



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 05.06.2000
COM(2000) 219 final

1997/0067 (COD)

OPINION OF THE COMMISSION

**pursuant to Article 251 (2) (c) of the EC Treaty,
on the European Parliament's amendments
to the Council's common position regarding the**

Proposal for a
EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE

**establishing a framework for Community action in the field of water policy (COM
(97)49 final, COM(97)614 final, COM(98)76 final and COM(99)271 final)**

AMENDING THE PROPOSAL OF THE COMMISSION
pursuant to Article 250 (2) of the EC Treaty

EXPLANATORY MEMORANDUM

Article 251, paragraph 2 (c) of the EC Treaty foresees that the Commission gives an opinion on the amendments proposed by the European Parliament in its second reading.

The Commission gives its opinion below on the 61 amendments adopted by Parliament. In accordance with Article 250, paragraph 2 of the EC Treaty, a modified proposal is attached. The amended proposal incorporates fully, in part or in principle 47 of the 61 amendments adopted by Parliament.

1. BACKGROUND

Proposal transmitted to Parliament and Council: 15.04.1997

Proposal amended twice, on 26.11.1997 (COM(1997)614) and on 17.02.1998 (COM(1998)76)

Opinion of the Economic and Social Committee: 01.10.1997

Opinion of the Committee of the Regions: 12.03.1998

Parliament opinion on first reading: 11.02.1999

Commission amended proposal (COM(1999)271): 17.06.1999

Council common position adopted: 22.10.1999

Commission opinion on the common position (SEC(1999)1706): 25.10.1999

In its opinion on the common position, the Commission acknowledged that it further develops the original proposal in particular in terms of technical specification. The Commission also welcomed the inclusion of a good number of Parliament's amendments. The Commission nevertheless expressed its disagreement with the common position, in particular the provisions on timetable for implementation, charging and the way reference was made to commitments under international agreements with particular reference to the OSPAR, Barcelona and HELCOM Conventions. The Commission expressed its concerns for these shortcomings but supported the common position.

2. PURPOSE OF THE COMMISSION PROPOSAL

The new water policy re-organises Community water legislation to prevent further deterioration and to protect and enhance water quality and quantity of aquatic ecosystems and groundwater. The proposal establishes a Community Framework with a common approach, objectives, basic measures and common definitions. This water policy focuses on water as it flows naturally through river basins towards the sea, taking into account natural interaction of surface water and groundwater in quantity and quality covering the whole of a river basin district including estuaries, other transitional waters and coastal waters. A combined approach to pollution control is required with control at source combined with the setting of environmental quality standards. Six Annual Management Plans covering each River Basin District,

including any transboundary waters, are required with co-ordinated programmes of measures to ensure good status of waters by 2010. Programmes of measures must take into account all sources of impact on the aquatic ecosystems including impact from agriculture, energy production, transport, and spatial planning. Systematic monitoring of achievements is required. Moreover, the proposal introduces a requirement for water pricing policies that act as an incentive for the rational use of water as a step towards the full recovery of costs for water services, including financial, environmental and resource costs. The proposed Directive furthermore implements international obligations under the United Nations Economic Commission for Europe Convention on Transboundary Water Courses and International Lakes of 1992 and the UN Convention on the non-navigational use of waters of 1996.

3. COMMISSION'S OPINION ON PARLIAMENTS AMENDMENTS

The Commission accepts fully, in part or in principle 47 of the 61 amendments adopted by Parliament. These amendments are incorporated in the attached amended proposal.

3.1. Amendments accepted by the Commission

- Amendment 6 clarifying that good water status should be achieved throughout the Community and that deterioration in the status of waters is avoided is accepted in full.
- Amendment 16 clarifying that good surface water chemical status is the status required for achieving the environmental objectives for surface water is accepted in full.
- Amendment 17 clarifying the definition of good groundwater chemical status upon consideration is accepted in full.
- Amendment 20 defining direct discharge to groundwater is accepted with the addition of "to groundwater".
- Amendment 21 adding radioactive substances to substances for which environmental standards should be adopted is accepted in full with the addition of "man-made" for reasons of clarification. This makes the implicit coverage of radioactive substances explicit. Amendment 76 introducing radioactive substances into the list of Annex VIII is consequently also accepted in full. Wording from the Commission's amended proposal after Parliament's first reading is used in a new recital 40a.
- Amendment 31 introducing stringent and transparent criteria for designation of artificial and heavily modified bodies of water in a separate paragraph is accepted in full with the addition of "or" between the indents of paragraph a for clarification of the parallel nature of these criteria. In this way one clear paragraph governs such designation instead of the unclear presentation in both Articles and Annexes of the common position. For additional clarity "port facilities" have been added as part of navigation. Amendment 65 deleting a section of Annex II with criteria for designation is consequently also accepted in full.

- Amendment 33 and 84 introducing more stringent and clearer criteria for “temporary” deterioration substituting “unforeseen” with “unforeseeable” and specifying the application to “untypically extreme and prolonged” floods and droughts are accepted in full. These are useful clarifications.
- Amendment 34 introducing more stringent and clearer criteria for making new modifications or alterations to waters is accepted in full. Minor adjustments have been made to the header from the common position by deletion of wording, which duplicates part of the amendment.
- Amendment 35 specifying that Member States shall ensure that extension or derogation to the general objectives must not permanently exclude or compromise the achievement of the objectives of the proposal is accepted.
- Amendment 46 increasing transparency by obliging Member States to establish timetables for the full implementation of the charging obligations is accepted in full.
- Amendment 48 specifying that programmes of measures must be “designed to achieve” the objectives of the proposal is accepted in full. However, reference is made only to Article 4 where the objectives of the proposal are presented.
- Amendment 53 clarifying the obligation to take measures to achieve good ecological status in the programme of measures is accepted in full.
- Amendment 67 aligning the thresholds for the monitoring requirements of the Drinking Water Directive with the requirements of the proposal is accepted in full.
- Amendment 75 clarifying reporting obligations on water unlikely to achieve the required good status is accepted in full.
- Amendment 78 introducing stringent and transparent criteria for the extension of deadlines for achievement of good status and shortening this from 3 to 2 updates of river basin management plans is accepted in full. This makes application clearer and shortens the rather long implementation time appropriately. To clarify that the three criteria introduced are parallel in nature, “at least one of “ has been added to the header.
- Amendment 85 increasing transparency by obliging reporting in river basin management plans on the implementation of a charging system that acts as an incentive for the rational use of water and in the contribution of each economic sector is accepted in full.
- Amendment 88 clarifies obligations by specifying that programmes of measures must include measures to progressively reduce emission to surface waters by continuously reducing discharges, emissions and losses of hazardous substances is accepted in full.

3.2. Amendments accepted in part by the Commission

- Amendment 8 introducing reference to “hydrogeological” alongside “ecological and hydrological” is accepted while the addition of “hydrogeological” to

river basin is not necessary because it is already included in the notion of a river basin district as defined in Article 2 point 15. This part is therefore not accepted.

- Amendment 42 specifying monitoring requirements for surface waters in relation to volumen and rate of flow is accepted while specification that monitoring is based on the chemical and biological conditions of the surface water is already in the proposal. A requirement that standardised methods recognised by all Member States shall be used is unnecessary and the procedure for such recognition is unclear and therefore not accepted.

- Amendment 47 specifying the scope of the combined approach to include all point and diffuse sources is accepted in part. A “de minimis” clause has been added for reasons of proportionality. Reference to its application to priority substances has been transferred to the relevant place in Article 16.

- Amendment 54 specifies that for waters failing to achieve the environmental objectives, consideration must be made to hydro-morphological and physico-chemical conditions when investigating waters, more monitoring is necessary, environmental quality standards should be established for pollutants identified, immediate review of authorisations is needed, and that measures are needed to ensure that hydro-morphology is in accordance with that needed to ensure the required ecological water status. The essential parts of these elements are accepted in shorter or slightly adjusted wording.

- Amendment 93 requesting proposals for continuous reduction of discharges, emissions and losses one year after the adoption of the priority list is accepted. Reference to the aim of levels close to zero by December 2020 is accepted in redrafted wording, in line with inclusion of this aspirational target into the purpose and objectives of the proposal. The requests for a target list and a data-deficiency list of substances are not accepted. The role of these two lists is not explained in the amendment and it is not clear what action would be required for these substances and to what extent this action would differ from what is required for the list of priority substances. The list of priority substances is intended as a tool for a more focussed action in relation to a number of clearly identified substances of concern at Community level and this objective would thus be lost.

- Amendment 94 with more stringent criteria for presentation of compliance with the objective for groundwater chemical status is accepted in part. A criterion that 70 % of mean values from each representative monitoring point must comply with the relevant standards of relevant Community legislation is accepted. Reference to specific Directives is unnecessary and therefore not accepted.

3.3. Amendments accepted in principle by the Commission

- Amendment 2, adding reference to “arid and semi-arid areas” could be accepted as such. However, the wording of this recital was subject to an informal compromise between Council and Parliament in February 1999. The Commission can accept full inclusion of the additional wording provided both institutions agree to this. Wording from the Commission’s amended proposal after Parliament’s first reading is used.

- Amendment 3 specifying that good water status will ensure drinking water supply is accepted in a slight rewording where the proposal “contributes” to securing drinking water supply. Recital 33 has been amended to take account of this.
- Amendment 5 referring to the importance of water protection for coastal fisheries is accepted in a redrafting, which takes account of the geographical difference between the definition of coastal areas of the proposal and that of coastal fisheries. The wording from the Commission’s amended proposal after Parliament’s first reading is used in the creation of a new recital 15a.
- Amendment 7 referring to the ultimate aim of achieving complete elimination of all anthropogenic pollutants and background concentrations of naturally occurring substances is accepted in a redrafting, which ensures the aspirational, essentially political and non-legally binding nature of this aim for the marine environment in line with the original statement of Member States and the Commission made at Sintra in 1998 in the framework of a meeting of the Parties to the OSPAR Convention. The Commission has included the wording used in its amended proposal in the amended recital 20.
- Amendment 10 referring to measures for progressive elimination of discharges of hazardous substances is accepted in principle. The Commission considers that it is covered by the combination of the present recital 39 and the rewording of recital 20 mentioned under amendment 7.
- Amendment 12 referring to procedures for the exercise of implementing powers conferred on the Commission is accepted in principle. A regulatory committee will be introduced in line with the relevant interinstitutional agreement on implementing powers through committee procedure. Consequently, amendment 63 is also accepted in principle.
- Amendment 14 referring to the aim of reducing discharges, emissions and losses of hazardous substances is accepted on principle. Wording has been introduced in Article 1 to clarify that the proposal in one of its purposes aims towards achieving this aspirational, essentially political and non-legally binding commitment through specific measures based on prioritisation of those substances of greatest concern. Wording is also added to the effect that the proposal contributes towards the ultimate aim of concentrations in the marine environment near background values for naturally occurring substances and close to zero for man-made synthetic substances in line with the Sintra statement of 1998 mentioned above under amendment 7. Wording from the Commission’s amended proposal after Parliament’s first reading is used.
- Amendment 22 defining the combined approach is accepted in a redrafting ensuring a neutral wording leaving the specification of its scope to Article 10.
- Amendment 24 specifying that programmes of measures must be made operational is included with reference to Member States rather than competent authorities in line with Member States’ prerogative for administrative arrangements. The requests for surface waters: for more stringent clarification of the proposal’s environmental objectives; more stringent specification of prevention of deterioration from the date of adoption; and specification of the objectives for artificial and heavily modified water in a separate paragraph are included in slightly adjusted

wording. Reference to the objective of progressively eliminating pollution of waters, moving towards the cessation of emissions by 31 December 2020 is made with wording which carefully reflects the aspirational and essentially political nature of this commitment as mentioned above under amendment 7. In accordance with this, reference to a target date is not considered appropriate.

- Amendment 25 specifying that prevention of deterioration of groundwater quality should address both chemical and quantitative aspects and clarifying that restoration applies to polluted groundwater is adjusted in line with the wording for surface waters. Reference to the aim of at least insignificantly anthropogenically polluted groundwater as part of the objective for groundwater is included only in relation to an ultimate target for reversal of significant and sustained upward trends in concentrations of pollutants. Wording essentially as in the Commission's amended proposal after Parliament's first reading is used. Taking half the values of the standards laid down by the Drinking Water Directive is accepted as an appropriate starting point for such trend reversal. A distinction between pollution from agricultural and other sources is not considered practical or appropriate.

- Amendment 26 requesting shortening of the timetable for implementation from 16 years to 10 years is considered too strict. However, agreeing that shortening is needed, the Commission suggests a global solution with a certain shortening of the deadline in combination with stricter conditions for achieving the environmental objectives. With the deletion of a third six-year extension period, in combination with a no-deterioration clause, more stringent criteria for extensions, for less stringent environmental objectives and for compliance as requested by Parliament the Commission accepts the 16 years of the common position as an overall date for achieving the environmental objectives. Appropriate wording has been inserted into Article 4 in relation to these elements. Other amendments adjusting timetables in other parts of the proposal in consequence of the request for a 10 year deadline are accepted in principle subject to the overall compromise of a deadline of 16 years, including amendment 55.

- Amendment 30 introducing more stringent criteria for the setting of less stringent environmental objectives is included with some elements redrafted for clarity and consistency with similar provisions on extension and designation of artificial and heavily modified bodies of water.

- Amendment 36 clarifying the characteristics of geographical, geological, hydrological and ecological elements of the required analyses of river basins are included while other more detailed requirements are considered inappropriate for inclusion in the Article. Wording has been inserted into Annex III in relation to a breakdown of costs for services covering more than one purpose.

- Amendment 43 introducing a water charging system that acts as an incentive for the rational use of water as an obligatory requirement is accepted in principle as part of a global solution on a provision on cost recovery for water services. The Commission's proposal aimed at a more ambitious provision but acknowledging that that level of ambition is not supported and taking into account the divergence between the common position and Parliament's amendments Article 9 has been redrafted based on the principles and parts of amendment 43. The wording of the definitions of water service and water use in Article 2(34) and (35) is also adjusted to

the revised Article 9 on charging. Consequential changes are also made in the corresponding Article 5 and Annex III.

- Amendment 56 obliging Member States to ensure that river basin management plans are made and implemented is considered included through the inclusion of amendment 24.
- Amendment 57 shortening the timetable for implementation is considered included through the global solution mentioned under amendment 26.
- Amendment 58 referring to the adoption by the European Parliament and the Council is included, thus reflecting the choice of legal basis for the proposal. Reference to the continuous reduction of discharges, emissions and losses moving towards the target of cessation by 2020 has been adjusted in order to reflect the nature of this commitment as mentioned under amendment 7.
- Amendment 69 specifying that bodies of groundwater for which compliance cannot be achieved due to past pollution shall be identified is accepted in principle. Reference is not made to make a state of “insignificant anthropogenically polluted” an integral part of the definition of “good groundwater chemical status. However, in line with the Commission’s amended proposal after Parliament’s first reading this has been introduced as an ultimate target for the trend reversal.
- Amendment 86 specifying that measures may be adopted as legal and administrative provisions or as contracts is considered to be covered by the structure of the programmes of measures, where the nature of the measures in Annex VI part A and B clarifies this.

3.4. Amendments not accepted by the Commission

- Amendment 1 stating that water is a common heritage rather than a commercial product is not accepted. The proposal does not treat water as a commercial product but protects water as an environmental and social good.
- Amendment 9 stating that there is no natural right to discharge hazardous substances and radioactive substances into water is not accepted. The function of this amendment is unclear and the proposal does not make reference to any “rights” of polluting.
- Amendment 13 adding “efficient” to “sustainable” and substituting “river basin” for “hydrological area” is not accepted. The concept of efficiency is already included in “sustainable” and the purpose of the undefined term “hydrological area” is unclear.
- Amendment 19 introducing a definition of “hazardous substances” is not accepted. The proposal defines clear criteria for selection of “hazardous substances” and a definition is therefore unnecessary. Moreover, the proposed definition deviates in important detail from the generally recognised definitions of hazardous substances.
- Amendment 23 giving priority to “structures from international agreements” is not accepted. This would infringe on Member States’ prerogative for choosing administrative arrangements and thus on the principle of subsidiarity.

- Amendment 39 requesting a cost-benefit study of investments, which have been required for the implementation of the Directive, five years after the date of implementation is not accepted. The request is already implicitly covered by requirements to establish six-annual management plans, including economic analyses. Moreover, the timing is unfortunate, as these management plans are being prepared 7-10 years after adoption.
- Amendment 40 adding “hydrogeological district” to “river basin district” is not accepted. The purpose of this is unclear as groundwater is already included in the definition of river basin district.
- Amendment 41 requiring quality standards set for surface waters to ensure that “the least intensive purification treatment” is used in the production of drinking water in order to comply with Community legislation for drinking water is not accepted. The objective of “good surface water status” should ensure that pre-treatment is generally reduced to a minimum. However, the suggested standards would for some substances such as nitrate be allowed in ecologically unsound concentrations. Moreover, the requirement would also be problematic for water, which still suffers from the impacts of past pollution. However, in the spirit of the request, an aspirational target and suggestions for measures aiming at a general reduction of pre-treatment have been introduced into the proposal.
- Amendment 61 unrealistically shortening the time for Member States’ action where Community standards are not adopted is not accepted. The suggested deadline is shorter than the time generally required for adoption of Community legislation.
- Amendment 64 making repeal of old legislation, which is incorporated into the proposal, conditional on steps to ensure compliance is not accepted. Compliance will be examined but it is not legally possible to make repeals conditional in this way.
- Amendment 77 adding “in so far as they have harmful effects on water” to “materials in suspension” included on the list of substances in Annex VIII is not accepted. The addition is unnecessary and confusing as Annex VIII simply lists substances and groups of substances, which may be subject to control if their discharge negatively impacts on water status.
- Amendment 87 requesting an environmental impact assessment of water abstraction; demand management for water use; a clause empowering local competent authorities to reallocate water from other uses to drinking water purposes; and prior authorisation of artificial recharge of groundwater is not accepted. The requirements are not consistent with the recently revised Environmental Impact Assessment Directive, the legal basis of the proposal does not allow for quantitative water resources management, decision on administrative powers is a prerogative of Member States and prior authorisation of artificial recharge is already required by the proposal.
- Amendment 91 requesting an a priori exemption of extraction of raw materials from authorisation is not accepted. Extraction of raw materials should be subject to the same controls as other activities, which may have negative impact on water status.
- Amendment 92 defining good groundwater chemical status with reference to the standards of the Drinking Water Directive is not accepted. Those standards are

intended for the protection of human health and apply at the tap, rather than to “raw water”. Their application in situ for groundwater would be unfortunate as this in some cases would lead to a “topping-up to the limit value” practice and in other cases be too strict.

Proposal for a

EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE

establishing a framework for Community action in the field of water policy (COM (97)49 final, COM(97)614 final, COM(98)76 final and COM(99)271 final)

**AMENDING THE PROPOSAL OF THE COMMISSION
pursuant to Article 250 (2) of the EC Treaty**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 175 (1) EC thereof,

Having regard to the proposal from the Commission¹,

Having regard to the opinion of the European Parliament²,

Having regard to the opinion of the Economic and Social Committee³,

Having regard to the opinion of the Committee of the Regions⁴,

Whereas:

- (1) The conclusions of the Community Water Policy Ministerial Seminar in Frankfurt in 1988 highlighted the need for Community legislation covering ecological quality; the Council in its Resolution of 28 June 1988⁵ asked the Commission to submit proposals to improve ecological quality in Community surface waters;
- (2) The declaration of the Ministerial Seminar on groundwater held at The Hague in 1991 recognised the need for action to avoid long-term deterioration of freshwater quality and quantity and called for a programme of actions to be implemented by the year 2000 aiming at sustainable management and protection of freshwater resources; in its Resolutions of 25 February 1992⁶ and 20 February 1995⁷, the Council requested an action programme for groundwater and a revision of Council Directive 80/68/EEC of

¹ OJ C 184, 17.6.1997, p. 20, OJ C 16, 20.1.1998, p. 14 and OJ C 108, 7.4.1998, p. 94.

² Opinion of the European Parliament of 11 February 1999 (OJ C 150, 28.5.1999, p. 419), Council Common Position of 22 October 1999 and Decision of the European Parliament of 16 February 2000 (not yet published in the Official Journal)).

³ OJ C 355, 21.11.1997, p. 83.

⁴ OJ C 180, 11.6.1998, p. 38.

⁵ OJ C 209, 9.8.1988, p. 3.

⁶ OJ C 59, 6.3.1992, p. 2.

⁷ OJ C 49, 28.2.1995, p. 1.

17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances⁸, as part of an overall policy on freshwater protection;

- (3) Waters in the Community are under increasing pressure from the continuous growth in demand for sufficient quantities of good quality water for all purposes; on 10 November 1995, the European Environment Agency in its report on "Environment in the European Union – 1995" presented an updated state of the environment report, confirming the need for action to protect Community waters in qualitative as well as in quantitative terms;
- (4) On 18 December 1995, the Council adopted conclusions requiring inter alia the drawing up of a new framework Directive establishing the basic principles of sustainable water policy in the European Union and inviting the Commission to come forward with a proposal;
- (5) On 21 February 1996 the Commission adopted a Communication to the European Parliament and the Council on "European Community Water Policy" setting out the principles for a Community water policy;
- (6) On 9 September 1996 the Commission presented a proposal for a Decision of the European Parliament and of the Council on an action Programme for integrated protection and management of groundwater⁹; in that proposal the Commission pointed to the need to establish procedures for the regulation of abstraction of freshwater and for the monitoring of freshwater quality and quantity;
- (7) On 29 May 1995 the Commission adopted a Communication to the European Parliament and the Council on the Wise Use and Conservation of Wetlands, which recognised the important functions they perform for the protection of water resources;
- (8) It is necessary to develop an integrated Community policy on water;
- (9) The Council on 25 June 1996, the Committee of the Regions on 19 September 1996, the Economic and Social Committee on 26 September 1996, and the European Parliament on 23 October 1996 all requested the Commission to come forward with a proposal for a Council Directive establishing a framework for a European water policy;
- (10) As set out in Article 174 of the Treaty, the Community policy on the environment is to contribute to pursuit of the objectives of preserving, protecting and improving the quality of the environment, in prudent and rational utilisation of natural resources, and to be based on the precautionary principle and on the principles that preventive action should be taken, environmental damage should, as a priority, be rectified at source and that the polluter should pay;
- (11) Pursuant to Article 174 of the Treaty, in preparing its policy on the environment, the Community is to take account of available scientific and technical data, environmental conditions in the various regions of the Community, and the economic and social

⁸ OJ L 20, 26.1.1980, p. 43. Directive as amended by Directive 91/692/EEC (OJ L 377, 31.12.1991, p. 48).

⁹ OJ C 355, 25.11.1996, p. 1.

development of the Community as a whole and the balanced development of its regions as well as the potential benefits and costs of action or lack of action;

- (12) There are diverse conditions and needs in the Community which require different specific solutions; this diversity should be taken into account in the planning and execution of measures to ensure protection and sustainable use of water in the framework of the river basin; decisions should be taken as close as possible to the locations where water is affected or used; priority should be given to action within the responsibility of Member States through the drawing up of programmes of measures adjusted to regional and local conditions;
- (13) The success of this Directive relies upon close cooperation and coherent action at Community, Member States and local level as well as on information, consultation and involvement of the public, including users;
- (14) The supply of water is a service of general interest as defined in the Commission communication on Services of General Interest in Europe ¹⁰;
- (15) Further integration of protection and sustainable management of water into other Community policy areas such as energy, transport, agriculture, fisheries, regional policy and tourism is necessary; this Directive should provide a basis for a continued dialogue and for the development of strategies towards a further integration of policy areas; this Directive can also make an important contribution to other areas of cooperation between Member States, inter alia, the European Spatial Development Perspective (ESDP);
- (15a) An effective and coherent water policy must take account of the vulnerability of aquatic ecosystems located near the coast and estuaries or in gulfs or relatively closed seas, as their equilibrium is strongly influenced by the quality of inland waters flowing into them. Protection of water status within river basins will provide economic benefits by contributing towards the protection of fish populations, including coastal fish population;**
- (16) Community water policy requires a transparent, effective and coherent legislative framework; the Community should provide common principles and the overall framework for action; this Directive should provide for such a framework and coordinate and integrate, and, in a longer perspective, further develop the overall principles and structures for protection and sustainable use of water in the Community in accordance with the principles of subsidiarity;
- (17) This Directive aims at maintaining and improving the aquatic environment in the Community; this purpose is primarily concerned with the quality of the waters concerned; control of quantity is an ancillary element in securing good water quality and therefore measures on quantity, serving the objective of ensuring good quality, should also be established;
- (18) The quantitative status of a body of groundwater may have an impact on the ecological quality of surface waters and terrestrial ecosystems associated with that groundwater body;

¹⁰ OJ C 281, 26.9.1996, p. 3.

- (19) The Community and Member States are party to various international agreements containing important obligations on the protection of marine waters from pollution, in particular the Convention on the Protection of the Marine Environment of the Baltic Sea Area, signed in Helsinki on 9 April 1992 and approved by Council Decision 94/157/EC¹¹, the Convention for the Protection of the Marine Environment of the North-East Atlantic, signed in Paris on 22 September 1992 and approved by Council Decision 98/249/EC¹², and the Convention for the Protection of the Mediterranean Sea Against Pollution, signed in Barcelona on 16 February 1976 and approved by Council Decision 77/585/EEC¹³, and its Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources, signed in Athens on 17 May 1980 and approved by Council Decision 83/101/EEC¹⁴; this Directive is to make a contribution towards enabling the Community and Member States to meet those obligations;
- (20) ~~This Directive is to contribute to~~ **The enhanced protection of the aquatic environment requires the progressive reduction of emissions and discharges of hazardous substances, and the prevention of losses by leakage and accidental pollution of those substances, prioritised on the basis of their risk to or via the aquatic environment in line with the statement made by the Parties to the OSPAR Convention at Sintra in 1998; This will contribute to the target of cessation of emissions, discharges and losses by 2020, and the ultimate aim of concentrations in the marine environment near background values for naturally occurring substances and close to zero for man-made synthetic substances; Council and the European Parliament shall, on a proposal by the Commission, agree on the substances to be considered for action as a priority; Council and the European Parliament shall on proposals from the Commission, adopt measures for the progressive reduction of emissions of those substances, taking into account all sources** ~~to water;~~
- (21) Common principles are needed in order to coordinate Member States' efforts to improve the protection of Community waters in terms of quantity and quality, to promote sustainable water use, to contribute to the control of transboundary water problems, to protect aquatic ecosystems, and terrestrial ecosystems and wetlands directly depending on them, and to safeguard and develop the potential uses of Community waters;
- (22) Common definitions of the status of water in terms of quality and, where relevant for the purpose of the environmental protection, quantity should be established; environmental objectives should be set to ensure that good status of surface water and groundwater is achieved **throughout the Community and that deterioration in the status of waters is avoided** at Community level;
- (23) Member States should aim to achieve the objective of at least good water status by defining and implementing the necessary measures within integrated programmes of measures, taking into account existing Community requirements; where good water status already exists, it should be maintained; for groundwater, in addition to the

¹¹ OJ L 73, 16.3.1994, p. 19.

¹² OJ L 104, 3.4.1998, p. 1.

¹³ OJ L 240, 19.9.1977, p. 1.

¹⁴ OJ L 67, 12.3.1983, p. 1.

requirements of good status, any significant and sustained upward trend in the concentration of any pollutant should be identified and reversed;

- (24) Surface waters and groundwaters are in principle renewable natural resources; in particular, the task of ensuring good status of groundwater requires early action and stable long-term planning of protective measures, owing to the natural time-lag in its formation and renewal; such time-lag for improvement should be taken into account in timetables when establishing measures for the achievement of good status of groundwater and reversing any significant and sustained upward trend in the concentration of any pollutant in groundwater;
- (25) In aiming to achieve the objectives set out in this Directive, and in establishing a programme of measures to that end, Member States may phase implementation of the programme of measures in order to spread the costs of implementation;
- (26) In order to ensure a full and consistent implementation of this Directive any extensions of timescale should be made on the basis of appropriate, evident and transparent criteria and be justified by the Member States in the River Basin Management Plans;
- (27) In cases where a body of water is so affected by human activity or its natural condition is such that it may be infeasible or unreasonably expensive to achieve good status, less stringent environmental objectives may be set on the basis of appropriate, evident and transparent criteria, and all practicable steps should be taken to prevent any further deterioration of the status of waters;
- (28) There may be grounds for **temporary** exemptions from the requirement to prevent further deterioration or to achieve good status under specific conditions, if the failure is the result of ~~unforeseen~~ **unforeseeable** or exceptional circumstances **of natural cause or force majeure**, in particular **untypically extreme** floods and **untypically prolonged** droughts, or, for reasons of overriding public interest, of new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater, provided that all practicable steps are taken to mitigate the adverse impact on the status of the body of water;
- (29) The objective of achieving good water status should be pursued for each river basin, so that measures in respect of surface water and groundwaters belonging to the same ecological ~~and hydrological~~ **and hydrogeological** system are coordinated;
- (30) For the purposes of environmental protection there is a need for a greater integration of qualitative and quantitative aspects of both surface waters and groundwaters, taking into account the natural flow conditions of water within the hydrological cycle;
- (31) Within a river basin where use of water may have transboundary effects, the requirements for the achievement of the environmental objectives established under this Directive, and in particular all programmes of measures, should be coordinated for the whole of the River Basin District; for river basins extending beyond the boundaries of the Community, Member States should endeavour to ensure the appropriate coordination with the relevant non-Member States; this Directive is to contribute to the implementation of Community obligations under international conventions on water protection and management, notably the United Nations Convention on the protection

and use of transboundary water courses and international lakes, approved by Council Decision 95/308/EC¹⁵ and any succeeding agreements on its application;

- (32) It is necessary to undertake analyses of the characteristics of a river basin and the impacts of human activity as well as an economic analysis of water use; the development in water status should be monitored by Member States on a systematic and comparable basis throughout the Community; this information is necessary in order to provide a sound basis for Member States to develop programmes of measures aimed at achieving the objectives established under this Directive;
- (33) **Protection of water status will contribute towards securing the drinking water supply for the populations; For this purpose, Member States should identify waters used for the abstraction of drinking water, take appropriate preventive measures aiming at a reduction of the purification and pre-treatment needed in production of drinking water, and ensure compliance with Council Directive 80/778/EEC of 15 July 1980 relating to the quality of water intended for human consumption¹⁶, or with Directive 98/83/EC.**
- (34) The use of economic instruments **and water charging is** ~~may be~~ appropriate as part of a programme of measures **in order that charges for water services act as an incentive for the rational use of water resources so as to achieve the environmental objectives of this directive;** the principle of recovery of **all** costs of water services, including environmental and resource costs associated with damage and negative impact on the aquatic environment should be taken into account **for various sectors of the economy, disaggregated into at least domestic, industrial and agricultural users,** in accordance with, ~~in particular,~~ the polluter pays principle; an economic analysis based on long-term forecasts of supply and demand for water in the river basin district will be necessary for this purpose.;
- (35) There is a need to prevent or reduce the impact of incidents in which water is accidentally polluted; measures with the aim of doing so should be included in the Programme of Measures;
- (36) With regard to pollution prevention and control, Community water policy should be based on a combined approach using control of pollution at source through the setting of emission limit values and of environmental quality standards;
- (37) For water quantity, overall principles should be laid down for control on abstraction, **water transfer** and impoundment in order to ensure the environmental sustainability of the affected water systems;
- (38) Common environmental quality standards and emission limit values for certain groups or families of pollutants should be laid down as minimum requirements in Community legislation; provisions for the adoption of such standards at Community level should be ensured;
- (39) There is a need to combat pollution through the discharge of various dangerous substances; the Council should, on a proposal from the Commission, agree on the substances to be considered for action as a priority and on specific measures to be

¹⁵ OJ L 186, 5.8.1995, p. 42.

¹⁶ OJ L 229, 30.8.1980, p. 11, and OJ L 330, 5.12.1998, p. 32, respectively.

taken against pollution of water by those substances, taking into account all significant sources and identifying the cost-effective and proportionate level and combination of controls;

- (40) Member States should adopt measures to eliminate pollution of surface water by the priority substances and progressively to reduce pollution by other substances which would otherwise prevent Member States from achieving the objectives for the bodies of surface water;

(40a) Community measures to protect human health from the adverse effects of ionising radiation from anthropogenic sources, in accordance with the Euratom Treaty, afford some protection for the environment; It is acknowledged that further measures are required to fully protect the environment, in accordance with the overall objectives of this Directive;

- (41) To ensure the participation of the general public including users of water in the establishment and updating of river basin management plans, it is necessary to provide proper information of planned measures and to report on progress with their implementation with a view to the involvement of the general public before final decisions on the necessary measures are adopted;

- (42) This Directive should provide mechanisms to address obstacles to progress in improving water status when these fall outside the scope of Community water legislation, with a view to developing appropriate Community strategies for overcoming them;

- (43) The Commission should present annually an updated plan for any initiatives which it intends to propose for the water sector;

- (44) Technical specifications should be laid down to ensure a coherent approach in the Community as part of this Directive; criteria for evaluation of water status are an important step forward; adaptation of certain technical elements to technical development and the standardisation of monitoring, sampling and analysis methods should be adopted by committee procedure; to promote a thorough understanding and consistent application of the criteria for characterisation of the river basin districts and evaluation of water status, the Commission may adopt guidelines on the application of these criteria;

(44a) Since the measures necessary for the implementation of this Directive are measures of general scope within the meaning of Article 2 of Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission, they shall be adopted by use of the regulatory procedure provided for in Article 5 of that Decision.

- (45) The implementation of this Directive is to achieve a level of protection of waters at least equivalent to that provided in certain earlier acts, which should therefore be repealed once the relevant provisions of this Directive have been fully implemented;

- (46) The provisions of this Directive take over the framework for control of pollution by dangerous substances established under Directive 76/464/EEC¹⁷; that Directive should therefore be repealed once the relevant provisions of this Directive have been fully implemented;
- (47) Full implementation and enforcement of existing environmental legislation for the protection of waters should be ensured; it is necessary to ensure the proper application of the provisions implementing this Directive throughout the Community by appropriate penalties provided for in Member States' legislation; such penalties should be effective, proportionate and dissuasive,

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Purpose

The purpose of this Directive is to establish a framework for the protection of inland surface water, transitional waters, coastal waters and groundwater which:

- a) prevents further deterioration and protects and enhances the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;
- b) promotes sustainable water use based on a long-term protection of available water resources;
- c) aims at enhanced protection and improvement of the aquatic environment through specific measures for the progressive reduction of emissions, discharges and losses of hazardous substances based on the prioritisation of those of greatest concern; and**
- ed)** contributes to mitigating the effects of floods and droughts

and thereby contributes to:

- the provision of the sufficient supply of good quality surface water and groundwater as needed for sustainable, balanced and equitable water use;
- the protection of territorial and marine waters;
- achieving the objectives of relevant international agreements including those which aim to prevent and eliminate pollution of the marine environment; and
- **the progressively reduction of emissions of moving towards the target of cessation of discharges, emissions and losses of hazardous substances by the year 2020, with the ultimate aim of achieving concentrations in the marine environment near background values for naturally occurring substances and close to zero for man-made synthetic substances.**

¹⁷ OJ L 129, 18.5.1976, p. 23; Directive as amended by Directive 91/692/EEC (OJ L 377, 31.12.1991, p. 48).

Article 2

Definitions

For the purposes of this Directive the following definitions shall apply:

- 1) "Surface water" means inland waters, except groundwater; transitional waters and coastal waters, except in respect of chemical status for which it shall also include territorial waters.
- 2) "Groundwater" means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
- 3) "Inland water" means all standing or flowing water on the surface of the land, and all groundwater on the landward side of the baseline from which the breadth of territorial waters is measured.
- 4) "River" means a body of inland water flowing for the most part on the surface of the land but which may flow underground for part of its course.
- 5) "Lake" means a body of standing inland surface water.
- 6) "Transitional waters" are bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows.
- 7) "Coastal water" means surface water on the landward side of a line every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured, extending where appropriate up to the outer limit of transitional waters.
- 8) "Artificial water body" means a body of surface water created by human activity.
- 9) "Heavily modified water body" means a body of surface water which as a result of physical alterations by human activity is substantially changed in character, as designated by the Member State in accordance with the provisions of Annex II.
- 10) "Body of surface water" means a discrete and significant element of surface water such as a lake, a reservoir, a stream, river or canal, part of a stream, river or canal, a transitional water or a stretch of coastal water.
- 11) "Aquifer" means a subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater.
- 12) "Body of groundwater" means a distinct volume of groundwater within an aquifer or aquifers.
- 13) "River basin" means the area of land from which all surface run-off flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta.

- 14) "Sub-basin" means the area of land from which all surface run-off flows through a series of streams, rivers and, possibly, lakes to a particular point in a water course (normally a lake or a river confluence).
- 15) "River Basin District" means the area of land and sea, made up of one or more neighbouring river basins together with their associated groundwaters and coastal waters, which is identified under Article 3(1) as the main unit for management of river basins.
- 16) "Competent Authority" means an authority or authorities identified under Article 3(2) or 3(3) .
- 17) "Surface water status" is the general expression of the status of a body of surface water, determined by the poorer of its ecological status and its chemical status.
- 18) "Good surface water status" means the status achieved by a surface water body when both its ecological status and its chemical status are at least "good".
- 19) "Groundwater status" is the general expression of the status of a body of groundwater, determined by the poorer of its quantitative status and its chemical status.
- 20) "Good groundwater status" means the status achieved by a groundwater body when both its quantitative status and its chemical status are at least "good".
- 21) "Ecological status" is an expression of the quality of the structure and functioning of aquatic ecosystems associated with surface waters, classified in accordance with Annex V.
- 22) "Good ecological status" is the status of a body of surface water, so classified in accordance with Annex V.
- 23) "Good ecological potential" is the status of a heavily modified or an artificial body of water, so classified in accordance with the relevant provisions of Annex V.
- 24) "Good surface water chemical status" means the chemical status achieved by a body of surface water in which concentrations of pollutants do not exceed the environmental quality standards established in Annex IX and under Article 16(5), and under other relevant Community legislation setting environmental quality standards at Community level.

“Good surface water chemical status” is also the chemical status required to meet the environmental objectives for surface waters established in Article 4(1)(e) and (f).

- 25) "Good groundwater chemical status" is the **chemical status of a body of groundwater, which meets all the conditions set out** defined in table 2.3.2 of Annex V.
- 26) "Quantitative status" is an expression of the degree to which a body of groundwater is affected by direct and indirect abstractions.
- 27) "Available groundwater resource" means the long term annual average rate of overall recharge of the body of groundwater less the long term annual rate of flow required to achieve the ecological quality objectives for associated surface waters specified under

Article 4, to avoid any significant diminution in the ecological status of such waters and to avoid any significant damage to associated terrestrial ecosystems.

28) "Good quantitative status" is the status defined in table 2.1.2 of Annex V.

28a) "Direct discharge to groundwater" means discharge of substances pursuant to Annex VIII into groundwater without passing through the soil or subsoil;

29) "Pollutant" means any substance liable to cause pollution, in particular those listed in Annex VIII.

30) "Pollution" means the direct or indirect introduction, as a result of human activity, of substances or heat into the air, water or land which may be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems, which result in damage to material property, or which impair or interfere with amenities and other legitimate uses of the environment.

31) "Environmental objectives" means the objectives set out in Article 4.

32) "Environmental quality standard" means the concentration of a particular pollutant or group of pollutants **or man-made radioactive substances** in water, sediment or biota, which should not be exceeded in order to protect human health and the environment.

(32a) "Combined approach" means the control of all discharges and emissions into surface waters according to the approach set out in Article 10.

33) "Water intended for human consumption" has the same meaning as under Directive 80/778/EEC, as amended by Directive 98/83/EC.

34) "Water services" means:

(a) **all services providing** abstraction, **impoundment**, distribution and **treatment** ~~consumption, or use in any economic activity of~~ surface water or groundwater;

(b) ~~emission of pollutants into surface water and waste water collection and~~, **waste water** treatment facilities which subsequently discharge **and waste water disposal** into surface water.

35) "Water uses" ~~means water services~~ **includes the main economic sectors such as domestic, agriculture and industry, amenities or other legitimate uses of the environment** together with any other activity identified under Article 5 and Annex **III** having a significant impact on the status of water.

This concept applies for the purposes of Article 1 and of the economic analysis carried out according to Article 5 and Annex III, point (b).

36) "Emission limit values" means the mass, expressed in terms of certain specific parameters, concentration and/or level of an emission, which may not be exceeded during any one or more periods of time. Emission limit values may also be laid down for certain groups, families or categories of substances, in particular for those identified under Article 16.

The emission limit values for substances shall normally apply at the point where the emissions leave the installation, dilution being disregarded when determining them. With regard to indirect releases into water, the effect of a waste water treatment plant may be taken into account when determining the emission limit values of the installations involved, provided that an equivalent level is guaranteed for protection of the environment as a whole and provided that this does not lead to higher levels of pollution in the environment.

- 37) "Emission controls" are controls requiring a specific emission limitation, for instance an emission limit value, or otherwise specifying limits or conditions on the effects, nature or other characteristics of an emission or operating conditions which affect emissions. Use of the term "emission control" in this Directive in respect of the provisions of any other Directive shall not be held as reinterpreting those provisions in any respect.

Article 3

Coordination of administrative arrangements within River Basin Districts

1. Member States shall identify the individual river basins lying within their national territory and, for the purposes of this Directive, shall assign them to individual River Basin Districts. Small river basins may be combined with larger river basins or joined with neighbouring small basins to form individual River Basin Districts where appropriate. Where groundwaters do not fully follow a particular river basin, they shall be identified and assigned to the nearest or most appropriate River Basin District. Coastal waters shall be identified and assigned to the nearest or most appropriate River Basin District or Districts.
2. Member States shall ensure the appropriate administrative arrangements, including the identification of the appropriate competent authority, for the application of the rules of this Directive within each River Basin District lying within their territory.
3. Member States shall ensure that a river basin covering the territory of more than one Member State is assigned to an international River Basin District. At the request of the Member States involved, the Commission shall act to facilitate the assigning to such international River Basin Districts.

Each Member State shall ensure the appropriate administrative arrangements, including the identification of the appropriate competent authority, for the application of the rules of this Directive within the portion of any international River Basin District lying within its territory.

4. Member States shall ensure that the requirements of this Directive for the achievement of the environmental objectives established under Article 4, and in particular all programmes of measures are coordinated for the whole of the River Basin District. For international River Basin Districts the Member States concerned shall together ensure this coordination. At the request of the Member States involved, the Commission shall act to facilitate the establishment of the programmes of measures.
5. Where a River Basin District extends beyond the territory of the Community, the Member State or Member States concerned shall endeavour to establish appropriate coordination with the relevant non-Member States, with the aim of achieving the

objectives of this Directive throughout the River Basin District. Member States shall ensure the application of the rules of this Directive within their territory.

6. Member States may identify an existing national or international body as competent authority for the purposes of this Directive.
7. Member States shall identify the competent authority by the date mentioned in Article 23.
8. Member States shall provide the Commission with a list of their competent authorities and of the competent authorities of all the international bodies in which they participate at the latest 6 months after the date mentioned in Article 23. For each competent authority the information set out in Annex I shall be provided.
9. Member States shall inform the Commission of any changes to the information provided according to paragraph 8 within three months of the change coming into effect.

Article 4

Environmental objectives

1. Member States shall **ensure that the programmes of measures specified in the River Basin Management Plans are made operational in order to:** ~~aim to achieve the objectives of:~~

for groundwater:

- (~~ba~~) preventing deterioration of **the chemical and quantitative status of groundwater, from the date of entry into force of this Directive, subject to the application of paragraphs 5 and 6** ~~status;~~
- (b) **protect, enhance and restore** ~~ing~~ **all** bodies of groundwater, and ensuring a balance between abstraction and recharge of groundwater; ~~and prevent the input of anthropogenic pollutants into groundwater, subject to the application of Article 11.3(g),~~ with the aim of achieving good groundwater status in all bodies of groundwater, in accordance with the provisions laid down in Annex V, at the latest 16 years after the date of entry into force of this Directive; and
- (c) ~~reversing~~ any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity **in order to progressively reduce pollution, thereby contributing to moving towards a state of insignificantly anthropogenically polluted groundwater in all bodies of groundwater,** subject to the application ~~of extensions determined in accordance with paragraph 3 and to the application of paragraphs 4, 5 and 6.~~ **Where environmental quality standards are set out in Community legislation, trend reversal shall take as its starting point a maximum of half of the level of those quality standards;**

for surface water:

- (d) prevent deterioration of the status of all surface waters, including artificial and heavily modified bodies of water, from the date of entry into force of this Directive, subject to the application of paragraphs 5 and 6;**
- ~~(ae)~~ ~~preventing deterioration of ecological status and pollution of surface waters and~~ **protect, enhance and restoring all** surface waters, with the aim of achieving good surface water status ~~or, for heavily modified and artificial bodies of water, good ecological potential and good surface water chemical status~~ at the latest 16 years after the date of entry into force of this Directive, in all bodies of surface water, in accordance with the provisions laid down in Annex V, subject to the application of **paragraph 1(f)**, extensions determined in accordance with paragraph 3 and to the application of paragraphs 4, 5 and 6 and without prejudice to the relevant international agreements referred to in Article 1 for the parties concerned;
- (f) protect and enhance the status of artificial and heavily modified bodies of water, with the aim of achieving good ecological potential and good surface water chemical status at the latest 16 years from the date of entry into force of this Directive, in all heavily modified and artificial bodies of water, in accordance with the provisions laid down in Annex V, subject to the application of extensions determined in accordance with paragraph 3 and to the application of paragraphs 5 and 6;**
- (g) progressively reduce emissions, discharges and losses of hazardous substances to all bodies of surface water in accordance with the provisions laid down in Articles 10, 11, 16 and Annex V and thereby contribute to moving towards the ultimate target of cessation of discharges, emissions and losses of hazardous substances.**

For protected areas:

- ~~(eh)~~ ~~achieving~~ compliance with any standards and objectives relating to Protected Areas, at the latest 16 years after the date of entry into force of this Directive, unless otherwise specified in the Community legislation under which the individual Protected Areas have been established,

through phased implementation of measures taken under Article 11 **in accordance with paragraph 3.**

2. Where more than one of the objectives under paragraph 1 relates to a given body of water, the most stringent shall apply.
3. The deadlines established under points ~~(b)~~, ~~(e)~~, and ~~(bf)~~ of paragraph 1 may be extended for the purposes of phased achievement of the objectives under paragraph 1 for bodies of water when ~~all~~ the following conditions are met:
 - (a) Member States determine that all necessary improvements in the status of bodies of water cannot reasonably be achieved within the timescales set out in that **paragraph for at least one of the following reasons:**
 - the scale of improvements required can, for reasons of technical feasibility, only be achieved in phases exceeding the timescale;**
 - completing the improvements within the timescale would be disproportionately expensive;**

- natural conditions do not allow rapid improvement in the status of the body of water; and;

(b) no further deterioration occurs in the status of the affected body of water; and

~~(bc)~~ the extension of the deadline, and the reasons for it, are specifically set out and explained in the River Basin Management Plan required under Article 13;

~~(ed)~~ extensions are limited to ~~periods which do not exceed the period covered by 32~~ further updates of the River Basin Management Plan except in cases where the natural conditions are such that the objectives cannot be achieved within this period. ~~Other than in these latter cases, a request for the third extension must be submitted to the Commission, which shall take a decision on such request within 3 months.~~

(e) a summary of the measures required under Article 11 which are envisaged as necessary to bring the bodies of water progressively to the required status by the extended deadline, **the reasons for any delay in making these measures operational**, and the expected timetable for their implementation are set out in the River Basin Management Plan. A review of the implementation of these measures and a summary of any additional measures shall be included in updates of the River Basin Management Plan.

4. Member States may aim to achieve less stringent environmental objectives than those required under paragraphs ~~4(a) and 1(b)~~ **and 1(e)** for specific bodies of **surface** water and **groundwater, where the body of water is so affected by past human activity or its natural condition is such that achievement of those objectives would be infeasible or disproportionately expensive**, when both **all** the following conditions are met:

~~(a) Member States determine that the body of water is so affected by human activity or its natural condition is such that improvements in status would be infeasible or unreasonably expensive; and~~

~~(ba)~~ **the environmental and social needs served by the existing characteristics of the water body cannot be achieved by other means, which are a better practical environmental option; and**

(b) Member States ensure,

-for surface water, the least possible changes to ecological status and chemical status given the unavoidable impacts due to the nature of the past human activity or past pollution;

- for groundwater, the least possible changes to groundwater level and chemical status given the unavoidable impacts due to the nature of the past human activity or past pollution; and

(c) no further deterioration occurs in the status of the affected body of water;

~~(ed)~~ the establishment of less stringent environmental objectives, and the reasons for it, are specifically mentioned in the River Basin Management Plan required under Article 13 and those objectives are reviewed every 6 years.

4a. new paragraph

Member States may designate a body of surface water as artificial or heavily modified, where

a) making improvements necessary for achieving good ecological status would have significant adverse effects on:

i) the wider environment; or

ii) navigation, including port facilities, or recreation; or

iii) activities for the purposes of which water is stored, such as drinking water supply, power generation or irrigation; or

iv) water regulation, flood protection or land drainage and other similar purposes; or

v) extraction of raw materials;

(b) the beneficial objectives served by the artificial or heavily modified characteristics of the water body cannot be achieved by other means, which are a better practical environmental option; and

(c) modifications are such that they allow for the best practicable approximation to ecological continuum, in particular with respect to migration of fauna and appropriate spawning and breeding grounds.

Such designation must be specifically mentioned in the River Basin Management Plans required under Article 13 and those designations are reviewed every 6 years.

5. ~~Temporary Deterioration~~ Temporary deterioration in the status of bodies of water shall not be in breach of the requirements of this Directive if this is the result of natural timelag in recovery or taking effect of measures, ~~unforeseen~~ unforeseeable or exceptional circumstances of natural cause or force majeure, in particular untypically extreme floods and untypically prolonged droughts, when all of the following conditions have been met:

(a) all practicable steps are taken ~~with the aim of~~ to preventing further deterioration in status and in order not to compromise the achievement of the objectives of this Directive in other bodies of water not affected by those circumstances;

(b) the conditions under which such ~~or exceptional~~ circumstances may be declared, including the adoption of the appropriate indicators, are stated in the River Basin Management Plan;

(c) the measures to be taken under such ~~exceptional~~ circumstances are included in the programme of measures and will not compromise the recovery of the quality of the body of water once the circumstances are over;

(d) the effects of ~~those unforeseen or exceptional~~ circumstances are reviewed annually and, subject to paragraph 3(a), ~~for situations other than floods and droughts,~~ any practicable measures are taken with the aim of restoring the body of water to its status prior to the effects of those circumstances as soon as reasonably practicable; and

- (e) a summary of the effects of the circumstances and of the measures taken or to be taken in accordance with paragraphs (a) and (d) are included in the next update of the River Basin Management Plan.
6. Failure to achieve good groundwater status, good ecological status or, where relevant, good ecological potential or to prevent deterioration in the status of a body of surface water or groundwater shall not be in breach of this Directive where this is the result of new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater ~~where Member States determine that there are reasons of overriding public interest for making these modifications or alterations for the purposes given in sections 1.6 (designation of artificial or heavily modified bodies) or 2.4 (review of the impact of changes in groundwater levels) of Annex II, and the following conditions are met:~~
- (a) the reasons for the modifications or alterations are of overriding public interest and/or, the benefits to the environment and to society of achieving the objectives set out in Article 4(1) are outweighed by the benefits of the modifications or alterations to human health, the maintenance of human safety or to sustainable development of the local areas in which the water body is located; and**
 - (b) the beneficial objectives served by the modifications or alterations of the water body cannot be achieved by other means, which are a better practical environmental option; and**
 - (c)** all practicable steps are taken to mitigate the adverse impact on the status of the body of water;
 - (d)** ~~the~~ **The** reasons for the modifications **or alterations must be** ~~are~~ specifically set out and explained in the River Basin Management Plan required under Article 13 and the objectives are reviewed every 6 years.
7. When applying paragraphs 3, 4, 5 and 6, a Member State shall ensure that the application does not **permanently exclude** or compromise the achievement of the objectives of this Directive in other bodies of water within the same River Basin District and is consistent with the implementation of other Community environmental legislation.

Article 5

Characteristics of the River Basin District, Review of the environmental impact of human activity and Economic Analysis of water use

1. Each Member State shall ensure that for each River Basin District or for the portion of an international River Basin District falling within its territory:
 - an analysis of its **geographical, geological, hydrological and ecological** characteristics,
 - a review of the impact of human activity on the status of surface waters and on groundwater, and
 - an economic analysis of water use

is undertaken according to the technical specifications set out in Annexes II and III and that it is completed at the latest 5 years after the date of entry into force of this Directive.

2. The analyses and reviews mentioned under paragraph 1 shall be reviewed, and if necessary updated at the latest 13 years after the date of entry into force of this Directive and every six years thereafter.

Article 6

Register of Protected Areas

1. Member States shall ensure the establishment of a register or registers of all areas lying within each River Basin District which have been designated as requiring special protection under specific Community legislation for the protection of their surface water and groundwater or for the conservation of habitats and species directly depending on water. They shall ensure that the register is completed at the latest 5 years after the date of entry into force of this Directive.
2. The register or registers shall include all bodies of water identified under Article 7(1) and all Protected Areas covered by Annex IV.
3. For each River Basin District, the register or registers of Protected Areas shall be kept under review and up to date.

Article 7

Waters used for the abstraction of drinking water

1. Member States shall identify, within each River Basin District:
 - all bodies of water used for the abstraction of water intended for human consumption providing more than 10m³ a day as an average or serving more than fifty persons, and
 - those bodies of water intended for such future use.

Member States shall monitor, in accordance with Annex V, those bodies of water which according to Annex V, provide more than 100m³ a day as an average.

2. For each body of water identified under paragraph 1, in addition to meeting the objectives of Article 4 in accordance with the requirements of this Directive, for surface water bodies including the quality standards established at Community level under Article 16, Member States shall ensure that under the water treatment regime applied, and in accordance with Community legislation, the resulting water will meet the requirements of Directive 80/778/EEC as amended by Directive 98/83/EC.
3. Member States shall ensure the necessary protection for the bodies of water identified with the aim of avoiding deterioration in their status and **the aim of moving towards a reduction of the purification and pre-treatment needed in the production of drinking water. Member States** may establish safeguard zones for those bodies of water.

Article 8

Monitoring of surface water status, groundwater status and protected areas

1. Member States shall ensure the establishment of programmes for the monitoring of water status in order to establish a coherent and comprehensive overview of water status within each River Basin District:
 - for surface waters such programmes shall cover monitoring of the **volume and level or rate of flow and the** ecological and chemical status;
 - for groundwaters such programmes shall cover monitoring of the chemical and quantitative status;
 - for protected areas the above programmes shall be supplemented by those specifications contained in Community legislation under which the individual protected areas have been established.
2. These programmes shall be operational at the latest 7 years after the date of entry into force of this Directive unless otherwise specified in the legislation concerned. Such monitoring shall be in accordance with the requirements of Annex V.

Article 9

Water charging and recovery of costs for water services

1. Member States shall **ensure by 2010:**

- a charging system for water services, which acts as an incentive for the sustainable use of water resources so as to achieve the environmental objectives of this Directive; ~~take account of the principle of recovery of the costs of water services, including environmental and resource costs,~~

- that the various sectors of the economy, a distinction being drawn at least between domestic industrial and agricultural users, contribute fairly to the recovery of all the costs of water services ~~having regard to the economic analysis conducted in accordance with Article 5 and Annex III and in accordance with the polluter pays principle; according to Annex III, and in accordance in particular with the polluter pays principle.~~

Member States may in doing so have regard to the **resulting** social, environmental and economic effects of the recovery as well as the geographic and climatic conditions of the region or regions affected.

2. Member States shall **establish timetables for the full application of the provisions of this Article. Details of such timetables shall be included in the River Basin Management Plans required under Article 13.**
3. **Member States shall** report in the River Basin Management Plans **on implementation of a charging system that offers incentives to achieve the environmental objectives of this Directive and on the contribution made by the various sectors of the economy to the recovery of all the costs of water services.** ~~the practical steps and measures taken to apply this principle~~

~~3. Nothing in this Article shall prevent the funding of particular preventative or remedial measures in order to achieve the objectives of this Directive.~~

Article 10

The combined approach for point and diffuse sources

1. Member States shall ensure that ~~relevant~~ **all** discharges **into surface waters** ~~subject to control as specified under paragraph 2~~ are controlled according to the **combined** approach set out in this Article.
2. Member States shall ensure the establishment and/or implementation of:
 - (a) the emission controls based on Best Available Techniques; or
 - (b) the relevant emission limit values; or
 - (c) in the case of diffuse impacts the controls including, as appropriate, Best Environmental Practices;

set out in:

- Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control¹⁸,
- Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment¹⁹,
- Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources²⁰,
- the Directives adopted pursuant to Article 16 of this Directive,
- the Directives listed in Annex IX,
- any other relevant Community legislation

at the latest 13 years after the date of entry into force of this Directive, unless otherwise specified in the legislation concerned.

3. Where a quality objective or quality standard, whether established pursuant to this Directive, in the Directives listed in Annex IX, or pursuant to any other Community legislation, requires stricter conditions than those which would result from the application of paragraph 2, more stringent emission controls shall be set accordingly.

4. Member States may exempt from these control discharges and emissions, which have no significant impact on water status.

¹⁸ OJ L 257, 10.10.1996, p. 26.

¹⁹ OJ L 135, 30.5.1991, p. 40. Directive as amended by Commission Directive 98/15/EC (OJ L 67, 7.3.1998, p. 29).

²⁰ OJ L 375, 31.12.1991, p. 1.

Article 11

Programme of measures

1. Each Member State shall ensure the establishment for each River Basin District, or for the part of an International River Basin District within its territory, of a programme of measures, taking account of the results of the analyses required under Article 5, ~~with the aim of~~ **designed to moving** progressively towards achieving the objectives established under Article 4. Where appropriate, a Member State may adopt measures applicable to all River Basin Districts and/or the portions of International River Basin Districts falling within its territory.
2. Each programme of measures shall include the "basic" measures specified in paragraph 3 and, where necessary, "supplementary" measures.
3. "Basic measures" are the minimum requirements to be complied with and shall consist of:
 - (a) those measures required to implement Community legislation for the protection of water, including measures required under the legislation specified in Article 10 and in part A of Annex VI;
 - (b) measures deemed appropriate for the purposes of Article 9;
 - (c) measures to meet the requirements of Article 7, **including measures with regard to provisioning a basic supply of drinking water for domestic purposes;**
 - (d) controls over the abstraction of fresh surface water and groundwater, and impoundment of fresh surface water, including a register or registers of water abstractions and a requirement of prior authorisation for abstraction, **transfer** and impoundment. These controls shall be periodically reviewed and, where necessary, updated. Member States can exempt from these controls, abstractions, **transfers** or impoundments which have no significant impact on water status;
 - (e) for point source discharges liable to cause pollution, a requirement for prior authorisation, or registration based on general binding rules, laying down emission controls for the pollutants concerned **in accordance with Article 10.** These controls shall be periodically reviewed and, where necessary, updated;
 - (f) measures to ensure, ~~where practicable~~, the control and, ~~where necessary~~, prevention of any other significant adverse impacts on the status of water identified under Article 5 and Annex II which would prevent the achievement of the objectives under Article 4.

For surface water, in particular measures:

- to progressively reduce emissions, discharges and losses of hazardous substances;

- to achieve good ecological potential for bodies of water designated as artificial or heavily modified;

- to improve water status to allow moving towards the aim of a reduction of the purification and pre-treatment needed in the production of drinking water;

- to ensure that the hydro-morphological condition of the water body is such as to ensure the achievement of the objectives set out in Article 4;

For groundwater, in particular measures:

- to prevent the input of anthropogenic substances, including, as appropriate, the use of best environmental practices, and

- to ensure a balance between abstraction and recharge of groundwater.

by, for example, **Controls may take the form of** a requirement for prior regulation, such as a prohibition on the entry of pollutants into water, prior authorisation or registration based on general binding rules where such a requirement is not otherwise provided for under Community legislation. These controls shall be periodically reviewed and, where necessary, updated;

- (g) a prohibition of direct discharges of pollutants into groundwater subject to the following provisions.

Member States may authorise re-injection into the same aquifer of water used for geothermal purposes.

They may also authorise, specifying the conditions for:

- injection of water containing substances resulting from the operations for exploration and extraction of hydrocarbons or mining activities, and injection of water for technical reasons, into geological formations from which hydrocarbons or other substances have been extracted or into geological formations which for natural reasons are permanently unsuitable for other purposes. Such injections shall not contain substances other than those resulting from the above operations,
- re-injection of pumped groundwater from mines and quarries or associated with the construction or maintenance of civil engineering works,
- injection of natural gas or liquefied petroleum gas (LPG) for storage purposes into geological formations which for natural reasons are permanently unsuitable for other purposes,
- injection of natural gas or liquefied petroleum gas (LPG) for storage purposes into other geological formations where there is an overriding need for security of gas supply, and where the injection is such as to prevent any present or future danger of deterioration in the quality of any receiving groundwater,
- construction, civil engineering and building works and similar activities on or in the ground which come into contact with groundwater. For these purposes, Member States may determine that such activities are to be treated as having been authorised provided that they are conducted in accordance with general binding rules developed by the Member State in respect of such activities,
- discharges of small quantities of substances for scientific purposes for characterisation, protection or remediation of water bodies limited to the amount strictly

provided such discharges do not compromise the achievement of the environmental objectives established for that body of groundwater.

- (h)** ~~Member States may authorise~~ **Controls for** artificial recharge ~~or augmentation~~ of groundwater bodies. The water used may be derived from any surface water or groundwater, provided that the use of the source does not compromise the achievement of the environmental objectives established for the source or the recharged ~~or augmented~~ body of groundwater;
- (hi)** in accordance with action taken pursuant to Article 16, measures to eliminate pollution of surface waters by those substances specified in the priority list agreed pursuant to Article 16(2) and to progressively reduce pollution by other substances which would otherwise prevent Member States from achieving the objectives for the bodies of surface waters as set out in Article 4;
- (ij)** any measures required to prevent significant leakage of pollutants from technical installations, and to prevent and/or to reduce the impact of accidental pollution incidents for example as a result of floods, including through systems to detect or give warning of such events.
4. "Supplementary" measures are those measures designed and implemented in addition to the basic measures, with the aim of achieving the objectives established pursuant to Article 4. Part B of Annex VI contains a non-exclusive list of such measures.

Member States may also adopt further supplementary measures in order to provide for additional protection or improvement of the waters covered by this Directive, including in implementation of the relevant international agreements referred to in Article 1.

5. Where monitoring or other data indicate that the objectives set under Article 4 for the body of water are unlikely to be achieved, the Member State shall ensure that:
- the causes of the possible failure are investigated, **including appropriate review of all relevant permits and authorisations;** and
 - **the monitoring programmes are reviewed and appropriately adjusted;**
 - **the established environmental quality standards of the water body are reviewed;**
 - such additional measures as may be practicable **necessary** in order to achieve those objectives are established, **including environmental quality standards.**

Where those causes are ~~unforeseen~~**unforeseeable** or due to exceptional circumstances, including floods or droughts, **subject to Article 4(3)(a), 3 indent,** the Member State may determine that additional measures are not practicable.

6. In implementing measures pursuant to paragraphs 3(e) and 3(f), Member States shall take all appropriate steps not to increase pollution of marine waters **and contribute to moving towards the target of cessation of discharges, emissions and losses of hazardous substances by the year 2020, with the ultimate aim of achieving concentrations in the marine environment near background values for naturally occurring substances and close to zero for man-made synthetic substances.** Without prejudice to existing legislation, the application of measures taken pursuant to paragraph 3 may on no account lead, either directly or indirectly to increased pollution

of surface waters. This requirement shall not apply where it would result in increased pollution of the environment as a whole.

7. The programmes of measures shall be established at the latest 10 years after the date of entry into force of this Directive and all the measures shall be made operational at the latest 13 years after that date.
8. The programmes of measures shall be reviewed, and if necessary updated at the latest 16 years after the date of entry into force of this Directive and every six years thereafter. Any new or revised measures established under an updated programme shall be made operational within three years of their establishment.

Article 12

Issues which can not be dealt with at Member State level

1. Where a Member State identifies an issue which has an impact on the management of its water but can not be resolved by that Member State, it may report the issue to the Commission and any other Member State concerned and may make recommendations for the resolution of it.
2. The Commission shall respond to any report or recommendations from Member States within a period of six months.

Article 13

River Basin Management Plans

1. Member States shall ensure that a River Basin Management Plan is produced for each River Basin District lying entirely within their territory **in order to achieve the objectives laid down in Article 4.**
2. In the case of an international River Basin District falling entirely within the Community, Member States shall ensure coordination with the aim of producing a single International River Basin Management Plan **in order to achieve the objectives laid down in Article 4.** Where such an international River Basin Management Plan is not produced, Member States shall produce River Basin Management Plans covering at least those parts of the international River Basin District falling within their territory to achieve the objectives of this Directive.
3. In the case of an international River Basin District extending beyond the boundaries of the Community, Member States shall endeavour to produce a single River Basin Management Plan, and, where this is not possible, the plan shall at least cover the portion of the international River Basin District lying within the territory of the Member State concerned.
4. The River Basin Management Plan shall include the information detailed in Annex VII.
5. River Basin Management Plans may be supplemented by the production of more detailed programmes and management plans for sub-basin, sector, issue, or water type, to deal with particular aspects of water management. Implementation of these measures

shall not exempt Member States from any of their obligations under the rest of this Directive.

6. River Basin Management Plans shall be published at the latest 10 years after the date of entry into force of this Directive.
7. River Basin Management Plans shall be reviewed and updated at the latest 16 years after the date of entry into force of this Directive and every six years thereafter.

Article 14

Public information and consultation

1. Member States shall encourage the active involvement of all interested parties in the implementation of this Directive, in particular in the production, review and updating of the River Basin Management Plans. Member States shall ensure that, for each River Basin District, they publish and make available for comments to the public, including users:
 - (a) a timetable and work programme for the production of the plan, including a statement of the consultation measures to be taken, at least three years before the beginning of the period to which the plan refers;
 - (b) an interim overview of the significant water management issues identified in the river basin, at least two years before the beginning of the period to which the plan refers;
 - (c) draft copies of the River Basin Management Plan, at least one year before the beginning of the period to which the Plan refers.

Upon request access shall be given to background documents and information used for the development of the draft River Basin Management Plan.

2. Member States shall allow at least six months to comment in writing on those documents in order to allow active involvement and consultation.
3. Paragraphs 1 and 2 shall apply equally to updated River Basin Management Plans.

Article 15

Reporting

1. Member States shall send copies of the River Basin Management Plans and all subsequent updates to the Commission and to any other Member State concerned within three months of their publication:
 - (a) for River Basin Districts falling entirely within the territory of a Member State, all River Management Plans covering that national territory and published pursuant to Article 13;
 - (b) for international River Basin Districts, at least the part of the River Basin Management Plans covering the territory of the Member State.
2. Member States shall submit summary reports of:

- the analyses required under Article 5; and
- the monitoring programmes designed under Article 8

undertaken for the purposes of the first River Basin Management Plan within 3 months of their completion.

3. Member States shall, within three years of the publication of each River Basin Management Plan or update under Article 13, submit an interim report describing progress in the implementation of the planned programme of measures.

Article 16

Strategies against pollution of water

1. The **European Parliament and the Council** shall adopt specific measures against pollution of water by individual pollutants or groups of pollutants presenting an unacceptable risk to or via the aquatic environment, including such risks to waters used for the abstraction of drinking water. **Such measures shall be aimed at preventing the pollution of waters by progressively reducing emissions, discharges and losses of hazardous substances based on the prioritisation of those of greatest concern following the procedure set out in paragraph 2 and thereby contributing to moving towards the target of their cessation.** Such measures shall be adopted acting on the proposals presented by the Commission in accordance with the procedures laid down in the Treaty.
2. The Commission shall submit a proposal setting out a ~~first-priority~~ list of **priority** substances ~~by 31 December 1999~~. Substances shall be prioritised for action on the basis of risk to or via the aquatic environment, identified by:
 - (a) risk assessment carried out under Council Regulation (EEC) No 793/93²¹, Council Directive 91/414/EEC²², and Directive 98/8/EC of the European Parliament and of the Council²³; or
 - (b) targeted risk-based assessment (following the methodology of Regulation (EEC) No 793/93) focusing solely on aquatic ecotoxicity and on human toxicity via the aquatic environment;

or, where this proves impracticable within the timescale;

- (c) a simplified risk-based assessment procedure based on scientific principles taking particular account of:
 - (i) evidence regarding the intrinsic hazard of the substance concerned, and in particular its aquatic ecotoxicity and human toxicity via aquatic exposure routes; and
 - (ii) evidence from monitoring of widespread environmental contamination; and

²¹ OJ L 84, 5.4.1993, p. 1.

²² OJ L 230, 19.8.1991, p. 1. Directive as last amended by Directive 98/47/EC (OJ L 191, 7.7.1998, p. 50).

²³ OJ L 123, 24.4.1998, p. 1.

- (iii) other proven factors which may indicate the possibility of widespread environmental contamination, such as production or use volume of the substance concerned, and use patterns.

The Commission shall review the adopted priority list on a triennial basis ~~at the latest 6 years after the date of entry into force of this Directive and at least every six years thereafter,~~ and come forward with proposals as appropriate.

3. In preparing its proposal, the Commission shall take account of recommendations from the Scientific Committee on Toxicity, Ecotoxicity and the Environment, Member States, the European Parliament, the European Environment Agency, Community research programmes, international organisations to which the Community is a party, European business organisations including those representing small and medium-sized enterprises, European environmental organisations, and of other relevant information which comes to its attention.
4. For the substances on the priority list, the Commission shall submit proposals for the progressive reduction of ~~controls on the principal sources of the emissions, discharges and losses~~ concerned one year after each triennial list, or more frequently as appropriate. The Commission's proposal shall have regard to the aim of moving towards the target of cessation of emissions, discharges and losses of hazardous substances. In doing so it shall take account of both point and diffuse sources and shall identify the most appropriate cost-effective and proportionate level and combination of product and process controls and take account of uniform emission standards ~~limit values~~ for process controls. Where appropriate, action at Community level for process controls may be established on a sector-by-sector basis. Where product controls include a review of the relevant authorisations issued under Directive 91/414/EEC and Directive 98/8/EC, such reviews shall be carried out in accordance with the provisions of those Directives. Each proposal for controls shall specify arrangements for their review, updating and for assessment of their effectiveness.
5. The Commission shall submit proposals for quality standards applicable to the concentrations of the priority substances in surface water, sediments or biota.
6. The Commission shall submit proposals, in accordance with paragraphs 4 and 5, and at least for emission controls for point sources and environmental quality standards within 1 year of the inclusion of the substance concerned on the priority list. For substances included in the first priority list, in the absence of agreement at Community level 7 years after the date of entry into force of this Directive, Member States shall establish environmental quality standards for these substances for all surface waters affected by discharges of those substances and controls on the principal sources of such discharges, based inter alia on consideration of all technical reduction options. For substances subsequently included in the priority list, in the absence of agreement at Community level, Member States shall take such action 5 years after the date of inclusion in the list.
7. The Commission may prepare strategies against pollution of water by any other pollutants or groups of pollutants, including any pollution which occurs as a result of accidents.
8. In preparing its proposals under paragraphs 4 and 5, the Commission shall also review all the Directives listed in Annex IX. It shall propose, by the deadline in paragraph 6, a revision of the controls in Annex IX for all those substances which are included in the

priority list and shall propose the appropriate measures including the possible repeal of the controls under Annex IX for all other substances.

All the controls in Annex IX for which revisions are proposed shall be repealed by the date of entry into force of those revisions.

9. The priority list of substances proposed by the Commission shall, on its adoption by the European Parliament and the Council, become Annex X to this Directive.

Article 17

Commission Report

1. The Commission shall publish a report on the implementation of this Directive at the latest 12 years after the date of entry into force of this Directive and every six years thereafter, and shall submit it to the European Parliament and to the Council.
2. The Report shall include the following:
 - (a) a review of progress in the implementation of the Directive;
 - (b) a review of the status of surface water and groundwater in the Community undertaken in coordination with the European Environment Agency;
 - (c) a survey of the River Basin Management Plans submitted in accordance with Article 15, including suggestions for the improvement of future plans;
 - (d) a summary of the response to each of the reports or recommendations to the Commission made by Member States pursuant to Article 12;
 - (e) a summary of any proposals, control measures and strategies developed under Article 16;
 - (f) a summary of the responses to comments made by the European Parliament and the Council on previous implementation reports.
3. The Commission shall also publish a report on progress in implementation based on the summary reports that Member States submit under Article 15(2), and submit it to the European Parliament and the Member States, at the latest 2 years after the dates referred to in Articles 5 and 8.
4. The Commission shall, within three years of the publication of each report under paragraph 1, publish an interim report describing progress in implementation on the basis of the interim reports of the Member States as mentioned in Article 15(3). This shall be submitted to the European Parliament and to the Council.
5. The Commission shall convene when appropriate in line with the reporting cycle a conference of interested parties on Community Water Policy from each of the Member States, to comment on the Commission's implementation reports and to share experiences.

Participants should include representatives from the competent authorities, the European Parliament, NGOs, the social and economic partners, consumer bodies, academics and other experts.

Article 18

Plans for future Community measures

1. Once a year, the Commission shall for information purposes present to the Committee referred to in Article 20 an indicative plan of measures having an impact on water legislation which it intends to propose in the near future, including any emerging from the proposals, control measures and strategies developed under Article 16. The Commission shall make the first such presentation at the latest 2 years after the date of entry into force of this Directive.
2. The Commission will review this Directive at the latest 19 years after the date of its entry into force and will propose any necessary amendments to it.

Article 19

Technical adaptations to the Directive

1. Annexes I, III and section 1.3.6 of Annex V may be adapted to scientific and technical progress in accordance with the procedures laid down in Article 20, taking account of the periods for review and updating of the River Basin Management Plans as referred to in Article 13. Where necessary, the Commission may adopt guidelines on the implementation of Annexes II and V in accordance with the procedures laid down in Article 20.
2. For the purpose of transmission and processing of data, including statistical and cartographic data, technical formats for the purpose of paragraph 1 may be adopted in accordance with the procedures laid down in Article 20.

Article 20

Regulatory committee

1. The Commission shall be assisted by a ~~regulatory~~ committee composed of the representatives of the Member States and chaired by the representative of the Commission.
2. **Where reference is made to this paragraph, the regulatory procedure laid down in Article 5 of Decision 1999/468/EC shall apply, in compliance with Article 7(3) and Article 8 thereof.** ~~The representative of the Commission shall submit to the committee a draft of the measures to be taken. The committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter. The opinion shall be delivered by the majority laid down in Article 205(2) of the Treaty in the case of decisions which the Council is required to adopt on a proposal from the Commission. The votes of the representatives of the Member States within the~~

~~committee shall be weighted in the manner set out in that Article. The chairman shall not vote.~~

3. The period provided for in Article 5(6) of Decision 1999/468/EC shall be 3 months.

~~If the European Parliament indicates, in a Resolution setting out the grounds on which it is based, that draft implementing measures, the adoption of which is contemplated and which have been submitted to the committee pursuant to this Directive would exceed the implementing powers provided for in this Directive, the Commission shall re-examine the draft measures. Taking the Resolution into account and within the time-limits of the procedure under way, the Commission may submit new draft measures to the committee, continue with the procedure or submit a proposal to the European Parliament and the Council on the basis of the Treaty.~~

~~The Commission shall inform the European Parliament and the committee of the action which it intends to take on the Resolution of the European Parliament and of its reasons for doing so.~~

~~4. The Commission shall, without prejudice to paragraph 3, adopt the measures envisaged if they are in accordance with the opinion of the committee.~~

~~5. If the measures envisaged are not in accordance with the opinion of the committee, or if no opinion is delivered, the Commission shall, without delay, submit to the Council a proposal relating to the measures to be taken and shall inform the European Parliament.~~

~~6. If the European Parliament considers that a proposal submitted by the Commission pursuant to this Directive exceeds the implementing powers provided for in this Directive, it shall inform the Council of its position.~~

~~7. The Council may, where appropriate, in view of any such position, act by qualified majority on the proposal, within a period of three months from the date of referral to the Council.~~

~~If within that period the Council has indicated by qualified majority that it opposes the proposal, the Commission shall re-examine it. It may submit an amended proposal to the Council, re-submit its proposal or present a legislative proposal on the basis of the Treaty.~~

~~If on the expiry of that period the Council has neither adopted the proposed implementing act nor indicated its opposition to the proposal for implementing measures, the proposed implementing act shall be adopted by the Commission."~~

Article 21

Repeals and transitional provisions

1. The following shall be repealed with effect from 7 years after the date of entry into force of this Directive:

- Directive 75/440/EEC of 16 June 1975 concerning the quality required of surface water intended for the abstraction of drinking water in the Member States ²⁴,

²⁴ OJ L 194, 25.7.1975, p. 26. Directive as last amended by Directive 91/692/EEC (OJ L 377, 31.12.1991, p. 48).

- Council Decision 77/795/EEC of 12 December 1977 establishing a common procedure for the exchange of information on the quality of surface freshwater in the Community²⁵,
 - Council Directive 79/869/EEC of 9 October 1979 concerning the methods of measurement and frequencies of sampling and analysis of surface water intended for the abstraction of drinking waters in the Member States²⁶.
2. The following shall be repealed with effect from 13 years after the date of entry into force of this Directive:
- Council Directive 78/659/EEC of 18 July 1978 on the quality of freshwaters needing protection or improvement in order to support fish life²⁷,
 - Council Directive 79/923/EEC of 30 October 1979 on the quality required of shellfish waters²⁸,
 - Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances²⁹,
 - Directive 76/464/EEC, with the exception of Article 6, which shall be repealed with effect from the entry into force of this Directive.
3. The following transitional provisions shall apply for Directive 76/464/EEC:
- (a) the priority list adopted under Article 16 of this Directive shall replace the list of substances prioritised in the Commission Communication to the Council of 22 June 1982;
 - (b) for the purposes of Article 7 of Directive 76/464/EEC, Member States may apply the principles for the identification of pollution problems and the substances causing them, the establishment of quality standards, and the adoption of measures, laid down in this Directive.
4. The environmental objectives in Article 4 and environmental quality standards established in Annex IX and pursuant to Article 16(5), and by Member States under Annex V for substances not on the priority list and under Article 16(6) in respect of priority substances for which Community standards have not been set, shall be regarded as environmental quality standards for the purposes of point 7 of Article 2 and Article 10 of Directive 96/61/EC.
5. Where a substance on the priority list adopted under Article 16 is not included in Annex VIII to this Directive or in Annex III to Directive 96/61/EC, it shall be added thereto.

²⁵ OJ L 334, 24.12.1977, p. 29. Decision as last amended by the 1994 Act of Accession.

²⁶ OJ L 271, 29.10.1979, p. 44. Directive as last amended by the 1994 Act of Accession.

²⁷ OJ L 222, 14. 8.1978, p. 1. Directive as last amended by the 1994 Act of Accession.

²⁸ OJ L 281, 10.11.1979, p. 47. Directive as amended by Directive 91/692/EEC (OJ L 377, 31.12.1991, p. 48).

²⁹ OJ L 20, 26.1.1980, p. 43.

6. For bodies of surface water, environmental objectives established under the first River Basin Management Plan required by this Directive shall, as a minimum, give effect to quality standards at least as stringent as those required to implement Directive 76/464/EEC.

Article 22

Penalties

Member States shall determine penalties applicable to breaches of the national provisions adopted pursuant to this Directive. The penalties thus provided for shall be effective, proportionate and dissuasive.

Article 23

Implementation

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive at the latest (.....)*. They shall forthwith inform the Commission thereof.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such a reference on the occasion of their official publication. The methods of making such a reference shall be laid down by the Member States.

2. Member States shall communicate to the Commission the texts of the main provisions of national law which they adopt in the field governed by this Directive. The Commission shall inform the other Member States thereof.

Article 24

Entry into force

This Directive shall enter into force on the day of its publication in the Official Journal of the European Communities.

* Three years after the date of entry into force of this Directive.

Article 25

Addressees

This Directive is addressed to the Member States.

Done at Brussels,

For the European Parliament

The President

For the Council

The President

INFORMATION REQUIRED FOR THE LIST OF COMPETENT AUTHORITIES

As required under Article 3(8), the Member States shall provide the following information on all competent authorities within each of its River Basin Districts as well as the portion of any international River Basin District lying within their territory.

- (i) Name and address of the competent authority –the official name and address of the authority identified under Article 3(2).
- (ii) Geographical coverage of the River Basin District – the names of the main rivers within the River Basin District together with a precise description of the boundaries of the River Basin District. This information should as far as possible be available for introduction into a Geographic Information System (GIS) and/or the Geographic Information System of the Commission (GISCO).
- (iii) Legal status of competent authority – a description of the legal status of the competent authority and, where relevant, a summary or copy of its statute, founding treaty or equivalent legal document.
- (iv) Responsibilities – a description of the legal and administrative responsibilities of each competent authority and of its role within each River Basin District.
- (v) Membership – where the competent authority acts as a coordinating body for other competent authorities, a list is required of these bodies together with a summary of the institutional relationships established in order to ensure coordination.
- (vi) International relationships – where a River Basin District covers the territory of more than one Member State or includes the territory of non-Member States, a summary is required of the institutional relationships established in order to ensure coordination.

1. SURFACE WATERS

1.1 Characterisation of surface water body types

Member States shall identify the location and boundaries of bodies of surface water and shall carry out an initial characterisation of all such bodies in accordance with the following methodology. Member States may group surface water bodies together for the purposes of this initial characterisation.

- (i) The surface water bodies within the river basin district shall be identified as falling within either one of the following surface water categories – rivers, lakes, transitional waters or coastal waters – or as artificial surface water bodies or heavily modified surface water bodies;
- (ii) For each surface water category, the relevant surface water bodies within the river basin district shall be differentiated according to type. These types are those defined using either "system A" or "system B" identified in section 1.2;
- (iii) If system A is used, the surface water bodies within the river basin district shall first be differentiated by the relevant ecoregions in accordance with the geographical areas identified in section 1.2 and shown on the relevant map in Annex XI. The water bodies within each ecoregion shall then be differentiated by surface water body types according to the descriptors set out in the tables for system A;
- (iv) If System B is used, Member States must achieve at least the same degree of differentiation as would be achieved using System A. Accordingly, the surface water bodies within the river basin district shall be differentiated into types using the values for the obligatory descriptors and such optional descriptors, or combinations of descriptors, as are required to ensure that type specific biological reference conditions can be reliably derived;
- (v) For artificial and heavily modified surface water bodies the differentiation shall be undertaken in accordance with the descriptors for whichever of the surface water categories most closely resembles the heavily modified or artificial water body concerned;
- (vi) Member States shall submit to the Commission a map or maps (in a GIS format) of the geographical location of the types consistent with the degree of differentiation required under system A.

1.2 Ecoregions and Surface Water Body Types

1.2.1 Rivers

System A

Fixed Typology	Descriptors
Ecoregion	Ecoregions shown on Map A in Annex XI
Type	<p>Altitude typology</p> <p>high > 800 m</p> <p>mid-altitude 200 to 800 m</p> <p>lowland < 200 m</p> <p>Size typology based on catchment area</p> <p>small 10 - 100 km²</p> <p>medium > 100 to 1 000 km²</p> <p>large > 1 000 to 10 000 km²</p> <p>very large >10 000 km²</p> <p>Geology</p> <p>Calcareous</p> <p>siliceous</p> <p>organic</p>

System B

Alternative Characterisation	Physical and chemical factors that determine the characteristics of the river or part of the river and hence the biological population structure and composition
Obligatory factors	Altitude latitude longitude geology size
Optional Factors	distance from river source energy of flow (function of flow and slope) mean water width mean water depth mean water slope form and shape of main river bed river discharge (flow) category valley shape transport of solids acid neutralising capacity mean substratum composition chloride air temperature range mean air temperature precipitation

1.2.2 Lakes

System A

Fixed Typology	Descriptors
Ecoregion	Ecoregions shown on Map A in Annex XI
Type	<p>Altitude typology</p> <p>high > 800 m</p> <p>mid-altitude 200 to 800 m</p> <p>lowland < 200 m</p> <p>Depth typology based on mean depth</p> <p>< 3 m,</p> <p>3 m to 15 m,</p> <p>> 15 m</p> <p>Size typology based on surface area</p> <p>0,5 to 1 km²</p> <p>1 to 10 km²</p> <p>10 to 100 km²</p> <p>> 100 km²</p> <p>Geology</p> <p>Calcareous</p> <p>siliceous</p> <p>organic</p>

System B

Alternative Characterisation	Physical and chemical factors that determine the characteristics of the lake and hence the biological population structure and composition
Obligatory factors	Altitude latitude longitude depth geology size
Optional Factors	mean water depth lake shape residence time mean air temperature air temperature range mixing characteristics (e.g. monomictic, dimictic, polymictic) acid neutralising capacity background nutrient status mean substratum composition water level fluctuation

1.2.3 Transitional Waters

System A

Fixed Typology	Descriptors
Ecoregion	<p>The following as identified on Map B in Annex XI:</p> <p>Baltic sea</p> <p>Barents Sea</p> <p>Norwegian Sea</p> <p>North Sea</p> <p>North Atlantic Ocean</p> <p>Mediterranean Sea</p>
Type	<p>Based on mean annual salinity</p> <p>< 0,5 ‰ Freshwater</p> <p>0,5 to < 5 ‰ Oligohaline</p> <p>5 to < 18 ‰ Mesohaline</p> <p>18 to < 30 ‰ Polyhaline</p> <p>30 to < 40 ‰ Euhaline</p> <p>Based on mean tidal range</p> <p>< 2 m microtidal</p> <p>2 to 4 m mesotidal</p> <p>> 4 m macrotidal</p>

System B

Alternative Characterisation	Physical and chemical factors that determine the characteristics of the transitional water and hence the biological population structure and composition
Obligatory factors	latitude longitude tidal range salinity
Optional Factors	depth current velocity wave exposure residence time mean water temperature mixing characteristics turbidity mean substratum composition shape water temperature range

1.2.4 Coastal Waters

System A

Fixed Typology	Descriptors
Ecoregion	<p>The following as identified on Map B in Annex XI:</p> <p>Baltic sea</p> <p>Barents Sea</p> <p>Norwegian Sea</p> <p>North Sea</p> <p>North Atlantic Ocean</p> <p>Mediterranean Sea</p>
Type	<p>Based on mean annual salinity</p> <p>< 0,5 ‰ Freshwater</p> <p>0,5 to < 5 ‰ Oligohaline</p> <p>5 to < 18 ‰ Mesohaline</p> <p>18 to < 30 ‰ Polyhaline</p> <p>30 to < 40 ‰ Euhaline</p> <p>Based on mean depth</p> <p>shallow waters <30 m,</p> <p>intermediate (30 to 200 m),</p> <p>deep >200 m</p>

System B

Alternative Characterisation	Physical and chemical factors that determine the characteristics of the coastal water and hence the biological community structure and composition
Obligatory factors	latitude longitude tidal range salinity
Optional Factors	current velocity wave exposure mean water temperature mixing characteristics turbidity retention time (of enclosed bays) mean substratum composition water temperature range

1.3 Establishment of type-specific reference conditions for surface water body types

- (i) For each surface water body type characterised in accordance with section 1.1, type-specific hydromorphological and physicochemical conditions shall be established representing the values of the hydromorphological and physicochemical quality elements specified in section 1.1 in Annex V for that surface water body type at high ecological status as defined in the relevant table in section 1.2 in Annex V. Type-specific biological reference conditions shall be established, representing the values of the biological quality elements specified in section 1.1 in Annex V for that surface water body type at high ecological status as defined in the relevant table in section 1.2 in Annex V.
- (ii) In applying the procedures set out in this section to heavily modified or artificial surface water bodies references to high ecological status shall be construed as references to maximum ecological potential as defined in Table 1.2.5 of Annex V. The values for maximum ecological potential for a water body shall be reviewed every 6 years
- (iii) Type-specific conditions for the purposes of i) and ii) and type-specific biological reference conditions may be either spatially based or based on modelling, or may be derived using a combination of these methods. Where it is not possible to use these methods, Member States may use expert judgement to establish such conditions. In defining high ecological status in respect of concentrations of specific synthetic pollutants, the detection limits are those which can be achieved in accordance with the available techniques at the time when the type-specific conditions are to be established.
- (iv) For spatially based type-specific biological reference conditions, Member States shall develop a reference network for each surface water body type. The network shall contain a sufficient number of sites of high status to provide a sufficient level of confidence about the values for the reference conditions, given the variability in the values of the quality elements corresponding to high ecological status for that surface water body type and the modelling techniques which are to be applied under paragraph V.
- (v) Type-specific biological reference conditions based on modelling may be derived using either predictive models or hindcasting methods. The methods shall use historical, palaeological and other available data and shall provide a sufficient level of confidence about the values for the reference conditions to ensure that the conditions so derived are consistent and valid for each surface water body type.
- (vi) Where it is not possible to establish reliable type-specific reference conditions for a quality element in a surface water body type due to high degrees of natural variability in that element, not just as a result of seasonal variations, then that element may be excluded from the assessment of ecological status for that surface water type. In such circumstances Member States shall state the reasons for this exclusion in the River Basin Management Plan.

1.4 Identification of Pressures

Member States shall collect and maintain information on the type and magnitude of the significant anthropogenic pressures to which the surface water bodies in each River Basin District are liable to be subject, in particular:

estimation and identification of significant point source pollution, in particular by substances listed in Annex VIII, from urban, industrial, agricultural and other installations and activities, based inter alia on information gathered under

(i) Article 15 and 17 of Directive 91/271/EEC,

(ii) Articles 9 and 15 of Directive 96/61/EC³⁰,

and for the purposes of the initial River Basin Management Plan:

(iii) Article 11 of Directive 76/464/EEC, and

(iv) Directives 75/440/EC, 76/160/EEC³¹, 78/659/EEC and 79/923/EEC³²,

estimation and identification of significant diffuse source pollution, in particular by substances listed in Annex VIII, from urban, industrial, agricultural and other installations and activities; based inter alia on information gathered under

(i) Articles 3, 5 and 6 of Directive 91/676/EEC³³,

(ii) Articles 7 and 17 of Directive 91/414/EEC,

(iii) Directive 98/8/EC,

and for the purposes of the first River Basin Management Plan:

(iv) Directives 75/440/EEC, 76/160/EEC, 76/464/EEC, 78/659/EEC and 79/923/EEC,

estimation and identification of significant water abstraction for urban, industrial, agricultural and other uses, including seasonal variations and total annual demand, and of loss of water in distribution systems,

estimation and identification of the impact of significant water flow regulation, including water transfer and diversion, on overall flow characteristics and water balances,

identification of significant morphological alterations to water bodies,

estimation and identification of other significant anthropogenic impacts on the status of surface waters, and

estimation of land use patterns, including identification of the main urban, industrial and agricultural areas and, where relevant, fisheries and forests.

³⁰ OJ L 135, 30.5.1991, p. 40. Directive as last amended by Directive 98/15/EC (OJ L 67, 7.3.1998, p. 29).

³¹ OJ L 31, 5.2.1976, p. 1. Directive as last amended by the 1994 Act of Accession.

³² OJ L 281, 10.11.1979, p. 47. Directive as amended by Directive 91/692/EEC (OJ L 377, 31.12.1991, p. 48).

³³ OJ L 375, 31.12.1991, p. 1.

1.5 Assessment of Impact

Member States shall carry out an assessment of the susceptibility of the surface water status of bodies to the pressures identified above.

Member States shall use the information collected above, and any other relevant information including existing environmental monitoring data, to carry out an assessment of the likelihood that surface waters bodies within the River Basin District will fail to meet the environmental quality objectives set for the bodies under Article 4. Member States may utilise modelling techniques to assist in such an assessment.

For those bodies identified as being at risk of failing the environmental quality objectives, further characterisation shall, where relevant, be carried out to optimise the design of both the monitoring programmes required under Article 8, and the programmes of measures required under Article 11.

~~1.6 Designation of Artificial and Heavily Modified bodies~~

~~Member States may designate a body of surface water as artificial or heavily modified where making changes to artificial or modified characteristics of that body would affect:~~

- ~~(i) — the wider environment~~
- ~~(ii) — navigation or recreation~~
- ~~(iii) — activities for the purposes of which water is stored (for example, power generation, drinking water supply)~~
- ~~(iv) — water regulation, flood protection, irrigation or land drainage~~
- ~~(v) — human development.~~

2. GROUNDWATERS

2.1 Initial Characterisation

Member States shall carry out an initial characterisation of all groundwater bodies to assess their uses and the degree to which they are at risk of failing to meet the objectives for each groundwater body under Article 4. Member States may group groundwater bodies together for the purposes of this initial characterisation. This analysis may employ existing hydrological, geological, pedological, land use, discharge, abstraction and other data but shall identify:

- the location and boundaries of the groundwater body or bodies,
- the pressures to which the groundwater body or bodies are liable to be subject including:
 - diffuse sources of pollution
 - point sources of pollution
 - abstraction
 - artificial recharge,
- the general character of the overlying strata in the catchment area from which the groundwater body receives its recharge,
- those groundwater bodies for which there are directly dependent surface water ecosystems or terrestrial ecosystems.

2.2 Further Characterisation

Following this initial characterisation, Member States shall carry out further characterisation of those groundwater bodies or groups of bodies which have been identified as being at risk in order to establish a more precise assessment of the significance of such risk and identification of any measures to be required under Article 11. Accordingly, this characterisation shall include relevant information on the impact of human activity and, where relevant information on:

- geological characteristics of the groundwater body including the extent and type of geological units,
- hydrogeological characteristics of the groundwater body including hydraulic conductivity, porosity and confinement,
- characteristics of the superficial deposits and soils in the catchment from which the groundwater body receives its recharge, including the thickness, porosity, hydraulic conductivity, and absorptive properties of the deposits and soils,
- stratification characteristics of the groundwater within the groundwater body,
- an inventory of associated surface systems, including terrestrial ecosystems and bodies of surface water, with which the groundwater body is dynamically linked,
- estimates of the directions and rates of exchange of water between the groundwater body and associated surface systems, and

- sufficient data to calculate the long term annual average rate of overall recharge.

2.3 Review of the Impact of Human Activity on Groundwaters

For those bodies of groundwater which cross the boundary between two or more Member States or are identified following the initial characterisation undertaken in accordance with paragraph 2.1 as being at risk of failing to meet the objectives set for each body under Article 4, the following information shall, where relevant, be collected and maintained for each groundwater body:

- the location of points in the groundwater body used for the abstraction of water, **with the exception of points for the abstraction of water** intended for human consumption providing ~~more~~ **less** than an average of 10m³ per day or serving ~~more~~ **less** than 50 persons,
- the annual average rates of abstraction from such points,
- the chemical composition of water abstracted from the groundwater body,
- the location of points in the groundwater body into which water is directly discharged,
- the rates of discharge at such points,
- the chemical composition of discharges to the groundwater body, and
- land use in the catchment or catchments from which the groundwater body receives its recharge, including **pollutant inputs and** anthropogenic alterations to the recharge characteristics such as rainwater and run-off diversion through land sealing, artificial recharge, damming or drainage.

2.4 Review of the Impact of Changes in Groundwater Levels

Member States shall also identify those bodies of groundwater for which lower objectives are to be specified under Article 4 including as a result of consideration of the effects of the status of the body on:

- (i) surface water and associated terrestrial ecosystems
- (ii) water regulation, flood protection and land drainage
- (iii) human development.

2.5. Review of the Impact of Past Pollution on Groundwater Quality

Member States shall identify those bodies of groundwater for which lower objectives are to be specified under Article 4(4)(a) because as a result of past human activity the body of groundwater is so polluted that achieving good groundwater chemical status is infeasible or disproportionately expensive.

ECONOMIC ANALYSIS

The purpose of the economic analysis is:

- **to analyse water uses and services as specified in Article 5**
- **to serve as a basis for the development of charging systems as specified in Article 9**
- **to make an economic assessment (cost-effectiveness and/or cost-benefit analysis) of the programme of measures proposed in each River Basin Management Plan as specified in Article 11**

To do so, the economic analysis shall contain the following elements:

- 1. Estimates of water uses, drawing on the analysis carried out under Annex II (impact of human activities on groundwater and surface water bodies);**
- 2. Prices and all costs of water services (including those serving more than one sector) for the different sectors of the economy, disaggregated into at least domestic, industrial and agriculture uses;**
- 3. Long term forecasts of supply and demand for the different sectors of the economy, disaggregated into at least domestic, industrial and agriculture uses;**
- 4. Estimates of the required investments and costs of measures proposed in River Basin Management Plans;**
- 5. Estimates of benefits that are expected to arise as a result of the implementation of the set of measures proposed in River Basin Management Plans;**
- 6. Estimates of cost-effectiveness and/or cost-benefit indicators for the set of measures proposed in River Basin Management Plans**

Methodologies for collecting the relevant information will be adapted to local hydrological, socio-economic and institutional conditions to ensure a balance between data collection costs and information accuracy.

~~The economic analysis shall contain enough information in sufficient detail (taking account of the costs associated with collection of the relevant data) in order to:~~

- ~~(a) make the relevant calculations necessary for taking into account under Article 9 the principle of recovery of the costs of water services taking account of long term forecasts of supply and demand for water in the River Basin District and, where necessary:~~

- ~~— estimates of the volume, prices and costs associated with water services and~~
- ~~— estimates of relevant investment including forecasts of such investments;~~
- ~~(b) make judgements about the most cost effective combination of measures in respect of water uses to be included in the programme of measures under Article 11 based on estimates of the potential costs of such measures.~~

PROTECTED AREAS

1. The register of Protected Areas required under Article 6 shall include the following types of Protected Areas:
 - (i) areas designated for the abstraction of water intended for human consumption under Article 7;
 - (ii) areas designated for the protection of economically significant aquatic species;
 - (iii) bodies of water designated as recreational waters, including areas designated as bathing waters under Directive 76/160/EEC;
 - (iv) nutrient-sensitive areas, including areas designated as Vulnerable Zones under Directive 91/676/EEC and areas designated as Sensitive Areas under Directive 91/271/EEC; and
 - (v) areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection, including relevant Natura 2000 sites designated under Directive 92/43/EEC³⁴ and Directive 79/409/EEC³⁵.
2. The summary of the register required as part of the River Basin Management Plan shall include maps indicating the location of each Protected Area and a description of the Community, national or local legislation under which they have been designated.

³⁴ OJ L 206, 22.7.1992, p. 7. Directive as last amended by Directive 97/62/EC (OJ L 305, 8.11.1997, p. 42).

³⁵ OJ L 103, 25.4.1979, p. 1. Directive as last amended by Directive 97/49/EC (OJ L 223, 13.8.1997, p. 9).

1. SURFACE WATER STATUS

- 1.1. Quality elements for the classification of ecological status
 - 1.1.1. Rivers
 - 1.1.2. Lakes
 - 1.1.3. Transitional waters
 - 1.1.4. Coastal waters
 - 1.1.5. Artificial and heavily modified surface water bodies
- 1.2. Normative definitions of ecological status classifications
 - 1.2.1. Definitions for high, good and moderate ecological status in rivers
 - 1.2.2. Definitions for high, good and moderate ecological status in lakes
 - 1.2.3. Definitions for high, good and moderate ecological status in transitional waters
 - 1.2.4. Definitions for high, good and moderate ecological status in coastal waters
 - 1.2.5. Definitions for maximum, good and moderate ecological potential for heavily modified or artificial water bodies
 - 1.2.6. Procedure for the setting of chemical quality standards by Member States
- 1.3. Monitoring of ecological status and chemical status for surface waters
 - 1.3.1. Design of surveillance monitoring
 - 1.3.2. Design of operational monitoring
 - 1.3.3. Design of investigative monitoring
 - 1.3.4. Frequency of monitoring
 - 1.3.5. Additional monitoring requirements for protected areas
 - 1.3.6. Standards for monitoring of quality elements
- 1.4. Classification and presentation of ecological status
 - 1.4.1. Comparability of biological monitoring results
 - 1.4.2. Presentation of monitoring results and classification of ecological status and ecological potential
 - 1.4.3. Presentation of monitoring results and classification of chemical status

2. GROUNDWATER

2.1. Groundwater quantitative status

2.1.1. Parameter for the classification of quantitative status

2.1.2. Definition of quantitative status

2.2. Monitoring of groundwater quantitative status

2.2.1. Groundwater level monitoring network

2.2.2. Density of monitoring sites

2.2.3. Monitoring frequency

2.2.4. Interpretation and presentation of groundwater quantitative status

2.3. Groundwater chemical status

2.3.1. Parameters for the determination of groundwater chemical status

2.3.2. Definition of good groundwater chemical status

2.4. Monitoring of groundwater chemical status

2.4.1. Groundwater monitoring network

2.4.2. Surveillance monitoring

2.4.3. Operational monitoring

2.4.4. Identification of trends in pollutants

2.4.5. Interpretation and presentation of groundwater chemical status

2.5. Presentation of groundwater status

1. SURFACE WATER STATUS

1.1 Quality elements for the classification of ecological status

1.1.1 Rivers

Biological elements

Composition and abundance of aquatic flora

Composition and abundance of benthic invertebrate fauna

Composition, abundance and age structure of fish fauna

Hydromorphological elements supporting the biological elements

Hydrological regime

quantity and dynamics of water flow

connection to ground water bodies

River continuity

Morphological conditions

river depth and width variation

structure and substrate of the river bed

structure of the riparian zone

Chemical and physicochemical elements supporting the biological elements

General

Thermal conditions

Oxygenation conditions

Salinity

Acidification status

Nutrient conditions

Specific Pollutants

Pollution by all priority substances identified as being discharged into the body of water

Pollution by other substances identified as being discharged in significant quantities into the body of water

1.1.2 Lakes

Biological elements

Composition, abundance and biomass of phytoplankton

Composition and abundance of other aquatic flora

Composition and abundance of benthic invertebrate fauna

Composition, abundance and age structure of fish fauna

Hydromorphological elements supporting the biological elements

Hydrological regime

quantity and dynamics of water flow

residence time

connection to the ground water body

Morphological conditions

lake depth variation

quantity, structure and substrate of the lake bed

structure of the lake shore

Chemical and physico-chemical elements supporting the biological elements

General

Transparency

Thermal conditions

Oxygenation conditions

Salinity

Acidification status

Nutrient conditions

Specific pollutants

Pollution by all priority substances identified as being discharged into the body of water

Pollution by other substances identified as being discharged in significant quantities into the body of water

1.1.3 Transitional waters

Biological elements

Composition, abundance and biomass of phytoplankton

Composition and abundance of other aquatic flora

Composition and abundance of benthic invertebrate fauna

Composition and abundance of fish fauna

Hydro-morphological elements supporting the biological elements

Morphological conditions

depth variation,

quantity, structure and substrate of the bed

structure of the inter-tidal zone

Tidal regime

freshwater flow

wave exposure

Chemical and physico-chemical elements supporting the biological elements

General

Transparency

Thermal conditions

Oxygenation conditions

Salinity

Nutrient conditions

Specific Pollutants

Pollution by all priority substances identified as being discharged into the body of water

Pollution by other substances identified as being discharged in significant quantities into the body of water

1.1.4 Coastal waters

Biological elements

Composition, abundance and biomass of phytoplankton

Composition and abundance of other aquatic flora

Composition and abundance of benthic invertebrate fauna

Hydromorphological elements supporting the biological elements

Morphological conditions

depth variation

structure and substrate of the coastal bed

structure of the inter-tidal zone

Tidal regime

direction of dominant currents

wave exposure

Chemical and physico-chemical elements supporting the biological elements

General

Transparency

Thermal conditions

Oxygenation conditions

Salinity

Nutrient conditions

Specific Pollutants

Pollution by all priority substances identified as being discharged into the body of water

Pollution by other substances identified as being discharged in significant quantities into the body of water

1.1.5 Artificial and heavily modified surface water bodies

The quality elements applicable to artificial and heavily modified surface water bodies shall be those applicable to whichever of the four natural surface water categories above most closely resembles the heavily modified or artificial water body concerned.

1.2 Normative definitions of ecological status classifications

Table 1.2 General definition for rivers, lakes, transitional waters and coastal waters

The following text provides a general definition of ecological quality. For the purposes of classification the values for the quality elements of ecological status for each surface water category are those given in tables 1.2.1 - 1.2.4 below.

	High status	Good status	Moderate status
General	<p>There are no, or only very minor, anthropogenic alterations to the values of the physicochemical and hydromorphological quality elements for the surface water body type from those normally associated with that type under undisturbed conditions.</p> <p>The values of the biological quality elements for the surface water body reflect those normally associated with that type under undisturbed conditions, and show no, or only very minor, evidence of distortion.</p> <p>These are the type specific conditions and communities.</p>	<p>The values of the biological quality elements for the surface water body type show low levels of distortion resulting from human activity, but deviate only slightly from those normally associated with the surface water body type under undisturbed conditions.</p>	<p>The values of the biological quality elements for the surface water body type deviate moderately from those normally associated with the surface water body type under undisturbed conditions. The values show moderate signs of distortion resulting from human activity and are significantly more disturbed than under conditions of good status.</p>

Waters achieving a status below moderate shall be classified as poor or bad.

Waters showing evidence of major alterations to the values of the biological quality elements for the surface water body type and in which the relevant biological communities deviate substantially from those normally associated with the surface water body type under undisturbed conditions, shall be classified as poor.

Waters showing evidence of severe alterations to the values of the biological quality elements for the surface water body type and in which large portions of the relevant biological communities normally associated with the surface water body type under undisturbed conditions are absent, shall be classified as bad.

1.2.1 Definitions for high, good and moderate ecological status in rivers

Biological quality elements

Element	High status	Good status	Moderate status
Phytoplankton	<p>The taxonomic composition of phytoplankton corresponds totally or nearly totally to undisturbed conditions.</p> <p>The average phytoplankton abundance is wholly consistent with the type-specific physicochemical conditions and is not such as to significantly alter the type specific transparency conditions.</p> <p>Planktonic blooms occur at a frequency and intensity which is consistent with the type specific physicochemical conditions.</p>	<p>There are slight changes in the composition and abundance of planktonic taxa compared to the type-specific communities. Such changes do not indicate any accelerated growth of algae resulting in undesirable disturbances to the balance of organisms present in the water body or to the physico-chemical quality of the water or sediment.</p> <p>A slight increase in the frequency and intensity of the type specific planktonic blooms may occur.</p>	<p>The composition of planktonic taxa differs moderately from the type specific communities.</p> <p>Abundance is moderately disturbed and may be such as to produce a significant undesirable disturbance in the values of other biological and physico-chemical quality elements.</p> <p>A moderate increase in the frequency and intensity of planktonic blooms may occur. Persistent blooms may occur during summer months.</p>
Macrophytes and phytobenthos	<p>The taxonomic composition corresponds totally or nearly totally to undisturbed conditions.</p> <p>There are no detectable changes in the average macrophytic and the average phytobenthic abundance.</p>	<p>There are slight changes in the composition and abundance of macrophytic and phytobenthic taxa compared to the type-specific communities. Such changes do not indicate any accelerated growth of phytobenthos or higher forms of plant life resulting in undesirable disturbances to the balance of organisms present in the water body or to the physico-chemical quality of the water or sediment.</p> <p>The phytobenthic community is not adversely affected by bacterial tufts and coats present due to anthropogenic activity.</p>	<p>The composition of macrophytic and phytobenthic taxa differs moderately from the type-specific community and is significantly more distorted than at good status.</p> <p>Moderate changes in the average macrophytic and the average phytobenthic abundance are evident.</p> <p>The phytobenthic community may be interfered with and, in some areas, displaced by bacterial tufts and coats present as a result of anthropogenic activities.</p>
Benthic invertebrate fauna	<p>The taxonomic composition and abundance correspond totally or nearly totally to undisturbed conditions.</p> <p>The ratio of disturbance sensitive taxa to insensitive taxa shows no signs of alteration from undisturbed levels</p> <p>The level of diversity of invertebrate taxa shows no sign of alteration from undisturbed levels.</p>	<p>There are slight changes in the composition and abundance of invertebrate taxa from the type-specific communities</p> <p>The ratio of disturbance sensitive taxa to insensitive taxa shows slight alteration from type specific levels.</p> <p>The level of diversity of invertebrate taxa shows slight signs of alteration from type specific levels.</p>	<p>The composition and abundance of invertebrate taxa differ moderately from the type-specific communities.</p> <p>Major taxonomic groups of the type-specific community are absent.</p> <p>The ratio of disturbance sensitive taxa to insensitive taxa, and the level of diversity, are substantially lower than the type specific level and significantly lower than for good status.</p>

Fish fauna	<p>Species composition and abundance correspond totally or nearly totally to undisturbed conditions.</p> <p>All the type specific disturbance sensitive species are present.</p> <p>The age structures of the fish communities show little sign of anthropogenic disturbance and are not indicative of a failure in the reproduction or development of any particular species.</p>	<p>There are slight changes in species composition and abundance from the type specific communities attributable to anthropogenic impacts on physicochemical and hydromorphological quality elements.</p> <p>The age structures of the fish communities show signs of disturbance attributable to anthropogenic impacts on physicochemical or hydromorphological quality elements, and, in a few instances, are indicative of a failure in the reproduction or development of a particular species, to the extent that some age classes may be missing.</p>	<p>The composition and abundance of fish species differ moderately from the type specific communities attributable to anthropogenic impacts on physicochemical or hydromorphological quality elements.</p> <p>The age structure of the fish communities shows major signs of anthropogenic disturbance, to the extent that a moderate proportion of the type specific species are absent or of very low abundance.</p>
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Hydromorphological quality elements

Element	High status	Good status	Moderate status
Hydrological regime	The quantity and dynamics of flow, and the resultant connection to groundwaters, reflect totally, or nearly totally, undisturbed conditions.	Conditions consistent with the achievement of the values specified above for the biological quality elements.	Conditions consistent with the achievement of the values specified above for the biological quality elements.
River continuity	The continuity of the river is not disturbed by anthropogenic activities and allows undisturbed migration of aquatic organisms and sediment transport.	Conditions consistent with the achievement of the values specified above for the biological quality elements.	Conditions consistent with the achievement of the values specified above for the biological quality elements.
Morphological conditions	Channel patterns, width and depth variations, flow velocities, substrate conditions and both the structure and condition of the riparian zones correspond totally or nearly totally to undisturbed conditions.	Conditions consistent with the achievement of the values specified above for the biological quality elements.	Conditions consistent with the achievement of the values specified above for the biological quality elements.

Physico-chemical quality elements³⁶

Element	High status	Good status	Moderate status
General conditions	<p>The values of the physico-chemical elements correspond totally or nearly totally to undisturbed conditions.</p> <p>Nutrient concentrations remain within the range normally associated with undisturbed conditions.</p> <p>Levels of salinity, pH, oxygen balance, acid neutralising capacity and temperature do not show signs of anthropogenic disturbance and remain within the range normally associated with undisturbed conditions.</p>	<p>Temperature, oxygen balance, pH, acid neutralising capacity and salinity do not reach levels outside the range established so as to ensure the functioning of the type specific ecosystem and the achievement of the values specified above for the biological quality elements.</p> <p>Nutrient concentrations do not exceed the levels established so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.</p>	Conditions consistent with the achievement of the values specified above for the biological quality elements.
Specific synthetic pollutants	Concentrations close to zero and at least below the limits of detection of the most advanced analytical techniques in general use	Concentrations not in excess of the standards set in accordance with the procedure detailed in section 1.2.6 without prejudice to Directive 91/414/EC and Directive 98/8/EC. (<eqs)	Conditions consistent with the achievement of the values specified above for the biological quality elements.
Specific non synthetic pollutants	Concentrations remain within the range normally associated with undisturbed conditions (background levels = bgl).	Concentrations not in excess of the standards set in accordance with the procedure detailed in section 1.2.6 ³⁷ without prejudice to Directive 91/414/EC and Directive 98/8/EC. (<eqs)	Conditions consistent with the achievement of the values specified above for the biological quality elements.

³⁶ The following abbreviations are used: bgl = background level, eqs = environmental quality standard

³⁷ Application of the standards derived under this protocol shall not require reduction of pollutant concentrations below background levels: (eqs>bgl)

1.2.2 Definitions for high, good and moderate ecological status in lakes

Biological quality elements

Element	High status	Good status	Moderate status
Phytoplankton	<p>The taxonomic composition and abundance of phytoplankton correspond totally or nearly totally to undisturbed conditions.</p> <p>The average phytoplankton biomass is consistent with the type-specific physicochemical conditions and is not such as to significantly alter the type specific transparency conditions.</p> <p>Planktonic blooms occur at a frequency and intensity which is consistent with the type specific physicochemical conditions.</p>	<p>There are slight changes in the composition and abundance of planktonic taxa compared to the type-specific communities. Such changes do not indicate any accelerated growth of algae resulting in undesirable disturbance to the balance of organisms present in the water body or to the physico-chemical quality of the water or sediment.</p> <p>A slight increase in the frequency and intensity of the type specific planktonic blooms may occur.</p>	<p>The composition and abundance of planktonic taxa differ moderately from the type specific communities.</p> <p>Biomass is moderately disturbed and may be such as to produce a significant undesirable disturbance in the condition of other biological quality elements and the physico-chemical quality of the water or sediment.</p> <p>A moderate increase in the frequency and intensity of planktonic blooms may occur. Persistent blooms may occur during summer months.</p>
Macrophytes and phytobenthos	<p>The taxonomic composition corresponds totally or nearly totally to undisturbed conditions.</p> <p>There are no detectable changes in the average macrophytic and the average phytobenthic abundance.</p>	<p>There are slight changes in the composition and abundance of macrophytic and phytobenthic taxa compared to the type-specific communities. Such changes do not indicate any accelerated growth of phytobenthos or higher forms of plant life resulting in undesirable disturbance to the balance of organisms present in the water body or to the physicochemical quality of the water.</p> <p>The phytobenthic community is not adversely affected by bacterial tufts and coats present due to anthropogenic activity.</p>	<p>The composition of macrophytic and phytobenthic taxa differ moderately from the type-specific communities and are significantly more distorted than those observed at good quality.</p> <p>Moderate changes in the average macrophytic and the average phytobenthic abundance are evident.</p> <p>The phytobenthic community may be interfered with, and, in some areas, displaced by bacterial tufts and coats present as a result of anthropogenic activities.</p>
Benthic invertebrate fauna	<p>The taxonomic composition and abundance correspond totally or nearly totally to the undisturbed conditions.</p> <p>The ratio of disturbance sensitive taxa to insensitive taxa shows no signs of alteration from undisturbed levels</p> <p>The level of diversity of invertebrate taxa shows no sign of alteration from undisturbed levels</p>	<p>There are slight changes in the composition and abundance of invertebrate taxa compared to the type-specific communities.</p> <p>The ratio of disturbance sensitive taxa to insensitive taxa shows slight signs of alteration from type specific levels.</p> <p>The level of diversity of invertebrate taxa shows slight signs of alteration from type specific levels.</p>	<p>The composition and abundance of invertebrate taxa differ moderately from the type-specific conditions</p> <p>Major taxonomic groups of the type-specific community are absent.</p> <p>The ratio of disturbance sensitive to insensitive taxa, and the level of diversity, are substantially lower than the type specific level and significantly lower than for good status</p>

Fish fauna	<p>Species composition and abundance correspond totally or nearly totally to undisturbed conditions.</p> <p>All the type specific sensitive species are present.</p> <p>The age structures of the fish communities show little sign of anthropogenic disturbance and are not indicative of a failure in the reproduction or development of a particular species.</p>	<p>There are slight changes in species composition and abundance from the type specific communities attributable to anthropogenic impacts on physicochemical or hydromorphological quality elements.</p> <p>The age structures of the fish communities show signs of disturbance attributable to anthropogenic impacts on physicochemical or hydromorphological quality elements, and, in a few instances, are indicative of a failure in the reproduction or development of a particular species, to the extent that some age classes may be missing.</p>	<p>The composition and abundance of fish species differ moderately from the type specific communities attributable to anthropogenic impacts on physicochemical or hydromorphological quality elements.</p> <p>The age structure of the fish communities shows major signs of disturbance, attributable to anthropogenic impacts on physicochemical or hydromorphological quality elements, to the extent that a moderate proportion of the type specific species are absent or of very low abundance.</p>
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Hydromorphological quality elements

Element	High status	Good status	Moderate status
Hydrological regime	The quantity and dynamics of flow, level, residence time, and the resultant connection to groundwaters, reflect totally or nearly totally undisturbed conditions.	Conditions consistent with the achievement of the values specified above for the biological quality elements.	Conditions consistent with the achievement of the values specified above for the biological quality elements.
Morphological conditions	Lake depth variation, quantity and structure of the substrate, and both the structure and condition of the lake shore zone correspond totally or nearly totally to undisturbed conditions.	Conditions consistent with the achievement of the values specified above for the biological quality elements.	Conditions consistent with the achievement of the values specified above for the biological quality elements.

Physico-chemical quality elements³⁸

Element	High status	Good status	Moderate status
General conditions	<p>The values of physico-chemical elements correspond totally or nearly totally to undisturbed conditions.</p> <p>Nutrient concentrations remain within the range normally associated with undisturbed conditions.</p> <p>Levels of salinity, pH, oxygen balance, acid neutralising capacity, transparency and temperature do not show signs of anthropogenic disturbance and remain within the range normally associated with undisturbed conditions.</p>	<p>Temperature, oxygen balance, pH, acid neutralising capacity, transparency and salinity do not reach levels outside the range established so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.</p> <p>Nutrient concentrations do not exceed the levels established so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.</p>	<p>Conditions consistent with the achievement of the values specified above for the biological quality elements.</p>
Specific synthetic pollutants	<p>Concentrations close to zero and at least below the limits of detection of the most advanced analytical techniques in general use.</p>	<p>Concentrations not in excess of the standards set in accordance with the procedure detailed in section 1.2.6 without prejudice to Directive 91/414/EC and Directive 98/8/EC. (<eqs)</p>	<p>Conditions consistent with the achievement of the values specified above for the biological quality elements.</p>
Specific non synthetic pollutants	<p>Concentrations remain within the range normally associated with undisturbed conditions (background levels = bgl).</p>	<p>Concentrations not in excess of the standards set in accordance with the procedure detailed in section 1.2.6³⁹ without prejudice to Directive 91/414/EC and Directive 98/8/EC. (<eqs)</p>	<p>Conditions consistent with the achievement of the values specified above for the biological quality elements.</p>

³⁸ The following abbreviations are used: bgl = background level, eqs = environmental quality standard

³⁹ Application of the standards derived under this protocol shall not require reduction of pollutant concentrations below background levels

1.2.3 Definitions for high, good and moderate ecological status in transitional waters

Biological quality elements

Element	High status	Good status	Moderate Status
Phytoplankton	<p>The composition and abundance of the phytoplanktonic taxa are consistent with undisturbed conditions.</p> <p>The average phytoplankton biomass is consistent with the type-specific physicochemical conditions and is not such as to significantly alter the type specific transparency conditions.</p> <p>Planktonic blooms occur at a frequency and intensity which is consistent with the type specific physicochemical conditions.</p>	<p>There are slight changes in the composition and abundance of phytoplanktonic taxa.</p> <p>There are slight changes in biomass compared to the type-specific conditions. Such changes do not indicate any accelerated growth of algae resulting in undesirable disturbance to the balance of organisms present in the water body or to the physicochemical quality of the water.</p> <p>A slight increase in the frequency and intensity of the type specific planktonic blooms may occur.</p>	<p>The composition and abundance of phytoplanktonic taxa differ moderately from type specific conditions.</p> <p>Biomass is moderately disturbed and may be such as to produce a significant undesirable disturbance in the condition of other biological quality elements.</p> <p>A moderate increase in the frequency and intensity of planktonic blooms may occur. Persistent blooms may occur during summer months.</p>
Macroalgae	<p>The composition of macroalgal taxa is consistent with undisturbed conditions.</p> <p>There are no detectable changes in macroalgal cover due to anthropogenic activities.</p>	<p>There are slight changes in the composition and abundance of macroalgal taxa compared to the type-specific communities. Such changes do not indicate any accelerated growth of phytobenthos or higher forms of plant life resulting in undesirable disturbance to the balance of organisms present in the water body or to the physicochemical quality of the water.</p>	<p>The composition of macroalgal taxa differs moderately from type-specific conditions and is significantly more distorted than at good quality.</p> <p>Moderate changes in the average macroalgal abundance are evident and may be such as to result in an undesirable disturbance to the balance of organisms present in the water body.</p>
Angiosperms	<p>The taxonomic composition corresponds totally or nearly totally to undisturbed conditions.</p> <p>There are no detectable changes in angiosperm abundance due to anthropogenic activities.</p>	<p>There are slight changes in the composition of angiosperm taxa compared to the type-specific communities.</p> <p>Angiosperm abundance shows slight signs of disturbance.</p>	<p>The composition of the angiosperm taxa differs moderately from the type-specific communities and is significantly more distorted than at good quality.</p> <p>There are moderate distortions in the abundance of angiosperm taxa.</p>

Benthic invertebrate fauna	<p>The level of diversity and abundance of invertebrate taxa is within the range normally associated with undisturbed conditions.</p> <p>All the disturbance sensitive taxa associated with undisturbed conditions are present.</p>	<p>The level of diversity and abundance of invertebrate taxa is slightly outside the range associated with the type specific conditions</p> <p>Most of the sensitive taxa of the type specific communities are present.</p>	<p>The level of diversity and abundance of invertebrate taxa is moderately outside the range associated with the type specific conditions.</p> <p>Taxa indicative of pollution are present</p> <p>Many of the sensitive taxa of the type specific communities are absent</p>
Fish fauna	<p>Species composition and abundance is consistent with undisturbed conditions.</p>	<p>The abundance of the disturbance sensitive species shows slight signs of distortion from type specific conditions attributable to anthropogenic impacts on physicochemical or hydromorphological quality elements</p>	<p>A moderate proportion of the type specific disturbance sensitive species are absent as a result of anthropogenic impacts on physicochemical or hydromorphological quality elements.</p>

Hydromorphological quality elements

Element	High status	Good status	Moderate status
Tidal regime	The freshwater flow regime corresponds totally or nearly totally to undisturbed conditions.	Conditions consistent with the achievement of the values specified above for the biological quality elements.	Conditions consistent with the achievement of the values specified above for the biological quality elements.
Morphological conditions	Depth variations, substrate conditions, and both the structure and condition of the inter-tidal zones correspond totally or nearly totally to undisturbed conditions.	Conditions consistent with the achievement of the values specified above for the biological quality elements.	Conditions consistent with the achievement of the values specified above for the biological quality elements.

Physico-chemical quality elements⁴⁰

Element	High status	Good status	Moderate status
General conditions	<p>Physico-chemical elements correspond totally or nearly totally to undisturbed conditions.</p> <p>Nutrient concentrations remain within the range normally associated with undisturbed conditions.</p> <p>Temperature, oxygen balance and transparency do not show signs of anthropogenic disturbance and remain within the range normally associated with undisturbed conditions.</p>	<p>Temperature, oxygenation conditions and transparency do not reach levels outside the ranges established so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.</p> <p>Nutrient concentrations do not exceed the levels established so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.</p>	<p>Conditions consistent with the achievement of the values specified above for the biological quality elements.</p>
Specific synthetic pollutants	<p>Concentrations close to zero and at least below the limits of detection of the most advanced analytical techniques in general use.</p>	<p>Concentrations not in excess of the standards set in accordance with the procedure detailed in section 1.2.6 without prejudice to Directive 91/414/EC and Directive 98/8/EC. (<eqs)</p>	<p>Conditions consistent with the achievement of the values specified above for the biological quality elements.</p>
Specific non synthetic pollutants	<p>Concentrations remain within the range normally associated with undisturbed conditions (background levels = bgl).</p>	<p>Concentrations not in excess of the standards set in accordance with the procedure detailed in section 1.2.6⁴¹ without prejudice to Directive 91/414/EC and Directive 98/8/EC. (<eqs)</p>	<p>Conditions consistent with the achievement of the values specified above for the biological quality elements.</p>

⁴⁰ The following abbreviations are used: bgl = background level, eqs = environmental quality standard

⁴¹ Application of the standards derived under this protocol shall not require reduction of pollutant concentrations below background levels

1.2.4 Definitions for high, good and moderate ecological status in coastal waters

Biological quality elements

Element	High status	Good status	Moderate status
Phytoplankton	<p>The composition and abundance of phytoplanktonic taxa are consistent with undisturbed conditions.</p> <p>The average phytoplankton biomass is consistent with the type-specific physicochemical conditions and is not such as to significantly alter the type specific transparency conditions.</p> <p>Planktonic blooms occur at a frequency and intensity which is consistent with the type specific physicochemical conditions.</p>	<p>The composition and abundance of phytoplanktonic taxa show slight signs of disturbance.</p> <p>There are slight changes in biomass compared to type-specific conditions. Such changes do not indicate any accelerated growth of algae resulting in undesirable disturbance to the balance of organisms present in the water body or to the quality of the water.</p> <p>A slight increase in the frequency and intensity of the type specific planktonic blooms may occur.</p>	<p>The composition and abundance of planktonic taxa show signs of moderate disturbance.</p> <p>Algal biomass is substantially outside the range associated with type specific conditions, and is such as to impact upon other biological quality elements.</p> <p>A moderate increase in the frequency and intensity of planktonic blooms may occur. Persistent blooms may occur during summer months.</p>
Macroalgae and angiosperms	<p>All disturbance sensitive macroalgal and angiosperm taxa associated with undisturbed conditions are present.</p> <p>The levels of macroalgal cover and angiosperm abundance are consistent with undisturbed conditions.</p>	<p>Most disturbance sensitive macroalgal and angiosperm taxa associated with undisturbed conditions are present.</p> <p>The level of macroalgal cover and angiosperm abundance show slight signs of disturbance.</p>	<p>A moderate number of the disturbance sensitive macroalgal and angiosperm taxa associated with undisturbed conditions are absent.</p> <p>Macroalgal cover and angiosperm abundance is moderately disturbed and may be such as to result in an undesirable disturbance to the balance of organisms present in the water body.</p>
Benthic invertebrate fauna	<p>The level of diversity and abundance of invertebrate taxa is within the range normally associated with undisturbed conditions.</p> <p>All the disturbance sensitive taxa associated with undisturbed conditions are present.</p>	<p>The level of diversity and abundance of invertebrate taxa is slightly outside the range associated with the type specific conditions</p> <p>Most of the sensitive taxa of the type specific communities are present.</p>	<p>The level of diversity and abundance of invertebrate taxa is moderately outside the range associated with the type specific conditions.</p> <p>Taxa indicative of pollution are present</p> <p>Many of the sensitive taxa of the type specific communities are absent</p>

Hydromorphological quality elements

Element	High status	Good status	Moderate status
Tidal regime	The freshwater flow regime and the direction and speed of dominant currents correspond totally or nearly totally to undisturbed conditions.	Conditions consistent with the achievement of the values specified above for the biological quality elements.	Conditions consistent with the achievement of the values specified above for the biological quality elements.
Morphological conditions	The depth variation, structure and substrate of the coastal bed, and both the structure and condition of the inter-tidal zones correspond totally or nearly totally to the undisturbed conditions.	Conditions consistent with the achievement of the values specified above for the biological quality elements.	Conditions consistent with the achievement of the values specified above for the biological quality elements.

Physico-chemical quality elements⁴²

Element	High status	Good status	Moderate status
General conditions	<p>The physico-chemical elements correspond totally or nearly totally to undisturbed conditions.</p> <p>Nutrient concentrations remain within the range normally associated with undisturbed conditions</p> <p>Temperature, oxygen balance and transparency do not show signs of anthropogenic disturbance and remain within the ranges normally associated with undisturbed conditions.</p>	<p>Temperature, oxygenation conditions and transparency do not reach levels outside the ranges established so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.</p> <p>Nutrient concentrations do not exceed the levels established so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.</p>	Conditions consistent with the achievement of the values specified above for the biological quality elements.

⁴²

The following abbreviations are used: bgl = background level, eqs = environmental quality standard)

Specific synthetic pollutants	Concentrations close to zero and at least below the limits of detection of the most advanced analytical techniques in general use.	Concentrations not in excess of the standards set in accordance with the procedure detailed in section 1.2.6 without prejudice to Directive 91/414/EC and Directive 98/8/EC. (<eqs)	Conditions consistent with the achievement of the values specified above for the biological quality elements.
Specific non synthetic pollutants	Concentrations remain within the range normally associated with undisturbed conditions (background levels = bgl)	Concentrations not in excess of the standards set in accordance with the procedure detailed in section 1.2.6 ⁴³ without prejudice to Directive 91/414/EC and Directive 98/8/EC. (<eqs)	Conditions consistent with the achievement of the values specified above for the biological quality elements.

⁴³

Application of the standards derived under this protocol shall not require reduction of pollutant concentrations below background levels

1.2.5 Definitions for maximum, good and moderate ecological potential for heavily modified or artificial water bodies

Element	Maximum ecological potential	Good ecological potential	Moderate ecological potential
Biological quality elements	The values of the relevant biological quality elements reflect, as far as possible, those associated with the closest comparable surface water body type, given the physical conditions which result from the artificial or heavily modified characteristics of the water body.	There are slight changes in the values of the relevant biological quality elements as compared to the values found at maximum ecological potential.	There are moderate changes in the values of the relevant biological quality elements as compared to the values found at maximum ecological potential. These values are significantly more distorted than those found under good quality.
Hydromorphological elements	The hydromorphological conditions are consistent with the only impacts on the surface water body being those resulting from the artificial or heavily modified characteristics of the water body once all practicable mitigation measures having been taken.	Conditions consistent with the achievement of the values specified above for the biological quality elements.	Conditions consistent with the achievement of the values specified above for the biological quality elements.
Physicochemical elements			
General conditions	<p>Physico-chemical elements correspond totally or nearly totally to the undisturbed conditions associated with the surface water body type most closely comparable to the artificial or heavily modified body concerned.</p> <p>Nutrient concentrations remain within the range normally associated with such undisturbed conditions.</p> <p>The levels of temperature, oxygen balance and pH are consistent with the those found in the most closely comparable surface water body types under undisturbed conditions.</p>	<p>The values for physico-chemical elements are within the ranges established so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.</p> <p>Temperature and pH do not reach levels outside the ranges established so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.</p> <p>Nutrient concentrations do not exceed the levels established so as to ensure the functioning of the ecosystem and the achievement of the values specified above for the biological quality elements.</p>	Conditions consistent with the achievement of the values specified above for the biological quality elements.
Specific synthetic pollutants	Concentrations close to zero and at least below the limits of detection of the most advanced analytical techniques in general use	<p>Concentrations not in excess of the standards set in accordance with the procedure detailed in section 1.2.6 without prejudice to Directive 91/414/EC and</p> <p>Directive 98/8/EC. (<eqs)</p>	Conditions consistent with the achievement of the values specified above for the biological quality elements.

Specific non synthetic pollutants	Concentrations remain within the range normally associated with the undisturbed conditions found in the surface water body type most closely comparable to the artificial or heavily modified body concerned. (background levels = bgl)	Concentrations not in excess of the standards set in accordance with the procedure detailed in section 1.2.6 ⁴⁴ without prejudice to Directive 91/414/EC and Directive 98/8/EC. (<eqs)	Conditions consistent with the achievement of the values specified above for the biological quality elements.
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Application of the standards derived under this protocol shall not require reduction of pollutant concentrations below background levels

1.2.6 Procedure for the setting of chemical quality standards by Member States

In deriving environmental quality standards for pollutants listed in points 1 - 9 of Annex VIII for the protection of aquatic biota, Member States shall act in accordance with the following provisions. Standards may be set for water, sediment or biota.

Where possible, both acute and chronic data shall be obtained for the taxa set out below which are relevant for the water body type concerned as well as any other aquatic taxa for which data are available. The "base set" of taxa are:

- Algae and/or macrophytes
- Daphnia or representative organisms for saline waters
- Fish

Setting the Environmental Quality Standard

The following procedure applies to the setting of a maximum annual average concentration:

- (i) Member States shall set appropriate safety factors in each case consistent with the nature and quality of the available data and the guidance given in section 3.3.1 of Part II of "Technical guidance document in support of Commission Directive 93/67/EEC on risk assessment for new notified substances and Commission Regulation (EC) No 1488/94 on risk assessment for existing substances" and the safety factors set out in the table below:

	Safety factor
At least one acute L(E)C ₅₀ from each of three trophic levels of the base-set	1000
One chronic NOEC (either fish or Daphnia or a representative organism for saline waters)	100
Two chronic NOECs from species representing two trophic levels (fish and/or Daphnia or a representative organism for saline waters and/or algae)	50
Chronic NOECs from at least three species (normally fish, Daphnia or a representative organism for saline waters and algae) representing three trophic levels	10
Other cases, including field data or model ecosystems, which allow more precise safety factors to be calculated and applied.	Case by case assessment

- (ii) where data on persistence and bioaccumulation are available, these shall be taken into account in deriving the final value of the Environmental Quality Standard.
- (iii) the standard thus derived should be compared with any evidence from field studies. Where anomalies appear, the derivation shall be reviewed to allow a more precise safety factor to be calculated.
- (iv) the standard derived shall be subject to peer review and public consultation including to allow a more precise safety factor to be calculated.

1.3 Monitoring of ecological status and chemical status for surface waters

The surface water monitoring network shall be established in accordance with the requirements of Article 8. The monitoring network shall be designed so as to provide a coherent and comprehensive overview of ecological and chemical status within each river basin and shall permit classification of water bodies into five classes consistent with the normative definitions in section 1.2. Member States shall provide a map or maps showing the surface water monitoring network in the River Basin Management Plan.

On the basis of the characterisation and impact assessment carried out in accordance with Article 5 and Annex II, Member States shall for each period to which a River Basin Management Plan applies, establish a surveillance monitoring programme and an operational monitoring programme. Member States may also need in some cases to establish programmes of investigative monitoring.

Member States shall monitor parameters which are indicative of the status of each relevant quality element. In selecting parameters for biological quality elements Member States shall identify the appropriate taxonomic level required to achieve adequate confidence and precision in the classification of the quality elements. Estimates of the level of confidence and precision of the results provided by the monitoring programmes shall be given in the Plan.

1.3.1 Design of surveillance monitoring

Objective

Member States shall establish surveillance monitoring programmes to provide information for:

- supplementing and validating the impact assessment procedure detailed in Annex II;
- the efficient and effective design of future monitoring programmes;
- the assessment of long term changes in natural conditions; and
- the assessment of long term changes resulting from widespread anthropogenic activity.

The results of such monitoring shall be reviewed and used, in combination with the impact assessment procedure described in Annex II, to determine requirements for monitoring programmes in the current and subsequent River Basin Management Plans.

Selection of monitoring points

Surveillance monitoring shall be carried out of sufficient surface water bodies to provide an assessment of the overall surface water status within each catchment or sub catchments within the River Basin District. In selecting these bodies Member States shall ensure that, where appropriate, monitoring is carried out at points where:

- the rate of water flow is significant within the river basin district as a whole; including points on large rivers where the catchment area is greater than 2 500 km²,
- the volume of water present is significant within the river basin district, including large lakes and reservoirs,
- significant bodies of water cross a Member State boundary,
- sites are identified under the Information Exchange Decision 77/795/EEC; and

at such other sites as are required to estimate the pollutant load which is transferred across Member State Boundaries, and which is transferred into the marine environment.

Selection of quality elements

Surveillance monitoring shall be carried out for each monitoring site for a period of one year during the period covered by a River Basin Management Plan for:

- parameters indicative of all biological quality elements
- parameters indicative of all hydromorphological quality elements
- parameters indicative of all general physico-chemical quality elements
- priority list pollutants which are discharged into the river basin or sub-basin and
- other pollutants discharged in significant quantities in the river basin or sub-basin

unless the previous surveillance monitoring exercise showed that the body concerned reached good status and there is no evidence from the review of impact of human activity under Annex II that the impacts on the body have changed. In these cases, surveillance monitoring shall be carried out once every three River Basin Management Plans.

1.3.2 Design of operational monitoring

Operational monitoring shall be undertaken in order to:

- establish the status of those bodies identified as being at risk of failing to meet their environmental objectives, and
- assess any changes in the status of such bodies resulting from the programmes of measures.

The programme may be amended during the period of the River Basin Management Plan in the light of information obtained as part of the requirements of Annex II or as part of this Annex, in particular to allow a reduction in frequency where an impact is found not to be significant or the relevant pressure is removed.

Selection of monitoring sites

Operational monitoring shall be carried out for all those bodies of water which on the basis of either the impact assessment carried out in accordance with Annex II or surveillance monitoring are identified as being at risk of failing to meet their environmental objectives under Article 4 and for those bodies of water into which priority list substances are discharged. Monitoring points shall be selected for priority list substances as specified in the legislation laying down the relevant environmental quality standard. In all other cases, including for priority list substances where no specific guidance is given in such legislation, monitoring points shall be selected as follows:

- for bodies at risk from significant point source pressures, sufficient monitoring points within each body in order to assess the magnitude and impact of the point source. Where a body is subject to a number of point source pressures monitoring points may be selected to assess the magnitude and impact of these pressures as a whole;
- for bodies at risk from significant diffuse source pressures, sufficient monitoring points within a selection of the bodies in order to assess the magnitude and impact of the diffuse source pressures. The selection of bodies shall be made such that they are representative of the relative risks of the occurrence of the diffuse source pressures, and of the relative risks of the failure to achieve good surface water status;

- for bodies at risk from significant hydromorphological pressure, sufficient monitoring points within a selection of the bodies in order to assess the magnitude and impact of the hydromorphological pressures. The selection of bodies shall be indicative of the overall impact of the hydromorphological pressure to which all the bodies are subject.

Selection of quality elements

In order to assess the magnitude of the pressure to which bodies of surface water are subject Member States shall monitor for those quality elements which are indicative of the pressures to which the body or bodies are subject. In order to assess the impact of these pressures, Member States shall monitor as relevant:

- parameters indicative of the biological quality element, or elements, most sensitive to the pressures to which the water bodies are subject;
- all priority substances discharged, and other pollutants discharged in significant quantities;
- parameters indicative of the hydromorphological quality element most sensitive to the pressure identified.

1.3.3 Design of investigative monitoring

Objective

Investigative monitoring shall be carried out:

- where the reason for any exceedances is unknown;
- where surveillance monitoring indicates that the objectives set under Article 4 for a body of water are not likely to be achieved and operational monitoring has not already been established, in order to ascertain the causes of a water body or water bodies failing to achieve the environmental objectives; or

- to ascertain the magnitude and impacts of accidental pollution;

and shall inform the establishment of a programme of measures for the achievement of the environmental objectives and specific measures necessary to remedy the effects of accidental pollution.

1.3.4 Frequency of monitoring

For the surveillance monitoring period, the frequencies for monitoring parameters indicative of physico-chemical quality elements given below should be applied unless greater intervals would be justified on the basis of technical knowledge and expert judgement. For biological or hydromorphological quality elements, monitoring shall be carried out at least once during the surveillance monitoring period.

For operational monitoring, the frequency of monitoring required for any parameter shall be determined by Member States so as to provide sufficient data for a reliable assessment of the status of the relevant quality element. As a guideline, monitoring should take place at intervals not exceeding those shown in the table below unless greater intervals would be justified on the basis of technical knowledge and expert judgment.

Frequencies shall be chosen so as to achieve an acceptable level of confidence and precision. Estimates of the confidence and precision attained by the monitoring system used shall be stated in the River Basin Management Plan.

Monitoring frequencies shall be selected which take account of the variability in parameters resulting from both natural and anthropogenic conditions. The times at which monitoring is undertaken shall be selected so as to minimise the impact of seasonal variation on the results, and thus ensure that the results reflect changes in the water body as a result of changes due to anthropogenic pressure. Additional monitoring during different seasons of the same year shall be carried out, where necessary, to achieve this objective.

Quality Element	Rivers	Lakes	Transitional	Coastal
Biological				
Phyto-Plankton	6 months	6 months	6 months	6 months
Other aquatic flora	3 years	3 years	3 year	3 year
Macro invertebrates	3 years	3 years	3 years	3 years
Fish	3 years	3 years	3 years	
Hydromorphological				
Continuity	6 years			
Hydrology	continuous	1 month		
Morphology	6 years	6 years	6 years	6 years
Physico-Chemical				
Thermal Conditions	3 months	3 months	3 months	3 months
Oxygenation	3 months	3 months	3 months	3 months
Salinity	3 months	3 months	3 months	
Nutrient Status	3 months	3 months	3 months	3 months
Acidification Status	3 months	3 months		
Other Pollutants	3 months	3 months	3 months	3 months
Priority Substances	1 month	1 month	1 month	1 month

1.3.5 Additional monitoring requirements for protected areas

The monitoring programmes required above shall be supplemented in order to fulfil the following requirements:

Drinking water abstraction points

Bodies of surface water designated under Article 7 which provide more than 100 m³ a day as an average shall be designated as monitoring sites and shall be subject to such additional monitoring as may be necessary to meet the requirements of that Article. Such bodies shall be monitored for all priority substances discharged and all other substances discharged in significant quantities which could affect the status of the body of water and which are controlled under the provisions of the Drinking Water Directive. Monitoring shall be carried out in accordance with the frequencies set out below:

Community served	Frequency
< 10 000	4 per year
10 000 to 30 000	8 per year
> 30 000	12 per year.

Habitat and species protection areas

Bodies of water forming these areas shall be included within the operational monitoring programme referred to above where, on the basis of the impact assessment and the surveillance monitoring, they are identified as being at risk of failing to meet their environmental objectives under Article 4. Monitoring shall be carried out to assess the magnitude and impact of all relevant significant pressures on these bodies and, where necessary, to assess changes in the status of such bodies resulting from the programmes of measures. Monitoring shall continue until the areas satisfy the water-related requirements of the legislation under which they are designated and meet their objectives under Article 4.

1.3.6 Standards for monitoring of quality elements

Methods used for the monitoring of type parameters shall conform to the International Standards listed below or such other National or International standards which will ensure the provision of data of an equivalent scientific quality and comparability.

Macroinvertebrate sampling

ISO 5667-3 1995	Water Quality - Sampling - Part 3: Guidance on the preservation and handling of samples
EN 27828: 1994	Water Quality – Methods for biological sampling – Guidance on hand net sampling of benthic macroinvertebrates
EN 28265: 1994	Water Quality – Methods of biological sampling – Guidance on the design and use of quantitative samplers for benthic macroinvertebrates on stony substrata in shallow waters
EN ISO 9381: 1995	Water Quality – Sampling in deep waters for macroinvertebrates – Guidance on the use of colonisation, qualitative and quantitative samplers.
EN ISO 8689 - 1:1999	Biological Classification of Rivers PART I: Guidance on the Interpretation of Biological Quality Data from Surveys of Benthic Macroinvertebrates in Running Waters
EN ISO 8689 - 2:1999	Biological Classification of Rivers PART II: Guidance on the Presentation of Biological Quality Data from Surveys of Benthic Macroinvertebrates in Running Waters

Macrophyte sampling

Relevant CEN / ISO Standards when developed

Fish sampling

Relevant CEN / ISO Standards when developed

Diatom sampling

Relevant CEN/ISO Standards when developed

Standards for physicochemical parameters

Any Relevant CEN / ISO Standards

Standards for hydromorphological parameters

Any Relevant CEN / ISO Standards

1.4 Classification and presentation of ecological status

1.4.1 Comparability of biological monitoring results

- (i) Member States shall establish monitoring systems for the purpose of estimating the values of the biological quality elements specified for each surface water category or for heavily modified and artificial bodies of surface water. In applying the procedure set out below to heavily modified or artificial water bodies, references to ecological status should be construed as references to ecological potential. Such systems may utilise particular species or groups of species which are representative of the quality element as a whole.
- (ii) In order to ensure comparability of such monitoring systems, the results of the systems operated by each Member State shall be expressed as ecological quality ratios for the purposes of classification of ecological status. These ratios shall represent the relationship between the values of the biological parameters observed for a given body of surface water and the values for these parameters in the reference conditions applicable to that body. The ratio shall be expressed as a numerical value between zero and one, with high ecological status represented by values close to one and bad ecological status by values close to zero.

- (iii) Each Member State shall divide the ecological quality ratio scale for their monitoring system for each surface water category into five classes ranging from high to bad ecological status, as defined in Section 1.2, by assigning a numerical value to each of the boundaries between the classes. The value for the boundary between the classes of high and good status, and the value for the boundary between good and moderate status shall be established through the intercalibration exercise described below.
- (iv) The Commission shall facilitate this intercalibration exercise in order to ensure that these class boundaries are established consistent with the normative definitions in Section 1.2 and are comparable between Member States.
- (v) As part of this exercise the Commission shall facilitate an exchange of information between Members States leading to the identification of a range of sites in each ecoregion in the Community; these sites will form an intercalibration network. The network shall consist of sites selected from a range of surface water body types present within each ecoregion. For each surface water body type selected, the network shall consist of at least two sites corresponding to the boundary between the normative definitions of high and good status, and at least two sites corresponding to the boundary between the normative definitions of good and moderate status. The sites shall be selected by expert judgement based on joint inspections and all other available information.
- (vi) Each Member State monitoring system shall be applied to those sites in the intercalibration network which are both in the ecoregion and of a surface water body type to which the system will be applied pursuant to the requirements of this Directive. The results of this application shall be used to set the numerical values for the relevant class boundaries in each Member State monitoring system.
- (vii) Within 3 years of the date of entry into force of the Directive, the Commission shall prepare a draft register of sites to form the intercalibration network which may be adapted in accordance with the procedures laid down in Article 20. The final register of sites shall be established within 4 years of the date of entry into force of the Directive and shall be published by the Commission.
- (viii) The Commission and Member States shall complete the intercalibration exercise within 18 months of the date on which the finalised register is published.
- (ix) The results of the intercalibration exercise and the values established for the Member State monitoring system classifications shall be published by the Commission within 6 months of the completion of the intercalibration exercise.

1.4.2 Presentation of monitoring results and classification of ecological status and ecological potential

- (i) For surface water categories, the ecological status classification for the body of water shall be represented by the lower of the values for the biological and physico-chemical monitoring results for the relevant quality elements classified in accordance with the first column of the table set out below. Member States shall provide a map for each River Basin District illustrating the classification of the ecological status for each body of water, colour-coded in accordance with the second column of the table set out below to reflect the ecological status classification of the body of water:

Ecological Status Classification	Colour Code
High	Blue
Good	Green
Moderate	Yellow
Poor	Orange
Bad	Red

- (ii) For heavily modified and artificial water bodies, the ecological status classification for the body of water shall be represented by the lower of the values for the biological and physico-chemical monitoring results for the relevant quality elements classified in accordance with the first column of the table set out below. Member States shall provide a map for each River Basin District illustrating the classification of the ecological potential for each body of water, colour-coded, in respect of artificial water bodies in accordance with the second column of the table set out below, and in respect of heavily modified water bodies the third column of that table:

Ecological Potential Classification	Colour Code	
	Artificial Water Bodies	Heavily Modified
Good and above	Equal Green and Light Grey Stripes	Equal Green and Dark Grey Stripes
Moderate	Equal Yellow and Light Grey Stripes	Equal Yellow and Dark Grey Stripes
Poor	Equal Orange and Light Grey Stripes	Equal Orange and Dark Grey Stripes
Bad	Equal Red and Light Grey Stripes	Equal Red and Dark Grey Stripes

- (iii) Member States shall also indicate, by a black dot on the map, those bodies of water where failure to achieve good status or good ecological potential is due to non-compliance with one or more environmental quality standards which have been established for that body of water in respect of specific synthetic and non-synthetic pollutants (in accordance with the compliance regime established by the Member State).

1.4.3 Presentation of monitoring results and classification of chemical status

Where a body of water achieves compliance with all the environmental quality standards established in Annex IX, Article 16 and under other relevant Community legislation setting environmental quality standards it shall be recorded as achieving good chemical status. If not, the body shall be recorded as failing to achieve good chemical status.

Member States shall provide a map for each River Basin District illustrating chemical status for each body of water, colour-coded in accordance with the second column of the table set out below to reflect the chemical status classification of the body of water:

Chemical Status Classification	Colour Code
Good	Blue
Failing to Achieve Good	Red

2. GROUNDWATER

2.1 Groundwater quantitative status

2.1.1 Parameter for the classification of quantitative status

Groundwater level regime

2.1.2 Definition of quantitative status

Elements	Good status
Groundwater level	<p>The level of groundwater in the groundwater body is such that the available groundwater resource is not exceeded by the long-term annual average rate of abstraction.</p> <p>Accordingly, the level of groundwater is not subject to anthropogenic alterations such as would result in:</p> <ul style="list-style-type: none">– failure to achieve the environmental objectives specified under Article 4 for associated surface waters– any significant diminution in the status of such waters– any significant damage to terrestrial ecosystems which depend directly on the groundwater body. <p>and alterations to flow direction resulting from level changes may occur temporarily, or continuously in a spatially limited area, but such reversals do not cause saltwater or other intrusion, and do not indicate a sustained and clearly identified anthropogenically induced trend in flow direction likely to result in such intrusions.</p>

2.2 Monitoring of groundwater quantitative status

2.2.1 Groundwater level monitoring network

The groundwater monitoring network shall be established in accordance with the requirements of Articles 7 and 8. The monitoring network shall be designed so as to provide a reliable assessment of the quantitative status of all groundwater bodies or groups of bodies including assessment of the available groundwater resource. Member States shall provide a map or maps showing the groundwater monitoring network in the River Basin Management Plan.

2.2.2 Density of monitoring sites

The network shall include sufficient representative monitoring points to estimate the groundwater level in each groundwater body or group of bodies taking into account short and long term variations in recharge and in particular:

- for groundwater bodies identified as being at risk of failing to achieve environmental objectives under Article 4, ensure sufficient density of monitoring points to assess the impact of abstractions and discharges on the groundwater level;
- for groundwater bodies within which groundwater flows across a Member State boundary, ensure sufficient monitoring points are provided to estimate the direction and rate of groundwater flow across the Member State boundary.

2.2.3 Monitoring frequency

The frequency of observations shall be sufficient to allow assessment of the quantitative status of each groundwater body or group of bodies taking into account short and long term variations in recharge. In particular:

- for groundwater bodies identified as being at risk of failing to achieve environmental objectives under Article 4, ensure sufficient frequency of measurement to assess the impact of abstractions and discharges on the groundwater level,

- for groundwater bodies within which groundwater flows across a Member State boundary, ensure sufficient frequency of measurement to estimate the direction and rate of groundwater flow across the Member State boundary.

2.2.4 Interpretation and presentation of groundwater quantitative status

The results obtained from the monitoring network for a groundwater body or group of bodies shall be used to assess the quantitative status of that body or those bodies. Subject to Section 2.5 Member States shall provide a map of the resulting assessment of groundwater quantitative status, colour coded in accordance with the following regime:

Good – green

Poor – red.

2.3 Groundwater chemical status

2.3.1 Parameters for the determination of groundwater chemical status

Conductivity

Concentrations of Pollutants

2.3.2 Definition of good groundwater chemical status

Elements	Good status
General	<p>The chemical composition of the groundwater body is such that the concentrations of pollutants:</p> <ul style="list-style-type: none">- as specified below, do not exhibit the effects of saline or other intrusions- do not exceed the quality standards applicable <u>to anthropogenic pollution</u> under other relevant Community legislation, <u>including Council Directive 97/57/EC and Council Directive 98/8/EC</u>- are not such as would result in failure to achieve the environmental objectives specified under Article 4 for associated surface waters nor any significant diminution of the ecological or chemical quality of such bodies nor in any significant damage to terrestrial ecosystems which depend directly on the groundwater body
Conductivity	<p>changes in conductivity are not indicative of saline or other intrusion into the groundwater body</p>

2.4 Monitoring of groundwater chemical status

2.4.1 Groundwater monitoring network

The groundwater monitoring network shall be established in accordance with the requirements of Articles 7 and 8. The monitoring network shall be designed so as to provide a coherent and comprehensive overview of groundwater chemical status within each river basin and to detect the presence of long term anthropogenically induced upward trends in pollutants.

On the basis of the characterisation and impact assessment carried out in accordance with Article 5 and Annex II, Member States shall for each period to which a River Basin Management Plan applies, establish a surveillance monitoring programme. The results of this programme shall be used to establish an operational monitoring programme to be applied for the remaining period of the Plan.

Estimates of the level of confidence and precision of the results provided by the monitoring programmes shall be given in the Plan.

2.4.2 Surveillance monitoring

Objective

Surveillance monitoring shall be carried out in order to:

- supplement and validate the impact assessment procedure
- provide information for use in the assessment of long term trends both as a result of changes in natural conditions and through anthropogenic activity

Selection of monitoring sites

Sufficient monitoring sites shall be selected for each of the following:

- bodies identified as being at risk following the characterisation exercise undertaken in accordance with Annex II
- bodies which cross a Member State boundary.

Selection of parameters

The following set of core parameters shall be monitored in all the selected groundwater bodies:

- oxygen content
- pH value
- conductivity
- nitrate
- ammonium

Bodies which are identified in accordance with Annex II as being at significant risk of failing to achieve good status shall also be monitored for those parameters which are indicative of the impact of these pressures.

Transboundary water bodies shall also be monitored for those parameters which are relevant for the protection of all of the uses supported by the groundwater flow.

2.4.3 Operational monitoring

Objective

Operational monitoring shall be undertaken in the periods between surveillance monitoring programmes in order to:

- establish the chemical status of all groundwater bodies or groups of bodies determined as being at risk
- establish the presence of any long term anthropogenically induced upward trend in the concentration of any pollutant.

Selection of monitoring sites

Operational monitoring shall be carried out for all those groundwater bodies or groups of bodies which on the basis of both the impact assessment carried out in accordance with Annex II and surveillance monitoring are identified as being at risk of failing to meet objectives under Article 4. The selection of monitoring sites shall also reflect an assessment of how representative monitoring data from that site is of the quality of the relevant groundwater body or bodies.

Frequency of monitoring

Operational monitoring shall be carried out for the periods between surveillance monitoring programmes at a frequency sufficient to detect the impacts of relevant pressures but at a minimum of once per annum.

2.4.4 Identification of trends in pollutants

Member States shall use data from both surveillance and operational monitoring in the identification of long term anthropogenically induced upward trends in pollutant concentrations and the reversal of such trends. The base year or period from which trend identification is to be calculated shall be identified. The calculation of trends shall be undertaken for a body or, where appropriate, group of bodies of groundwater. Reversal of a trend shall be demonstrated statistically and the level of confidence associated with the identification stated.

2.4.5 Interpretation and presentation of groundwater chemical status

In assessing status, the results of individual monitoring points within a groundwater body shall be aggregated for the body as a whole. Without prejudice to the Directives concerned, for good status to be achieved for a groundwater body, for those chemical parameters for which environmental quality standards have been set in Community legislation:

- the mean value of the results of monitoring at each **representative monitoring** point in the groundwater body or group of bodies shall be calculated; and
- ~~the mean value of these calculations for all monitoring points in the groundwater body or group of bodies shall~~ **In order to demonstrate compliance, a total of 70 % of those mean values shall comply with these standards laid down for groundwater** in the manner prescribed in the relevant Directive.

Subject to section 2.5, Member States shall provide a map of groundwater chemical status, colour-coded as indicated below:

Good	- green
Poor	- red

Member States shall also indicate by a black dot on the map, those groundwater bodies which are subject to a significant and sustained upward trend in the concentrations of any

pollutant resulting from the impact of human activity. Reversal of a trend shall be indicated by a blue dot on the map.

These maps shall be included in the River Basin Management Plan.

2.5 Presentation of Groundwater Status

Member States shall provide in the River Basin Management Plan a map showing for each groundwater body or groups of groundwater bodies both the quantitative status and the chemical status of that body or group of bodies, colour coded in accordance with the requirements of sections 2.2.4 and 2.4.5. Member States may choose not to provide separate maps under sections 2.2.4 and 2.4.5 but shall in that case also provide an indication in accordance with the requirements of 2.4.5 on the map required under this section of those bodies which are subject to a significant and sustained upward trend in the concentration of any pollutant or any reversal in such a trend.

**LISTS OF MEASURES TO BE INCLUDED WITHIN THE PROGRAMMES OF
MEASURES**

Part A

Measures required under the following Directives:

- i. The Bathing Water Directive 76/160/EEC
- ii. The Birds Directive 79/409/EEC⁴⁵
- iii. The Drinking Water Directive 80/778/EEC as amended by Directive 98/83/EC
- iv. The Major Accidents (Seveso) Directive 96/82/EC⁴⁶
- v. The Environmental Impact Assessment Directive 85/337/EEC⁴⁷
- vi. The Sewage Sludge Directive 86/278/EEC⁴⁸
- vii. The Urban Waste Water Treatment Directive 91/271/EEC
- viii. The Plant Protection Products Directive 91/414/EEC
- ix. The Nitrates Directive 91/676/EEC
- x. The Habitats Directive 92/43/EEC⁴⁹
- xi. The Integrated Pollution Prevention Control Directive 96/61/EC

⁴⁵ OJ L 103, 25.4.1979, p. 1.

⁴⁶ OJ L 10, 14.1.1997, p. 13.

⁴⁷ OJ L 175, 5.7.1985, p. 40. Directive as amended by Directive 97/11/EC (OJ L 73, 14.3.1997, p. 5).

⁴⁸ OJ L 181, 8.7.1986, p. 6.

⁴⁹ OJ L 206, 22.7.1992, p. 7.

Part B

The following is a non-exclusive list of supplementary measures which Member States within each River Basin District may choose to adopt as part of the Programme of Measures required under Article 11(4):

- i. legislative instruments
- ii. administrative instruments
- iii. economic or fiscal instruments
- iv. negotiated environmental agreements
- v. emission controls
- vi. codes of good practice
- vii. re-creation and restoration of wetlands areas
- viii. abstraction controls
- ix. demand management measures, inter alia promotion of adapted agricultural production such as low water requiring crops in areas affected by drought
- x. efficiency and re-use measures, inter alia promotion of water efficient technologies in industry and water saving irrigation techniques
- xi. construction projects
- xii. desalination plants
- xiii. rehabilitation projects
- xiv. artificial recharge of aquifers
- xv. educational projects
- xvi. research, development and demonstration projects
- xvii. other relevant measures

RIVER BASIN MANAGEMENT PLANS

- A. River Basin Management Plans shall cover the following elements:
1. a general description of the characteristics of the River Basin District required under Article 5 and Annex II. This shall include:
 - 1.1. For surface waters:
 - mapping of the location and boundaries of water bodies,
 - mapping of the ecoregions and surface water body types within the river basin,
 - identification of reference conditions for the surface water body types;
 - 1.2. For groundwaters:
 - mapping of the location and boundaries of groundwater bodies;
 2. a summary of significant pressures and impact of human activity on the status of surface water and groundwater, including:
 - estimation of point source pollution,
 - estimation of diffuse source pollution, including a summary of land use,
 - estimation of pressures on the quantitative status of water including abstractions,
 - analysis of other impacts of human activity on the status of water;
 3. identification and mapping of protected areas as required by Article 6 and Annex IV;

4. a map of the monitoring networks established for the purposes of Article 8 and Annex V, and a presentation in map form of the results of the monitoring programmes carried out under those provisions for the status of:
 - 4.1. surface water (ecological and chemical);
 - 4.2. groundwater (chemical and quantitative);
 - 4.3. protected areas;
5. a list of the environmental objectives established under Article 4 for surface waters, groundwaters and protected areas, including in particular identification of instances where use has been made of Article 4(3), (4), (5) and (6), and the associated information required under that Article;
6. a summary of the economic analysis of water use as required by Article 5 and Annex III;
7. a summary of the programme or programmes of measures adopted under Article 11, including the ways in which the objectives established under Article 4 are thereby to be achieved;
 - 7.1. a summary of the measures required to implement Community legislation for the protection of water;
 - 7.2. a report on the practical steps and measures taken to apply the principle of recovery of the costs of water use in accordance with Article 9;
 - 7.3. a summary of the measures taken to meet the requirements of Article 7;
 - 7.4. a summary of the controls on abstraction and impoundment of water, including reference to the registers and identifications of the cases where exemptions have been made under Article 11(3)(d);

- 7.5. a summary of the controls adopted for point source discharges and other activities with an impact on the status of water in accordance with the provisions of Article 11(3)(e) and 11.3(f);
- 7.6. an identification of the cases where direct discharges to groundwater have been authorised in accordance with the provisions of Article 11(3)(g);
- 7.7. a summary of the measures taken in accordance with Article 16 on priority substances;
- 7.8. a summary of the measures taken to prevent or reduce the impact of accidental pollution incidents;

7.8.a a summary of measures taken under Article 11(5) for bodies of water, which are unlikely to achieve the objectives set out in Article 4.

- 7.9. details of the supplementary measures identified as necessary in order to meet the environmental objectives established;
- 7.10. details of the measures taken to avoid increase in pollution of marine waters in accordance with Article 11(6);
- 8. a register of any more detailed programmes and management plans for the River Basin District dealing with particular sub-basins, sectors, issues or water types, together with a summary of their contents;
- 9. a summary of the public information and consultation measures taken, their results and the changes to the plan made as a consequence;
- 10. a list of competent authorities in accordance with Annex I;
- 11. the contact points and procedures for obtaining the background documentation and information referred to in Article 14(1), and in particular details of the control measures adopted in accordance with Article 11(3)(e) and 11(3)(f) and of the actual monitoring data gathered in accordance with Article 8 and Annex V.

- B. The first update of the River Basin Management Plan and all subsequent updates shall also include:
1. a summary of any changes or updates since the publication of the previous version of the River Basin Management Plan, including a summary of the reviews to be carried out under Article 4(3), (4), (5) and (6);
 2. an assessment of the progress made towards the achievement of the environmental objectives, including presentation of the monitoring results for the period of the previous plan in map form, and an explanation for any environmental objectives which have not been reached;
 3. a summary of, and an explanation for, any measures foreseen in the earlier version of the River Basin Management Plan which have not been undertaken;
 4. a summary of any additional interim measures adopted under Article 11(5) since the publication of the previous version of the River Basin Management Plan.
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INDICATIVE LIST OF THE MAIN POLLUTANTS

1. Organohalogen compounds and substances which may form such compounds in the aquatic environment.
2. Organophosphorus compounds.
3. Organotin compounds.
4. Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment.
5. Persistent hydrocarbons and persistent and bioaccumulable organic toxic substances.
6. Cyanides.
7. Metals and their compounds.
8. Arsenic and its compounds.
9. Biocides and plant protection products.
10. Materials in suspension.
11. Substances which contribute to eutrophication (in particular, nitrates and phosphates).

12. Substances which have an unfavourable influence on the oxygen balance (and can be measured using parameters such as BOD, COD, etc.).

13. Man-made radioactive substances.

EMISSION LIMIT VALUES AND ENVIRONMENTAL QUALITY STANDARDS

The "limit values" and "quality objectives" established under the daughter Directives of Directive 76/464/EEC shall be considered emission limit values and environmental quality standards, respectively, for the purposes of this Directive. They are established in the following Directives:

- i. The Mercury Discharges Directive (82/176/EEC)⁵⁰;
- ii. The Cadmium Discharges Directive (83/513/EEC)⁵¹;
- iii. The Mercury Directive (84/156/EEC)⁵²;
- iv. The Hexachlorocyclohexane Discharges Directive (84/491/EEC)⁵³, and
- v. The Dangerous Substance Discharges Directive (86/280/EEC)⁵⁴

⁵⁰ OJ No L 81, 27.3.1982, p. 29.

⁵¹ OJ No L 291, 24.10.1983, p. 1.

⁵² OJ No L 74, 17.3.1984, p. 49.

⁵³ OJ No L 274, 17.10.1984, p. 11.

⁵⁴ OJ No L 181, 4.7.1986, p. 16.

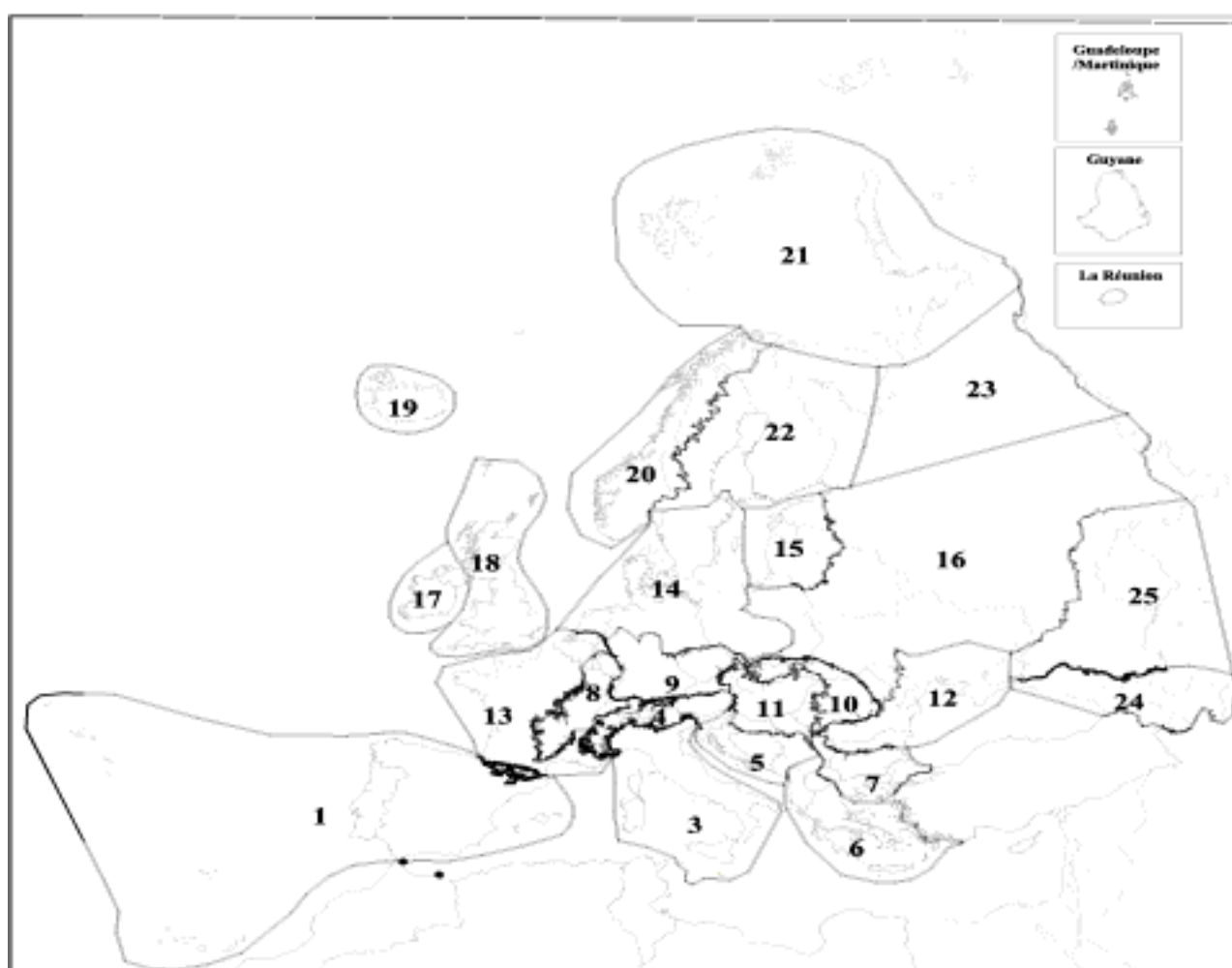
PRIORITY SUBSTANCES

MAP A**System A: Ecoregions for rivers and lakes**

1. Iberic - Macaronesian region
2. Pyrenees
3. Italy, Corsica and Malta
4. Alps
5. Dinaric Western Balkan
6. Hellenic Western Balkan
7. Eastern Balkan
8. Western highlands

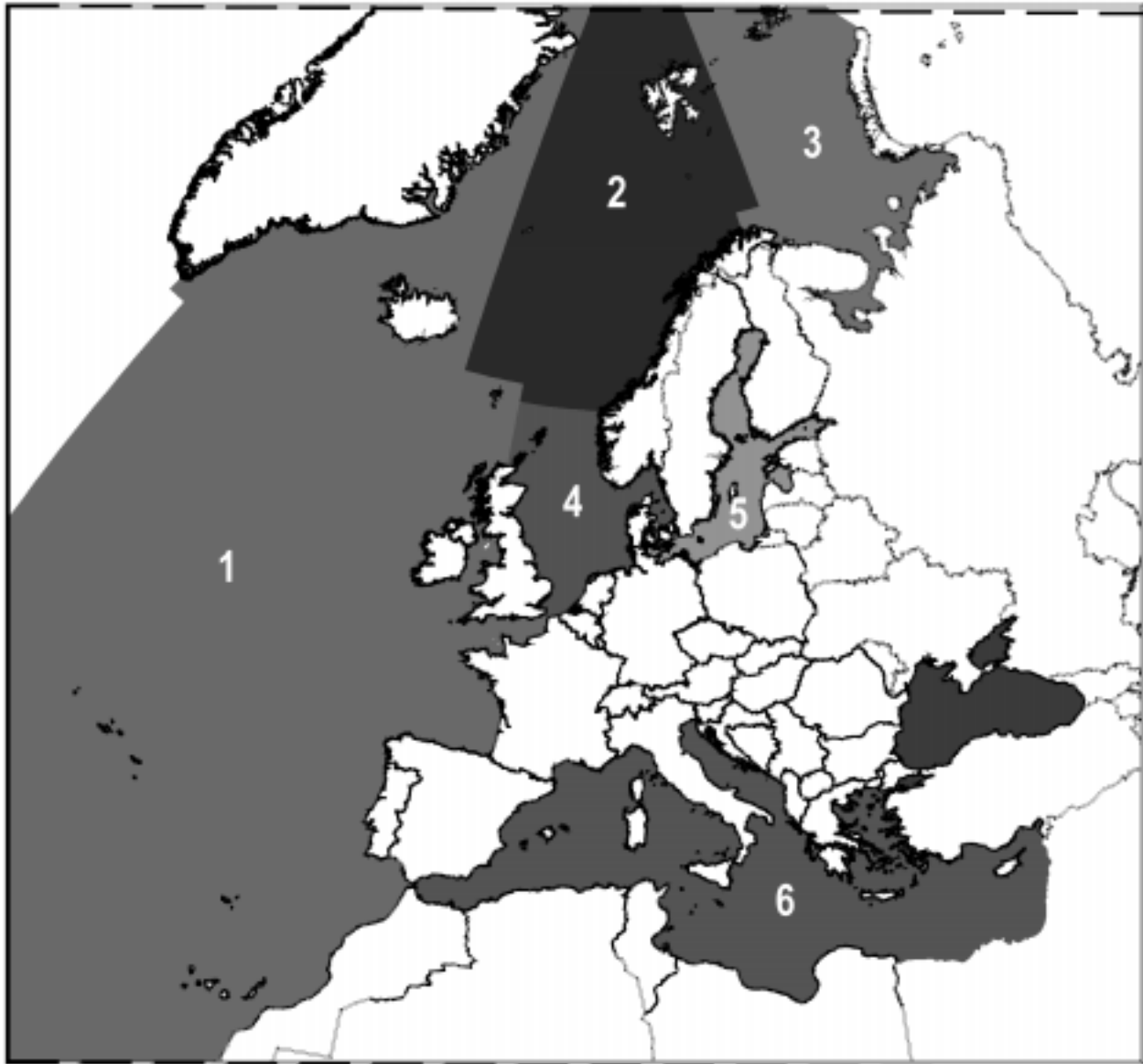
9. Central highlands
10. The Carpathians
11. Hungarian lowlands
12. Pontic province
13. Western plains
14. Central plains
15. Baltic province
16. Eastern plains

17. Ireland and Northern Ireland
18. Great Britain
19. Iceland
20. Borealic uplands
21. Tundra
22. Fenno-Scandian shield
23. Taiga
24. The Caucasus
25. Caspian depression



MAP B

System A: Ecoregions for Transitional waters and Coastal waters



- | | | | |
|----|----------------|----|-------------------|
| 1. | Atlantic Ocean | 4. | North Sea |
| 2. | Norwegian Sea | 5. | Baltic Sea |
| 3. | Barents Sea | 6. | Mediterranean Sea |