

UK Technical Advisory Group on the Water Framework Directive

Draft principles for an objective setting framework for river basin management planning in accordance with the Water Framework Directive

Public Working Draft

This Guidance Paper is a working draft defined by the UKTAG. It documents the principles to be adopted by agencies responsible for implementing the Water Framework Directive (WFD) in the UK. This method will evolve as it is tested, with this working draft amended accordingly.

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1. Purpose of this Paper

1.1 This paper sets out draft principles for the objective setting framework. It focuses on the Directive's provisions for extending the 2015 deadline for achieving good status (paragraph 4 of Article 4) and for setting a less stringent objective than good status (paragraph 5 of Article 4).

2. Introduction

2.1 The Water Framework Directive (WFD) establishes a range of different environmental objectives for the water environment. For river basin management planning, an objective setting process is required to enable decisions to be made about which of these environmental objectives are applicable to particular bodies of water. The flexibility to apply different objectives will allow improvements to the water environment to be prioritised over successive planning cycles whilst ensuring that the needs of water users and other stakeholders are properly taken into account in decision-making.

2.2 The environmental objectives of the WFD are set out in Article 4 and summarised in Table 1 below.

Prevent deterioration in status (i.e. deteriorating to a poorer status class) [Article 4.1.a.i; 4.1.b.i]	Aim to restore to good surface water status or good groundwater status by 2015 [Article 4.1.a.ii; 4.1.a.iii; 4.1.b.ii]	Comply with the standards and objectives for Protected Areas by the timetable specified in the legislation establishing the Area or, if no timetable is so specified, by 2015 [Article 4.1.c]	For surface waters, aim to cease or phase out discharges, emissions and losses of priority hazardous substances (PHSs) [Article 4.1.a.iv] NB: Timetable is 20 years after the daughter directive is adopted.	For groundwater, prevent or limit the input of pollutants into groundwater [Article 4.1.b.i] And Reverse any significant and sustained upward trend in the concentration of any pollutant in order to progressively reduce pollution [Article 4.1.b.iii]

Table 1: Environmental objectives of the Water Framework Directive				
Applies to all surface water and groundwater bodies	Applies to all surface water and groundwater bodies	Applies to surface waters or groundwater relevant to the objectives of the Protected Area. May require standards to be met across a water body; in part of a water body or in relation to specific pressures affecting a water body or part of a water body	Applies to all discharges, emissions and losses of such substances. Does not require standards to be met in surface water itself (NB: EQS compliance for PHSs is required for good status)	Applies to all groundwater
Alternative objectives: Exceptions for temporary deterioration (Article 4.6); Deterioration due to new physical alterations to surface waters or level alterations to groundwater (Article 4.7); Deterioration of surface waters from high status to good status due to new sustainable development activities (Article 4.7)	Alternative objectives: Extended deadline (Article 4.4); Less stringent objective (Article 4.5)	Alternative objectives: The exceptions specified under the parent legislation establishing the Protected Area may be used to define the objectives and standards for the particular area	Alternative objectives: None unless specified in the daughter directive	Alternative objectives: No specific exemptions are relevant to these objectives. The exemptions for temporary deterioration in status and deterioration from high surface water status to good surface water status are assumed to mean that failures to prevent or limit inputs of pollutants into groundwater or reverse pollutant trends in groundwater can be allowed in the relevant circumstances

2.3 This paper sets out draft principles for the objective setting framework. It focuses on the Directive's provisions for extending the 2015 deadline for achieving good status (paragraph 4 of Article 4) and for setting a less stringent objective than good status (paragraph 5 of Article 4). Separate TAG papers discuss the objectives for Protected Areas and the objective of preventing deterioration in the status of water bodies. A further TAG paper sets out guidance on designing cost-effective programmes of measures.

2.4 The Directive requires that where more than one of its environmental objectives relates to a given water body, the most stringent applies¹. For example, in some circumstances, the objective for a Protected Area may be the most stringent objective if the achievement of that objective requires:

- (i) A more stringent standard for a particular parameter to be met in a water body, or in part of a water body than would be required to prevent deterioration in status; or, as relevant, achieve good status by 2015 or by an extended deadline, or achieve a less stringent objective than good status for the water body;
- (ii) An earlier deadline for achieving a particular standard; or
- (iii) A more stringent control on a pressure affecting a water body, or part of a water body than would be required to prevent deterioration in status; or, as relevant, achieve good status by 2015 or by an extended deadline, or achieve a less stringent objective.

¹ Paragraph 2 of Article 4

2.5 The principles outlined in this paper are intended to be applicable to the diverse situations in which decisions on measures are likely to be taken. These range from measures which would require a UK-level legislative decision (e.g. economic instruments and marketing and use restrictions); measures for which investment limits are determined by the devolved administrations (e.g. water industry planning); measures negotiated between the regulators and private sector representatives; and measures negotiated between the regulators and individual water users.

3. Overview of the tests for extended deadlines and less stringent objectives

3.1 Figure 1 summarises the relationship between the principal tests involved in determining whether an extended deadline or a less stringent objective is applicable.

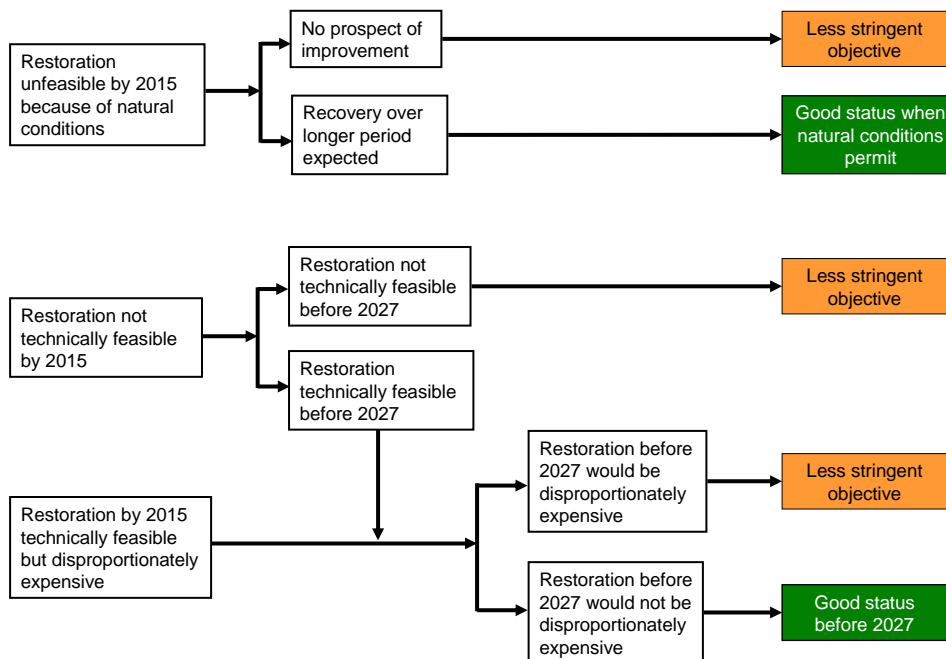


Figure 1: Principal tests involved in applying extended deadlines or less stringent objectives

4. Order of major decision steps in objective setting

4.1 The possibility of extending the 2015 deadline² for achieving good status³ in order to phase the necessary environmental improvements over successive planning cycles should be explored first before considering the application of a less stringent objective⁴ than good status (See Figure 2).

4.2 Where less stringent objectives than good status are set, they must be reviewed every six years. The reviews may identify improvements that would enable water bodies for which less stringent objectives have been set in previous planning cycles to achieve good status or to move closer to achieving good status.

² Paragraph 4 of Article 4 of Directive 2000/60/EC

³ References to good status mean: for surface water bodies that are not designated as artificial or heavily modified, good ecological status and good surface water chemical status; for surface water bodies that are designated as heavily modified or artificial, good ecological potential and good surface water chemical status; and, for bodies of groundwater, good groundwater chemical status and good groundwater quantitative status

⁴ Paragraph 5 of Article 4 of Directive 2000/60/EC

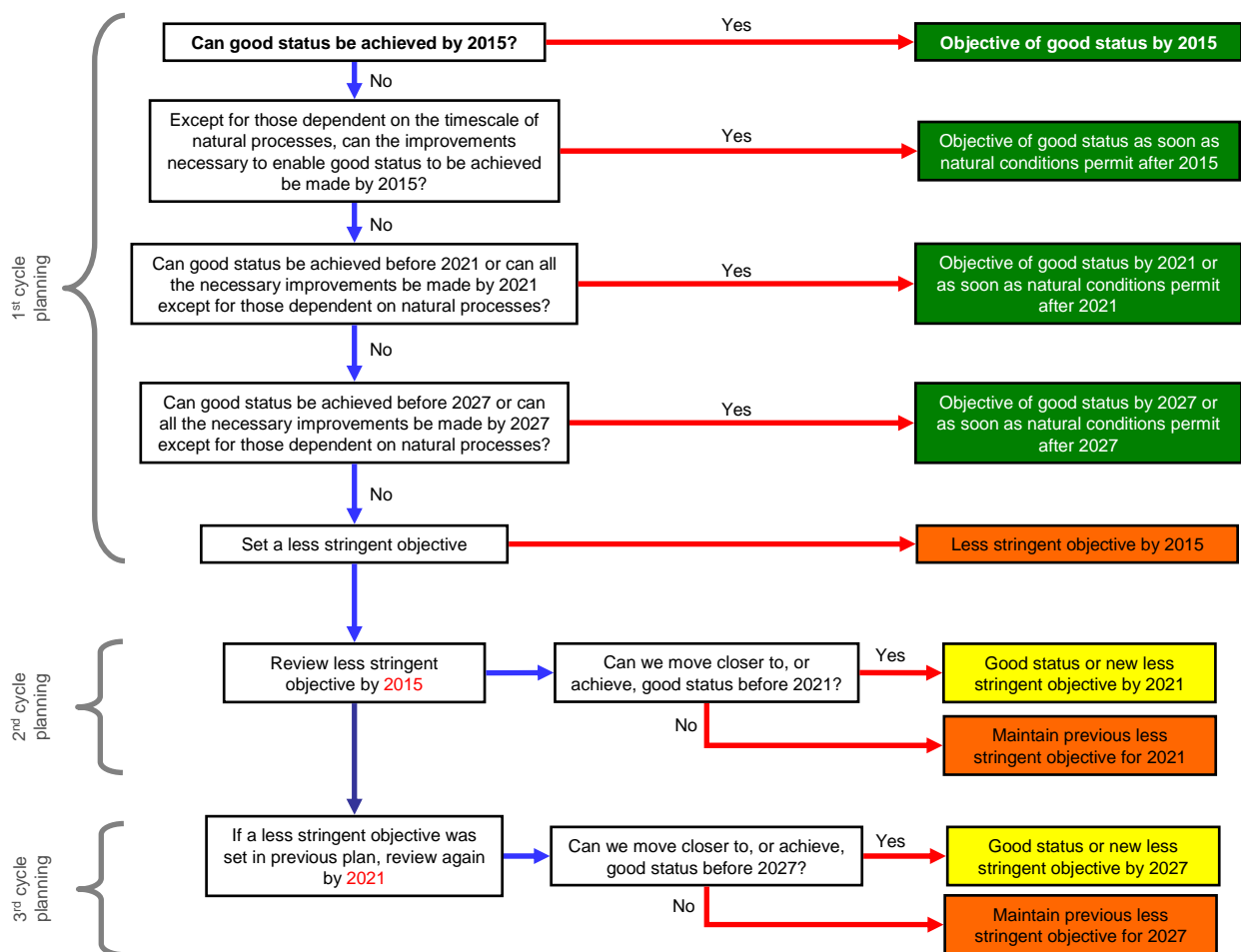


Figure 2: Stepped approach to setting improvement objectives. Although not illustrated, less stringent objectives continue to be reviewed every six years after 2021

5. The technical feasibility test

- 5.1 An extended deadline up to 2027 or a less stringent objective may be set where the measures required to achieve good status by 2015 would be (technically) unfeasible or disproportionately expensive [Paragraph 4(a)(i) and 4(a)(ii) and the chapeau to paragraph 5 of Article 4].
- 5.2 An extended deadline should also be applied where all the improvements necessary to achieve good status bar those dependent on natural processes (see paragraph 6.3) are to be made by 2015 but good status is not expected to be achieved until later when the natural processes have had effect. In such cases, the deadline for achieving good status extends without limit until the necessary natural processes have had effect.
- 5.3 If making all the necessary improvements bar those dependent on natural processes by 2015 would be technically unfeasible or disproportionately expensive, an extended deadline up to 2027 for making the improvements may be applied. Should the achievement of good status still require further improvements that depend on natural processes, the deadline for achieving good status extends without limit until such processes have had effect.
- 5.4 The technical feasibility of achieving good status by the relevant deadline should be explored first before undertaking assessments of whether achieving good status would be disproportionately expensive (See Figure 3).

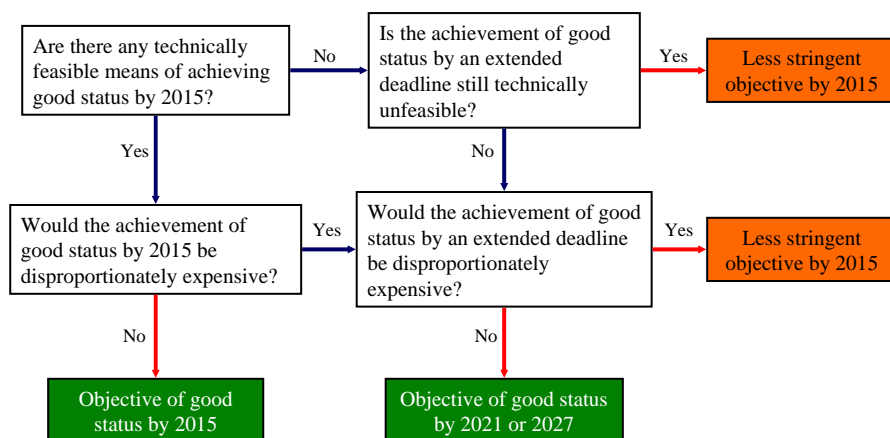


Figure 3: Stepped approach to the main tests justifying the use of extended deadlines and less stringent objectives

5.5 Achieving good status should be considered technically unfeasible if:

- (i) A technique necessary to do so cannot reasonably be developed in time;
- (ii) A technique necessary to do so cannot be reasonably be deployed and have effect in the time available within the relevant planning cycle, or planning cycles in the case of decisions on extended deadlines;
- (iii) The technical capacity that can reasonably be made available to implement a necessary technique is inadequate (e.g. the competence in the necessary technique that could be made available is insufficient to implement a necessary technique within the relevant planning cycle, or planning cycles in the case of decisions on extended deadlines);
- (iv) There is nothing to indicate what the cause of the failure to achieve good status may be and therefore what technique may be needed to aim to achieve good status⁵; or
- (v) There is considerable uncertainty⁶ about the effectiveness of a necessary technique and therefore about whether good status can be achieved by the required deadline

6. The disproportionately expensive test

6.1 Extended deadlines or less stringent objectives may also be set if the measures needed to achieve good status by 2015 are disproportionately expensive [Paragraph 4(a)(ii) and the chapeau to paragraph 5 of Article 4].

6.2 This provision provides a means of deferring from the aim of achieving good surface water status by 2015 or good groundwater status by 2015 in those circumstances where achieving these objectives would be clearly unreasonable.

6.3 The effort involved in estimating the potential costs and benefits of achieving good status should depend on the evidence needed to justify the application of an extended deadline or a less stringent objective⁷.

⁵ Where the cause of the problem is subsequently identified (e.g. through investigative monitoring), the objective for the water body should be reviewed immediately

⁶ Note: The Directive requires Member States to AIM to achieve good status. Uncertainty about the effectiveness of a measure should not justify deferring from at least trying to achieve good status. However, where the uncertainty about the effectiveness is high, setting a less stringent objective is recommended to avoid raising false expectations among stakeholders

⁷ Proportionate methods are needed for making determinations, taking account of the number and diversity of decision-making situations likely to be encountered in river basin management planning. Where possible, simple pre-agreed rules

- 6.4 The measures required under other relevant Community legislation [e.g. Urban Waste Water Treatment Directive; Nitrates Directive; IPPC Directive; Dangerous Substances' Daughter Directives; Habitats Directive; Birds Directive; Bathing Water Directive; etc] must be implemented in accordance with that legislation. The Water Framework Directive's objective setting provisions do not allow the deadline for implementing the measures required under other Community legislation to be deferred or the stringency of those measures to be reduced.
- 6.5 The consideration of whether the measures needed to achieve good status would be disproportionately expensive only applies to those measures that are required over and above those already required under other Community legislation.
- 6.6 The assessment of whether achieving good status would be disproportionately expensive should be based on an assessment of whether a combination of these additional measures judged to be most cost-effective at achieving good status would be disproportionately expensive.
- 6.7 The following table provides examples of the most likely circumstances in which there may be different combinations of measures capable of achieving good status

Combinations	Specific examples
Where different pressures contribute to a particular impact	<ul style="list-style-type: none"> • The balance between point and diffuse source controls on nutrient concentrations • The balance between controls on different point source discharges into a water body • The balance between controls on abstractions (lowering the quantity of water available to dilute pollutants) and discharges
Where there is an option to remove or significantly reduce the magnitude of a pressure and hence reduce the need for other controls on that pressure	<ul style="list-style-type: none"> • Using process or source management controls, such as Sustainable Urban Drainage Systems, to reduce the need for expensive end-of-pipe treatment • Applying marketing and use restrictions for pesticides or for nutrients in detergents to reduce the need for end-of-pipe treatment • Re-locating a problem abstraction to an alternative supply (e.g. creating winter storage ponds as an alternative supply for summer agricultural irrigation) • Creating flood water storage areas to reduce the need for hard engineering flood defences
Where there is an option to compensate for the effects of a pressure and hence reduce the need for controls on that pressure	<ul style="list-style-type: none"> • Using groundwater to augment river flows that would otherwise be impacted by a surface water abstraction

7. Application of extended deadlines

7.1 Paragraph 4 of Article 4 provides for the phased achievement of good status. The provision effectively extends the planning horizon by up to 12 years. However, where natural conditions are the limiting factor, no deadline need be established for achieving good status.

⁷ Proportionate methods are needed for making determinations, taking account of the number and diversity of decision-making situations likely to be encountered in river basin management planning. Where possible, simple pre-agreed rules should be developed to screen out obvious cases where the necessary measures to achieve good status would be either disproportionately expensive or obviously not disproportionately expensive. Measures determined to be not disproportionately expensive may be incorporated into general binding rules; standards of good agricultural practice; marketing and use restrictions etc. A measure that has been implemented in a previous planning cycle without proving disproportionately expensive could be assumed not to be a disproportionately expensive measure, unless the circumstances under which the measure is to be applied are substantially different from those under which it was previously used.

7.2 An extended deadline may be applied if:

- (i) Natural conditions prevent the timely achievement of good status; or
- (ii) It is technically unfeasible or disproportionately expensive to achieve good status by 2015; but
- (iii) Technically feasible and not disproportionately expensive to achieve good status before 2027

7.3 Natural conditions [see paragraph 4(a)(iii) of Article 4]: If the measures necessary to achieve good status require the assistance of a natural process to make them effective the achievement of good status can be extended until such time as those natural processes have occurred. No maximum time limit is imposed by the Directive in such cases. For example:

- (i) Once those measures that are technically feasible and not disproportionately expensive have been taken, a series of flood events may still be required to restore the morphological conditions in a river water body necessary to support good ecological status;
- (ii) Once those measures that are technically feasible and not disproportionately expensive have been taken, natural attenuation processes may still be required for a water body to recover from pollution. The attenuation rate is a natural condition controlling recovery time once further pollutant inputs have been controlled;
- (iii) Once water quality has been improved in a polluted water body (e.g. nutrient concentrations in a lake have been restored to those necessary to support good status), the natural processes of colonisation and establishment of the flora and fauna associated with good status may take many years.

7.4 Technical unfeasibility & disproportionate expense [see paragraph 4(a)(i) & (ii) of Article 4]: Although an extended deadline must apply to the objectives for a specific water body, the tests for deciding whether an extended deadline is applicable may be applied to either:

- (i) The measures required to bring a specific body of water to good status; or
- (ii) The programme of measures required to bring several or all bodies of water to good status⁸. This enables consideration to be given to the technical feasibility and the overall costs and benefits of a particular programme designed to improve a number of water bodies.

7.5 For example, achieving good status by 2015 in all the water bodies in a set of water bodies may be unfeasible because the technical capacity that can be made available is insufficient (see Figure 4). The technical capacity that can be made available may be used to achieve good status in a prioritised sub-set of the water bodies. The achievement of good status in the other water bodies is technically unfeasible in the first planning cycle, and would be deferred to subsequent planning cycles.

⁸ Note the wording of the chapeau to Article 4.4 and paragraph (a) refers to 'bodies of water' whereas the chapeau of Article 4.5 refers to 'specific bodies of water'.

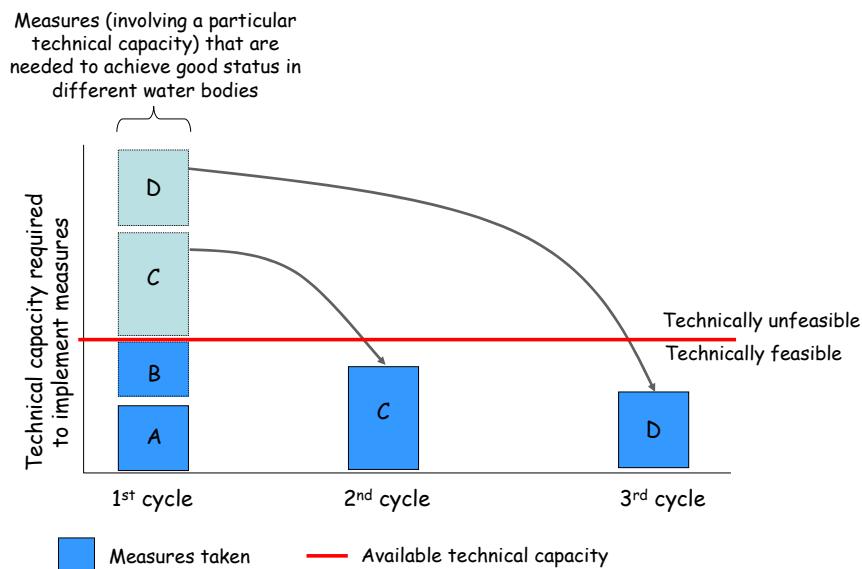


Figure 4: Example of applying extended deadlines in relation to a set of water bodies.

7.6 Similarly, for the purposes of phasing the achievement of good status, the ‘disproportionately expensive’ test can be applied to the programme of measures for a set of water bodies or on a water body by water body basis (See Figure 5). The former approach enables the costs and the benefits of the improvement programme overall to be taken into account, and where appropriate, for the improvements to be phased over successive planning cycles.

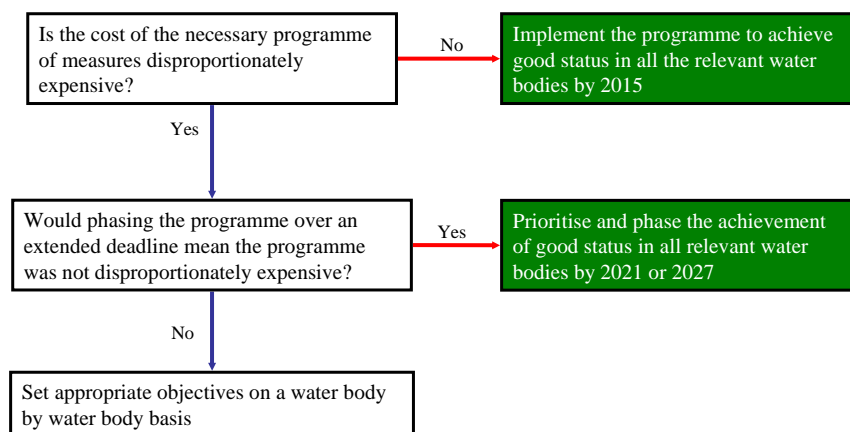


Figure 5: Applying extended deadline tests to a programme of measures

7.7 Disproportionate expense [see paragraph 4(a)(ii) of Article 4]: The achievement of good status may be disproportionately expensive by 2015 but no longer so by an extended deadline where the implementation of the measures over the longer period significantly reduces the costs of those measures⁹. For example, the implementation of the measures could be timed to coincide with a planned renewal cycle and hence substantially reduce their costs.

7.8 Where an extended deadline for achieving good status is applied, interim targets may be established to help monitor progress towards achieving good status by the extended deadline.

⁹ The disproportionate expense test should enable the river basin management planning process to take account of the effect of phasing spend over a longer period on the affordability of that spending

8. Constraints on the use of less stringent objectives – test for alternative means

8.1 A less stringent objective cannot be applied if:

- (i) There are other means of providing the environmental and socio-economic needs served by the activity, the water use of which is preventing the achievement of good status;
- (ii) These other means are a significantly better environmental option; and
- (iii) These other means would not entail disproportionate costs (Figure 6).

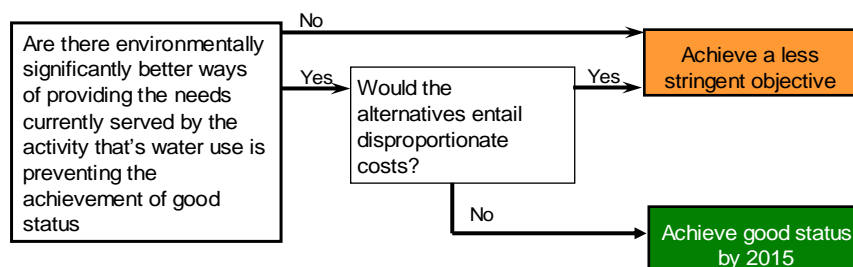


Figure 6: A less stringent objective cannot be applied if there are other suitable means of providing the needs served by the activity, the water use of which is preventing the achievement of good status

- 8.2 Where a case is being made that making the improvements necessary to achieve good status would be disproportionately expensive, the combinations of measure options, the costs of which are being assessed, must include those measure options that would enable the pressure preventing the achievement of good status to be removed or substantially reduced by providing the needs served by the activity responsible for the pressure in some other way that is significantly better overall for the environment (e.g. relocating an abstraction to an alternative supply; piping a discharge to another location; replacing hard engineered flood defences with environmentally better options to flood management).
- 8.3 Where there are other means of providing the needs served by the activity and these means do not entail disproportionate costs, the achievement of good status cannot be considered disproportionately expensive. The implementation of such other means is not mandatory but, if the potential for such means exists, good status must be achieved in one way or another even if disproportionately expensive measures are used to do so.

9. General constraints on the use of extended deadlines and less stringent objectives

9.1 There are a number of constraints to the application of extended deadlines and less stringent objectives in addition to the tests discussed in the previous sections. An extended deadline or a less stringent objective cannot be set if:

- (i) Doing so would compromise the achievement of a more stringent objective required under Article 4 (see paragraph 2 of Article 4)

For example, if setting a less stringent objective affected a no deterioration in status objective; a Protected Area objective or a trend reversal objective for groundwater

- (ii) Deterioration in the status of the affected water body would result (see the chapeau to paragraph 4 and paragraph 5(c) of article 5).

For example, if setting a less stringent objective or an extended deadline would leave the water body in condition in which it was vulnerable to deterioration in status (e.g. no

reserve carrying capacity to cope with uncontrolled inputs of pollutants), the less stringent objective or the extended deadline could not be applied

- (iii) The achievement of the objectives of the Directive in other water bodies would be permanently excluded (see paragraph 8 of Article 4).

The practical effect of this requirement may be limited in the context of extended deadlines and less stringent objectives since both are time limited exemptions and are unlikely to make the potential for improvements to other water bodies permanently worse.

- (iv) The achievement of the objectives of the Directive in other water bodies would be compromised (see paragraph 8 of Article 4).

For example, if setting an extended deadline or a less stringent objective for a water body would compromise the ability to prevent deterioration in the status of any other water body, the extended deadline or the less stringent objective could not be applied.

- (v) Extending the deadline or setting a less stringent objective would be inconsistent with the implementation of other Community legislation (see paragraph 8 of Article 4).

For example, if the objectives or measures required by other Community legislation, including the legislation establishing Protected Areas, would be compromised by the application of extended deadlines or less stringent objectives, the application of such objectives would not be permitted.

- (vi) The level of protection provided by existing Community legislation would not be guaranteed (see paragraph 9 of Article 4).

For example, if the achievement of the standards and objectives for a Protected Area would be compromised by the setting of an extended deadline or a less stringent objective, the extended deadline or the less stringent objective could not be applied.

10. Inter-sector and intra-sector combinations of measures and objective setting

- 10.1. The tests for whether achieving good status would be disproportionately expensive or technically unfeasible apply to the set of measures necessary to achieve good status.
- 10.2. Before a less stringent objective or an extended deadline can be applied, the most cost-effective combinations of measures that would fully address each impact should be identified (e.g. pollution impacts; water resource impacts; habitat impacts). In some cases, a measure may contribute to addressing more than one impact (e.g. improved habitat may also improve pollutant mixing and breakdown).
- 10.3. Each of the impacts preventing the achievement of good status must be addressed to achieve good status. A less stringent objective or an extended deadline would be justified if the implementation of one of the cost-effective combinations of measures identified in relation to one of the impacts would be disproportionately expensive.
- 10.4. The cost-effective combinations of measures to address one of the impacts preventing the achievement of good status may include measures that need to be taken by different sectors or different water users within a sector (i.e. a measure taken by one sector would not resolve the impact unless another sector also took measures. River basin management may therefore require the development of some form of effective intra-sector and inter-sector planning.

Annex 1 Definition of a less stringent objective

- 1.1 Where a less stringent objective is applicable, the objective set for a surface water body must represent the highest ecological and chemical status possible, given impacts that could not reasonably have been avoided due to the nature of the human activity or pollution.
- 1.2 The ecological and chemical status class of a water body is dictated by the quality element worst affected by human activity [i.e. one-out, all-out]. The highest class a water body can achieve will be determined by the worst affected quality element relevant to classification.
- 1.3 Suppose, for reasons of technical unfeasibility or disproportionate expense, a quality element cannot be restored to the condition required of it for good ecological status or good chemical status by 2015 or by an extended deadline. The highest class that can be assigned to the water body will be worse than good, even though the condition of some of the quality elements may be compatible with good status or better. However, this does not mean that a less stringent objective can be defined such that the condition of the other quality elements is permitted to deteriorate to the status dictated by the worst affected quality element (See Figure 7).

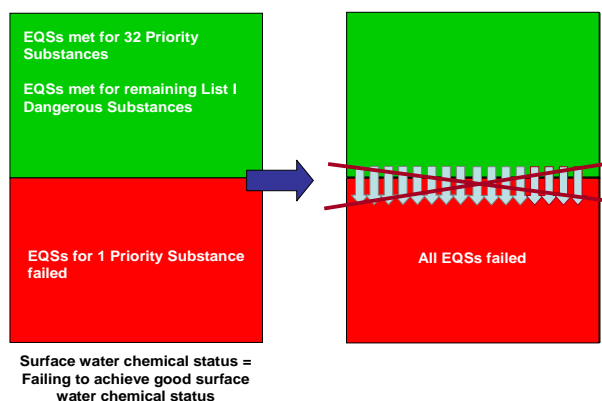


Figure 7: A less stringent objective does not mean that the condition of all quality elements can deteriorate to that of the worst affected

- 1.4 The Directive's provisions for less stringent objectives make allowance only for those impacts that cannot reasonably be avoided because doing so would be technically unfeasible or disproportionately expensive. The intent of the provisions is not to allow the quality of the water body to move even further away from good status. This is illustrated by the requirement to review the objective every six years to assess whether circumstances have changed such that it has become technically feasible and not disproportionately expensive to achieve good status.
- 1.5 Accordingly, a less stringent objective must represent the condition a surface water body will achieve once all improvements towards good status have been made which are not technically unfeasible or disproportionately expensive (see Figure 8).

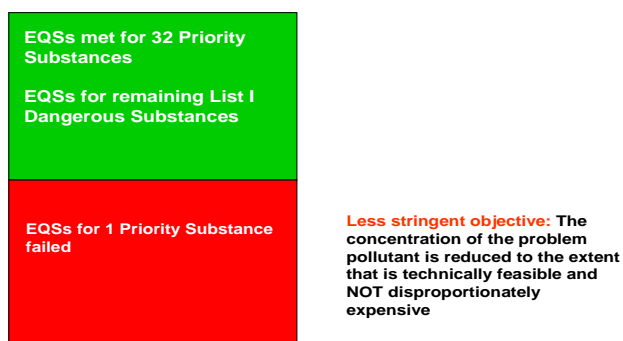


Figure 8: The standards for a less stringent objective represent those improvements towards good status that are not disproportionately expensive or technically unfeasible.