



EUROPEAN COMMISSION

Brussels, 12 -06- 1997

SG(97) D/ 4417

94/4274, 90/5220 and 90/0961

Sir,

I have the honour to forward to you the text of a Reasoned Opinion of the Commission addressed to Ireland, pursuant to Article 169 of the EC Treaty, about the failure to fulfill its obligations under Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.

Yours faithfully,
For the Commission

Encl.: Doc. C(97) 1647 final

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COMMISSION OF THE EUROPEAN COMMUNITIES

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REASONED OPINION

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1. The purpose of Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community is to protect the aquatic environment of the Community from pollution (hereinafter referred to as "the Directive").

To this end, the Directive draws a distinction between two categories of dangerous substance, one entered on List I and the other on List II in the Annex to the Directive. List I contains substances particularly dangerous for the aquatic environment and selected mainly on the basis of their toxicity, persistence and bioaccumulation. List II contains substances which have a deleterious effect on the aquatic environment but which can, however, be confined to a given area and which depend on the characteristics and location of the water into which they are discharged. The Annex to the Directive states that substances in List I for which the emission limit values referred to in Article 6 of the Directive (see below) have not been determined must be treated as List II substances.

The first paragraph of Article 1 of the Directive provides that the Directive shall apply to inland surface water, territorial waters and internal coastal waters.

The second paragraph of Article 1 of the Directive provides for a series of definitions, including "discharge" and "pollution".

"Discharge" is defined in Article 1(2)(d) as "the introduction into the waters referred to in paragraph 1 of any substances in List I or List II of the Annex, with the exception of:

- discharges of dredgings,
- operational discharges from ships in territorial waters,
- dumping from ships in territorial waters."

"Pollution" is defined in Article 1(2)(e) as "the discharge by man, directly or indirectly, of substances or energy into the aquatic environment, the results of which are such as to cause hazards to human health, harm to living resources and to aquatic ecosystems, damage to amenities or interference with other legitimate uses of water."

Article 2 of the Directive requires Member States to take the appropriate steps to eliminate pollution of water by the substances in List I and to reduce pollution by the substances in List II, in accordance with the Directive, the provisions of which represent only a first step towards this goal.

Article 6 of the Directive provides that the Council, acting on a proposal from the Commission, is to lay down the limit values which the emission standards to be laid down in the discharge authorizations issued by the Member States must not exceed together with the quality objectives for the various substances in List I.

Article 7 of the Directive provides that:

- "1. In order to reduce pollution of the waters referred to in Article 1 by the substances within List II, Member States shall establish programmes in the implementation of which they shall apply in particular the methods referred to in paragraphs 2 and 3.
2. All discharges into the waters referred to in Article 1 which are liable to contain any of the substances within List II shall require prior authorization by the competent authority in the Member State concerned, in which emission standards shall be laid down. Such standards shall be based on the quality objectives, which shall be fixed as provided for in paragraph 3.
3. The programmes referred to in paragraph 1 shall include quality objectives for water; these shall be laid down in accordance with Council Directives, where they exist.
4. The programmes may also include specific provision governing the composition and use of substances or groups of substances and products and shall take into account the latest economically feasible technical developments.
5. The programmes shall set deadlines for their implementation.
6. Summaries of programmes and the results of their implementation shall be communicated to the Commission.
7. The Commission, together with the Member States, shall arrange for regular comparisons of the programmes in order to ensure sufficient coordination in their implementation. If it sees fit, it shall submit relevant proposals to the Council to this end."

The Directive laid down no explicit time limits for implementation. In a letter dated 3 November 1976, the Commission suggested the following dates to the Member States: 15 September 1978 for the authorization system; 15 September 1981 for the programmes to reduce pollution by List II substances and 15 September 1986 for the implementation of programmes.

Article 9 of the Directive provides that the application of the measures taken pursuant to the Directive may on no account lead, either directly or indirectly, to increased pollution of the waters covered by the Directive. This provision enshrines a "stand still" principle, i.e. a principle that implementation of the Directive should not worsen water pollution.

The third paragraph of Article 189 of the Treaty establishing the European Community provides that directives shall be binding, as to the result to be achieved, on each Member State to which they are addressed. The first paragraph of Article 5 of that Treaty provides that Member States shall take all appropriate measures, whether general or particular, to ensure fulfilment of the obligations arising out of the Treaty or resulting from action taken by the institutions of the Community.

2. On 14 February 1991, the Commission notified a letter of formal notice to Ireland (SG(91) D/3384) in which it addressed the failure by Ireland to communicate summaries of pollution reduction programmes for certain List II substances.

On 23 December 1992, the Commission notified a letter of formal notice to Ireland (SG(92) D/19207) in which it inter alia contended that the Irish legislation did not constitute an adequate framework for implementing Article 7 of the Directive (the legislation failed to make pollution reduction programmes mandatory, to adequately provide for the laying down of quality objectives, and to subject "sewers" to authorization) and that, in addition, there had been failures of implementation of Article 7 in relation to a number of specific areas. By a letter dated 30 July 1993, Ireland responded.

On 14 February 1996, the Commission notified a letter of formal notice to Ireland (SG(96) D/2223) in which it drew attention to Ireland's failure to implement Article 7 of the Directive in relation to Irish marine fish farms. By a letter of letter dated 11 June 1996, Ireland responded. The notification of this letter of formal notice followed the Commission's investigation of a number of complaints about Irish marine fish farms (P93/4525, P93/4870, P94/4078 and P94/4274). During these investigations, Ireland confirmed in a letter dated 7 April 1995 that the substance Dichlorvos was used in Irish marine fish farms and that the Local Government (Water Pollution) Act, 1977 did not apply to such farms; with a letter dated 4 July 1995, Ireland enclosed copies of sections of the Fisheries Act 1959 to 1994 together with the Foreshore Act 1933 which govern the licensing and regulation of Irish marine fish farms.

By a letter dated 14 June 1996, Ireland further outlined its position in relation to Article 7 of the Directive.

On 3 October 1996, the Commission notified a further letter of formal notice to Ireland (SG(96) D/8634) as a supplement to its letter of formal notice SG(92)D/19207. To date, the Commission has not received a response to this.

3. The Directive in its Article 7 succinctly sets down broad and far-reaching requirements for the control of water pollution in the Community. Its scope in terms of the substances it covers and the waters it encompasses is more extensive than any other piece of water legislation adopted by the Community to date. This makes its correct transposal and application of considerable importance to the protection of the Community's aquatic environment. It is the Commission's contention that Ireland has not given proper effect to these requirements. In particular, Ireland has not adopted pollution reduction programmes in accordance with Article 7 or communicated programme summaries and implementation results to the Commission; it has not in its legislation or in the application of that legislation

fully and correctly provided for the authorization of discharges, and the laying down of quality objectives and emission standards; in relation to the substance phosphorous, it has allowed a serious problem of phosphorous pollution to emerge and worsen over the period since the Directive was adopted. Details are set out below.

Failure by Ireland to establish programmes and to communicate programme summaries and implementation results

Contrary to Article 7(1) of the Directive, Ireland has failed to establish programmes in accordance with the Directive for all substances comprised in List II of the Directive.

In the abovementioned letter of 14 June 1996, Ireland argued that, apart from phosphorous which is responsible for the eutrophication of Irish surface waters (see below), pollution by List II substances is not a feature of Irish waters, and that, in these circumstances, formal programmes under Article 7 to reduce pollution by such substances are not considered to be warranted under the conditions obtaining in Ireland at present.

The Commission rejects the argument that Ireland is not obliged to establish pollution reduction programmes under Article 7. The Irish argument apparently rests on an interpretation of Article 7 whereby pollution must be present before pollution reduction programmes are required. However, Community environmental policy is based on the precautionary principle and on the principles that preventive action should be taken, and that environmental damage should as a priority be rectified at source¹. The interpretation implicit in Ireland's argument runs contrary to these principles. The programmes required under Article 7 clearly have a preventive content. For example, the required system of discharge authorizations with emission standards (Article 7(2)) is preventive in as much as it imposes conditions on future discharges. In addition, this system applies to *all* discharges *liable* to contain any of the substances within List II, i.e. it is not confined to discharges which are actually causing pollution by List II substances. The interpretation implicit in Ireland's argument also runs contrary to Article 9 of the Directive, in as much as it may lead directly or indirectly to increased pollution through a deferment of action until problems have manifested themselves. The problems Ireland is currently experiencing with phosphorous illustrate this (see below).

The Commission would also take issue with Ireland's assertion that pollution by List II substances is not a feature of Irish waters. This assertion is not based on comprehensive, authoritative evidence in relation to all List II substances and all of Ireland's territory over the period since the Directive was adopted. Nor is the assertion consistent with the evidence that is available. By way of illustration, the official report "Water Quality in Ireland 1987-1990"² points to examples of pollution other than phosphorous pollution, for example it notes heavy contamination with heavy metals in Dungarvan Harbour, and the carrying of significant lead contamination to the Suir Estuary.

¹ The second paragraph of Article 130r of the EC Treaty.

² Water Quality in Ireland. Environmental Research Unit, 1992. ISBN 1 85053 1803.

While arguing that it is not formally required to establish pollution reduction programmes other than for phosphorous, the Irish authorities point out that they are pursuing measures aimed at the prevention of pollution by List II substances generally. The Commission welcomes these measures, but rejects the proposition that Ireland is free not to establish pollution reduction programmes under Article 7.

In so far as Ireland may purport to have established programmes for all or any substances comprised in List II of the Directive (Ireland has referred to a programme of measures in relation to phosphorous), the Commission would contend that it has not established programmes within the meaning of the Directive (for example, quality objectives are absent).

Contrary to Article 7(5), Ireland has failed to set deadlines for the implementation of programmes for all List II substances.

Contrary to Article 7(6), it has failed to communicate to the European Commission summaries of programmes for all List II substances and the results of their implementation.

Failures by Ireland with regard to mandatory implementation methods

Article 7(1) provides that, in the implementation of programmes for List II substances, Member States shall apply in particular the methods referred to in Article 7(2) and (3). The Commission would contend that Ireland does not respect this provision.

In particular, in so far as Ireland may argue that it applies these methods, the Commission would contend that it does not do so *in the implementation of programmes*, since it has not established programmes in accordance with the Directive (as noted above, Ireland does not accept that it has a legal obligation to establish programmes except in the case of phosphorous).

Furthermore, in so far as it may be argued that these methods are applied in Ireland, the Commission would contend that they are not applied to the extent required by the Directive, owing to the following deficiencies in relation to the content and/or application of the relevant Irish legislation.

Authorization system

Article 7(2) provides that all discharges which are liable to contain List II substances shall require prior authorization by the competent authority of the Member State.

Although in the abovementioned letter of 14 June 1996, Ireland argued that, with the exception of the substance phosphorous, it was not obliged to establish pollution reduction programmes pursuant to Article 7 of the Directive, in an earlier letter dated 5 June 1978, it informed the Commission that the licensing provisions of local authorities under the Local Government (Water Pollution) Act, 1977 (hereinafter referred to as "the 1977 Act") would form the nucleus of programmes for the reduction of pollution from List II

substances. The 1977 Act was later modified by the Local Government (Water Pollution)(Amendment) Act, 1990 (hereinafter referred to as "the 1990 Act") and the Environmental Protection Agency Act, 1992, the last-mentioned Act introducing the concept of integrated pollution control for a number of specified activities.

To the extent that Ireland may argue that these licensing provisions satisfy the requirements of Article 7(2) of the Directive, the Commission would contend that they cover a narrower range of discharges than does Article 7(2).

In particular, while Section 4(1) of the 1977 Act creates a general obligation to discharge only on foot of a licence, Section 4(2) provides that this general obligation shall not apply to discharges:

- to tidal waters from marine structures,
- from a sewer, or
- the subject of a ministerial exemption under Section 4(10).

These categories of exemption from the requirement of a discharge authorization are not contemplated by the Directive and are contrary to it.

Discharges from marine structures

The definition of "discharge" in Article 1(2)(d) of the Directive excepts operational discharges and dumping from ships in territorial waters. However, these exceptions are not co-extensive with the exemption of marine structures in the 1977 Act.

As a consequence, discharges which are within the scope of the authorization requirements of the Directive are outside the scope of the authorization requirements of the 1977 Act. In particular, the Commission would refer to discharges from Irish marine fish farms. In the abovementioned letter of 7 April 1995, Ireland confirmed that these were exempt from water pollution licensing under the 1977 Act. While Irish marine fish farms are subject to other licensing and regulatory requirements set out in the Fisheries Act 1959 to 1994 together with the Foreshore Act, 1933, these requirements do not include the authorization of discharges for the purpose of controlling water pollution.

In March 1994, there were at least 47 marine fish farms operating in Ireland. Fish production from these farms expanded greatly during the 1980s³. Such farms are situated on publicly owned coastal or estuarine waters (i.e. within waters covered by the Directive), and involve the rearing of dense concentrations of fish (mainly salmon) in cages of various shapes and sizes.

³ Report of the Sea Trout Task Force, March 1994. The Task Force was set up by the Irish Minister for the Marine in July 1993 to look at the links between a collapse in stocks of wild sea trout and the presence of marine fish farms.

A number of List II substances are introduced into Irish coastal waters from these structures, i.e. they give rise to "discharges" within the meaning of Article 1(2)(d) of the Directive. None of the exceptions set out in Article 1(2)(d) of the Directive apply (fish farm cages constitute "marine structures" but do not constitute "ships").

Particular mention might be made of the following three categories of List II substances: substances belonging to the families and groups of substances in List I for which the limit values referred to in Article 6 of the Directive have not been determined; biocides and their non-derivatives not appearing in List I; substances which have an adverse effect on the oxygen balance, particularly: ammonia, nitrites

In relation to the first two of these three categories of List II substances, the operation of fish farms involves the use of biocides, vaccines, disinfectants and anaesthetics. An example is provided by Dichlorvos, an organophosphorous substance⁴ which serves as a biocide for controlling sea-lice, a parasite affecting salmon bred in marine fish farms. Ireland has confirmed that it is used in Irish marine fish farms.

In relation to the third of these three categories of List II substances, fish farms produce organic wastes (from fish faeces and feed wastage) which can have an adverse effect on the oxygen balance.

Because of the unenclosed nature of marine fish farm cages, marine fish farms constitute a direct source for the introduction of the above substances into the aquatic environment.

In the light of the foregoing, the Commission would therefore contend that Ireland has failed to comply with its obligation to ensure that, in accordance with Article 7(2) of the Directive, discharges of List II substances from Irish marine structures, and in particular Irish marine fish farms, are made the subject of prior authorization in which emission standards are laid down on the basis of quality objectives.

⁴ Apart from mercury and cadmium, List I of the Directive names no individual substances but just families and groups of substances. It was therefore necessary to select specific substances in these families or groups in order to consider proposals and, if necessary, submit them to the Council. This work by the Commission, with the cooperation of the Member States, produced a list of 132 substances, 129 of which (including Dichlorvos) were listed in the annex to a Commission Communication to the Council of 22 June 1982, OJ No C 176, 14.7.1982, p. 3. This list of 129 substances was recognized by the Council in its resolution of 7 February 1983, OJ No C 46, 17.2.1983, p.17. However, for most of these substances, including Dichlorvos, the emission limit values referred to in Article 6 of the Directive were not subsequently determined. Therefore, these substances are to be treated as List II substances and made subject to Article 7 of the Directive.

Discharges from sewers

So far as sewers are concerned (which term is defined in the 1990 Act to mean a sewer that is vested in or controlled by a sanitary authority and includes a sewage treatment works, and a sewage disposal works, that is vested in or controlled by a sanitary authority), Ireland has adopted regulations pursuant to the Environmental Protection Agency Act, 1992 to give effect to Council Directive 91/271/EEC concerning urban waste water treatment⁵. However, these regulations do not encompass discharges from all sewers.

To the extent that they do not cover discharges from all sewers, the Irish systems of authorization fail to fully respect Article 7(2) of the Directive.

Power of exemption from authorization

The definition of "discharge" in Article 1(d) of the Directive contains a number of exceptions (discharges of dredgings, operational discharges from ships in territorial waters, dumping from ships in territorial waters). To the extent that exemptions in national legislation from the requirement of an authorization coincide with these exceptions, they are permissible.

However, Section 4(10) of the 1977 Act does not limit the power to grant an exemption to these exceptions, and, while the Commission is not aware that any use has been made of Section 4(10), it considers that its existence is incompatible with the Directive.

Quality Objectives

Article 7(3) of the Directive provides that programmes shall include quality objectives and that these shall be laid down in accordance with Council Directives, where they exist.

While there are a number of Council Directives which create water quality objectives for particular uses of water (for example, Council Directive 78/659/EEC on the quality of fresh waters needing protection or improvement in order to support fish life), these do not create quality objectives for all List II substances in respect of all the waters covered by the Directive. Therefore, in order to satisfy Article 7(3) of the Directive, Member States must do more than merely implement other Council Directives concerning water quality.

Ireland's implementation of Article 7(3) of the Directive is unsatisfactory in two respects. Firstly, Ireland has failed to lay down quality objectives for all List II substances in respect of all the waters covered by the Directive. Secondly, in so far as Ireland has made statutory or other provision for quality objectives, it has not done so in accordance with the Directive or with Community law.

⁵ Environmental Protection Agency Act, 1992 (Urban Waste Water Treatment) Regulations, 1994.

In relation to the statutory or other provision Ireland has made for quality objectives, Ireland has in its correspondence referred to a statutory power for the Minister for the Environment to prescribe water quality standards, a statutory power for local authorities to draw up water quality management plans and to the existence of administrative guidelines on effluent and water quality standards ("Memorandum No.1 of the Technical Committee on Effluent and Water Quality Standards").

The provision whereby the Irish Minister for the Environment is empowered to prescribe *water quality standards* is found in Section 26 of the 1977 Act (as amended by the 1990 Act). However, this imposes no duty on the Minister to prescribe such standards, and in practice the Minister has not adopted quality standards for all (or to the Commission's knowledge any) List II substances.

To the extent that Ireland may argue that Section 26 of the 1977 Act constitutes an adequate transposal into national legislation of the requirements of Article 7(3) of the Directive, the Commission would contend that it is unsatisfactory in that it imposes no duty on the Minister to prescribe water quality standards for List II substances. In addition, the Commission would contend that, in practice, Ireland has failed to achieve the results required by Article 7(3) (i.e. a laying down of quality objectives for List II substances) via Section 26.

The provision whereby Irish local authorities are empowered to draw up *water quality management plans* is found in Section 15 of the 1977 Act (as amended by the 1990 Act). Under this provision, a water quality management plan "shall contain such objectives for the prevention and abatement of the pollution of the waters the subject of the plan and such other provisions as appear to the local authority to be necessary." There is no statutory requirement to include water quality objectives for all relevant List II substances in a water quality management plan. In addition, local authorities are under no duty to prepare plans (unless the Irish Minister for the Environment, in his discretion, directs them to do so) and, in practice many water bodies in Ireland are not the subject of any plan.

To the extent that Ireland may argue that Section 15 of the 1977 Act constitutes an adequate transposal into national legislation of the requirements of Article 7(3) of the Directive, the Commission would contend that it is unsatisfactory in that it imposes no duty on local authorities to lay down quality objectives for List II substances. In addition, the Commission would contend that, in practice, Ireland has failed to achieve the results required by Article 7(3) (i.e. a laying down of quality objectives for List II substances) via Section 15.

Memorandum No 1 of the Technical Committee on Effluent and Water Quality Standards was published in 1979. It represents the work of the Technical Committee on Effluent and Water Quality Standards which was established by the Minister for the Environment in 1976 to advise him on technical aspects of water quality standards in anticipation of the abovementioned Section 26 of the 1977 Act. The aims of the Memorandum included providing local authorities with guidelines on water and effluent quality for their assistance in dealing with development proposals which might affect water quality. However, these guidelines do not have a statutory basis and are not binding.

To the extent that Ireland may argue that Memorandum No 1 satisfies the requirements of Article 7(3) of the Directive, the Commission would contend that quality objectives should be binding in nature. The Commission would cite the decision of the Court of Justice in Case -131/88, *Commission v Germany*, (1991) ECR 1-0825 in which the Court observed at paragraph 61 that the procedural provisions of Council Directive 80/68/EEC on the protection of groundwater against pollution caused by certain dangerous substances "lay down, in order to guarantee effective protection of groundwater, precise and detailed rules which are intended to create rights and obligations for individuals. It follows that they must be incorporated into German law with the precision and clarity necessary in order to satisfy fully the requirement of legal certainty. Moreover, the Court has consistently held that mere administrative practices, which are alterable at the will of the administration and are not given adequate publicity, cannot be regarded as constituting adequate compliance with the obligation imposed on Member States to whom a directive is addressed by Article 189 of the EEC Treaty". Given the history of Council Directive 80/68/EEC (it replaces the Directive in regard to groundwater protection) and the parallels between its provisions and those of the Directive (in particular, in relation to the use of a system of authorizations to control polluting discharges), the Commission considers that these observations of the Court are also pertinent to the Directive.

Emission Standards

Article 7(2) provides that emission standards shall be laid down in authorizations and that these shall be based on quality objectives.

In so far as Ireland has exempted certain discharges of List II substances from authorization (see above), ipso facto it exempts them from the requirement to have emission standards based on quality objectives. This is contrary to Article 7(2).

To the extent that Ireland does provide for the authorization of discharges of List II substances, the systems of Irish water pollution authorization mentioned above (i.e. under the 1977 Act and the Environmental Protection Agency Act, 1992) provide that discharges shall comply with water quality standards prescribed under Section 26 of the 1977 Act. However, as noted above, quality standards have not been adopted for all (or to the Commission's knowledge any) List II substances.

Ireland has indicated in its correspondence that emission limits in discharge authorizations are determined having regard to statutorily made water quality management plans, Memorandum No.1 of the Technical Committee on Effluent and Water Quality Standards and Irish regulations giving effect to quality objectives set in other Community water legislation.

However, as pointed out above, Memorandum No 1 is not legally binding and the quality objectives set in other Community water legislation do not extend to all List II substances or all the waters covered by the Directive. Furthermore, water quality management plans made under Section 15 of the 1977 Act do not cover all water bodies in Ireland or all List II substances. In addition, there is no specific statutory requirement on local authorities to set emission standards based on water quality objectives fixed in water quality management plans.

Therefore, the Commission would contend that, both in terms of the content of its national legislation and the application of that legislation, Ireland has not complied with Article 7(2) of the Directive in relation to emission standards based on quality objectives.

Increase in phosphorous pollution in Ireland

Ireland has identified eutrophication due to phosphorous inputs as the major threat to the quality of Irish rivers and lakes. The Commission would agree that this conclusion is consistent with the evidence available. However, it considers that Ireland has allowed phosphorous pollution of Irish waters covered by the Directive to develop or worsen over the period since the Directive was adopted, contrary to the results required by Article 7 and 9 of the Directive.

Phosphorous is a nutrient and is included in the families and groups of substances contained in List II of the Directive ("inorganic compounds of phosphorous and elemental phosphorous").

Eutrophication consists in the enrichment of a water body by nutrients, causing an accelerated growth of algae and higher forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water body and to the quality of the water concerned⁶. Phosphorous is the nutrient which contributes most to the eutrophication of freshwaters.

To the extent that it is anthropogenic in origin, eutrophication can be considered a form of "pollution", as it is defined in Article 1(e) of the Directive.

The Commission's attention has been drawn to several authoritative sources of information which point to a problem of eutrophication linked to phosphorous in certain Irish waters covered by the Directive.

In 1996, the Irish Environmental Protection Agency published a report on the state of the environment in Ireland pursuant to Section 70 of the Environmental Protection Agency Act, 1992.⁷

⁶ See the definition of "eutrophication" in Directive 91/271/EEC concerning urban waste water treatment
⁷ "State of the Environment in Ireland", edited by L. Stapleton, Environmental Protection Agency, Wexford, February 1996 (ISBN No 1-899965-25-4)

This report notes that both long-term (since 1971) and more recently (since 1987-1990) there is a distinct trend of increasing levels of slight, and to a lesser extent, moderate pollution, due largely to eutrophication.

The report notes the existence of eutrophic or highly eutrophic rivers in the east and south, and points out that the biggest threat to the water quality of Irish lakes is eutrophication by the nutrients phosphorous and nitrate, particularly phosphorous.

The report states that, in the period 1991-1994, the water quality of 135 lakes was examined. The surface area of these amounted to 750km² or 50 per cent of the lake surface area of the country. The 24 lakes found to be excessively enriched included two large lakes, i.e. Loughs Ree and Derg, which represented 38% of the surface area of the water examined.

The State of the Environment report confirms that sewage and agriculture are the main sources of excess phosphorous. It states that, on a national basis, much more phosphorous than is required is being used in intensive agriculture.

The information in this state of the environment report is confirmed and further detailed in "Water Quality in Ireland 1991-1994"⁸, the latest in a series of periodic official reviews of water quality in Ireland. At page 68, the water quality review notes:

"The main effect of the increasing eutrophication is likely to be a deterioration in the salmonid or gamefish populations, which are still the main feature of most Irish freshwaters. The ubiquitous presence of gamefish is relatively rare in European countries and in Ireland it is an important feature adding to the perception of a still high quality environment. Salmonid fish are primarily denizens of oligotrophic or mesotrophic waters and are likely to be adversely affected directly or indirectly, by the change in conditions brought about by eutrophication. The main direct threat is deoxygenation which may arise from the respiration of large biomasses of algal and other plant material or from the subsequent decay of these plant communities. Indirect impacts may arise from a change in the nature of the food organisms, or from competition with other fish species more favoured by the enrichment process. There are indications from recent surveys undertaken by the fishery agencies that gamefish populations have deteriorated in several river systems."

Other evidence in the Commission's possession presents additional insights into the problems of Irish water bodies resulting from the introduction of excessive amounts of phosphorous.

⁸ "Water Quality in Ireland 1991-1994", Environmental Protection Agency 1996. ISBN 1-899965-12-2.

For example, the Commission would refer to evidence concerning Lough Conn, a large limestone lake (50km²) situated in County Mayo in the west of Ireland. Ireland's large limestone lakes (Loughs Mask, Corrib, Ennel and Owel are others) are natural resources of international importance. A combination of factors (climate, naturally low nutrient status owing to limestone catchments) create ideal conditions for salmonid fish (such as wild brown trout and char). Such lake conditions are exceptional in Europe, and Loughs Conn together with its neighbouring lakes, Loughs Mask and Corrib (collectively known as the Great Western Lakes) have enjoyed an international reputation as wild brown trout fisheries. Changes in the nutrient status of these lakes can detrimentally affect their role as exceptional aquatic ecosystems (it may be noted that the Directive's definition of "pollution" specifically refers to "aquatic ecosystems").

The 1991-1994 lake examination mentioned above, which was based on limited monitoring, indicated that recent measurements (1991) pointed to some deterioration in Lough Conn. In 1994, a multi-agency official report was published on the nutrient or trophic status of the lake⁹.

Noting evidence of eutrophication of Lough Conn (increased algal blooms, presence of algal scums, virtual disappearance of Artic Charr, a pollution sensitive fish species), the latter report pointed to a doubling of the amount of phosphorous being introduced to the lake between 1982 and 1994 (i.e. during a period when the Directive was in force). Phosphorous introduction was from several sources. However, by far the most important was agriculture. The period 1982-1994 was marked by a major change in agricultural practice within the catchment. In particular, there was an increase in the winter housing of cattle, resulting in the accumulation of large amounts of animal excrement (slurry) containing phosphorous. The report explained that, particularly during rainy weather (this region has high rain fall), landspread slurry was washed into rivers and streams in the catchment, bringing about a significant increase in the amounts of phosphorous entering the lake.

Lough Conn thus presents a cogent example of the practical consequences of Ireland's failure to establish and implement a pollution reduction programme for phosphorous in conformity with the Directive. In particular, there was not, and there still is not, in place a phosphorous quality objective applicable to the lake. Moreover, instead of being reduced, pollution of the lake has been allowed to develop and worsen in a period during which the Directive was in force. In the case of Lough Conn and other Irish waters which have since 1976 experienced the development and worsening of phosphorous pollution, this amounts to a clear failure to attain the results required by Article 7. It is also inconsistent with the principle of prevention.

⁹ The Trophic Status of Lough Conn. An investigation into the Causes of Recent Accelerated Eutrophication, published by Mayo County Council in association with: Environmental Protection Agency, Central Fisheries Board, North Western Fisheries Board, Teagasc, Bord Na Mona, Department of Agriculture and Department of the Marine.

To the extent that Ireland may argue that it has acted in conformity with the Directive in relation to phosphorous, the Commission would also contend that, for Irish water bodies such as Lough Conn which have experienced a development or worsening of pollution since the Directive entered into force, Ireland has not respected the provisions of Article 9 of the Directive.

FOR THE ABOVE REASONS, THE COMMISSION

having given Ireland, by letters of 14 February 1991, 23 December 1992, 14 February 1996, and 3 October 1996, the opportunity to submit its observations, and having examined those submitted by the Irish authorities,

HEREBY DECLARES AS ITS REASONED OPINION,

delivered pursuant to the first paragraph of Article 169 of the Treaty establishing the European Community, that Ireland, in failing to take all the measures necessary to ensure a correct transposal and application of Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community, has failed to comply with Directive 76/464/EEC and in particular Articles 7 and 9 thereof and with its obligations under the Treaty.

Pursuant to the second paragraph of Article 169 of the Treaty, the Commission requests Ireland to take the measures necessary to comply with this Reasoned Opinion within two months following notification thereof.

Done at Brussels, 12 -06- 1997

For the Commission

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