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The Control of Nitrate Pollution in the EEC: Proposed Directive 88/708

INTRODUCTION

Growing concern for the effects of pollutants on the environment and their subsequent effects on human life have prompted the Commission of the European Economic Community (Commission)\(^1\) to take action on environmentally related issues. In December 1988, the Commission issued Proposed Directive 88/708 addressing the prevalent problem of nitrate pollution within Community waters.\(^2\) The proposed directive urges the adoption of measures designed to limit the quantity of nitrates entering surface and underground waters within the member states of the European Economic Community (EEC or Community).\(^3\) Prior to this proposal, Community directives existed dealing with the protection of Community waters, and the Commission had set quality standards for member states to meet regarding drinking water, bathing water, and fresh water suitable for fishing.\(^4\) The nitrate control proposal provides special protective measures for water against excessive levels of nitrogen.\(^5\) While the proposed directive will be applicable to the entire Community, the primary implementation of these measures will be targeted at areas already identified as highly vulnerable.\(^6\)

\(^1\) The Commission formulates proposals for new policies, mediates between member states on adoption of proposals, coordinates national policies and oversees execution of EEC policies. T. Hartley, THE FOUNDATIONS OF EUROPEAN COMMUNITY LAW 8 (2d ed. 1988).


\(^3\) Id.


\(^6\) See infra note 75 and accompanying text.
The Commission prepared the proposal in order to lay down a framework for member states to follow when formulating programs, whether independently or with other states, to deal with the problem of nitrate pollution. A major source of high nitrogen compounds arises from the use of livestock manure. The Commission has identified the need for common action among the states to control the problems arising from intensive livestock production and the need for an agricultural policy which accounts for environmental policy. Because a major goal of the EEC is to harmonize the laws of the member states, the proposed directive outlines procedures to ensure that a uniform implementation of nitrate control measures can be achieved for the benefit of all member states.

This Comment focuses on the protection of Community water sources from nitrate pollution. Part I reviews the basic authority which gives the Commission the power to legislate about environmental matters. Part II addresses the development of the proposed directive concerning nitrate pollution. Part III discusses the proposed directive's impact on nitrate pollution. This Comment concludes with a consideration of some possible objections to the proposed directive.

I. ENVIRONMENTAL POLICY UNDER THE EEC TREATY

A. EEC ENVIRONMENTAL POLICY PRIOR TO THE SINGLE EUROPEAN ACT

Before the enactment of the Single European Act (SEA), the legal basis for the Community's environmental action was derived from the interpretation of general provisions in the Treaty of Rome (EEC Treaty). The EEC Treaty did not, however, provide any direct guidance for the Community in devising and implementing environmental policy. Since the motive for the drafting...
of the EEC Treaty was primarily economic, the first environmental measures taken by the Community reflected a desire to facilitate the development of an internal market.\textsuperscript{14} The initial environmental actions, therefore, were economically motivated and concerned with issues such as abolishing obstacles to trade between the member states.\textsuperscript{15} Problems arose most often because the Commission was trying to legislate in a noneconomic area on the basis of principles in the EEC Treaty that were economically derived.\textsuperscript{16} Therefore, while the broad language of the Treaty allowed for interpretations which could encompass environmental issues, no clear power to act on such problems was provided for in the Treaty.

Most environmental action prior to the SEA was based on articles 100 and 235 of the EEC Treaty. Article 100 provides for the harmonization of legislation among the member states,\textsuperscript{17} and only supports Community action if it is done in reaction to an existing member state’s measure that affects the functioning of the internal market.\textsuperscript{18} In other words, environmental protection is only assured under article 100 if the measure is related to the functioning of the internal market.\textsuperscript{19}

Article 235 provides additional powers to the Community by permitting action in areas that are not expressly addressed in the Treaty.\textsuperscript{20} The Commission has resorted to article 235 where action is necessary to fulfill a Treaty objective even though the

\textsuperscript{14} Id. at 408–409. The first EEC environmental measures aimed at easing the transportation of goods between member states and eliminating competitive conditions between companies due to differing national environmental legislation. Id. at 409.

\textsuperscript{15} Id.


\textsuperscript{17} See EEC Treaty, supra note 9, at art. 100. Article 100 states:

The Council shall, acting unanimously on a proposal from the Commission, issue directives for the approximation of such provisions laid down by law, regulation or administrative action in Member States as directly affect the establishment or functioning of the common market.

\textsuperscript{18} Vandermeersch, supra note 12, at 410.

\textsuperscript{19} Id. at 411.

\textsuperscript{20} See EEC Treaty, supra note 9, at art. 235. Article 235 states:

If action taken by the Community should prove necessary to attain, in the course of the operation of the common market, one of the objectives of the Community and this Treaty has not provided the necessary powers, the Council shall, acting unanimously on a proposal from the Commission and after consulting the Assembly, take the appropriate measures.
powers required for action have not been provided for in the Treaty. Although environmental activity may be encompassed in the general goals of the preamble of the Treaty, (for example, as contributing to “the constant improvement of the living and working conditions” of the people), article 235 has been used to establish a clear legal basis for such action.

B. EEC Environmental Policy After the Single European Act

The main objective of the SEA is to amend and complete the EEC Treaty and to make the internal market a reality by 1992. The SEA addresses issues that were beyond the scope of the original EEC Treaty and provides them with a status that the individual governments cannot ignore. The SEA pursues new objectives through the addition of a title to the EEC Treaty regarding the preservation of the environment and human health. The new title aims to fulfill the EEC goal of “improving the economic and social situation of the peoples of the EEC by extending common policies and pursuing new objectives.” The applicable provisions of the SEA concerning environmental action are articles 130R, 130S, and 130T.

1. Article 130R: The Objectives of EEC Environmental Policy

Before considering the enactment of any environmental regulation, it is essential to determine whether the particular environmental problem substantially affects the Community as a whole and whether the problem is best remedied by standards set at the Community level rather than by individual, self-interested member states. Specifically, article 130R states: “The Community shall take action relating to the environment to the extent to which objectives [of the Community environmental policy] can be attained better at [the] Community level than at the level of

21 See EEC Treaty, supra note 9, at article 235.
22 Id.
24 See Vandermeersch, supra note 12, at 407; see also SEA, supra note 23, at intro.
25 Id. at art. 25.
26 Id. at intro.
27 SEA, supra note 23, at art. 130R(4); see also Vandermeersch, supra note 12, at 422; Harris, supra note 4, at 1059.
the individual Member States." Environmental problems do not remain isolated; they know no national boundaries. Therefore, problems may be most effectively addressed and remedied at the Community level.

Article 130R sets forth the objectives of the Community environmental policy and states the substantive standards the policy must follow. The objectives for environmental Community action are enumerated in article 130R(1): "to preserve, protect and improve the quality of the environment, to contribute towards protecting human health, to ensure a prudent and rational utilisation of natural resources." Additionally, article 130R imposes the burden of bearing the costs of implementing environmental clean up measures on the party responsible, either directly or indirectly, for the harm. This principle may prove critical because it may create difficulties for member states attempting to implement environmental measures. If strictly enforced, the effect of this principle is that the individual member states have the authority to refuse to grant state subsidies to polluters to assist them in complying with their obligation to adhere to environmental standards. Such a lack of assistance could cause severe problems for industries or individuals that are unable to meet the costs of pollution clean up and prevention. Thus, in light of potential economic harm and criticism, this principle may hinder a member state's desire to take significant affirmative environmental action.

Before implementing any new environmental policy, article 130R(3) requires the Community to consider the following factors: "the available scientific and technical data; environmental conditions in the various regions of the Community; the potential

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28 See SEA, supra note 23, at art. 130R(4).
29 See Harris, supra note 4, at 1059. The Commission stated, "Pollution recognises no frontiers." Id.
30 Id. at art. 130R.
31 Id. at art. 130R(1).
32 Id. at art. 130R(2). Article 130R(2) states:

Action by the Community relating to the environment shall be based on principles that preventive action should be taken, that environmental damage should as a priority be rectified at source, and that the polluter should pay. Environmental protection requirements shall be a component of the Community's other policies.

33 See Vandermeersch, supra note 12, at 416. However, "[i]t should be noted that the 'polluter pays' principle applies only to the formulation of Community law. It has never been made mandatory as a general rule for Member States to comply with when they implement their own environmental policy or implement EEC directives." Id.
benefits and costs of action or lack of action; the economic and social development of the Community as a whole and the balanced development of its regions. 34 These requirements serve primarily as guidelines for member states to consider in assessing the potential utility of the new environmental measure. 35 It is understood that every proposed environmental action need not comply with each of the stated requirements. 36 A proposed measure that does not reflect the results of an evaluation of the articulated requirements will not necessarily be deemed inappropriate for enactment. 37 The requirements need only be "taken into account," and are only suggestions to be considered in determining to what extent EEC action in that area is appropriate. 38 The goal, as always, is to act in the best interests of the Community.

2. Article 130S: The Legislative Process

Article 130S provides for the legislative processes used in the creation of EEC environmental law. 39 According to article 130S, a determination must be made as to which problems are better addressed at the Community level rather than at the national level. 40 Generally, the final decision whether to enact an environmental proposal, and at which level, must be by a unanimous vote of the Council. 41 In instances where a proposal is focused on the completion of the internal market, however, the SEA

34 See SEA, supra note 23, at art. 130R(3).
35 See Vandermeersch, supra note 12, at 419.
36 Id. at 420.
37 Id. For example, it is not stated in article 130R(3) that unless there is scientific proof that a measure will aid in eliminating the environmental problem it addresses, it cannot be implemented. Id.
39 SEA, supra note 23, at art. 130S.
40 Id.
41 Id. Article 130S provides:

The Council, acting unanimously on a proposal from the Commission and after consulting the European Parliament and the Economic and Social Committee, shall decide what action is to be taken by the Community.

The Council shall, under the conditions laid down in the preceding paragraph, define those matters on which decisions are to be taken by a qualified majority.

Id. The Council of the European Communities (Council) is comprised of government representatives of all European Economic Community (EEC or Community) member states. Each government appoints several of its ministers to the Council, including its foreign minister. T. Hartley, supra note 1, at 14.
permits qualified majority voting and consultation with the European Parliament on behalf of the Council.\textsuperscript{42}

3. Article 130T: A Safeguard Clause

Article 130T is regarded as a safeguard clause. It states that the requirements set forth by the Community are the minimum standards to which the member states should comply.\textsuperscript{43} Under article 130T, any member state is permitted to introduce or maintain more stringent protective measures than Community directives require.\textsuperscript{44} As a part of the EEC Treaty these measures must, however, continue to be compatible with the EEC Treaty objectives. Thus, the measures constitute neither a means of arbitrary discrimination nor a disguise or restriction on trade between member states.\textsuperscript{45}

II. Proposed Directive: Protection of Water Against Pollution Caused by Nitrates

A. Background of the Final Directive

1. Growth of Nitrate Pollution in the EEC

In recent years, the EEC has become more concerned with a significant increase in nitrate levels present in water sources in many member states.\textsuperscript{46} In 1980, the EEC set a maximum level of 50 mg/l of nitrate in drinking water supplies in attempt to preserve and maintain water quality.\textsuperscript{47} According to the proposed directive, states finding water supplies with nitrate levels in excess of the limit must reduce the level of nitrates through treatments or by blending the water with clean supplies.\textsuperscript{48} The processes of

\textsuperscript{42} Id. See Vandermeersch, supra note 12, at 425.
\textsuperscript{43} SEA, supra note 23, at art. 130T. Article 130T states:

\textsuperscript{44} Id.

The protective measures adopted in common pursuant to Article 130S shall not prevent any Member State from maintaining or introducing more stringent protective measures compatible with this Treaty.

\textsuperscript{45} See EEC Treaty, supra note 9, at art. 100A.

\textsuperscript{46} See generally Proposed Directive 88/708, supra note 2, Explanatory Memorandum at 3.


\textsuperscript{48} Id.
treatment and blending, however, are extremely expensive, do not confront the problem at the source, and are difficult to use on smaller Community water supplies.\textsuperscript{49}

Recently, human health problems and environmental phenomena have led to the discovery of the serious negative effects of excessive nitrate levels in water.\textsuperscript{50} In 1984, the World Health Organization Working Group in Health Hazards from Nitrates in Drinking Water concluded that to prevent the occurrence of methaemoglobinaemia\textsuperscript{51} in bottle-fed infants, drinking water should contain nitrate levels no higher than 10 mg/l.\textsuperscript{52} The measures contained in the proposed directive, therefore, aim to protect waters from becoming overenriched with nitrate.\textsuperscript{53}

In its decision to take action against nitrate pollution, the Commission addresses the additional problem of eutrophication. Eutrophication results in the uncontrolled growth of algae and aquatic plants due to excessive concentrations of nutrients in surface water.\textsuperscript{54} Ecology is suffering dramatically from eutrophication.\textsuperscript{55} The uncontrolled growth of algae and aquatic plants has a highly adverse impact on water quality.\textsuperscript{56} The result is not only the demise of aquatic life, but also the loss of the aesthetic pleasures of water sources, such as decreasing water transparency.\textsuperscript{57}

\textsuperscript{49} Proposed Directive 88/708, \textit{supra} note 2, Explanatory Memorandum at 3.

\textsuperscript{50} \textit{Id.} at 15–16. Excessive nitrate levels have been found to cause methaemoglobinaemia (blue baby syndrome) as well as the excessive growth of algae and aquatic plants in water sources. \textit{Id.}

\textsuperscript{51} Methaemoglobinaemia is the result of “the abnormal shunting of blood from the right to the left side of the heart. The result is that some unoxygenated blood flows into the aorta instead of the pulmonary artery, that is into general circulation, without first passing through the lungs. The infants born with this condition are known as ‘blue babies’ because the unoxygenated blood causes a bluish tinge to the lips, skin, and nails.” \textit{The Columbia University College of Physicians and Surgeons Complete Home Medical Guide} (1985).

\textsuperscript{52} Proposed Directive 88/708, \textit{supra} note 2, Explanatory Memorandum at 15.

\textsuperscript{53} \textit{Id.}

\textsuperscript{54} \textit{Id.} at 16. This phenomena is most common in still fresh waters, i.e. lakes, manmade reservoirs, slow-flowing rivers and canals. It has also been known to occur in shallow coastal waters such as the Baltic and Wadden Seas. Changes have been noted in the composition and overall level of algae plankton in the deeper portions of the Community’s seas due to increased levels of nitrates. The decay of large algae blooms decrease oxygen in the water which is necessary for the survival of other water life. The increase in eutrophication can be traced to the industrial, agricultural, and urban development in many member states. \textit{Id.} at 16–17.

\textsuperscript{55} \textit{Id.} at 16.

\textsuperscript{56} \textit{Id.}

\textsuperscript{57} \textit{Id.}
Member states have sought to combat the problems eutrophied water cause by highly chlorinating the water during treatment. The combination of high levels of chlorine and organic substances, however, can result in increased concentrations of toxic organochlorine compounds which may be harmful in drinking water, especially if carcinogenic. As a result, the Commission has concentrated on "cleaning up" important water sources by controlling the disposal of industrial and domestic sewage at their origins. Additionally, emphasis has been placed on controlling diffuse nitrate sources from agricultural land. Because of the transient nature of water, more than one member state may have an interest in an affected water source and the method of treatment. Therefore, the effective control of nitrate pollution in water sources may best be achieved at the Community level through implementation of the proposed directive.

2. Current Nitrate Levels Faced by Member States

In 1984, the Water Supply Associations from the member states of the EEC compiled the results of tests conducted to determine the level of nitrate concentrations in Community water supplies. Nearly every member state reported areas with nitrate levels surpassing the permissible maximum of 50 mg/l. The highest levels were reported in intensely agricultural areas. The reports imply that ground water is more significantly affected by the presence of high nitrogen levels than is surface water. The results from the surveys show that in all countries, with the exception of Portugal, nitrate pollution is constantly increasing, especially in groundwater.

Member states have been relatively inactive in instituting regulations to reduce inputs of nitrogen into the environment.

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58 Id.
59 Id.
60 Id.
61 Id.
62 Id. at 5–14.
63 Id.
64 Id.
65 See id.
66 Id. at 5–14.
67 Id. at 4. The North Sea Conference, as well as a June 1988 seminar of Environmental Ministers in Frankfurt, realized that "the reduction of nutrients had so far been given insufficient attention." Id.
Many countries prescribe no regulations concerning the use of chemical fertilizers. Greater attention has been focused on the use of animal manure. Countries such as Denmark, Germany, France, the Netherlands, and the United Kingdom have implemented programs to control the quality, storage, application, and transport of animal manure. Because agricultural areas are most greatly affected, emphasis has been placed on promoting rational fertilization. Only regulated amounts of nitrogen are used on crops and fertilization has been limited to specified dates.

Not every member state has acknowledged the severity of the issues presented by the increasing levels of nitrates in Community water supplies by implementing measures to alleviate and prevent the problem. Community action is necessary, therefore, to emphasize the need to control effluents to land and also to insure that the risk of pollution is minimized. If member states refuse to take action on the advice of the Commission, nitrates will assuredly reach concentration levels which are likely to interfere with the legitimate and necessary uses of the water.

B. **Proposed Action**

Proposed Directive 88/708 protects Community waters against nitrate pollution from all sources and applies to the use of nitrogen compounds, land management practices, and the treatment of municipal sewage. The stated objective of the proposed directive is: “[to avoid] the concentration of nitrate in freshwaters, both surface and ground, [from] reaching a level at which it could interfere with the legitimate uses of these waters[;] [to avoid] the eutrophication of surface, estuarial, coastal marine waters.” Although the objectives are general, the Commission has set forth a specific timetable for the adoption and implementation of the proposed directive. The final decrease in nitrate water pollution is to be achieved within eight years.

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68 See id. at 21–33.
69 Id.
70 Id.
71 Id. at 21–33.
73 Id.
74 Proposed Directive 88/708, supra note 2, Explanatory Memorandum at 37.
The measures introduced in the proposed directive are intended to concentrate on "vulnerable zones." The proposed directive provides that the member states must designate any zones vulnerable to water pollution from nitrogen compounds. The member states must determine these zones within two years. The criteria used to evaluate which areas are most vulnerable include whether the water is used as a source of drinking water and if the water has the potential for becoming eutrophic. Once an area is designated vulnerable, the proposed directive requires member states to take a number of measures to alleviate the high nitrogen content.

The proposed directive specifically addresses in detail the disposal of animal manure over land. Nitrate problems arise due to nutrients from the manure permeating the soil and affecting ground water. Under article 4(1)(a) of the proposed directive, each farm's manure disposal is limited by the number of animals and amount of land involved. If implemented under the national laws of the member states, the proposed directive will have the effect of significantly limiting the times of the year during which livestock manure can be applied. The proposed directive will further require farmers to construct new storage spaces for manure with greater storage capacities.

The proposed directive also mandates each member state to establish application rates for chemical fertilizers. Researching the various rates at which different crops take up nitrogen from the soil is required, as is determining the amount of nitrogen that

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75 Proposed Directive 88/708, supra note 2, at art. 3(1):

Vulnerable zones are those areas of land which drain directly or indirectly into one or more of the following waters:

(i) surface freshwaters intended for the abstraction of drinking water which could contain more than 50 mg/l nitrate if protective action is not taken.
(ii) groundwater intended for the abstraction of drinking water which contain more than 50 mg/l nitrate if protective action is not taken.
(iii) natural freshwater lakes, other natural freshwater bodies, estuaries, coastal waters and seas which are found to be eutrophic or which in a short time may become eutrophic if protective action is not taken.

Id. at Annex 1.
76 Id. at art. 3(2).
77 Id.
78 Id. at Annex 1.
79 Id. at arts. 3–4.
80 Id. at art. 4(1).
81 Id.; see also id. at Annex 2.
82 Id.
83 Id.
is already present in the soil as a result of the use of other nonchemical fertilizers. Chemical fertilizers, as well as livestock manure, may contain nitrogen compounds. If an area is found to possess high levels of nitrogen, due to the limitations placed on natural and chemical fertilization, farmers may be unable to fertilize their land.

Proposed Directive 88/708 gives the member states significant guidance in establishing programs to combat nitrate pollution. Measures to receive great consideration in the creation of action programs are specifically set out in article 4(3). These primarily include restrictions on farming practices. In light of the advised guidelines, the proposed directive requires the member states to keep records of the respective total quantities of nitrogen found in the land. To ensure that the proposed directive's measures are enforced effectively, the proposed directive requires that member states institute monitoring programs and send the results of all monitoring to the Commission for final assessment to determine the adequacy of treatment of the vulnerable zone.

III. IMPACT OF PROPOSED DIRECTIVE 88/708

The Commission's goal is to reduce and control the inputs of nitrogen into the aquatic environment through member states' implementation of the proposed directive. Within eight years, the Commission hopes to have identified the areas most susceptible to nitrate pollution and to have taken action to alleviate the problem.

The measures that have been adopted for controlling the quantity of nitrates affecting water sources are likely to bear heavily on Community farmers, especially those in regions where the nitrate content of the soil is already high. Some farmers, therefore, may oppose the implementation of measures the Commission suggests which go beyond the requirements of traditional agricultural practices. Increased hostility may develop if individual farmers bear the costs of implementing the proposed

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84 Id.
85 Id. at art. 4(3).
86 Id. at Annex 3.
87 Id. at art. 4(5).
88 Id. at Annex 4.
89 See supra notes 74–79 and accompanying text.
measures as required by SEA article 130R.\textsuperscript{91} The polluter in this case is likely to be an independent farmer who, prior to any education in the area of nitrate pollution, did not realize that his agricultural methods were harming the environment. Many farmers will likely be unable to sustain the economic burden that the proposed directive will place on them. In anticipation of this problem, the Commission has stated that member states should be allowed to include in their programs appropriate "technical and/or financial assistance to help farmers adapt to the new agro-economic context."\textsuperscript{92} Therefore, true advancement in the control of nitrate pollution can be expected only if some member states provide financial assistance to the affected farmers. Action, however, still may not be permitted under the EEC Treaty if it would affect EEC objectives by imposing an added burden on agriculture in some member states and not in others.\textsuperscript{93}

Agricultural industry in the EEC will bear a significant portion of the cost of cleaning up nitrate pollution. If positive action is not taken, however, other industries such as fishing and tourism, which depend highly on water sources, will also suffer. Communities dependent on these industries are likely to favor the implementation of the proposed directive, especially in light of the fact that the industries may be severely damaged if the pollution problem is ignored.\textsuperscript{94}

Emphasis should be placed on assessments made regarding the effects of nitrates on human health. Ultimately, this should be the motivating factor for all member states to enact and enforce the proposed directive. Despite the economic costs and burdens of the proposed directive, the member states have a primary responsibility to the health of their citizens. To ignore the serious health hazard that is posed by the presence of high levels of nitrates in Community water sources violates the fundamental objectives of the EEC environmental policy.\textsuperscript{95}

\section*{Conclusion}

The Commission has addressed one source of the serious water pollution problem through the proposal of Proposed Directive

\footnotesize{\textsuperscript{91} See supra notes 30–33 and accompanying text.\\textsuperscript{92} Proposed Directive 88/708, \textit{supra} note 2, Explanatory Memorandum at 4.\\textsuperscript{93} EEC Treaty, \textit{supra} note 9, at art. 100A.\\textsuperscript{94} Proposed Directive 88/708, \textit{supra} note 2, Explanatory Memorandum at 16.\\textsuperscript{95} See \textit{supra} note 31 and accompanying text.}
88/708. The proposed directive is intended to decrease the dangerously high levels of nitrates found in many of the Community's water sources. Although the objectives of the directive are phrased in general language, the Commission specifically articulates what measures the member states should take in order to begin remedying the nitrate problem. The Commission also has provided dates by which the measures should be implemented.

The proposed directive has the potential for having a harsh impact on the agricultural industry, although in some instances member states are permitted to provide aid to farmers needing assistance. The Commission, however, has recognized the severe future environmental harm that is likely, if not inevitable, to occur if action is not taken. Proposed Directive 88/708, if implemented by all member states, will alleviate the present nitrate pollution problem in the EEC which ultimately is likely to benefit the economies of the individual member states.

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