this meeting, two studies were made for the Commission :
- (i) Evaluation of the impact of the aquatic environment of hexachlorocyclohexane (HCH isomers), hexachlorobenzene (HCB), DDT (+ DDE and DDD), heptachlor (+ heptachlor epoxide) and chlordane, by Dr. J.E. Portmann. (ENV. 486/79) ;
 - (ii) Reduction of chlordane, DDT, heptachlor, hexachlorobenzene and hexachlorocyclohexane isomers contained in effluents, taking into account the best technical means available, by Dr. J. de Bruin (ENV. 313/79 - rev. 1).
5. Dr. Portmann has made a comprehensive review of the ecotoxicity of heptachlor and heptachlor epoxide. He draws attention to some shortcomings and uncertainties in the published data. Subject to this qualification, it is clear that both heptachlor and heptachlor epoxide are very toxic substances, that both can persist in the soil for years but are degraded in weeks in the aquatic environment, and that both are bioaccumulable. There is some evidence that both heptachlor and heptachlor epoxide are carcinogenic.
6. Dr. Portmann has also made a comprehensive review of the ecotoxicity of chlordane. Again he draws attention to some shortcomings and uncertainties in the published data. Chlordane exists in two isomeric forms and, in addition, many technical grades of chlordane contain a substantial quantity of heptachlor. However, it is concluded that chlordane is very toxic, is one of the more persistent organochlorine pesticides and is bioaccumulable. Chlordane is only weakly carcinogenic, if at all.
7. Dr. de Bruin has reviewed the production of uses of heptachlor and chlordane, and some other organochlorine pesticides, in the Community.
8. Heptachlor is not manufactured in the Community, and its only use within the Community is the protection of beet seed. This use will be controlled by Council Directive 79/117/EEC (1) which comes into force in 1981. At present about 30 tonnes per year of heptachlor is imported into the

(1) Council directive of 21 December 1978 concerning the prohibition of the marketing and use of plant protection products containing certain active substances (OJ L 33/36, 8 February 1979)

Community. Of this quantity, about 20 tonnes is exported and the remainder, about 10 tonnes, is used within the Community. It is expected that export markets will decrease in the future. The manufacture of heptachlor in the United States of America will be banned after 1982, and it is possible that heptachlor will have disappeared as a commercial product between 1985 and 1990.

9. Chlordane is not manufactured in the Community and although it has been used widely in the past for agricultural purposes its use is now severely limited. The use of chlordane for plant protection purposes will be banned by Council directive 79/117/EEC which comes into operation in 1981. At present about 5 tonnes per year is imported into the Community and, of this, 2 tonnes is exported. It is expected that the use of chlordane will continue to decline. The manufacture of chlordane in the United States of America will be banned after 1980, and it may well be that chlordane will have disappeared entirely as a commercial product within ten years.
10. During the preparation of the proposals for Council directive 79/117/EEC, the Commission had prepared a document summarising the uses of heptachlor and chlordane in the Member States (1335/VI/75) and the legal controls in force. At that time, heptachlor was used in some Member States for soil treatment or the treatment of beet seeds ; in one Member State it was used against moles. In two Member States chlordane was sold, in small packs, for ant control, and in one it was used for earthworm control. The Commission has no knowledge of any new uses which have been introduced since the production of document 1335/VI/75, and it considers that the uses disclosed in that document present an insignificant threat to the aquatic environment of the Community. Moreover, the use of heptachlor and chlordane will be controlled by directive 79/117/EEC. This directive specifically permits the use of heptachlor for the treatment of beet seed, but it is expected that this will only take place in the Federal Republic of Germany. The use of chlordane for other plant protection purposes will not be permitted.
11. The following table, which relates to 1977, showing the quantities of various organochlorine pesticides produced in the Community, imported into the Community and exported from the Community, has been compiled from Dr. de Bruin's report.

Flow of organochlorine pesticides (tonnes/year)

	Chlordane	DDT	Heptachl.	HCB	HCH	Lindane
Produced within the Community	0	7000	0	3500	42300	4700
Imported into the Community	5	150	30	0	0	260
Total within the Community	5	7150	30	3500	42300	4960
Used as intermediates	0	1250	0	3400	42300	0
Exported from the Community	2	5650	20	0	0	2640
Used within the Community	3	250	10	100	0	2320
Total	5	7150	30	3500	42300	4960

Dr. de Bruin qualified the information presented in this table by noting that it had not always been possible to obtain statistically reliable data and that the figures should be used with great care.

12. The reports prepared by Dr. Portmann and Dr. de Bruin were considered at a meeting of national experts held on 21 June 1979 (ENV.407/79). Although in principle chlordane and heptachlor might be included in List I and be the subject of Council directives made under directive 76/464/EEC, the experts recommended that these substances be deleted from the list of priority substances. The experts noted that the substances were not manufactured or used industrially in the Community and that the quantities likely to be discharged during compounding were negligibly small. The effort which might have been directed towards producing directives could be better spent elsewhere.

13. Conclusions

In view of the opinion of the national experts, of the existence of Council Directive 79/117/EEC, which will reduce the use of chlordane and heptachlor, and of the fact that the manufacture of these substances is to be

discontinued in the United States of America, a major supplier of these substances to the Community, the Commission considers that further work on these substances within the framework of Directive 76/464/EEC would not lead to any significant reduction in the pollution of the aquatic environment.

The Commission therefore considers that no useful purpose would be served by preparing and submitting proposals for Council directives concerning heptachlor and chlordane. It will be sufficient to keep the use of these substances under review ; proposals for Council directives will only be submitted if it appears that a change in the pattern of manufacture or use of either of these substances has increased substantially the risk of polluting the aquatic environment.
