

COMMON IMPLEMENTATION STRATEGY FOR THE WATER FRAMEWORK DIRECTIVE (2000/60/EC)



Guidance Document No. 20

GUIDANCE DOCUMENT ON EXEMPTIONS
TO THE ENVIRONMENTAL OBJECTIVES

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Foreword

Activities to support the implementation of the Water Framework Directive are under way both in Member States and in the European Commission. The EU Member States, Norway and the European Commission have jointly developed a common strategy for supporting the implementation of the Directive 2000/60/EC, "establishing a framework for Community action in the field of water policy" (the Water Framework Directive). The main aim of this strategy is to allow a coherent and harmonious implementation of the Directive. The focus is on methodological questions related to a common understanding of the technical and scientific implications of the Water Framework Directive.

In the context of this common implementation strategy (CIS), a series of working groups and joint activities have been launched for the development and testing of non-legally binding Guidance Documents. A strategic co-ordination group oversees these working groups and reports directly to the Water Directors of the European Union and Commission that play the role of the overall decision body for the Common Implementation Strategy.

As a result of a four year discussion initiated by the Water Directors and assisted by a Drafting Group, several documents have been prepared to identify some key issues and make recommendations related to environmental objectives and exemptions.

Now this previous work is brought together in one consolidated document to give a full overview on the issue of environmental objectives and exemptions. This document compiles previously agreed interpretations on issues related to environmental objectives and exemptions and does not add any new issues. The previously agreed documents will stay available on Circa¹ as background documents for this consolidated guidance document.

¹

http://circa.europa.eu/Public/irc/env/wfd/library?!=/framework_directive/thematic_documents/environmental_objectives

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1 INTRODUCTION - A GUIDANCE DOCUMENT: WHAT FOR?

On 23 October 2000, the "Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy" or, in short, the **EU Water Framework Directive** (or even shorter the WFD) was adopted. By means of this Framework Directive, the EU provides for the management of inland surface waters, groundwater, transitional waters and coastal waters in order to prevent and reduce pollution, promote sustainable water use, protect the aquatic environment, improve the status of aquatic ecosystems and mitigate the effects of floods and droughts.

The environmental objectives are defined in Article 4 - the core article - of the Water Framework Directive (WFD). The aim is long-term sustainable water management based on a high level of protection of the aquatic environment. Article 4.1 defines the **WFD general objective** to be achieved in all surface and groundwater bodies, i.e. good status by 2015, and introduces the principle of preventing any further deterioration of status. There follow a number of **exemptions** to the general objectives that allow for less stringent objectives, extension of deadline beyond 2015, or the implementation of new projects, provided a set of conditions are fulfilled.

As for many of the challenging concepts under the WFD, the text of the directive provides the framework and gives the general orientation but there is scope for differences in understanding and application. So from the first day of the implementation it was clear that the use of exemptions needed to be explained further and the rules for application had to become clearer.

Under the Common Implementation Strategy (CIS) of the WFD several working groups for various topics have been set up². The issue of exemptions was firstly addressed in the working group on economics (WATECO) where a first indication of how to deal with exemptions related to disproportionate costs is given. The WATECO guidance document, endorsed by the Water Directors, in particular started to discuss exemptions in the light of disproportionate costs.

In June 2005, the Water Directors (WD) endorsed a paper on the environmental objectives under the WFD (WFD). This document introduced key elements regarding the environmental objectives of the WFD. At the end of 2006, the Water Directors endorsed a Policy Paper on the application of Article 4.7 for new modifications. In November 2007, a third document dealing with the exemptions on extension of deadlines (4.4), the setting of less stringent objectives (4.5) and temporary deterioration (4.6) was endorsed by the Water Directors. Finally, a specific paper with conclusions on disproportionate costs was endorsed by the Water Directors in June 2008³.

In addition to the agreed documents, information on case studies and practical examples was exchanged at various occasions. Information related to a workshop held in Berlin in 2005 and in Copenhagen in 2008 can be found at the Circa website⁴.

² See http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents

³ All papers can be found at http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/thematic_documents/environmental_objectives

⁴ See http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/implementation_convention/objectives_exemptions and http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/implementation_convention/disproportionate

After this, all existing earlier agreed papers are brought together into one consolidated document, resulting in this guidance document. Chapter 2 recalls the requirements of the WFD related to the environmental objectives and the exemptions. Chapter 3 reflects on key issues for the interpretation of the exemptions. In paragraph 3.2, horizontal issues which are applicable to two or more exemptions are addressed. In addition to these horizontal issues, paragraph 3.3 until 3.5 included address some specific issues related to each exemption.

This guidance document intends to provide earlier agreed information in a complete way, and may be useful for water managers involved in preparing the river basin management plans, as well as to the public interested in the (draft) river basin management plans (RBMP) and the related process of objectives setting.

2 RECALL OF WFD REQUIREMENTS IN RELATION TO ENVIRONMENTAL OBJECTIVES

2.1 General introduction

The environmental objectives and the exemptions are set under Article 4 of the WFD. The subsequent paragraphs aim at describing Article 4, mainly the exemptions, in a summarised way and in the order presented in the Directive.

Article 4 WFD sets out the "**environmental objectives**" mainly in Article 4.1. The **main environmental objectives** in the Directive are manifold and include the following elements (for details see Article 4.1, (a) surface waters, (b) groundwaters and (c) protected areas):

- **No deterioration** of status for surface and groundwaters and the protection, enhancement and restoration of all water bodies;
- Achievement of *good status* by 2015, i.e. good ecological status (or Potential) and good chemical status for surface waters and good chemical and good quantitative status for groundwaters;
- **Progressive reduction of pollution** of priority substances and **phase-out of** priority hazardous substances in surface waters⁵ and prevention and limitation of input of pollutants in groundwaters;
- **Reversal** of any significant, upward **trend** of pollutants in groundwaters;
- Achievement of Standards and objectives set for **protected areas** in Community legislation.

It is important to note that where more than one of the objectives relates to a given body of water, the most stringent shall apply (Art. 4.2), irrespective of the fact that all objectives must be achieved.

It is important to understand that the normative definitions for the environmental objective of "good status" are described in the Directive in great detail in Annex V. However, the development of specific numerical criteria and classification schemes including class boundaries is described only as regards the process. Taking into account the results of the intercalibration exercise Member States are obliged to set detailed values defining the status for each water body.

For **heavily modified and artificial water bodies**, Article 4.1 point (a) indent (iii) sets out "specific objectives" for these specific water bodies. In Article 4.3, strict criteria for the designation of artificial or heavily modified water bodies are described.

In order to achieve the specific objectives for heavily modified and artificial water bodies (i.e. good ecological potential and good chemical status), the provisions for designation (see Article 4.3), contain elements of comparing the consequences of achieving the 'good ecological status' to a number of aspects including economic considerations. Moreover, the assessment of "good ecological potential" is linked to the possible mitigation measures⁶.

There has been a debate whether these requirements should be interpreted as "alternative objectives" or "exemptions". **It has been agreed that artificial and heavily modified water bodies do not constitute a conventional objective or exemption. They are a**

⁵ Pollution of "other pollutants" than PS and PHS need to be reduced by Member States in accordance with Article 11 (3) (k) WFD.

⁶ See Guidance Document No. 4 on "Identification and Designation of HMWB and AWB" for more detail. http://europa.eu.int/comm/environment/water/water-framework/guidance_documents.html

specific water body category - with its own classification scheme and objectives - which is related to the other exemptions in requiring certain socio-economic conditions to be met before it comes to play.

An integral part of the environmental objectives set out in Article 4 are the so-called exemptions. Article 4.4, 4.5, 4.6 and 4.7 describe the conditions and the process in which they can be applied. These exemptions range from small-scale temporary exemptions to mid- and long term deviations from the rule "good status by 2015"⁷, and include the following aspects:

- **the extension of the deadline** , in other words, good status must be achieved by 2021 or 2027 at the latest (Article 4.4) or as soon as natural conditions permit after 2027;
- the achievement of **less stringent objectives** under certain conditions (Article 4.5);
- the **temporary deterioration** of the status in case of natural causes or "force majeure" (Article 4.6);
- **new modifications** to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater, or failure to prevent status deterioration of a body of surface water (including from high status to good status) as a result of new sustainable human development activities (Article 4.7).

Common to all these exemptions are strict conditions to be met and a justification to be included in the River Basin Management Plan.

Comparing the criteria for applying the various exemptions (or "exemption tests"), there are some similarities between them. Thus, it should be discussed how and when to apply particular exemptions and whether there is a certain sequence or hierarchy when applying them together (see chapter 3 for more details).

Finally, paragraphs 8 and 9 of Article 4 introduce two principles applicable to all exemptions,

- first, exemptions for one water body must not permanently exclude or compromise achievement of the environmental objectives in other water bodies
- second, at least the same level of protection must be achieved as provided for by existing Community law (including those elements to be repealed).

2.2 Scope of article 4.4 and 4.5

Under certain conditions, the WFD permits the assignment of a less stringent objective or the extension of the timescales for achieving a particular objective:

Art 4.4

The deadlines established under paragraph 1 may be extended for the purposes of phased achievement of the objectives for bodies of water, provided that no further deterioration occurs in the status of the affected body of water when all of 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:
- (i) the scale of improvements required can only be achieved in phases exceeding the timescale, for reasons of technical feasibility;
 - (ii) completing the improvements within the timescale would be disproportionately expensive;
 - (iii) natural conditions do not allow timely improvement in the status of the body of water.

⁷ or "good ecological potential by 2015 " for HMWB and AWB.

(b) 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.

(c) Extensions shall be limited to a maximum of two 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.

(d) 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 significant 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.

Art 4.5

Member States may aim to achieve less stringent environmental objectives than those required under paragraph 1 for specific bodies of water when they are so affected by human activity, as determined in accordance with Article 5(1), or their natural condition is such that the achievement of these objectives would be infeasible or disproportionately expensive, and all the following conditions are met:

(a) the environmental and socioeconomic needs served by such human activity cannot be achieved by other means, which are a significantly better environmental option not entailing disproportionate costs;

(b) Member States ensure,
— for surface water, the highest ecological and chemical status possible is achieved, given impacts that could not reasonably have been avoided due to the nature of the human activity or pollution,
— for groundwater, the least possible changes to good groundwater status, given impacts that could not reasonably have been avoided due to the nature of the human activity or pollution;

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

(d) 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 six years.

2.3 Scope of article 4.6

Article 4.6 differs from articles 4.4 and 4.5 in that it relates to events which "could not reasonably have been foreseen".

Art 4.6.

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 circumstances of natural cause or *force majeure* which are exceptional or could not reasonably have been foreseen, in particular extreme floods and prolonged droughts, or the result of circumstances due to accidents which could not reasonably have been foreseen, when all of the following conditions have been met:

(a) all practicable steps are taken to prevent 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 circumstances that are exceptional or that could not reasonably have been foreseen 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 the circumstances that are exceptional or that could not reasonably have been foreseen are reviewed annually and, subject to the reasons set out in paragraph 4 (a), all 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 such 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.

Hence it is not used for setting alternative objectives during the improvement planning process - rather it is used after the event, as a "defence" to justify why an objective which was set in a river basin management plan has not been met. This justification must be provided in the following (update of the) river basin management plan. Details are discussed in section 3.4.

2.4 Scope of article 4.7

Article 4.7 sets out circumstances in which failure to achieve certain of the WFD objectives are permitted.

Art 4.7.

Member States will not be in breach of this Directive when:

- 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 is the result of new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater, or
- failure to prevent deterioration from high status to good status of a body of surface water is the result of new sustainable human development activities

and all the following conditions are met:

- (a) all practicable steps are taken to mitigate the adverse impact on the status of the body of water;
- (b) the reasons for those modifications or alterations are specifically set out and explained in the river basin management plan required under Article 13 and the objectives are reviewed every six years;
- (c) the reasons for those 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 paragraph 1 are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development, and
- (d) the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option.

Note that Article 4.7 does not provide an exemption if deterioration caused by inputs of pollutants from point or diffuse sources drives the water body to a status below good.

If the resulting development is not causing a deterioration of status on the water body scale, art. 4.7 does not have to be used (for example if replacing one activity by another).

Details on how Art 4.7 can be applied are provided in section 3.5.

3 KEY ISSUES IN THE PROCESS OF JUSTIFYING EXEMPTIONS

3.1 General Introduction

When discussing exemptions it should be taken into account that the WFD is an environmental directive and exempting from its objectives should not be the rule but exceptional. It is important that before considering the application of exemptions for a certain water body, all relevant requirements from existing EU legislation for the protection of water have to be fulfilled. Nevertheless "exemptions" are an integral part of the environmental objectives set out in Article 4 and the planning process.

Member States are encouraged to keep the analysis for applying exemptions as simple as possible, but as detailed as necessary. The level of information should be determined by the complexity of the decision and the possible consequences of taking the wrong decision.

When consensus is reached between all relevant stakeholders in an early stage of the decision-making process, the efforts for data gathering may be reduced. Thus, early consensus may help to reduce analytical efforts but does not replace an economic analysis.

In the following section the key issues to use exemptions are outlined in more detail. First, some horizontal issues related to the exemptions in general are set out (in paragraph 3.2), followed by specific issues for Article 4.4 and 4.5 (in paragraph 3.3), Article 4.6 (in paragraph 3.4) and Article 4.7 (paragraph 3.5).

3.2 Horizontal issues

3.2.1 Scale

Member States have to set objectives for individual water bodies. As reflected in the 2010 reporting sheets, Member States are asked to report each water body for which the objective will not be good status by 2015; the alternative objective related to the affected quality element, and the reasons for this.

It is however recognised that different scales (national, basin, sub-basin, water body) may be appropriate for different assessments or different aspects of the same assessment. For example, transboundary issues have to be assessed on a transboundary scale. However, the choice of the scale should be justified by the provisions of the WFD and if the information used to justify an exemption is gathered at a more aggregated level it needs to be clear that the aggregated information is relevant for the concerned water body or group of water bodies.

Furthermore, Article 4.8 specifies that when applying an exemption to a water body, "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." Regarding the link between water bodies, it is clear that there cannot be an automatic mechanism for justifying exemptions in an adjacent water body on the basis of an assessment carried out for another water body. This does not necessarily imply that the reasons (e.g. water uses or significant pressures) for justifying an exemption must always be located within the water body for which the exemption is sought for.

3.2.2 Protected areas

It is generally understood that the exemptions in Article 4.4 and 4.5 and 4.6 are applicable to all environmental objectives in Article 4.1, thus also to Article 4.1(c), which describes the objectives for protected areas. But Article 4.9 is clear in its obligation that when applying the exemptions of Article 4, the same level of protection should be given as in existing Community legislation. This means that exemptions from the WFD environmental objectives cannot be used to deviate from objectives and obligations set by other pieces of EU legislation.

For example, a new development is proposed that would cause deterioration of status and a failure to achieve the objectives for a Natura 2000 site. In such a case, in order to fulfil both the WFD and the Habitats Directive:

- The relevant conditions set out in Article 4.7 of the WFD for allowing deterioration of status would have to be met to the extent that it is a water body; and
- The conditions set out in Article 6 of the Habitats Directive (92/43/EEC) for allowing a failure to achieve a Natura 2000 site's objective would have to be met.

3.2.3 Management of uncertainties

Uncertainty is an inevitable feature of objective setting in general, and will therefore be a feature of the first set of river basin plans⁸. Uncertainties should be taken into account in deciding the appropriate action. This action may include further investigation, monitoring and assessment to reduce uncertainties and this could contribute to the justification for the phasing of measures across cycles. Uncertainty will reduce over the medium to long term but will always be present. There can be uncertainty about:

- Whether, and to what extent, a water body is adversely impacted and what and/or who causes the impact;
- The impact of policies already in place or planned and various trends and developments, including innovation and technical change;
- The effectiveness of measures in addressing an adverse impact on a water body (note that this will have an effect on the certainty of the benefits as well);
- The assessment of the achievement of good status⁹;
- The costs associated with measures;
- The benefits resulting from improvements to the status of water bodies, particularly the calculation of the non-marketable benefits.

These uncertainties will also relate to the analysis for applying exemptions, and will have substantial impact on cost and benefit estimates. There are a number of things which can be done, and should be done, to reduce uncertainties or to deal with them in the decision-making process. For example:

- Choose reversible measures, measures that can be easily adapted, measures that can be carried out iteratively or measures with low risk and costs, and high return¹⁰. Where

⁸ See also Guidance nr 13 on Classification of Ecological Status on: http://circa.europa.eu/Public/irc/env/wfd/library?!=/framework_directive/guidance_documents

⁹ A number of uncertainties are addressed by the Directive's requirements to apply the 'one out - all out' principle and to set physico-chemical Standards characterising the good Status and to use hydro-morphological parameters to define the high Status. The pressure - Status - impact relations are well researched and understood for most of those non-biological parameters. Furthermore, uncertainties associated with the assessment of water body Status are addressed in the CIS ECOSTAT work programme 2007-2009.

¹⁰ These measures are often referred to as 'no-regret measures'.

there is significant uncertainty, the risk of incurring disproportionate costs can be reduced by choosing measures that can be readily and iteratively added to, or adapted, in the future on the basis of information on their effects and the associated benefits. However, these kinds of measures are not necessarily the ones that are most acceptable to stakeholders.

- Estimating and recording the level of uncertainty is needed to take into account uncertainty in objective setting.
- Weigh the benefits in such a way that the additional uncertainty of benefits relative to costs is taken into account. The same logic should apply where costs are more uncertain than benefits, though this is likely to be less common in practice.
- Actions need to be taken to reduce uncertainty (e.g. by research programmes), although these actions need to be proportional. The findings of the Article 5 reports are an important basis for addressing knowledge gaps and identifying follow-up actions.
- Efforts to reduce uncertainty should be proportional to the difficulty of the decision at hand and the implications of making a wrong decision. However, there is no point attempting to reduce uncertainty if doing so does not clarify the decision at hand. It may be better to act on the basis of principle, for example the precautionary principle and/or the polluter pays principle and/or, where possible, on the basis of consensus.
- There needs to be a balance between the risk of failing to meet objectives and the risk of failing to use the most cost-effective means of achieving those objectives, with priority being given to minimising the risks of the first.

For example, the effectiveness of diffuse pollution measures may be more uncertain than the effectiveness of point source pollution measures. Conversely, the costs of diffuse pollution measures may be less than the costs of point source pollution measures.

3.2.4 Technical infeasibility

In principle, only issues of a technical nature should be taken into account in applying the technical infeasibility test - as referred to in Article 4.4 and 4.7 - and not cost issues. Although cost savings may be associated with extending the deadline for achieving good status, such savings are not relevant in deciding whether making the improvements by the deadline would be technically infeasible.

Technical infeasibility is justified if:

- No technical solution is available;
- It takes longer to fix the problem than there is time available;
- There is no information on the cause of the problem; hence a solution cannot be identified.

In practice, the greater the effort expended in trying to overcome practical issues of a technical nature, the greater the likelihood that technically feasible ways of making the improvements will be found. This means that consideration of the costs and benefits will need to be considered alongside technical feasibility. Where the benefits resulting from an improvement would be substantial, a much higher degree of effort to find a technically feasible option is likely to be appropriate than where the benefits of an improvement are expected to be low.

Further guidance can be provided by the term 'best available technique (BAT)' which is defined in the IPPC-directive (96/61/EC)¹¹, although in the cases where going beyond BAT might be technically feasible, these options should be explored.

Article 4.5 refers to the term 'infeasible', which includes technical infeasibility, but which could also refer to situations where addressing a problem is out of the control of a Member State.

3.2.5 Disproportionate costs

The term disproportionate costs (or disproportionately expensive) is used in Article 4.4, 4.5 and 4.7 of the WFD. Below, some principal issues related to these terms are addressed.

3.2.5.1 General introduction of the terms 'disproportionate costs'

'Disproportionality', as referred to in Article 4.4 and 4.5, is a political judgement informed by economic information, and an analysis of the costs and benefits of measures is necessary to enable a judgement to be made on exemptions. It was already concluded in the WATECO guidance that, given the uncertainty around estimates of costs and benefits one should bear in mind that,

- Disproportionality should not begin at the point where measured costs simply exceed quantifiable benefits;
- The assessment of costs and benefits will have to include qualitative costs and benefits as well as quantitative;
- The margin by which costs exceed benefits should be appreciable and have a high level of confidence;
- In the context of disproportionality the decision-maker may also want to take into consideration the ability to pay of those affected by the measures and some information on this may be required.

From the logic of the WFD it becomes clear that an assessment of disproportionate costs only makes sense after a combination of the most cost-effective solutions has been identified. Most importantly, for all cases where an exemption is applied, all measures that can be taken without involving disproportionate costs should still be taken to reach the best status possible.

In cases where exemptions are considered the consequences of non-action (i.e. foregone benefits) need to be weighed against the specific costs of the measures.

3.2.5.2 Costs of measures required under other Community legislation

The costs of measures required under existing Community legislation already agreed at the time of the adoption of the Directive cannot be considered when deciding on disproportionate costs. Without prejudice to the transitional arrangements in the Accession Treaties, this also applies to Member States which joined the EU in 2004 and 2007.

¹¹ 'best available techniques' shall mean the most effective and advanced stage in the development of activities and their methods of Operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole. For further details, see <http://ec.europa.eu/environment/air/legis.htm#stationary>

3.2.5.3 Affordability issues

Affordability (or ability to pay for a certain measure) can be one element for justifying the decision on a time extension (i.e. application of Article 4.4), if based on a clear explanation:

- of the non-availability of relevant alternative financing mechanisms which would not result in affordability issues,
- of the consequences of non-action in deciding on an extension of the deadline,
- of steps to resolve the affordability issues in the future.

Non-action by one player does not automatically lead to non-action by other players within the same sector.

Furthermore, Member States may phase the implementation of measures to spread the costs of the implementation, but there is the need for clear and demonstrable action in the first cycle.

When affordability arguments are used to extend the deadline, the possibility to use relevant **alternative financing mechanisms** should be fully considered. The alternative financing mechanisms could include distribution of costs among polluters and users, use of the public budget (at different levels), private investment, EU and international funds, etc. These relevant alternative financing mechanisms should be considered at the appropriate scale.

On the role of affordability in setting less stringent objectives, no guidance can be provided at this stage. For some Water Directors affordability could play a role in setting less stringent objectives, as both Article 4(4) and 4(5) use the same terminology 'disproportionately expensive'. They indicated that in practice affordability arguments may be used less frequently in Article 4(5) than in Article 4(4). Some other Water Directors argued that affordability can not be used as an argument for setting less stringent objectives as the context of 'disproportionate expenses' is different in 4(5) from the context in Article 4(4) as it concerns setting lower objectives permanently (subject to revision every 6-years). These Water Directors consider that application of this provision requires it to be set out clearly that the costs outweigh the benefits of achieving the targets.

On the role of constraints of the public budget as a reason for extending the deadline, no guidance can be provided at this stage either. Most Water Directors indicated that constraints of the public budget may be used as a reason for extending the deadline as there are limits to the available budget for water management. The Commission indicated that in its views the adoption of the WFD by the Council and the European Parliament entails obligations for Member States to make available the necessary means for its implementation.

3.2.5.4 Prioritisation approaches in the context of disproportionate costs

The Water Directors agreed that a proportionate selection of the different analyses (cost-benefit analysis, benefits assessment, assessment of the consequences of non-action, distribution of costs, social and sectoral impacts, affordability, cost-effectiveness etc) is useful to inform decision making.

It was also agreed by the Water Directors that prioritisation approaches for ranking measures that are considered technically feasible can be the first operational steps in the assessment of cost disproportionality, but that a justification of an extension of the deadline following these approaches should respect the relevant provisions of the WFD. The results of prioritisation have to be developed on or transformed to the water body level when relevant.

It was emphasised that prioritisation takes place on different geographic / administrative levels (e.g. MS, River Basin, Region, sub unit, water body) and should consider the different basic conditions in the area. The prioritisation process should take into account a set of relevant criteria, for example:

- synergies with other directives, e.g. habitat directive, flood risk management directive
- cost-efficiency / benefits of measures
- consequences of non-action
- certainty / uncertainty (“no regret measures”)
- measures which could be implemented short term
- urgency of problem to be solved(severe consequences/high cost of non action: e.g. protection of drinking water supplies)
- existence of available financing mechanisms
- acceptance by the public

Prioritisation criteria and results should be transparent and should be disclosed to the public. The prioritisation approach should also give information on the further timescale to reach the environmental objectives.

3.2.6 Alternative means

In both Article 4.5 and Article 4.7, the necessity is mentioned to assess 'alternative means'. In Article 4.5 this refers to alternatives to serve the environmental and socioeconomic needs served by a certain human activity, which are a significantly better environmental option not entailing disproportionate costs. In Article 4.7 it is indicated that it is necessary to demonstrate that the beneficial objectives served by the modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option.

Those means or alternative solutions could involve alternative locations, different scales or designs of development, or alternative processes. Alternatives should be assessed in the early stages of development and at the appropriate geographical level (EU, national, RBD) against a clear view of the beneficial objectives provided by the modification.

For projects under its scope, the use of the requirements of the EIA Directive can help to assess the different possible alternatives.

3.2.7 Transboundary context

In international river basin districts within the EU, exemptions need to be coordinated. This obligation to coordinate the requirements for the achievement of the environmental objectives is indicated in Article 3.4 and 3.5.

Exemptions can be applied in cases where a certain Member State cannot resolve the reasons for not achieving the environmental objectives because they lay outside the competence and jurisdiction of the Member State. In these cases, a country causing the problem should be obliged to provide enough information for justification of the application of exemptions for the affected Member State.

Frequent information exchange between Member States, and between an EU Member State and a country outside the EU, is crucial when applying exemptions in a transboundary context. This includes information on intermediate objectives and the expected evolution for the water bodies where exemptions are applied. This enables affected Member States to adapt their own planning process.

In cases where the reasons for not achieving good status cannot be resolved by a Member State since they are outside the competence and jurisdiction of the Member State, the WFD includes the provision of Article 12 on the involvement of the Commission to solve the issue.

The key issue in both applying the exemption and invoking Article 12 is the demonstration of evidence that Member States have taken all reasonable actions to fulfil the legal obligations.

More information on the transboundary context is included in Annex II: Exemptions in a transboundary context

3.2.8 Public participation and transparency

Active participation at an early stage should be encouraged not only because of legal requirements, but it can also be used to get a better insight in factors influencing the application of exemptions (such as costs and benefits and technical feasibility). Further, it might also give an early indication of acceptability and create a basis of understanding of a certain decision on objective setting. However, public information and consultation do not guarantee acceptance of a range of (feasible) measures.

As a minimum, the public should be given insight in the reasons for applying exemptions (eg. as mentioned in Article 4(a) i, ii and iii) per water body for which an exemption is applied.

Public information and consultation is not only an obligation of WFD Article 14 and other legislation, also Article 4(4) and 4(5) and the related recitals require that the following information should be provided in the river basin management plans¹²:

- the reasons for an extension of the deadline should be specifically set out
- the reasons for the establishment of less stringent environmental objectives should be specifically mentioned;
- a summary of the measures to bring the bodies of water *progressively* to the required status;
- the reasons for any significant delay in making the measures operational;
- the expected timetable for the implementation of the measures (that are delayed);
- the appropriate, evident and transparent criteria used for applying exemptions

It is agreed that:

- there is the need for clear and demonstrable action in the first cycle;
- when applying the 'disproportionality justification', the reasons, underlying data and assessments should be made public;
- if affordability arguments are used, an explanation that there are no relevant alternative financing mechanisms available;
- an explanation of how consequences of non-action are taken into account and what action will be taken to address these reasons, so that in the future a time extension is no longer needed.

¹² See 4.4(b):'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' and 4.4(d):' A summary of 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 significant delay in making these measures operational, and the expected timetable for their implementation are set out in the river basin management plan.' and 4.5(d):' 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 six years', including reasons why 'the environmental and socioeconomic needs served by such human activity cannot be achieved by other means, which are a significantly better environmental option not entailing disproportionate costs' (4.5(a)).

3.2.9 Link with Strategic Environmental Assessment and Environmental Impact Assessment

Both in applying Article 4.4/4.5 and in applying Article 4.7, the question may arise regarding how a link to the Environmental Impact Assessment (EIA)¹³ and/or Strategic Environmental Assessment (SEA)¹⁴ can be best made.

Some measures to improve status may fall within the scope of the EIA Directive and hence require an EIA (see Figure below). Furthermore, the EIA Directive gives a list of some of the environmental factors to consider in assessment of environmental costs and benefits which should be a starting point.

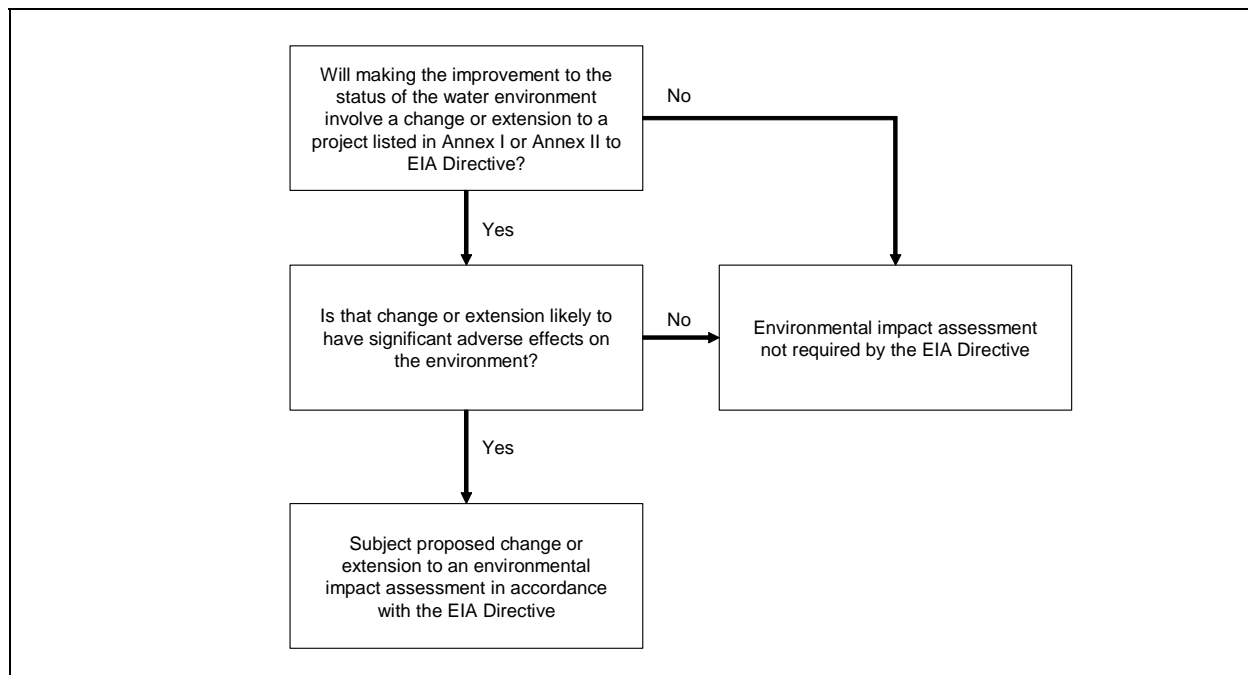


Figure 0: Link between EIA and measures under the WFD

Information from an already carried out SEA or EIA should be used as much as possible in exemptions tests. However, a formerly carried out EIA is not a blank cheque for application of the WFD exemptions.

The assessment of whether the criteria and conditions set out in **Article 4.7** are met needs to be carried out in the planning stage. Thus, it makes sense to incorporate such an evaluation into the environmental impact assessment which has to be done for most of these types of projects. However, even if certain projects are not covered by the EIA Directive, article 4.7 may apply. For plans and programmes affecting the environmental objectives of the WFD, the evaluation in accordance to 4.7 should be incorporated into the SEA¹⁵.

In summary, the planning of "new modifications" requires the carrying out of an assessment of the environmental impacts which demonstrates, at least, that the criteria and conditions of Article 4.7, but also 4.8 and 4.9, are met.

¹³ Directive 85/337/EEC

¹⁴ Directive 2001/42/EC

¹⁵ See guidance document on the implementation of the SEA Directive, available at <http://europa.eu.int/comm/environment/eia/sea-support.htm>

3.3 Key issues for Article 4.4 and 4.5

3.3.1 Relationship between Article 4.4 and 4.5

The relationship between Article 4.4 and Article 4.5 is not a hierarchy in the sense that Member States must prove that one is ruled out before considering another. Member States are free to apply either exemption, provided the relevant exemption tests are met. However, the conditions for setting less stringent objectives require more information and in-depth assessment of alternatives than those for extending the deadline. For this reason, there should be a stepwise thinking process for considering what sort of exemption may be most appropriate (see Figure 1).

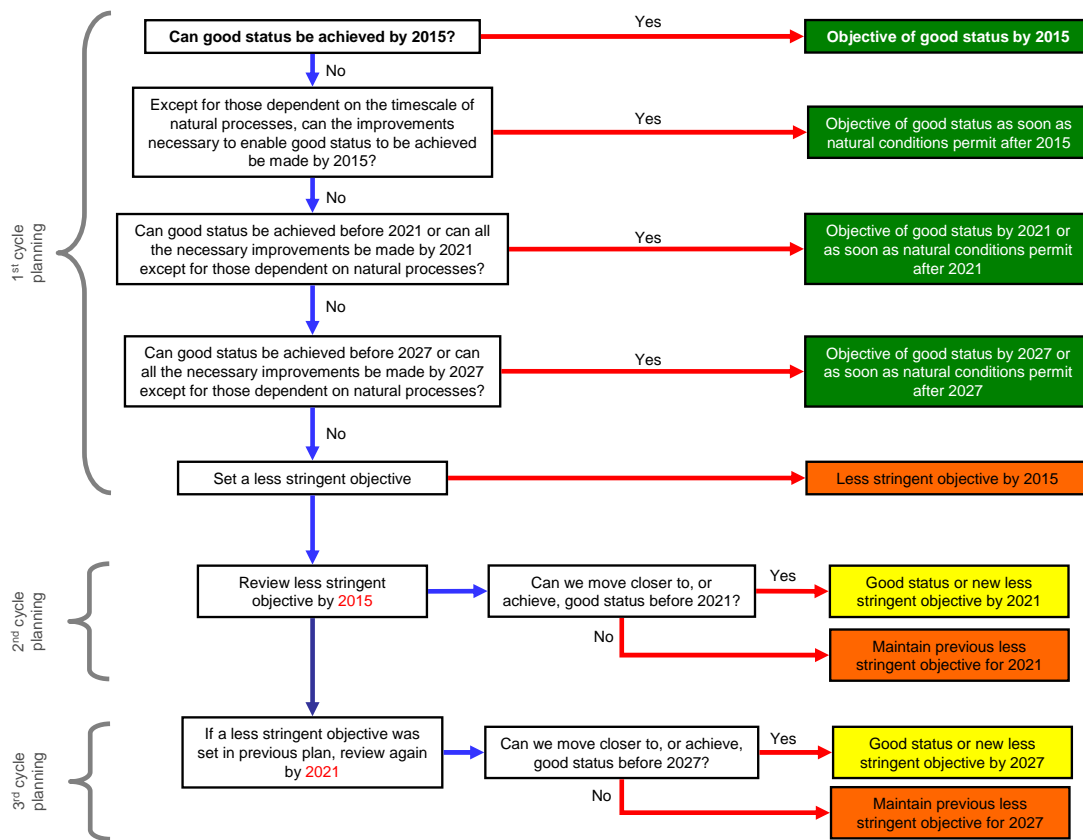


Figure 1: Stepwise thinking process for the considerations of exemptions from good status. The orange boxes refer to Art 4.5, the green except the first box to Art 4.4. For water bodies designated as heavily modified or artificial, references in the Figure to 'good status' should be taken to mean 'good ecological potential and good surface water chemical status'¹⁶. Note, if the objective of "good status" is aimed for (green boxes), the achievement of "good status" needs to be confirmed by monitoring data.

¹⁶ All information needed for the decision on exemptions should be on the desk before starting the stepwise process, especially the economic data and assessments, as these make it possible to test the proportionality of costs, which is one assumption for the achievement of good status

3.3.2 Internal logic of Article 4.4

Figure 2 summarises the principal tests involved in deciding whether the application of an extended deadline is appropriate. Other tests also need to be considered before applying an extended deadline. These include meeting the conditions specified in paragraphs 8 and 9 of Article 4 of the Directive.

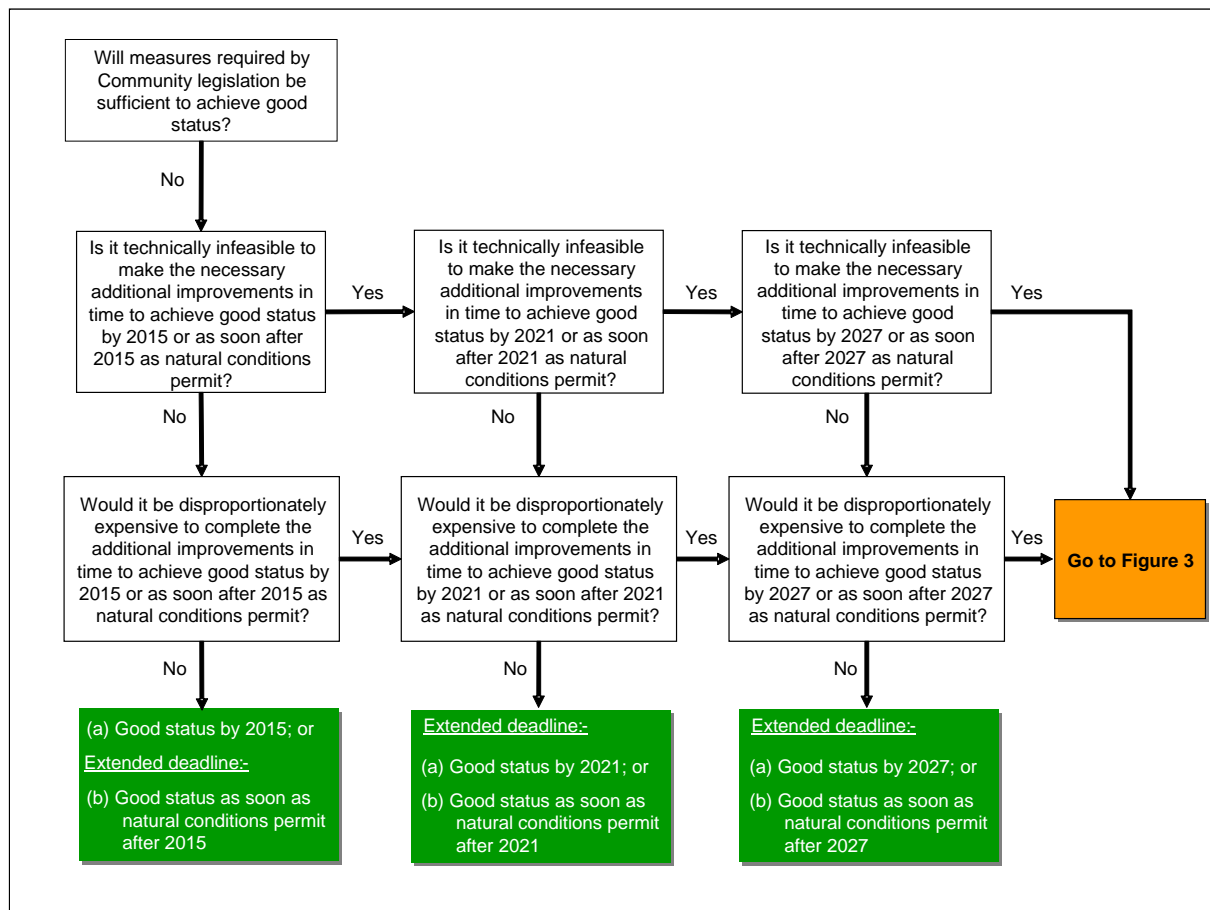


Figure 2: Internal logic of Article 4.4 - References in the Figure to good status should be interpreted as references to good ecological potential and good chemical status when dealing with heavily modified or artificial water bodies.

The Figure represents the internal logic of Article 4.4 as a step-wise linear process. However, in practice Member States may apply the process in a more iterative manner. For example, where it is technically infeasible to achieve good status by 2015 because there is no known technique for doing so (see above), consideration of the other tests illustrated in Figure 2 will not be relevant. Instead, the application of a less stringent objective (see Figure 3 below) could be considered. In contrast, if achieving good status by 2015 is technically infeasible because of technical constraints on the timing of making the measure operational, consideration of whether the measure could be implemented in time to achieve good status by 2021 or 2027 would be relevant in order to decide if an extended deadline might be applicable.

The tests should not be applied in relation to any improvements to the status of water bodies that are required by other Community legislation (see above). Exemptions may only be applied in

relation to the additional improvements that would be necessary to achieve good status once compliance with relevant Community legislation has been achieved.

Where an exemption for an extended deadline is applied, a summary of the measures envisaged as necessary to achieve good status by the extended deadline and the expected timetable for their implementation must be set out in the RBMP. A review of the implementation of these measures and a summary of any additional measures must be included in updates of the RBMP. In the second and third planning cycle, Figure 2 should be used by leaving out the first column boxes referring to 2015.

The tests require consideration of the measures needed to address the pressures on the water body and so create the conditions necessary for the achievement of good status. It should be borne in mind that the rate of recovery of the water body to good status once such conditions have been established may be delayed because of natural conditions. Where natural conditions are preventing the timely achievement of good status by 2015, Article 4.4 provides that the deadline may be extended until such time as the water body recovers to good status.

Some changes of the institutional framework for putting alternative financing mechanisms in place, or addressing other administrative or legal constraints, may need time. In some cases, pursuing these changes within the first management cycle may lead to disproportionate costs. In cases where certain procedural requirements need to be fulfilled to take measures, the deadline for achieving the environmental objectives may need to be extended. In all cases where administrative or legal constraints occur, a description of the constraints has to be given in the RBMP as well as an explanation of how these constraints will be addressed in the future.

3.3.3 Internal logic of Article 4.5

Figure 3 is intended to illustrate the process of checking whether a less stringent objective is applicable and, if so, the process for identifying what the less stringent objective should be.

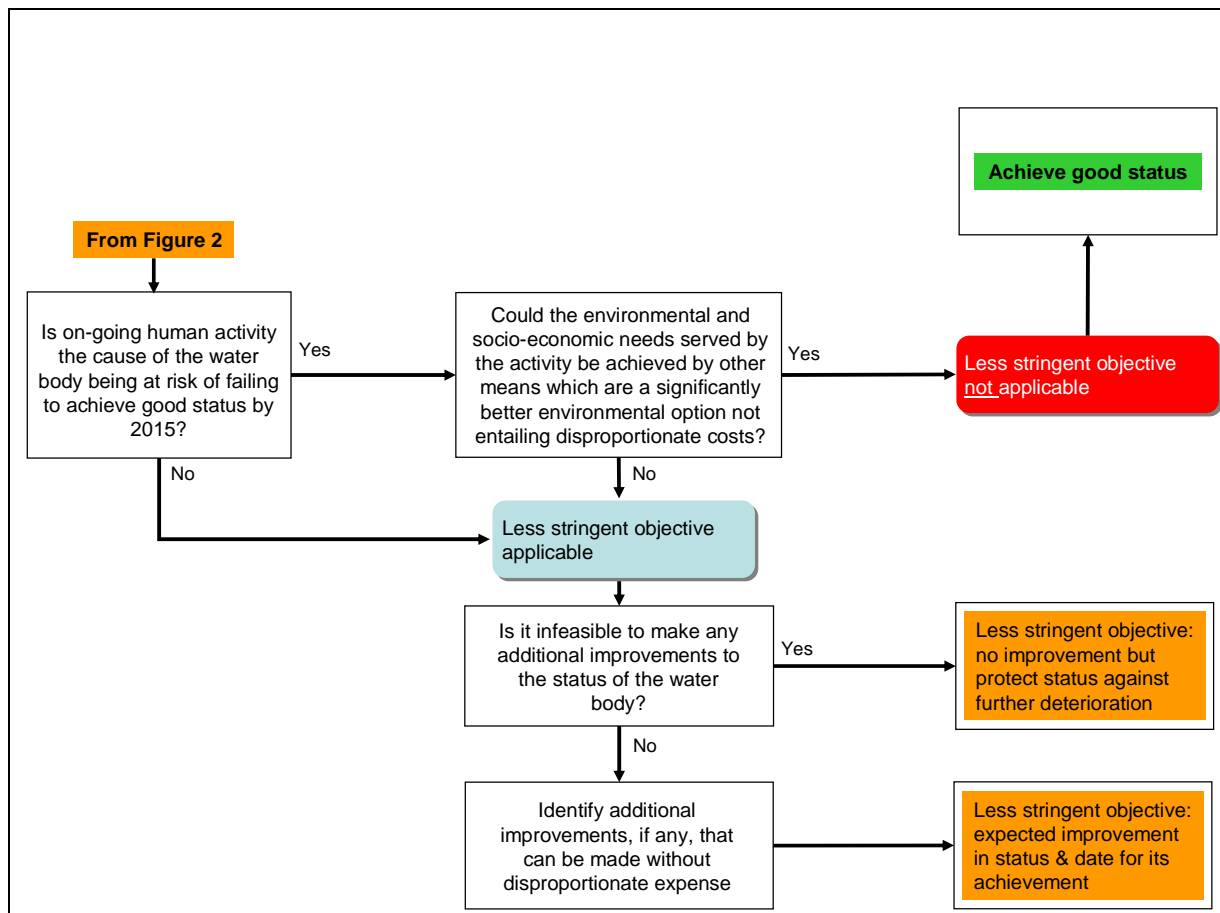


Figure 3: Internal logic of Article 4.5 - References to status should be interpreted as references to ecological potential and chemical status when dealing with heavily modified or artificial water bodies.

Figure 3 should be read in conjunction with Figure 2. According to the step-wise approach, it assumes that the tests indicated in Figure 2 have already been applied.

The Figure illustrates the process for the first cycle. The application of any less stringent objective must be reviewed in each subsequent planning cycle. When reviewing a less stringent objective, the internal logic illustrated in Figure 3 still applies. However, references in the Figure to 2015 should be treated as references to the deadline relevant to the planning cycle concerned (e.g. 2021; 2027; etc).

Before setting a less stringent objective, Member States must decide whether the environmental and socio-economic needs served by any activity that is preventing the achievement of good status could instead be provided by other means which are a significantly better environmental option not entailing disproportionate costs. Where the achievement of good status is being prevented by impacts resulting from human activities which have now ceased (e.g. historically contaminated land or sediment), this test will not be relevant.

If the test for other means is failed (i.e. if an 'other means' exists), an exemption cannot be applied and the objective for the water body will remain to aim to achieve good status. Member States are free to choose how they then achieve good status. They are not obliged to implement the identified other means of providing the benefits served by the activity as part of those measures.

In principle, a less stringent objective should represent the condition expected in the water body once all measures that are feasible and not disproportionately expensive have been taken. For example, this could mean that a less stringent objective is for the majority of the quality

elements to be protected at, or restored to, values consistent with good status even though the overall status may be worse than good because of remaining impacts on other quality elements. A 'less stringent objective' does therefore not mean that (a) the other quality elements are permitted to deteriorate to the status dictated by the worst affected quality element or (b) the potential for improvement in the condition of other quality elements can be ignored.

In some cases it may be technically infeasible or disproportionately expensive to make any improvements in the status of a water body within the period covered by the relevant river basin management plan or update. In such cases, Member States must nevertheless prevent further deterioration of status, subject to the application of paragraphs 6 or 7 of Article 4 of the Directive. It should be noted that the term "infeasible" used in Article 4 (5) is broader than the term "technical feasibility" used in Article 4 (4).

The achievement of a so called "less stringent objective" may require the implementation of measures that are as stringent, if not more so, than the measures that are required for water bodies for which the objective is good status.

3.3.4 Application of new exemptions in subsequent planning cycles

On the basis of new knowledge gathered in the subsequent planning cycle, it may be necessary and appropriate in some cases to apply a new exemption under article 4.4 or 4.5 in the next update of the river basin management plan. For example, suppose a Member State finds that a water body will not achieve the objective set for it because the measures the Member State implemented are proving less effective than expected. If bringing the achievement of the objective back on track would be infeasible or disproportionately expensive, an extended deadline up to 2027 or a less stringent objective may be applied, as appropriate. Along the same lines, it is possible to apply a less stringent objective in a subsequent planning cycle for a water body for which an extension of the deadline was applied in an earlier planning cycle or it could be concluded that an exemption is not necessary anymore for the second or the third planning cycle.

The internal logic of Article 4.4 and 4.5 illustrated in Figures 2 and 3 above applies equally where the application of new exemptions is being considered in subsequent planning cycles. However, references in the figures to the deadlines for achieving objectives will change accordingly.

3.3.5 Natural conditions

The term 'natural conditions' is used both in Article 4.4 and 4.5 and refers to the conditions which dictate the rate of natural recovery. It recognises that it may take time for the conditions necessary to support good ecological status to be restored and for the plants and animals to recolonise and become established. It also recognises that due to varying natural hydrogeological conditions, groundwater bodies may take time to reach good chemical status. Climate change can also change the natural conditions over time.

3.4 Key issues for Art 4.6

Article 4.6 provides, under certain conditions, an exemption for temporary deterioration of the status of bodies of water in certain circumstances, which are exceptional or could not reasonably have been foreseen. In order to apply Art 4.6 a common understanding of the

different terms below is needed, as well as a common understanding of the terms extreme floods and prolonged droughts.

- *Temporary deterioration*: The length of a temporary deterioration (Article 4.6) is linked to the length of the circumstances of natural cause, which are exceptional or could not reasonably have been foreseen and the practicability¹⁷ of the measures that can be taken to restore the status of the water bodies.
- *Natural cause*: 'Natural cause' refers to events like floods and droughts which give rise to situations which cause us to make use of the water environment in ways that results in its deterioration of status (e.g. by taking emergency action to save life and property during floods; by supplying the public with drinking water during prolonged drought; by having pollutants to be washed into the water environment by floods). It is essential for proper river basin management planning and the application of Article 4(6) to make a distinction between the natural cause itself and the effects of management practices. WFD Article 4.6 deals with circumstances of natural cause which are exceptional or could not reasonably have been foreseen.

3.4.1 Extreme floods

The term 'extreme floods' recognises that, whilst it is possible to have some knowledge of the quantitative range of numerical flows and levels that might occur and the possible frequency of flood events, it will not be possible to foresee all flood events or to extrapolate all of their consequences in terms of environmental and other impacts.

The new Flood Risk Management Directive¹⁸ introduces a EU-wide *"framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity"*. This includes the setting up of preventive measures which can contribute to the prevention of deterioration of status as provided for by the WFD. Thus, a closely coordinated and coherent implementation of both Directives will maximise synergies in the achievement of their objectives.

Despite all required preventive measures, however, some flood events will lead to "temporary deterioration" for which it is justified to apply the exemption set out by Article 4.6 WFD¹⁹. The identification of such an event can finally only take place after its occurrence. However, Member States should have assessment strategies in place in which they make use, to the maximum possible extent, of the implementation of the Floods Directive.

For example, the Floods Directive introduces three categories in Article 6.3 for the purposes of mapping floods:

- a) floods with a low probability, or extreme events scenarios;
- b) floods with a medium probability (likely return period > 100 years);
- c) floods with a high probability, where appropriate.

It is most likely that "extreme flood" events falling under category (a) will require the application of a "temporary deterioration". However, floods with a higher probability of

¹⁷ Practicable is related to 'technical feasible, not disproportionately expensive and without natural conditions preventing the improvements' (Article 4.4(a)).

¹⁸ Directive 2007/60/EC of 23 October 2007 of the European Parliament and of the Council on the assessment and management of flood risks.

¹⁹ This does not, however, include those cases of coastal flooding where deterioration, as a result of coastal erosion, may be permanent.

occurrence may also be regarded as "extreme floods" in circumstances where the impacts of such floods are equally exceptional or reasonably unforeseen.

In no way does the application of exemptions under the WFD give a Member State a possibility to make an exemption from the obligation of implementing all aspects of the Directive on the assessment and management of flood risks.

3.4.2 Prolonged droughts

A drought - contrary to water scarcity- is a natural unpredictable phenomenon. The appearance of a drought is not generated by human activities. However, the impacts of a drought episode may be exacerbated by mismanagement practices. Mitigation and prevention measures can be taken in order to reduce, and potentially avoid, the consequences of a drought when it occurs, but no measures can avoid a drought.

Although not always easy in practice, Member States will have to differentiate between the effects of prolonged droughts, which are purely natural phenomena, and the effects of human activities.

'Prolonged' droughts should be clearly distinguished from non-prolonged droughts. The conditions of a prolonged drought, i.e. the circumstances that are exceptional or that could not reasonably have been foreseen, should be demonstrated, as normal dry hydrological conditions should be addressed in the reference conditions. Relevant indicators identified at EU level are necessary to facilitate the common understanding of a 'prolonged drought', similar to criteria to define 'extreme floods'. More information is provided in Annex III.

3.5 Key issues for Art 4.7

Under Art 4.7 exemptions can be applied for **new modifications** and **new sustainable human development activities**. Before explaining the main principles of applying Art 4.7 some common definitions are provided:

- New modifications: Article 4.7 has a considerable impact on new developments and modifications. Modifications to the physical characteristics of water bodies mean modifications to their hydro-morphological characteristics. The impacts may result directly from the modification or alteration or may result from changes in the quality of water brought about by the modification or alteration. For example, hydropower plants, flood protection schemes and future navigation projects are covered by this provision. Also the hydro-morphological characteristics of impoundment created for hydropower and water supply can dictate the oxygen and temperature conditions resulting in a deterioration of ecological status in the impounded water and in the downstream river. These may be different from those in a natural water body.

The impacts of those modifications and alterations may be limited to the water bodies in which modification works are undertaken; or extend to water bodies beyond those in which the modification works are undertaken. For example, the abstraction of water from a body of groundwater may cause adverse impacts in an associated surface water body.

- New sustainable human development activities: The Directive does not give a definition of those activities. In general, such activities cannot be defined per se through a set of criteria or policies but are framed by the relevant decision making process requirements within an open ended and iterative procedure. The exact definition for an activity falling under sustainable development will thus depend on the time, scale, involved stakeholders and information available. Relevant process

requirements are provided in the WFD itself, the Strategic Environment Assessment, Environmental Impact Assessment and "Aarhus" Directives and should be guided by the principles of the EC Treaty, being the *"polluter pays principle, the precautionary principle and preventive action, and the principle of rectification of pollution at source"*. Guiding principles on sustainable development can be found in the Renewed EU Sustainable Development Strategy (EU SDS), which was adopted by the Council in June 2006²⁰. Furthermore, the decision making process should follow the principles of "good governance", including policy coherence, social inclusion and transparency and make best use of the availability of alternatives. A generic approach for small business developments affecting the same water body may be considered when applying the second point of 4.7.

- **Deterioration of status or potential:** The ecological status (or the potential) of a water body is expressed in terms of "classes" (e.g. high, good, moderate, poor or bad). Ecological status and potential classes are established on the basis of specific criteria and boundaries in accordance with the annex V of the WFD. In the context of Article 4.7, the objectives of preventing deterioration of ecological status (or the potential) refer to changes between classes rather than within classes. Member States do not, therefore, need to use article 4.7 for negative changes within a class.
- **Temporary effects:** Fluctuations in the condition of water bodies can sometimes occur as a result of short-duration human activities, such as construction or maintenance works. If the condition of each affected water body is adversely affected for only a short period of time and recovers within a short period of time²¹ without the need for any restoration measures, such fluctuations will not constitute deterioration of status. The application of Article 4.7 will not be required.

For example, temporary impacts due to the establishment of the modification during the building phase are not required to be addressed if no deterioration of status or potential could be expected thereafter in the water body or parts of the water body.

Article 4.6 provides, under certain conditions, an exemption for temporary deterioration of the status of bodies of water in certain circumstances, which are exceptional or could not reasonably have been foreseen. An exemption under Article 4.7 will be unnecessary in those cases in which an Article 4.6 exemption is applicable.

- **Small size projects:** The size of the project is not the relevant criteria to trigger article 4.7. The relevant approach is to assess if a given project, whatever its importance is, will result in deterioration of the status of a body of surface water or groundwater or prevent the achievement of good ecological status, good ecological potential or good groundwater status or from high status to good status of a body of surface water. Thus, projects of any size may fall under article 4.7. However, for small projects not falling within the scope of the EIA Directive (85/337/EEC) a generic approach can be used in order to reduce the assessment burden.

In addition to the explanations above, the conditions under which Article 4.7 can be applied are presented in the figure below in a stepwise approach. This flow chart aims to be a practical tool when considering application of Article 4.7.

In comparison to the exact text of the Directive (art 4.7) c), the order of Box 3 and 4 have been changed. This is done for two reasons. Firstly, the considerations in Box 2 and 3 may result in adaptations of the project. This is not the case for the considerations from Box 4 onwards.

²⁰ Available at: <http://register.consilium.europa.eu/pdf/en/06/stlO/stl0117.en06.pdf>

²¹ No definition will be given of 'short period of time'. However, the frequencies mentioned for the monitoring programmes (Annex V 1.3.4 and 2.2.3) can serve as an indication.

Secondly, Box 3 refers to the process of looking for alternatives, which should be done at an early stage of drafting the project, when better alternatives are available.

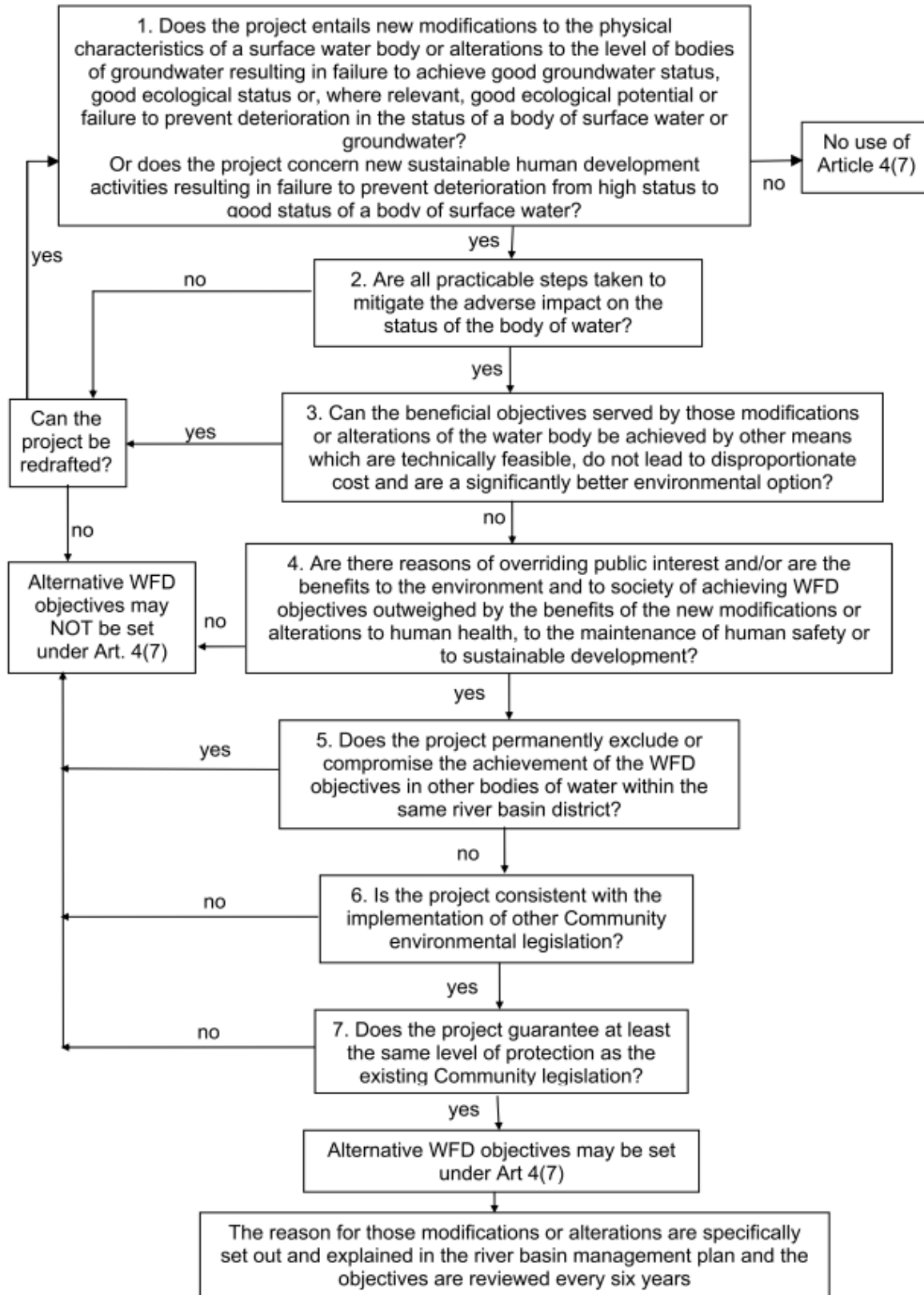


Figure 4: Example for an iterative approach, which should allow the re-assessment of the potential identification of a sustainable development activity done at the beginning.

Like all WFD exemptions, article 4.7 does not apply when the provisions of articles 4.8 and 4.9 are not fulfilled. In other words, use of the exemptions is allowed when they guarantee

at least the same level of protection as existing Community legislation and provided that they do not permanently exclude or compromise the achievement of the wider objectives of the WFD under Article 1 in other bodies of water within the same river basin district.

In the following paragraphs, the different conditions of the Article 4.7 assessment are explained in more detail.

3.5.1 Practicable steps to mitigate adverse impacts

As indicated in box 2 in figure 5, all practicable steps have to be taken to mitigate the adverse impact on the status of the water body. As article 4.7 requires only mitigation, it is at first important to make a clear distinction between:

- Mitigation measures, which aim to minimise or even cancel the adverse impact on the status of the body of water, and
- Compensatory measures, which aim is to compensate in another body of water the "net negative effects" of a project and its associated mitigation measures.

Article 4.7 does not require compensatory measures.

The notion of "steps" addresses potentially a wide range of measures in all phases of development, including maintenance and operation conditions, facilities' design, restoration and creation of habitats.

The wording "all practicable steps", in analogy with the term "practicable" used in other legislation, suggests those mitigation measures should be technically feasible; do not lead to disproportionate costs; and are compatible with the new modification or sustainable human development activity.

3.5.2 Overriding public interest

As indicated in box 4, when applying Article 4.7, the reasons for those modifications or alterations are of overriding public interest. This concept is also used in the Habitats Directive (92/43/EEC) and other EC law. Though there is no case law from the European Court of Justice on the application of this concept to the Habitats Directive, the European Commission's "Methodological guidance on the provisions of Article 6.3 and 6.4 of the Habitats Directive 92/43/EEC: Assessment of plans and projects significantly affecting Natura 2000 sites"²², may bring some clarification. It is reasonable to consider that the reasons of overriding public interest²³ refer to situations where plans or projects envisaged prove to be indispensable within the framework of:

- Actions or policies aiming to protect fundamental value for citizen's lives (health, safety, environment);
- Fundamental policies for the state and the society;
- Carrying out activities of an economic or social nature, fulfilling specific obligations of public services.

²² Some consideration to defining "Overriding public interest" can be found at http://europa.eu.int/comm/environment/nature/nature_conservation/eu_nature_legislation/specific_articles/art6/index_en.htm

²³ Note that the consideration of "overriding public interest" only applies to the first part of Article 4.7 c, not to the second part.

Furthermore, public participation will contribute considerably in determining overriding public interest²⁴.

3.5.3 Benefits of the new modification versus benefits to the environment

In Box 4, it is asked whether the benefits to the environment and to society of achieving the objectives set out in paragraph 4.1 (of the Directive) are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development. The benefits of achieving the environmental objectives of Article 4 include:

- In case of deterioration of status, those benefits and opportunities foregone as a result of the deterioration of status (e.g. loss of biodiversity); and
- In case of failure of reaching good status or potential, those benefits that would be provided if the achievement of good status or good ecological status were not prevented (e.g. drinking water supply is not longer possible).

The "water costs" (negative benefits) have to be put in balance with the potential benefits and other costs (increased use of other natural resource, including global impacts) of the new modifications and alterations to human health, to the maintenance of human safety or to sustainable development. Thus, other categories of possible benefits and costs will have to be considered and -if possible- calculated.

In conclusion, an analysis of the costs and the benefits of the project adapted to the needs of the Directive is necessary to enable a judgement to be made on whether the benefits to the environment and to society of preventing deterioration of status or restoring a water body to good status are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development.

This does not mean that it will be necessary to monetise or even quantify all costs and benefits to make such a judgement. The appropriate mix of qualitative, quantitative and, in some cases, monetised information should depend on what is necessary to reach a judgement and what is proportional and feasible to collect.

3.5.4 Article 4.7 and the designation of heavily modified water bodies (HMWB)

After a new hydro-morphological alteration has occurred, it may be that the water body qualifies for designation as a heavily modified water body in accordance with Article 4.3 in the next planning cycle. There is no requirement that the designation has to wait until the publication of the next River Basin Management Plan. However, **water bodies cannot be designated as HMWBs before the new modification has taken place** because of the anticipation of the significant hydro-morphological alteration.

After the application of article 4.7 and in case of designation of new HMWBs, the step by step approach developed within the HMWB guidance document should be applied without the "provisional identification-step".

²⁴ See Guidance Document No 8: Public Participation in relation to the Water Framework Directive on http://forum.europa.eu.int/Public/irc/env/wfd/library?!=/framework_directive/guidance_documents

3.5.5 Reporting article 4.7 in the RBMP and public consultation

Annex VII of the WFD describes the information that should be included in the RBMP. Under point A.4, the current status of the water bodies must be assessed as a result of the monitoring programmes. Under point A.5, the environmental objectives established for surface waters and groundwaters must be listed, including identification of the use of the exemptions and the associated information required under Article 4.

The risk of deterioration of status occurring should be assessed at the time a new modification or alteration is being considered. The assessment of risk should be based on the best information available on the status of those water bodies whose status is likely to be affected by the proposed project. Such information should include the latest information from the monitoring programmes required under Article 8 and information obtained from any environmental impact assessment undertaken for the project.

Further, under article 4.7 (b), there is a general provision that "the reasons for those modifications and alterations are specifically set out and explained in the river basin management plan required under Article 13 and the objectives are reviewed every six years". This is a reporting obligation and does not mean that Member States must wait until the publication of the River Basin Management Plan before allowing a new physical modification or new sustainable development activity to proceed. In many cases projects will be developed within the RBMP six-year cycle.

For modifications and alterations within the scope of the Environmental Impact Assessment Directive, Member States must ensure that the public concerned is given the opportunity to express an opinion before the project is initiated.

Even if timing of a project is such that consultation on the RBMPs will not provide the opportunity for interested parties to express their views in advance of those decisions, Article 14 requires Member States to encourage the active involvement of all interested parties in the implementation of the Directive. It is recommended that Member States ensure that such opportunities are provided in relation to projects that are outside the scope of the Environmental Impact Assessment Directive but likely to result in deterioration of status or to prevent the achievement of good ecological Status, good ecological potential or good groundwater status.

The information provided through such consultations will help Member States in reaching a judgement on whether the exemption conditions are met and will reduce the likelihood that interested parties will challenge the subsequent decision.

If a modification or alteration goes ahead in the middle of a river basin planning cycle, the reason for that modification or alteration must be set out in the subsequent (update of the) RBMPs.

4 Conclusions

The work on environmental objectives and exemptions has started in 2005 and has progressed significantly over the past years. It has become evident that Article 4 of the WFD is the heart of this legislation and the crucial element to achieve a high level of protection of our waters as part of a sustainable water management, which also takes account of the social and economic needs and realities. This document brings together the fruitful work under the WFD Common Implementation Strategy on exemptions.

In the mean time, Member States are gaining practical experience with the application of Article 4 and are preparing for the necessary discussions as part of the public consultation. Whilst it is recognised that starting points, strategies and approaches differ across Europe, it is important to make transparent the underlying reasons and data for decision-making and to not use the exemptions as a blanket excuse. In many cases it may be more effective to discuss in a proactive way what measures can be taken to improve the current situation, rather than what arguments and administrative effort can be made to avoid taking any measures.

Thus, where "good status" may not be achieved or "deterioration of the current status" is possible, no action is not an option! This document aims at contributing towards this positive and proactive attitude when implementing the WFD and thereby contributing to sustainable water management.

The process of objective setting does not stop after the first planning cycle but is dynamic and iterative which means that it should be further developed and improved on the basis of experiences in the first RBMP. It is likely that the number of water bodies for which exemptions are applied will be decreasing within the second and third planning cycle but the application will have to be adapted each time.

It may be necessary to continue the work on exemptions in the next years, focusing on practical experiences and cases from the first planning cycle.

ANNEXES

Annex I: Costs & Benefits

An analysis of the costs and the benefits of measures to achieve the objectives of the WFD may be necessary to support the judgement to be made on exemptions from these objectives. Reasonable efforts should be made to collect information on different types of costs and benefits, including the appropriate mix of qualitative, quantitative and monetised information. In addition, available information, for example from the cost-effectiveness assessment, should be used. In all cases, the data should be used in a transparent way showing how the assessments and calculations have been carried out.

Below, more specific information is given on benefits and costs in the framework of the WFD. Useful guidance on types of costs and benefits and how to assess them was also made in the **WATECO guidance**. Please see Section 2 and 3 and Annex D of this guidance document²⁵.

In addition to the WATECO guidance, **the study on Costs and Benefits associated with the implementation of the Water Framework Directive of 2007**²⁶ provides useful information on types of costs and benefits and methodology for Cost-Benefit Analyses (CBAs) (mainly Chapter 3). Currently used methodologies for estimating the total costs and benefits of the implementation of the WFD were studied, and recommendations were made on which costs and benefits to include and how to evaluate them. Issues relating to comparison and aggregation of costs and benefits were also outlined.

I.1 Benefits

The environmental objectives set in the WFD shall ensure the long-term protection and the sustainable use of the water resources and prevent further deterioration. The achievements of these objectives will have numerous benefits and socio-economic gains for this and coming generations. When examining the proportionality of costs required for achieving the objectives, these benefits can and should be taken into account. Some examples of such benefits are listed below:

- Protection and enhancement of health and biodiversity of the aquatic ecosystem (in particular since good ecological status requires good quality of the structure and the functioning of this ecosystem).
- Protection of human health through water-related exposure (e.g. through drinking, drinks and food production, bathing and consumption of fish, shellfish and seafood).
- Lower costs for water uses, e.g. water supply or fisheries and more cost effectively achieved improvements by reducing treatment and remediation costs (e.g. drinking water supply, Sediment pollution).
- Improvement of efficiency and effectiveness of water policy based on the "polluters-pays principle" (in particular by adequate water pricing policies and cost-effectiveness assessment of measures, example: reduction of amount of water use per capita).
- Increased cost-effectiveness of water management, in particular of measures to implement and apply, for example the Nitrates, Urban Wastewater Treatment and IPPC Directives.

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http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/guidancesnos1seconomicss/ EN 1.0 &a=d

26

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/thematic_documents/economic_issues/benefits_implementation/report_sept12pdf/ EN 1.0 &a=d

- Integrated river basin management - as introduced by the WFD – should help authorities to maximise the economic and social benefits derived from water resources in an equitable manner instead of repeating the mistaken and fragmented approaches of the past, which dealt with problems in a local, and usually temporary, basis. This should translate, *inter alia*, in designing more cost-effective measures to meet the environmental objectives of other EU legislation (see above). Especially for new Member States, the cost-saving potential is great the lessons from the experiences in EU15 are learnt²⁷.
- Improvement of the quality of life by increasing the amenity value of surface waters (e.g. for visitors, tourists, water-sports users, conservationist) and by increasing its non-use value and all non-market benefits associated.
- Mitigation of impacts from **climate change and security of water supplies** (e.g. by forward planning in river basin management, water demand and supply management and mitigation of flood and drought events)
- Mechanisms to address **conflicts and regional disadvantages** by balancing interests of different water users and creating a level playing field for water users across the EU²⁸ (in particular by addressing and managing all demands on water resources from drinking water supply, agricultural and industrial uses, navigation, hydropower, etc. in a consistent and comparable way).
- Promotion of sustainable uses thereby **creation of new jobs** (e.g. in ecotourism, fisheries, environmental technologies and nature conservation sector).

Some of these benefits are financial like e.g. the saving of costs for water supply (economic benefits) and therefore can be expressed in monetary terms, or, if the acquisition of the corresponding data requires a disproportionate effort, can at least be estimated. However, on the basis of existing methodologies, it is difficult to attribute a monetary value to many types of environmental and social benefits. The existing Information Sheet on "Environmental and Resource Costs" clarifies many concepts and outlines a few examples of how to measure them in monetary terms. Another useful tool is the "Millennium Ecosystem Assessment Report"²⁹ which includes substantial information on freshwater ecosystem values as well as more recent study on The Economics of Ecosystems and Biodiversity (TEEB)³⁰ which quantified the costs of in-action for many ecosystem services. Member States need to make an effort to value or assess social and environmental benefits/costs more appropriately than in the past. Without this, it is likely that many assessments of disproportionate costs, taking place as part of the WFD implementation, will be incorrect.

However, it will not always be necessary to place a monetary value on all costs and benefits. Member States will need to collect sufficient information on costs and benefits to support good decision making, taking into account the costs associated with the collection of the relevant information. There is a need for pragmatic approaches in order to be able to take benefits into account if this monetary information is incomplete or not fully available. Some of these benefits may be assessed by using qualitative information. In other cases, an appropriate alternative may be the application of the "precautionary principle" or it might be possible to make a qualitative assessment of the benefits and to weigh them up against the costs.

More work is required to achieve full assessment of benefits (monetary or not) derived from the implementation of measures under the WFD. It is expected that, e.g. the ongoing

²⁷ See e.g. EEA report on "Effectiveness of urban wastewater treatment policies in selected countries: an EEA pilot study". Final draft of 19 April 2005.

²⁸ and with non-EU countries sharing a river basin with the EU.

²⁹ <http://www.maweb.org/en/index.asp>

³⁰ http://ec.europa.eu/environment/nature/biodiversity/economics/index_en.htm

work on environmental costs (both within the WFD implementation as well as in a wider context) will improve this situation.

I.2 Costs

While recognising the considerable benefits, achieving the environmental objectives may have additional costs on those water uses or "driving forces" which have a negative impact on the aquatic environment or beneficiaries from improvements and which have not - up until now - contributed to address such impacts (e.g. not paying for the water use). At the moment, these potential costs are not known for various reasons. First, it is impossible to determine the costs before criteria for the environmental objectives are available. The water quality has to be monitored in accordance with the Directive. Only when comparing the monitoring results with the environmental standards (as defined through Annex V WFD) will it be possible to assess the "distance to target" and thereby the required investments. Second, the costs are largely dependent on the choices of instruments and combination of measures that Member States will use. Third, application and enforcement of other water protection legislation, in particular the Urban Waste Water Directive, the Nitrates Directive and the Drinking Water Directive, are inadequate in a number of countries and, thus, costs related to implementing those are easily, but wrongly, added to the costs of implementing the WFD. In the end, it is not always possible to distinguish between the water management costs incurred due to the implementation of the WFD, and the costs which would have been incurred in the absence of the WFD. However, this distinction is crucial for performing the different analysis of costs. The costs of basic measures according to existing EC water related directives (UWWDD, IPPC, Nitrate etc.) can not be included in the analysis for justification of exemptions.

Independent of the lack of concrete cost-estimates, the WFD incorporates mechanisms that the socio-economic impacts are properly addressed in the decision-making and that the least cost option is selected. The way that such considerations are addressed in the directive is mainly through the above-mentioned exemptions and the development of the programme of measures as an integral part of the planning process.

If there is sufficient evidence that costs seem to be disproportionate, careful assessment and balanced decision-making on benefits and costs is an integral part of the WFD, in particular through the "exemptions" tests.

Further to the considerations in the objectives, the socio-economic aspects and, in particular the **cost-effectiveness**, is a central part in the development for the Programme of Measures. The Member States should attempt to ensure that the combination of measures for achieving the environmental objectives is resulting in the least cost option after giving sufficient attention and consideration to environmental and resource costs. Such approaches, which should be applied on national or river basin, sub-basin or water body level, leave enough flexibility in order to address issues of concern.

Furthermore, the proposed options including the use of certain exemptions and the proposed programme of measures must be subject to **public participation** in which all interested stakeholders are encouraged to be involved.

The WFD provides for environmental objectives which should be achieved by the most cost-effective combination of measures. Cost-effectiveness assessment and public participation of proposed choices are the key instruments in this process.

Annex II: Exemptions in a transboundary context

II.1 Principles for applying exemptions in a transboundary context

Exemptions may be applied in cases where a certain Member State cannot resolve the reasons for not achieving the environmental objectives because they lay outside the competence and jurisdiction of the Member State. When applying such an exemption, the following principles should be taken account of.

The coordination mechanisms as mentioned in WFD Article 3.4 or Article 3.5 or covered by other pieces of legislation (e.g. air quality) should be in place and have been exploited to the fullest extent to resolve the problem. In this context, the Member States concerned should coordinate their efforts to apply the most cost effective solution to solve the environmental issue for which an exemption may be required. - Furthermore, the Member State has to take all measures on its own territory that will contribute to achieving good status, and that are not disproportionate expensive or technically infeasible.

Finally, the Member State has to demonstrate that the reasons for not achieving the environmental objectives are outside its jurisdiction and its competence. This could for example be done by information provided by the other Member State, and/or by information provided by a monitoring point at the border between the Member States concerned or by other means.

II.2 Reasons for applying exemptions in a transboundary context

Exemptions in a transboundary context could relate to transboundary pollution, but also to hydro-morphological alterations or other transboundary ecological impacts or in the case of extreme events.

Transboundary pollution was specifically discussed in the context of the negotiations of the Commission proposal on environmental quality Standards (EQS) for priority substances³¹, in particular for the following issues:

- where EQS are exceeded because the pollution load which is transported from an upstream country (whether this country is a EU Member State or not) through transboundary rivers;
- where EQS are exceeded because long-range transboundary air pollution transports high loads of pollutants (in particular heavy metals and PAHs) into the Member State concerned³²;

In both cases, the exceedance of the EQS *"cannot be resolved by that Member State"* since the sources of pollution are outside the competence and jurisdiction of the Member State. So it appears most likely that in these cases of transboundary pollution, the exemptions (Article 4.4, 4.5 and 4.6) would be applicable. Countries receiving transboundary pollution via marine currents or by atmospheric deposition are also considered downstream (or affected) countries in the context of Section 3.2.7 and this Annex.

³¹ COM(2006) 397 final of 17.7.2006; 2006/0129 (COD)

³² It should be noted that other EU or international legislation or agreements might be applicable to this issue, for example the protocols under the UNECE Convention on Long-range Transboundary Air Pollution.

II.3 Conditions of the exemptions in transboundary context

Similar to applying exemptions in a national context, it needs to be demonstrated if the conditions of Article 4.4 and 4.5 are met. Subparagraph 4.5(a) needs special attention in this case: the application of sub-paragraph (a) is clear in cases where human activities are carried out within a Member State and where an assessment of the environmental and socio-economic needs of the human activities and its alternatives is carried out. In case of transboundary effects, there is no human activity within the Member States' competence that can be compared with another. The human activity causing the pollution or the ecological impacts is outside the jurisdiction of the Member State. Thus, this condition does not apply in case of transboundary pollution or transboundary ecological impacts.

WFD Article 3

WFD Article 3.4 requires Member States to ensure coordination of the requirements for the achievement of the environmental objectives for international river basin districts within the territory of the EU. For international river basin districts partly outside the territory of the EU, the requirement is to 'endeavour to establish appropriate coordination'. It is obvious that this includes the coordination of the application of exemptions. It is of particular relevance that the coordination ensures that all relevant information and data are being exchanged between the Member States and/or other countries. For example, if the upstream Member State intends to apply an exemption on its territory, the downstream country should be informed as soon as possible and access to all information should be guaranteed. The international river conventions and other relevant international agreements play an important role in fostering and improving this information exchange.

WFD Article 12

In case the reasons for not achieving good status cannot be resolved by a Member State since they are outside the competence and jurisdiction of the Member State, the WFD includes the Provision of Article 12 **"Issues which cannot be dealt with at a Member State level"**. Article 12 provides for:

"1. Where a Member State identifies an issue which has an impact on the management of its water but cannot 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 12 might be invoked for various situations related to exemptions. It might for example be applied in cases where no information on exemptions is provided, or it might be applied to solve the issue for which an exemption needs to be applied by a neighbouring Member State. Article 12 could be invoked at the same time when applying the exemption in the drafting phase of the river basin management plan.

The possible reaction by the Commission will vary depending on the issue.

Demonstration of evidence

The key issue in both applying the exemption and invoking Article 12 is the **demonstration of evidence** that Member States have taken all reasonable actions to fulfil the legal obligations.

When applying exemptions, the reasons for this need to be mentioned in the river basin management plan. Furthermore, it is important to inform neighbouring countries as soon as possible on intermediate Steps related to the evidence, the intermediate objectives and the

expected evolution, in order to enable the neighbouring country to adapt their own river basin management.

When a Member State is reporting to the Commission under Article 12, it will have to provide information which support their argument and allow the Commission to verify that the non-achievement of an objective is clearly linked to the transboundary pollution or other transboundary effects. In general, such demonstration of evidence can be achieved through an appropriate and targeted monitoring strategy or a comprehensive risk analysis in accordance with Article 5 and Annex II WFD.

Annex III: Background information on prolonged droughts

The 'Drought Management Plan Report, including Agriculture, Drought Indicators and Climate Change' (also DMP report) of the Water Scarcity and Drought Expert Network notes that there are various types of droughts. For the application of exemptions according to WFD Article 4(6), the term to be used is "prolonged droughts". Whilst it will be difficult to find an all encompassing definition for what a "prolonged drought" is, it would be beneficial to enhance the common understanding for the application of the term in the context of the WFD exemptions.

As the WFD indicates in Article 4.6, the Member State may declare a "temporary deterioration" to achieving the objectives of Article 4.1 on the basis of the following conditions:

- It is a result of natural causes or *force majeure* which are exceptional or which could not reasonably be foreseen and which are reviewed periodically (e.g. through a follow up of the Programme of Measures (PoM) and/or Drought Management Plan);
- All practicable Steps are taken to avoid further deterioration (Article 4.6(a));
- Measures taken during the prolonged drought do not compromise the recovery of the water body after the prolonged drought and are included in the PoM (Article 4.6(c));
- Measures to restore the water body are taken as soon as reasonably practicable and are included in the next update of the River Basin Management Plan; (Article 4.6(c) and 4.6(d))
- A summary of effects of the prolonged droughts is included within the RBMP (Article 4.6(e)).

Section 10 of the Paper "Exemptions to the Environmental Objectives under the Water Framework Directive, Article 4(4), 4(5), and 4(6)" already highlights a few issues regarding the exemption under 4(6).

First, 'prolonged droughts' are one of the natural causes for which the exemptions under Article 4(6) may be applied. It is highlighted again that a **drought - contrary to water scarcity - is a natural and unpredictable phenomenon**³³. The appearance of a drought is not generated by human activities. However, the impacts of a drought episode depend on the degree of use of the resource in a particular river basin and may be exacerbated by mismanagement practices (i.e. water resource management that is not sustainable). Some mitigation and prevention measures can be taken in order to (partially) reduce the effects of a drought when it occurs, but no measures can avoid a drought.

Secondly, it is already recognised that Member States will have to differentiate between the effects of prolonged droughts, which are purely natural phenomena, and the effects of human activities, although not always easy in practice. It is essential for proper river basin management planning and the application of Article 4.6 to make a distinction between the natural cause itself and the effects of management practices.

Thirdly, the Exemptions Paper indicates that for the distinction between a "non prolonged drought" and a "prolonged drought", the conditions of a prolonged drought, i.e. the circumstances of natural causes or "force majeure" which are exceptional or could not reasonably have been foreseen should be demonstrated in order to qualify as "prolonged". Normal dry hydrological conditions should be addressed in the ecological reference conditions set by the WFD. The river basin management plans should be able to

³³ See also the Communication 'Addressing the challenge of water scarcity and droughts in the European Union' (COM(2007) 414)

cope with non prolonged droughts without resorting to the exemption in article 4(6). Relevant criteria are necessary to facilitate the common understanding of a 'prolonged drought' through an agreed set of indicators (see below), similar to criteria to define 'extreme floods'.

III.1 Identification of a "prolonged drought"

Characteristics of droughts can vary significantly from country to country and between regions and therefore it is not possible to agree on common values of indicators that can be used in all cases.

As the circumstances to declare prolonged drought relate to a natural cause, indicators for prolonged droughts should relate to natural parameters (see 4.6(b)). Although there might be a time lag between the lack of precipitation and decreased water levels, e.g. due to retention effects of soil and vegetation and inertial effects on aquifers, the main parameter to define prolonged drought should be related to lack of precipitation (minus evapotranspiration) during a particular period with respect to average, and should take into account aspects like intensity and duration. It is necessary to distinguish between the drought itself and the effects of water use and management practices.

The drought events that are part of the normal dry hydrological conditions cannot be considered a "prolonged drought" since they are not "circumstances of natural cause *or force majeure* which are exceptional or could not reasonably have been foreseen". Any indicator used to define a prolonged drought and hence to allow triggering the exemption in article 4(6) should be based on a statistical analysis of the deviation of precipitation from the average situation (including intensity and duration), to prove that the circumstances are those of a prolonged drought.

III.2 Management of a prolonged drought

The reason for invoking an exemption under Article 4.6 is that a prolonged drought may affect the status of a water body considerably and during a significant period of time, so that a temporary deterioration may be inevitable even with the application of the best water management practices.

In the case of a prolonged drought, it may be necessary to take exceptional measures, but they must not compromise the recovery of the quality of the water body when the prolonged drought is over. These measures need to be included in the programmes of measures and/or the Drought Management Plan. They also do not exempt from taking all practicable steps to prevent further deterioration in status of the water body (see 4.6 paragraphs (a) and (c)).

Furthermore, during the prolonged drought and afterwards, all measures have to be taken with the aim of restoring the water body to its prior status as soon as reasonably practicable. In this context, practicable measures are those that are technically feasible and not disproportionately expensive. Restrictions on water use by different sectors might be an example of measures that have to be taken.

Managing prolonged droughts implies making decisions on the allocation of reduced resources to both environmental and human activity needs. Unlike in non prolonged droughts, during which the environmental needs should be respected at all times so that the WFD environmental objectives are met, during a prolonged drought, and provided the conditions on article 4.6 are respected, priority needs related to human activity (e.g. drinking water supply) can be temporarily met at the expense of the environmental needs, i.e.

allowing a temporary non-achievement of the environmental objectives. Such decisions have to carefully consider the environmental and socioeconomic aspects in accordance with the conditions in paragraphs 4.6 (a) to (d).

Besides the potential impacts on drinking water, prolonged droughts may cause significant impacts on all water uses, in particular irrigation, hydropower generation, supply of cooling water and other industrial uses, navigation and domestic uses other than drinking water (such as garden sprinkling). Thus, a clear prioritisation of main uses should be established³⁴ in advance where use restrictions are imposed step-by-step with increased duration, intensity and impact of the drought event. Essential drinking water supplies will be considered a high priority during periods of prolonged droughts, and this should be combined with high priority for an ecological minimum flow.

All drought situations other than a prolonged drought need to be managed without the use of article 4.6, i.e. for water bodies where non-prolonged droughts occur, the environmental objectives should be achieved and no deterioration must take place. Hence the water uses need to be brought in balance with the water availability under these dry hydrological conditions. The impacts of non prolonged droughts need to be taken into account in the definition of the environmental objectives of the RBMP and need to be addressed in the programme of measures and/or the Drought Management Plan. The iterative process of the WFD includes a periodical review of these objectives and associated measures in order to take into account the evolving impacts of these events in time.

In case of water bodies where the extent of human activity is such as to produce a permanent imbalance between available resources and demands, and if the achievement of environmental objectives would be infeasible or disproportionately expensive, the possibility to apply an exemption in article 4.4 or 4.5 might be explored, provided the conditions set out in these articles are fulfilled

III.3 Drought impacts on ecology and other water uses

For management of droughts and for determining if a temporary deterioration occurs in case of a prolonged drought, the impacts of this extreme phenomenon need to be investigated, both on ecology and on different human water uses.

Some examples for impacts on the ecology at a low water level and high water temperature are, in particular:

- changes in fish development and larger numbers of deaths than normal. Some periods of the year are highly critical for fish, such as the reproduction and migration periods.
- increased algae development due to the lack of water in rivers and lakes due to the drought. However, this parameter may be difficult to distinguish from the excess of nutrient releases that cause eutrophication.

The effects of a drought could greatly vary depending on the existing scenarios: basins with storage aquifers directly linked to the water body system, and/or regulating infrastructures (e.g. reservoirs) could be less vulnerable to impacts, while basins without storage capacity could be more rapidly affected. Other factors will undoubtedly influence drought impacts, such as demands and uses of the area. Thus, the different potential impacts caused by droughts should be assessed or, at least estimated, in advance, preferably as part of a drought management plan. Such assessment should consider economic, social and

³⁴ See also the Communication 'Addressing the challenge of water scarcity and droughts in the European Union' (COM(2007) 414)

environmental impacts in order to inform the necessary decision-making. Such an assessment should also take into account transboundary impacts, disparities between different Member States and distortions of competition between them which may stem from restricting or stopping certain uses.

III.4 Indicators

Three types of indicators can be identified in relation to droughts:

1. Indicators to identify and demonstrate the occurrence of a prolonged drought: natural indicators based on precipitation as the main parameter (where relevant including evapotranspiration, and with statistical series) indicate that it is a 'natural cause *or force majeure*', and that the circumstances are exceptional or could have not reasonably been foreseen.
2. Indicators to prove that the prolonged drought has resulted in a temporary deterioration of one (or several) water body(-ies) as an integral part of the monitoring programmes established under Article 8 and Annex V WFD (these are indicators related to environmental impacts).
3. Indicators to illustrate the socio-economic impacts of the prolonged droughts (drinking water supply, agriculture, industry, etc).

The first and second types of indicators should be used to prove the occurrence of a prolonged droughts and the associated temporary deterioration of water bodies. The second and third types of indicators should be used:

- to take the appropriate measures in order to mitigate the impacts of the prolonged droughts and recover the quality of the water bodies, according to 4.6 (c) and (d),
- to draft the annual review of the effects of the prolonged droughts (4.6(d))
- to draft the summary of the effects (4.6(e))

All indicators should be used to inform the water users and the public about the occurrence of droughts, their effects and the management results.

Chapter 3 of the DMP report provides an overview of national indicators related to droughts. The development of such indicators to be used on EU level and the specification on which indicators are consistent for the purpose of applying the exemption related to "prolonged droughts" will be subject of further work carried out by the European Commission, the European Environment Agency and Member States. In all cases, it is a requirement that when applying an exemption and the related indicators that they are to be submitted to a transparent and open process through the public participation (cf. Article 14 WFD).

III.5 Measures to address "prolonged droughts"

When a prolonged drought occurs, measures need to be taken to avoid further deterioration and to restore the water body as soon as reasonably practicable. Examples of such measures could be the following:

- develop early warning System and public Information
- implement preventive measures
- promote water savings
- take all practicable measures to prevent further deterioration
- implement specific mitigation and adaptation measures of article 11 (basic and supplementary) in water management sector as well as in other water

dependant sectors (agriculture, energy, tourism, transport, urban development, industry)

- propose additional measures after the annual review of the effects of circumstances that are exceptional or could not have reasonably been foreseen (Article 4.6(d))

When, and where necessary, these measures can be presented in advance as part of a drought management plan (complementing the river basin management plan). Acting on a prolonged drought, requires a rapid adoption of measures, for which the course of action should also be reflected in the RBMP or directly within the specific DMP.

Measures to be taken in case of prolonged droughts as mentioned in 4.6(c) cannot adversely affect other water bodies (see Article 4.8 WFD) and must ensure that the objectives set by other Community legislation are not compromised (see Article 4.9 WFD).

Additional information on the types of measures and possible implementation strategies are described in detail in Chapter 5 of the DMP report.

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