OPINION OF ADVOCATE GENERAL GEELHOED

delivered on 29 November 2001 [1]

I — Introduction

1. The implementation of Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources [2] (hereinafter the 'Nitrates Directive') continues to give rise to differences of interpretation between the Member States and the Commission. Those differences of interpretation are frequently technical in nature. This is also the case in these infringement proceedings.

2. Under Article 3(1) of the Nitrates Directive, the Member States are required to identify which waters are affected by pollution with nitrogen compounds from agricultural sources and which waters could be affected if action is not taken to reduce the nitrogen input from agricultural sources. To that end, they are required to designate as 'vulnerable zones' the agricultural areas which drain into the waters identified as polluted by nitrogen compounds or at risk of becoming so.

3. Under Article 5(1) of the Nitrates Directive, action programmes must be established in respect of the vulnerable zones designated in this way, for the purpose of reducing the addition of nitrogen to the soil. This will reduce the risk that nitrogen compounds not taken up by plants will leach out of the soil and ultimately end up in surface waters which are already polluted or at risk of becoming so.

4. It is clear that there is a link between the extent to which surface waters are identified as being polluted or at risk of becoming polluted by nitrogen compounds and the surface area of the vulnerable zones to be designated. It is also clear that the area of the vulnerable zones in turn has consequences for the extent and the degree to which agricultural production methods must be adapted.

5. In view of the possible ecological and economic consequences of the identification of surface waters polluted or at risk of becoming polluted with nitrogen compounds, similar criteria should be used throughout the Community for identifying those waters. The criteria for identifying surface waters are laid down in Annex I(A)(3) to the Nitrates Directive.

1 — Original language: Dutch.
2 — OJ 1991 L 375, p. 1.

6. The difference of opinion between the French Government and the Commission in this case concerns the interpretation and application of the provisions in Annex I(A)(3). The discussion which took place between the parties in the preliminary procedure and in the procedure before the Court is essentially technical and scientific in nature, with references in support of the differing viewpoints to the extensive literature on the ecology of different types of surface waters and the forms of plant and animal life found in them.

7. After setting out the relevant provisions of the Nitrates Directive and of the associated recitals in the preamble to the directive, and the course of the proceedings, I shall start with a summary of the technical aspects of the dispute and the resulting consequences for the application of the Nitrates Directive and its objectives. The tenability of the views held by the parties should then be assessed in the light of those consequences.

II — Legal framework

A — *The relevant provisions of the Nitrates Directive*

8. Article 3(1) and (2):

'1. Waters affected by pollution and waters which could be affected by pollution if action pursuant to Article 5 is not taken shall be identified by the Member States in accordance with the criteria set out in Annex I.

2. Member States shall, within a two-year period following the notification of this Directive, designate as vulnerable zones all known areas of land in their territories which drain into the waters identified according to paragraph 1 and which contribute to pollution. They shall notify the Commission of this initial designation within six months.'

Annex I, containing criteria for identifying waters referred to in Article 3(1):

'A. Waters referred to in Article 3(1) shall be identified making use, inter alia, of the following criteria:

1. whether surface freshwaters, in particular those used or intended for the abstraction of drinking water, contain or could contain, if action pursuant to Article 5 is not taken, more than the concentration of nitrates laid down in accordance with Directive 75/440/EEC;

2. whether groundwaters contain more than 50 mg/l nitrates or could contain more than 50 mg/l nitrates if action pursuant to Article 5 is not taken;

3. whether natural freshwater lakes, other freshwater bodies, estuaries, coastal waters and marine waters are found to be eutrophic or in the near future may become eutrophic if action pursuant to Article 5 is not taken.

B. In applying these criteria, Member States shall also take account of:

1. the physical and environmental characteristics of the waters and land;

2. the current understanding of the behaviour of nitrogen compounds in the environment (water and soil);

3. the current understanding of the impact of the action taken pursuant to Article 5.'

Article 2(i) of the Directive defines as follows the term 'eutrophication', which is essential for the interpretation and application of the criterion described in Annex I(A)(3):

'"eutrophication": means the enrichment of water by nitrogen compounds, 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 and to the quality of the water concerned.'

B — *Relevant considerations from the preamble to the Nitrates Directive*

9. 'Whereas the Council resolution of 28 June 1988 on the protection of the North Sea and of other waters in the Community [3] invites the Commission to submit proposals for measures at Community level (fourth recital);

Whereas the main cause of pollution from diffuse sources affecting the Community's waters is nitrates from agricultural sources (fifth recital);

3 — OJ 1988 C 209, p. 3.

Whereas, by encouraging good agricultural practices, Member States can provide all waters with a general level of protection against pollution in the future (eighth recital);

Whereas certain zones, draining into waters vulnerable to pollution from nitrogen compounds, require special protection (ninth recital);

Whereas it is necessary for Member States to identify vulnerable zones and to establish and implement action programmes in order to reduce water pollution from nitrogen compounds in vulnerable zones (10th recital)'.

III — Procedure

10. The reasoned opinion and the Commission's application contain four objections. In the course of the proceedings before the Court, the French Government has dealt with two of them. At this stage, the Commission still has two objections. It still rejects the method used by the French authorities to designate waters polluted or at risk of becoming polluted with nitrogen as incompatible with the Nitrates Directive. In addition, it maintains that the French authorities wrongly failed to designate the Seine bay as a body of water polluted with nitrogen.

11. Specifically, the Commission claims that the Court should:

— declare that, by failing to take appropriate steps to identify waters affected by pollution and, in consequence, to designate the corresponding vulnerable zones, as provided for by Article 3 of and Annex I to Directive 91/676, the French Republic has failed to fulfil its obligations under that directive;

— order the French Republic to pay the costs.

12. The French Republic claims that the Court should dismiss the Commission's appeal and order it to pay the costs.

13. The Kingdom of Spain has been allowed to intervene in support of the observations of the French Republic.

IV — The subject-matter of the dispute

14. The French authorities implemented the Nitrates Directive by a circular of 5 November 1992 issued by the Minister for the Environment. Attached to that circular is an Annex 4 entitled 'Prise en compte de l'état d'eutrophisation des eaux' (Assessment of the eutrophication of waters).

15. That circular draws a distinction between waters deemed to be eutrophic in accordance with the definition in Article 2(i) of the Directive and other waters. The distinction is based on the respective proportions of the two main plant nutrients, namely nitrogen and phosphorus, in the environment (water or soil).

16. In cases where the ratio between nitrogen and phosphorus is high — i.e. there is a relatively large amount of nitrogen available in the environment — phosphorus is the limiting factor for plant growth. If eutrophication occurs with such a ratio, resulting in excessive plant growth, the reduction of the quantity of phosphorus present in the (aquatic) environment is the most efficient way of controlling the eutrophication.

17. On the other hand, in cases where the ratio between nitrogen and phosphorus is relatively low — where there is a relatively large amount of phosphorus available in the environment — nitrogen becomes the limiting factor for plant growth. In this case, reducing the quantity of nitrogen is the most effective way of reducing the eutrophication.

18. According to the aforementioned annex to the circular of 5 November 1992, the equilibrium between nitrate and phosphorus as plant nutrients lies at a ratio of 16, i.e. 16 atoms of nitrogen to 1 atom of phosphorus. If that ratio is higher, phosphorus becomes the limiting factor which has to be reduced in the event of eutrophication; if it is lower, the reduction of nitrogen is indicated in principle as the limiting factor.

19. However, it is not always effective to tackle eutrophication via the limiting factor. Cases may arise in which nitrogen is indeed the limiting factor but there is no point in reducing its availability because the plants present in the aquatic environment — especially blue algae — meet their nitrogen requirements by taking it from the air. In those cases, reducing nitrogen as a nutrient is ineffective. Nitrogen is indeed the limiting factor, but not the controlling factor for reducing eutrophication.

20. On the basis of the argument reproduced here, the aforementioned annex distinguishes between different types of waters

depending on whether their eutrophication can be reduced by reducing nitrogen as a limiting *and* controlling factor.

21. The annex provides as follows:

'The present state of knowledge, which is still imprecise and incomplete due to the complexity of the processes to be taken into account, suggests that it is highly likely that nitrogen is the controlling factor in the eutrophication of saline (coastal) waters and stagnant, shallow, brackish waters (lagoons). It is established that this is not the case for flowing brackish waters (estuaries) and hard freshwaters, both flowing and stagnant, where phosphorus plays that role (of controlling factor). Finally, for acidic freshwater, especially stagnant (ponded) and deep brackish waters, further studies are required in order to be able to reach a conclusion.

After observations and studies have made it possible to describe ... the state of eutrophication of waters, the working group will, on the basis of the considerations set out above, determine in which cases nitrogen is the controlling factor in the phenomenon of eutrophication. It will then also have to determine whether the nitrogen is in fact, at least predominantly ("de façon prépondérante"), of agricultural origin. [4] In the opposite case, there will be no reason to designate a particular vulnerable zone on the basis of that criterion.'

22. Three comments may be made concerning this technical implementation by the French authorities of their obligations arising from Article 3(1) of and Annex I to the Nitrates Directive.

23. First, as the French Government points out, this means of implementation follows on from the definition of eutrophication given in Article 2(i): 'the enrichment of water by nitrogen compounds, 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 and to the quality of the water concerned'.

24. In cases where it is not nitrogen but phosphorus that is the limiting factor, nitrogen may enrich the water, but that enrichment does not bring about an accelerated growth of algae and higher forms of plant life. In those cases, nitrogen cannot be regarded as the controlling factor in reducing eutrophication. Consequently, even the measures as referred to in Article 5 of the Nitrates Directive would have no effect.

4 — In the revised version of the circular dated 24 July 2000, the words 'de façon prépondérante' are replaced by the words 'de façon significative' (significantly).

25. Second, according to the circular, this means of implementation has the result that, in cases where waters are indeed enriched by the leaching of nitrogen from the soil but where the eutrophication, evidenced by excessive plant growth, is caused primarily not by nitrogen but by phosphorus, none of the agricultural areas draining into the waters concerned need be designated as 'vulnerable zones'.

26. Third, this method is beset by scientific uncertainty. This is confirmed in the circular itself and has also been admitted by the French Government in the course of these proceedings.

27. The Commission contests the views of the French authorities as laid down in the circular of 5 November 1992. It points out that the method worked out in that circular does not take adequate account of the variations which may arise, depending on the different species of plant, in the take-up of nutrients. Such variations might also occur in the course of the growth cycle of various forms of plant life. In those cases, identifying phosphorus as the limiting and controlling factor would have the result that the excessive growth of forms of plant life for which nitrogen is the limiting factor would remain unimpeded.

28. The Commission also points out that nitrogen as a nutrient is always an important factor in the eutrophication of surface waters, which plays a vital role in maintaining the phenomenon of eutrophication, even if the complementary presence of phosphorus has triggered that phenomenon. As a result, apart from the measures which the Member States may take in order to limit the occurrence of phosphorus in surface waters, it is always desirable to limit the nitrogen content of such waters. To that end, waters with a high nitrogen content should always be designated under Article 3 of and Annex I to the Nitrates Directive, with the associated consequences of the designation of vulnerable zones and action programmes in order to control the pollution of those waters with nitrogen.

29. In the course of the written procedure, both the French Government and the Commission have attempted to substantiate the scientific tenability of their viewpoints with numerous references to scientific studies. Perusal of the material submitted confirms the comment made in the circular of 5 November 1992 that, in the light of the complexity of eutrophication processes, current knowledge remains incomplete and inexact. That material also appears to confirm the view that the role and significance of nitrogen and phosphate in the eutrophication process may vary widely depending on place, time and form of plant life.

V — Assessment

30. The scientific studies and data put forward by the French Government and the Commission do not permit an unambiguous conclusion as to the scientific tenability of the method used by the French authorities to designate waters which have become or are at risk of becoming eutrophic due to nitrogen.

31. It *is* established, however, that the use of that method may result in waters with a high nitrogen content being left out of consideration for the purposes of the Nitrates Directive, with the consequence that the areas of land draining into them need not be designated as 'vulnerable zones' and that no action programmes need be set up in that respect.

32. The main legal question raised here is whether this consequence is in accordance with the objective pursued by the Nitrates Directive, namely reducing the pollution of the aquatic environment with nitrogen 'in order to protect human health and living resources and aquatic ecosystems'.

33. The French Government puts forward two legal arguments in essence in support of its views.

34. The first has already been referred to above at point 23, namely that the method described by the French Government in its circular of 5 November 1992 follows on from the description of the term eutrophication given in Article 2(i) within the meaning of the Nitrates Directive:

— the enrichment of water by nitrogen compounds, causing an accelerated growth of algae and higher forms of plant life;

— resulting in an undesirable disturbance to the balance of organisms present in the water;

— a disturbance which leads to a deterioration in water quality.

The French Government infers from this that the mere enrichment of surface waters by nitrates does not make those waters eutrophic within the meaning of the Directive.

35. The French Government derives its second argument from the judgment in *Standley*. [5] In that judgment, the Member

5 — Case C-293/97 *The Queen* v *Secretary of State for the Environment, Minister of Agriculture, Fisheries and Food, ex parte: H. A. Standley and Others* [1999] ECR I-2603.

States were accorded wide discretion in the choice of methods by which vulnerable zones were to be designated under the Nitrates Directive.

36. Against the first argument, the Commission submits that the definition in Article 2(i) of the Directive is not intended to list three cumulative conditions to be used to decide whether eutrophication is present in one case or another. Its purpose is to specify the role of nitrogen in the eutrophication process.

37. The Commission has opposed the second argument in its written documents and at the hearing. If an argument in favour of a margin of discretion for the Member States can be derived from the *Standley* judgment [6] in identifying waters threatened by eutrophication, that margin should not have the result that a very substantial proportion of the waters polluted with nitrogen could not be designated.

38. In assessing these arguments we should, I believe, consult the purpose of the Directive, as set out in its preamble. It aims to protect human health, living resources and aquatic ecosystems and to safeguard other uses of water. In a wider context, it also refers to the protection of the North Sea.

39. In the light of those objectives, the restrictive interpretation and application of the definition in Article 2(i) in identifying eutrophic waters, as arises from the circular of 5 November 1992, is not tenable.

40. Apart from the scientific objections which could be raised against it — the Commission emphasised these in its reply — the result of the French method might be that large sections of surface freshwaters, brackish water estuaries and parts of coastal waters could never be designated as eutrophic, however serious the (threat of) pollution with nitrogen from agricultural sources.

41. Such a result does not take account of the fact that forms of plant life whose growth is accelerated by nitrogen pollution may indeed occur in such waters, with the resulting risks for the equilibrium between the various organisms present in the water. Nor does it take account of seasonal changes, by which phosphorus and nitrates alternate as the main limiting factor for the phenomenon of eutrophication. The objectives of protection pursued by the Directive, referred to in point 38, are therefore unattainable from the outset.

6 — Cited in footnote 5.

42. The contested method, which has the result that certain categories of waters are automatically exempted from the scope of the Directive purely on the basis of generic assumptions concerning nitrogen or phosphorus as limiting and controlling factors in the eutrophication phenomenon is also at odds with the requirement in Annex I(B)(1) which provides that Member States shall also take account of the physical and environmental characteristics of the waters and land. This requirement calls for a specific investigation of nitrogen pollution and the eutrophication phenomena and risks of the individual waters and the land draining into them. Only then can the vulnerable zones referred to in Article 3 of the Directive be meaningfully identified and the appropriate action programmes set up.

43. Finally, the contested method appears to disregard the fact that flowing freshwater in particular may pass through environments with different physical characteristics. A stream may rise on an acidified plateau poor in nutrients, pass through a low-lying area with limestone-based soil in a brackish estuary and finally emerge into a purely marine environment with a high salt content. Should that water become seriously polluted with nitrogen at any time en route, the consequences, in terms of accelerated plant growth with serious implications for the natural environment, might not become noticeable until it reached the coastal waters. In the compartmentalised approach which is a consequence of the method chosen by the French authorities, the source of the nitrogen pollution might not be taken into consideration. Such a result is irreconcilable with the intended protection of the North Sea from contamination by nitrogen.

44. On the basis of the above, I conclude that the method chosen by the French authorities for the designation of eutrophic waters and waters at risk of eutrophication is inadequate in the light of the objectives of the Nitrates Directive.

45. The fact that the Member States have a certain discretion in the choice of method by which they designate surface waters which have already become or are at risk of becoming eutrophic does not alter this conclusion. The differences in geographical conditions and the differences in soil use within the Community provide sufficient reason, even in the light of the scientific uncertainty which still persists with respect to the phenomenon of eutrophication.

46. In paragraphs 37 to 40 of the aforementioned *Standley* judgment, the Court confirmed that the Directive may be applied by the Member States in different ways. This is not incompatible with the nature of the Directive, '... since it does not seek to harmonise the relevant national laws but to create the instruments needed in order to ensure that waters in the Community are protected against pollution caused by nitrates from agricultural sources ...'.

47. This quotation from paragraph 39 of the *Standley* judgment shows that the Member States do have wide discretionary powers, but that they must be used in accordance with the objective of the Directive, namely to create the instruments needed in order to ensure that waters are protected against pollution caused by nitrates from agricultural sources. The use of a method for the designation of waters polluted by nitrogen from agricultural sources, which has the result that certain categories of waters, irrespective of their actual state of nitrogen pollution, are generically regarded as unpolluted, is per se incompatible with the objective of the Directive. The French Government has thereby overstepped the bounds of the discretion accorded to it by the Directive.

48. It is my view, therefore, that the Commission's first objection is unfounded.

49. In view of the above, I need not dwell long on the second objection, which accuses the French Government of wrongly failing to designate the Seine bay as eutrophic and therefore infringing Article 3(1) of and Annex I(A)(3) to the Nitrates Directive.

50. It should be inferred from the exchange of documents and the scientific studies referred to in those documents that the phenomenon of eutrophication in that bay, as regards the role played there by nitrogen as a limiting and controlling factor, varies widely depending on the species of algae and other plants and depending on the season.

51. The French Government also concedes in its rejoinder (point 15, final paragraph) that it is not out of the question that certain phenomena may be described as a disturbance of the equilibrium between the various organisms present in the water or as a deterioration in water quality and that, on that basis, it might be assumed that the Seine bay meets the criteria in the Nitrates Directive.

52. Irrespective of this technical and scientific debate, it is my view that the Commission's argument that the Seine bay contributes to the eutrophication of the eastern part of the North Sea is more important — and decisive. Where it is uncontested that the pollution of the water with nitrates in that bay is extensive and where the parties agree that, in the salt water of the North Sea, nitrogen is the main limiting factor for the occurrence of accelerated growth of algae and higher forms of plant life, the contribution made by the Seine bay to the eutrophication of the North Sea cannot be disregarded, even if the eutrophication phenomenon does not occur in the bay itself.

53. The fourth recital of the preamble to the Nitrates Directive, which refers in so many words to the protection of the North Sea as one of the motivations for the Directive, opposes an interpretation and application of that directive in which the contribution made by rivers and estuaries polluted with nitrogen to the eutrophication of the North Sea is not taken into account.

54. As a result, it is my view that this objection raised by the Commission is also unfounded.

VI — Conclusion

55. On the basis of the foregoing considerations, I submit that Court should:

(1) declare that, by failing to take appropriate steps to identify waters affected by pollution and, in consequence, to designate the corresponding vulnerable zones, as provided for by Article 3 of and Annex I to Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources, the French Republic has failed to fulfil its obligations under that directive;

(2) order the French Republic to pay the costs.