COMMON IMPLEMENTATION STRATEGY

FOR THE WATER FRAMEWORK DIRECTIVE

(2000/60/EC)

Guidance Document No. 35

Exemptions to the Environmental Objectives according to Article 4(7)

New modifications to the physical characteristics of surface water bodies, alterations to the level of groundwater, or new sustainable human development activities

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Table of Contents

List of Tables

List of Figures

List of Case Studies

1 INTRODUCTION

1.1 A Guidance Document: What for?

This document aims at guiding experts and stakeholders in the implementation of the Directive 2000/60/EC establishing a framework for Community action in the field of water policy - the Water Framework Directive (WFD)[1]. It focuses on exemptions under Article 4(7) of the WFD. Article 4(7) only applies to new modifications to the physical characteristics of a surface water body, alterations to the level of bodies of groundwater and new sustainable human development activities, which can lead to failure of achieving the WFD objectives. In case the conditions as outlined under Article 4(7) are met exemptions can be granted.

The document is based on and further specifies the issues already outlined in Guidance Document No. 20 on exemptions to the environmental objectives[2]. It was developed in the frame of the WFD Common Implementation Strategy (CIS)[3] process 2016-2018 and aims to provide complementary information and further clarification by taking into account the latest experiences with the implementation of the WFD and case laws related to Article 4(7).

The document constitutes guidance and good practice. Member States are not legally required to follow the recommendations contained in it. Member States are, however, required to use methods and approaches compliant with the requirements of the WFD.

The guidance is specifically addressed towards:

- Water managers and river basin authorities developing river basin management plans;
- Authorities responsible for taking decisions on the granting of permissions for new activities or projects that might have an impact on water;
- Decision makers at different levels who are responsible for the development, promotion and approval of sectorial strategies (e.g. rural development and agriculture, flood risk management, transport policy, energy policy, etc.);
- Experts which are performing assessments under related legislation like Environmental Impact Assessments (EIA), Strategic Environmental Assessments (SEA), assessments under the Habitats Directive (HD), etc.;
- Project developers and representatives from different economic sectors;
- Interested stakeholders and representatives from civil society organisations.

The guidance inter alia recalls the requirements of the WFD related to environmental objectives and the exemptions with a focus on Article 4(7). Chapter 2 reflects on horizontal issues and addresses the importance of policy coherence for the sustainable management of water resources and for assessments under Article 4(7). Chapter 3 outlines the scope and conditions triggering an Article 4(7) Test and chapter 4 provides guidance on a potential assessment approach for determining whether an Article 4(7) Test has to be performed for a certain activity or project. Chapter 5 provides clarification on the different steps which have to be performed under an Article 4(7) Test towards a decision whether a certain activity or project can be approved or not. Finally, chapter 6 provides an outlook on potential

[1] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32000L0060

[2] CIS Guidance Document No. 20 – Exemptions to the Environmental Objectives: https://circabc.europa.eu/sd/a/2a3ec00a-d0e6-405f-bf66-60e212555db1/Guidance_documentN%C2%B020_Mars09.pdf

[3] Common Implementation Strategy (CIS) for the Water Framework Directive: http://ec.europa.eu/environment/water/water-framework/objectives/implementation_en.htm

follow-up activities for the benefit of a coherent implementation of the WFD and Article 4(7). Practical examples and approaches are illustrated via case studies and inter-linkages with other relevant EU legislation and policies are addressed within the different chapters of the document.

In summary, the document aims at clarifying a number of aspects in relation to the application of WFD Article 4(7). However, this is not a detailed manual on application. Further methodological guidance is likely necessary at Member State level that is adapted to the legal, administrative and technical reality of each Member State.

1.2 WFD and the Common Implementation Strategy (CIS) process

The implementation of the WFD raises a number of shared technical challenges for the Member States, the Commission, the Candidate and EEA Countries as well as stakeholders and NGOs. In addition, many of the European river basins are international, crossing administrative and territorial borders and therefore a common understanding and approach is crucial to the successful and effective implementation of the Directive.

In order to address the challenges in a co-operative and coordinated way, the Member States, Norway and the Commission agreed on a Common Implementation Strategy (CIS). Since 2001 the activities in the frame of the CIS are aiming at a coherent and harmonious implementation of the WFD. The focus is on methodological questions related to a common understanding of the technical and scientific implications. In this context a series of working groups and joint activities have been undertaken during the last years. While Member States have gained valuable practical experience in the use of exemptions, the implementation of Article 4(7) has shown concrete issues that would greatly benefit from this updated guidance. For that purpose a specific Ad-hoc Task Group (ATG) has been established in the frame of the CIS. The following table provides an overview on those main CIS activities relevant for Article 4(7) since the adoption of the Directive. More detailed information can be obtained from the related documents.

Table 1: Overview CIS activities relevant for WFD Article 4(7)

When	Who	Output
2003	Water Directors	WATECO guidance[4] which outlines a basic concept of Article 4(7).
2003	Water Directors	Guidance document No. 4 on the identification and designation of Heavily Modified and Artificial Water Bodies.
2006	CIS process	Policy paper on WFD and hydro-morphological pressures[5] with a focus on hydropower, navigation and flood defence activities. It includes recommendations for better policy integration.
2007	CIS process	Workshop on WFD & Hydropower[6]. As a result some first key principles for hydropower under the WFD have been formulated.
2008	Water Directors	CIS Guidance number 20 on Environmental Objectives and Exemptions[7] discusses basic concepts under Article 4(7).
2009	CIS process	Workshop on Heavily Modified Water Bodies (HMWB) delivered several recommendations[8] relevant to hydropower and the WFD, such as on the interpretation of "significant adverse effects on the use", good ecological potential and ecological continuum.
2009	Water Directors	CIS Guidance number 24 – River Basin Management in a changing climate addresses some aspects related to Article 4(7).

[4] http://ec.europa.eu/environment/water/water-framework/economics/pdf/Guidance%201%20-%20Economics%20-%20WATECO.pdf
[5] https://circabc.europa.eu/sd/a/bcba0b09-a2d3-4762-a1f6-5ac664beaa15/HyMo_Political_Paper_FINAL.pdf
[6] https://circabc.europa.eu/w/browse/a839626e-9806-4fee-8a93-678a086c0ab3
[7] https://circabc.europa.eu/sd/a/2a3ec00a-d0e6-405f-bf66-60e212555db1/Guidance_documentN%C2%B020_Mars09.pdf
[8] https://circabc.europa.eu/sd/a/651417d8-46d6-4120-8c59-54f2bbcf422d/FinalHMWBConclusions.pdf

When	Who	Output
2010	Water Directors	Statement on "Hydropower Development under the Water Framework Directive"[9] summarising key principles and recommendations. A key clarification was that the size of the project is not the relevant criteria to trigger Article 4(7).
2011	CIS process	2nd CIS workshop on Water Management, WFD & Hydropower made good practice recommendations on the application of WFD Article 4(7)[10].
2016	CIS process	Establishment of Ad-hoc Task Group for guidance on the implementation of Article 4(7).

Further guidance documents are available with more general WFD relevance and linking aspects related to Article 4(7).[11]

1.3 Setting Article 4(7) into context

The **environmental objectives of the WFD** are outlined in Article 4 and the core of this EU legislation providing for a long-term sustainable water management on the basis of a high level of protection of the aquatic environment. Article 4(1) sets out the environmental objectives for natural surface and groundwater bodies and artificial and heavily modified water bodies (HMWBs). Natural surface water bodies must, by 2015, adhere to good ecological and chemical status and groundwater bodies to good quantitative and chemical status. Artificial and HMWBs must achieve good ecological potential and good chemical status. In Article 4(3) the criteria for the designation of artificial or heavily modified water bodies are described. One **further key objective** of the WFD, outlined in Article 4(1), is to implement the necessary measures to **prevent deterioration of the status of all water bodies** - the so-called "**non-deterioration principle**", which is of particular relevance in the context of Article 4(7). Finally, the WFD objective of good status may need to be complemented by additional objectives in order to ensure that conservation objectives for protected areas are achieved (Article 4(1)(c) and Article 4(2)).

Exemptions from these objectives are defined within Article 4, outlining the conditions under which the achievement of good status or potential may be phased or not be achieved, or under which deterioration may be allowed. Article 4(4), 4(5), 4(6) and 4(7) describe the conditions and the process in which they can be applied. They include the following:

- Extension of the deadline, in other words, good status/potential must be achieved by 2021 or 2027 at the latest (Article 4(4)) or as soon as natural conditions permit after 2027;
- Achievement of less stringent objectives under certain conditions (Article 4(5));
- Temporary deterioration of the status/potential in case of natural causes or "force majeure" (Article 4(6));
- Deterioration or failure to achieve good status/potential as a result of new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater, or status deterioration of a body of surface water from high status to good status as a result of new sustainable human development activities (Article 4(7)).

All these exemptions contain distinct conditions to be met and have to be set out and explained in the River Basin Management Plan.

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

[9] https://circabc.europa.eu/sd/a/4e0cb9d2-c268-4d67-ac56-f1977c1b85fc/WD%20statement%20May%202010-%20Hydropower%20Development%20under%20the%20Water%20Framework%20Directive.pdf
[10] https://circabc.europa.eu/sd/a/23d94d2d-6b9c-4f17-9e15-14045cd541f3/Issue%20Paper_final.pdf
[11] http://ec.europa.eu/environment/water/water-framework/facts_figures/guidance_docs_en.htm

- first, exemptions for one water body must not permanently exclude or compromise the achievement of the environmental objectives in other water bodies (see chapter 3.5);
- second, at least the same level of protection must be achieved as provided for by existing Community law (including those elements to be repealed).

This Guidance focuses on the exemptions under Article 4(7), which sets out the conditions for exemption in the event of new modifications to the physical characteristics of a body of surface water, alterations to the level of bodies of groundwater or new sustainable human development activities.

Integration with other sector policies is a key issue in this context. The Guidance contributes to the "further integration of protection and sustainable management of water into other Community policy areas such as energy, transport, agriculture, fisheries, regional policy and tourism" with a "continued dialogue and for the development of strategies towards a further integration of policy areas"[12]. It also contributes to the "Better Regulation Initiative"[13].

This to comply with the precautionary principle and with the principle of sustainable development, what is a fundamental objective of the European Union, laid down in the Treaty[14] and applicable to all EU activities and policies and in the context that "a high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development"[15].

[12] WFD preamble, paragraph 16.
[13] Commission Communication Better Regulation: Delivering better results for a stronger Union (COM(2016) 615 final)
[14] Treaty on European Union
[15] Laid down in Article 37 of the Charter of Fundamental Rights of the European Union

2 INTEGRATION OF SECTOR POLICIES AS PREREQUISITE FOR POLICY COHERENCE

Integrated approaches and policy coherence play a central role for the implementation of the WFD and for informed assessments in relation to Article 4(7). New physical modifications, alterations, or new sustainable human development activities, potentially causing deterioration, are frequently linked with the achievement of the objectives of other EU policies such as energy, transport, flood protection, coastal defence, water supply and wastewater treatment, irrigation, etc., next to relevant national policies. Integration of the WFD and its links with the implementation of such policies therefore strongly calls for a coordinated approach and a better streamlining of authorisation processes in relation to Article 4(7).

Some of the relevant EU policies and programs include *inter alia* the following:

- Trans-European transport network (TEN-T)[16]
- Energy policy including renewable energy policy and its renewable energy action plans
- Industry policies such as the EU Raw Materials Strategy
- The flood risk management plans under the EU Floods Directive
- Marine Strategy Framework Directive and Maritime Spatial Planning Directive
- European Funding Instruments and the Common Agricultural Policy (CAP)
- Climate change policies including adaptation and mitigation
- Other environmental directives and policies, in particular the SEA, EIA, Birds and Habitats Directives and the Urban Wastewater Treatment Directive

Involvement and consultation of authorities and stakeholders concerned with the implementation of the WFD in the design and implementation of these policies allows integrating the objectives of the WFD from the beginning and might even reduce the need for new modifications and hence the possibility of deterioration of water bodies status due to increased transparency for decision makers on expectable impacts.

Furthermore, assessments under Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (SEA Directive) can contribute to the integration of environmental considerations into the preparation of certain plans and programmes as listed above, which might be subject to an SEA. Assessments under the SEA Directive can help to fully take significant effects on the environment into account, including effects on water.

The results of such integrated approaches can also provide valuable information for assessments required in the context of Article 4(7), in particular when it comes to the strategic dimension of overriding public interest, weighing benefits and impacts of modifications or for the assessment of better environmental options (see chapters 5.3 and 5.4).

2.1 Transport policy

The TEN-T programme was established to support the construction and upgrade of transport infrastructure across the European Union. The programme consists of projects – defined as studies or works – whose purpose is to ensure the cohesion, interconnection and interoperability of the trans-European transport network, as well as access to it.

[16] For more information see http://ec.europa.eu/transport/themes/infrastructure_en

TEN-T projects, which are located in every EU Member State[17], include different modes of transport[18] which can be relevant in terms of their potential effects on water. This can for instance be the case for projects related to the construction and upgrade of railway infrastructure or roads, but can be of particular relevance for navigation covering inland waterways and several coastal and inland water ports. The inland waterways dimension of the TEN-T covers all major rivers, canals and lakes used traditionally for transport purposes in the EU (waterways of European dimension, following the classification of the United Nations Economic Commission for Europe - UNECE). Articles 15 and 39 of the TEN-T Guidelines[19] set the following requirements:

- Rivers, canals and lakes comply with the minimum requirements for class IV waterways as laid down in the new classification of inland waterways established by the European Conference of Ministers of Transport (ECMT) and that there is continuous bridge clearance. At the request of a Member State, in duly justified cases, exemptions shall be granted by the Commission from the minimum requirements on draught (less than 2.50 m) and on minimum height under bridges (less than 5.25 m);
- Rivers, canals and lakes are maintained so as to preserve "good navigation status", while respecting the applicable environmental law.

Article 16 of the TEN-T Guidelines establishes priorities for inland waterway infrastructure development, whereas Article 16(e) outlines that priority should *inter alia* be given to "paying particular attention to the free-flowing rivers which are close to their natural state and which can therefore be the subject of specific measures".

Due to the potential need for modifications to the hydromorphological conditions of water bodies for meeting these objectives, navigation infrastructure projects may cause deterioration or failure to achieve good status/potential and therefore trigger an Article 4(7) Test to assess to assess whether a project can be authorised under the WFD. Since both, the WFD as well as the TEN-T regulations allow for the application of exemptions, and since there is no hierarchical relationship between these two policies, it is important to follow an integrated approach for a coherent implementation of both, water and transport policy. Further guidance on the concept of "good navigation status", addressing also the relationship with the WFD and other environmental legislation, is planned to be made available[20].

2.2 Energy policies including renewable energy policy

The focus of the EU Energy Strategy is to make energy supply more secure, affordable and sustainable. Conventional energy generation installations are expected to still play an important role for energy supply in the foreseeable future. However, renewables play an increasingly central role to achieve these targets. The EU's Renewable Energy Directive (2009/28/EC)[21] sets a binding target of 20% final energy consumption from renewable sources by 2020. Renewables will continue to play a key role in helping the EU meet its energy needs beyond 2020. EU countries have agreed on a new renewable energy target of at least 27% of final energy consumption in the EU as a whole by 2030 as

[17] For more information see https://ec.europa.eu/inea/ten-t/ten-t-projects/projects-by-country
[18] For more information see https://ec.europa.eu/inea/ten-t/ten-t-projects/projects-by-transport-mode
[19] Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU; See: http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32013R1315
[20] During the drafting process of this document work was ongoing on guidelines towards achieving 'good navigation status', addressing also the linkage to the WFD. Related documents will be made available as soon as finalised.
[21] Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC; See: http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32009L0028

part of the EU's energy and climate goals for 2030[22]. On 30 November 2016 the Commission published a proposal for a revised Renewable Energy Directive towards meeting these targets[23]. The long-term goal is to reduce greenhouse gas emissions by 80-95% until 2050.

A number of measures are required to achieve these targets, including the increase of energy efficiency and the increase of energy production from renewable sources. EU countries have committed to reaching their own national renewables targets which are varying amongst Member States. Renewable energy can be produced from different sources including wind, solar, hydropower, geothermal, biomass and also tidal. All EU countries have adopted national renewable energy action plans[24] under the Renewable Energy Directive. These action plans outline how Member States want to achieve their Renewable Energy targets. Beside others these plans cover:

- individual renewable energy trajectories for electricity, heating and cooling, and transport sectors;
- the planned mix of different renewables technologies.

Hydropower constitutes an important renewable energy source, although the share of contribution from other sources of renewable energy is increasing. Specific hydropower facilities can also play an important role to integrate other sources of variable renewables, such as wind and solar. By impacting on hydromorphology new hydropower plants or new modifications at existing facilities altering hydromorphology are likely to be subject to an Article 4(7) Test by causing deterioration of water status.

2.3 EU Raw Materials Strategy and Extractive Waste Directive

In 2008, the Commission adopted the Raw Materials Initiative[25] which set out a strategy for tackling the issue of access to raw materials in the EU. This strategy has three pillars which aim to ensure i) fair and sustainable supply of raw materials from global markets, ii) sustainable supply of raw materials within the EU, and iii) resource efficiency and supply of "secondary raw materials" through recycling. The strategy covers all raw materials used by European industry except materials from agricultural production and materials used as fuel.

Waste from extractive operations (i.e. waste from extraction and processing of mineral resources) is one of the largest waste streams in the EU. It involves materials that must be removed to gain access to the mineral resource, such as topsoil, overburden and waste rock, as well as tailings remaining after minerals have been largely extracted from the ore.

Directive 2006/21/EC[26] provides for measures, procedures and guidance to prevent or reduce as far as possible any adverse effects on the environment[27], in particular water, air, soil, fauna and flora and

[22] European Council (23 and 24 October 2014) Conclusions on 2030 Climate and Energy Policy Framework; See: http://data.consilium.europa.eu/doc/document/ST-169-2014-INIT/en/pdf

[23] Proposal for a Directive of the European Parliament and of the Council on the promotion of the use of energy from renewable sources COM/2016/0767 final - 2016/0382 (COD); See: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016PC0767

[24] See https://ec.europa.eu/energy/node/71

[25] Communication from the Commission to the European Parliament and the Council - The raw materials initiative — meeting our critical needs for growth and jobs in Europe COM(2008) 699 final; See: https://ec.europa.eu/growth/sectors/raw-materials/policy-strategy_en

[26] Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC; See: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02006L0021-20090807

[27] The directive does not apply for injection of water and re-injection of pumped ground-water as defined in the first and second indents of Article 11(3)(j) of Directive 2000/60/EC, to the extent authorised by that Article.

landscape, and any resultant risks to human health, brought about as a result of the management of waste from the extractive industries.

In regard to water the construction and management of waste facilities need to meet the conditions in the short and long-term perspectives that preventing pollution of the soil, air, groundwater or surface water, taking into account the groundwater directive and the WFD. The operator of such a facility has to take the necessary measures in order to meet Community environmental standards in that regard. The requirement for such measures can only be reduced if an environmental assessment (Art 13 of the Directive) shows that the waste facility poses no potential hazard to soil, groundwater or surface water.

Further according to Article 13(5) when placing extractive waste back into excavation voids, whether created through surface or underground extraction, which will be allowed to flood after closure, the operator shall take the necessary measures to prevent or minimise water status deterioration and soil pollution. The operator shall provide the competent authority with the information necessary to ensure compliance with Community obligations, in particular those in WFD.

2.4 Flood risk management

In 2007, the EU Floods Directive (FD)[28] entered into force with the aim to reduce the adverse consequences on human health, the environment, cultural heritage and economic activity associated with floods in the Community. Under Art 9 the FD requires Member States to develop flood risk management plans. These have to include a summary of measures and their prioritisation aiming to achieving the appropriate objectives of flood risk management (FD article 7). The first flood risk management plans have been adopted for the 2016-2021 cycle.

Furthermore, Member States shall take appropriate steps to coordinate the application of all aspects of implementation focusing on opportunities for improving efficiency, information exchange and for achieving common synergies and benefits (FD Article 9) and more specifically:

- The flood maps and the reviews of the characterisation analysis required under WFD Article 5(2) and the information in the flood maps shall be consistent with relevant information presented under the WFD (FD Article 9(1));
- The development and review of the FRMPs and RBMPs shall be coordinated, and may be integrated (FD Article 9(2));
- The active involvement of all stakeholders under both Directives shall be coordinated, as appropriate (FD Article 9(3)).

The implementation of both the WFD and FD would benefit from Member States taking an integrated approach to maximise the synergies between the two policies (e.g. via natural water retention measures[29]) and minimise conflicts between them. When designing programmes of measures under both directives it is important to be clear on what synergies are being taken advantage of and what potential conflicts there may be. New flood risk management projects triggered by the FD could result in changes to the hydromorphology, e.g. hard defence systems. Such planned changes can require being subject to Article 4(7) assessments.

[28] Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks; See: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007L0060

[29] For more information see: http://ec.europa.eu/environment/water/adaptation/ecosystemstorage.htm

2.5 Marine Strategy Framework and Maritime Spatial Planning Directives

The *Marine Strategy Framework Directive* (Marine Directive or MSFD, 2008/56/EC) aims at achieving the 'good environmental status' of European marine waters by the year 2020 through the implementation of two overarching principles: the ecosystem-based approach to the management of human activities and an integrated, coordinated approach at regional and sub-regional level.

In the context of exemptions, it is important to consider the scope and differences of the MSFD and the WFD in defining environmental objectives:

- Both the MSFD and the WFD address coastal water bodies but the MSFD clarifies its scope in covering coastal water bodies to those particular aspects of the environmental status of the marine environment which are not already addressed through the WFD. The MSFD consequently applies to WFD coastal water bodies for additional topics such as birds, cetaceans, fish, litter, underwater noise and other aspects not already addressed by the WFD.
- Both the WFD and the MSFD use similar concepts for their environmental objectives. Good Ecological Status in coastal water bodies under the WFD refers to defined pelagic and benthic biological objectives taking into account physico-chemical and hydromorphological parameters. Good Environmental Status under the MSFD is broader and covers 11 qualitative descriptors, including all aspects of biodiversity (birds, mammals, reptiles, fish, cephalopods, pelagic and benthic habitats, food webs) and a number of pressure-based descriptors (non-indigenous species, eutrophication, hydrographical changes, contaminants, litter and energy). There are overlaps between the definitions of good status under the WFD and MSFD, particularly for eutrophication and contamination issues.

Article 14 of the MSFD provides for certain exceptions to achieving good status in its coastal and marine waters (Note: not to confuse with the WFD's "exemptions"). Among other reasons, Article 14(1)(d) provides that Member States must notify the Commission in case it identifies an instance where it cannot achieve good status due to modifications or alterations to the physical characteristics of marine waters brought about by actions taken for reasons of overriding public interest which outweigh the negative impact on the environment, including any transboundary impact. Member States have to take appropriate ad-hoc measures aiming to continue pursuing their environmental targets, to prevent further deterioration in the environmental status and to mitigate the adverse impact at the level of the marine region or sub-region concerned or in the marine waters of other Member States. In addition Article 14(1)(2) specifies that Member States shall ensure that the modifications or alterations do not permanently preclude or compromise the achievement of good environmental status at the level of the marine region or sub-region concerned or in the marine waters of other Member States.

As the WFD covers all coastal waters out to one nautical mile beyond the baseline from which territorial waters are drawn, new physical modifications, like dredging, port construction, drainage or flood protection taking place within this area or with an impact on this area must be assessed for WFD compliance and the possible application of Article 4(7) requirements.

The *Maritime Spatial Planning Directive* 2014/89/EU (MSP) creates a common framework for maritime spatial planning in Europe. This since competition for maritime space – for renewable energy equipment, aquaculture and other growth areas – has highlighted the need for efficient management, to avoid potential conflict and create synergies between different activities. Several marine activities (even if offshore) might trigger a modification of the coast (e.g. oil and wind platforms require landing of cables and pipelines).

Engaging at an early stage with marine planners can help to reach improved policy coherence and might reduce the need for Article 4(7) cases in coastal water bodies.

2.6 European Funding Instruments

The European Funding Instruments promote the implementation of specific policies. Each instrument has a dedicated focus and targets certain actors and activities. Proposed operations and investments for new projects, which might require assessments in relation to WFD Article 4(7), are frequently linked with investments financed under these instruments and *inter alia* need to meet the requirements of EU legislation, including the WFD. In the following, some of the main European Funding Instruments related to water are briefly described.

2.6.1 European Structural and Investment Funds

The European Structural and Investment Funds (ESIF) are the European Regional Development Fund (ERDF), the Cohesion Fund (CF), the European Social Fund (ESF), the European Agricultural Fund for Rural Development (EAFRD), and the European Maritime and Fisheries Fund (EMFF), aiming to invest in job creation and a sustainable and healthy European economy[30]. The ESIF is also the main EU funding instrument for water related projects.

Member States were required to submit strategic level Partnership Agreements to the European Commission setting out how the funds will be used during the current funding period at national level. Specific investment programmes then detail how funds will be spent in the different regions and through projects in policy areas concerned.

The ERDF and CF (which form together with the European Social Fund the so-called Cohesion Policy) are managed through Operational Programmes, which cover an entire Member State or regions therein. Cohesion Policy[31] is an important source of funding for technical flood defence infrastructure like dykes, dams, retention walls, etc., or investments in the water, energy or transport sectors. The EAFRD is administered through Rural Development Programmes. Member States have the possibility to request co-financing for the construction of new irrigation networks including reservoirs, drainage of agriculture land and flood risk prevention measures like dykes and dams.

Projects financed by ESI funds *inter alia* need to meet the requirements of EU legislation, including the WFD, and its exemptions. As an example, Article 6 of Regulation 1303/2013 points out that "*Operations supported by the ESI Funds shall comply with applicable Union law and the national law relating to its application ('applicable law')*"[32]. More specifically, Annex 1 of Regulation 1303/2013 requests that investments shall be in line with the water management hierarchy in line with the WFD[33] and contains a specific ex-ante-conditionality related to the WFD[34]. Therefore, ensuring compliance,

[30] The funds have a total EU budget of EUR 454,446,693 implemented in the framework of 533 programmes for the period 2014-2020. More information: https://cohesiondata.ec.europa.eu/overview .

[31] 11 investment priorities or "thematic objectives" are supported in the 2014-2020 programming period. Thematic objective 6 applies to water.

[32] Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006; see: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1303

[33] Annex 1 "Common Strategic Framework", Point 5.2.3 of EU Regulation (No 1303/2013; http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1303

[34] Annex XI to CPR 1303/2013, ex-ante-conditionality for Thematic Objective 6, p.123: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:347:0320:0469:en:PDF

also with Article 4(7), is a compulsory prerequisite and an obligation for a project proposal in order to be selected and subsequently eligible.[35]

2.6.2 Connecting Europe Facility (CEF)

The Connecting Europe Facility[36] (CEF) is a key EU funding instrument, financed by the Cohesion Fund, to promote growth, jobs and competitiveness through targeted infrastructure investment at European level. It supports the development of interconnected trans-European networks in the fields of transport (TEN-T), energy and digital services. CEF investments fill the missing links in Europe's energy, transport and digital backbone. The CEF is divided into three sectors: CEF Energy, CEF Transport and CEF Telecom. The CEF is implemented through direct management by the European Commission (direct grants). Article 23 of Regulation 1316/2013[37] calls for compliance of projects proposed to be financed under CEF with EU legislation, including the WFD and Article 4(7), as a prerequisite for eligibility.

2.6.3 Instrument for Pre-Accession

The Instrument for Pre-accession Assistance[38] (IPA) is the means by which the EU supports reforms in the 'enlargement countries' with financial and technical help. The IPA funds build up the capacities of the countries throughout the accession process. The EU operates comprehensive approval procedures to ensure new members are admitted only when they can demonstrate they will be able to play their part fully as members, namely by complying with all the EU's standards and rules. The conditions and timing of the candidate's adoption, implementation and enforcement of all current EU rules (the "acquis") are negotiated between the EU and the respective candidate country.

Chapter 27 is "Environment". The acquis comprises over 200 major legal acts including the WFD covering horizontal legislation, water and air quality, waste management, nature protection, industrial pollution control and risk management, chemicals and genetically modified organisms (GMOs), noise and forestry. Compliance with the acquis, including the application and enforcement of the WFD in the IPA countries, requires significant investment.

2.7 Climate change policy including adaptation and mitigation as a cross-cutting issue

At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal. The agreement set a framework for mitigation and adaptation framing also the EU climate policy.

Climate change adaptation and mitigation strategies respectively plans have been and are developed at different administrative levels. The main aim is to reduce the vulnerabilities to climate change or to mitigate greenhouse gas emission. They can therefore trigger a set of measures, such as flood defence infrastructure, reallocation of existing infrastructure, water storage (incl. hydropower) and water abstraction, but also investments in green infrastructure like natural water retention measures.

[35] Commission Implementing Regulation 2015/207 of 20 January 2015 lays down detailed rules for major projects related to the WFD; http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32015R0207

[36] Art. 5 of Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010. The total EU Budget is EUR 33,242,259,000 for the period 2014 to 2020.

[37] Art. 23 EU Regulation 1316/2013 Compliance with Union policies and Union law: "Only actions which are in conformity with Union law and which are in line with the relevant Union policies shall be financed under this Regulation".

[38] Regulation (EU) No 231/2014 of the European Parliament and of the Council of 11 March 2014 establishing an Instrument for Pre-accession Assistance (IPA II). IPA II dedicates EUR 11.7 billion for the period 2014-2020.

CIS Guidance Document No. 24 on River Basin Management in a changing climate[39] points out that "*the implementation of specific adaptation measures, for instance infrastructure projects, might invoke exemptions according to Article 4(7) of the WFD more often*". And further that "*certain adaptation measures to climate change can be counterproductive to WFD aims, e.g. storage basins. Such measures need to meet the conditions set in Article 4(7) of the WFD on new modifications*".

The elaboration and implementation of climate adaptation and mitigation plans would benefit from an integrated approach by taking WFD requirements into account in order to maximise the synergies between the two policies and minimise conflicts between them.

2.8 Other environmental policies

The WFD is strongly linked with other environmental directives and policies. WFD Article 4(9) indicates that steps must be taken to ensure that the application of Article 4(7) (as well as Article 4(3) to 4(6)) guarantees at least the same level of protection as existing Community legislation. In other words, compliance with other environmental legislation must be ensured despite the application of exemptions under the WFD.

Ensuring compliance also provides the opportunity to utilise synergies and reduce the work load in the assessments required for a proposed project under different legislation. As such grouping of assessments and streamlining can be efficient (e.g. in terms of data collection and public participation)[40].

In the following, key environmental directives are described, including the Strategic Environmental Assessment (SEA Directive), Environmental Impact Assessment (EIA) Directive and the Habitats Directive (HD). The specific linkages and potentials for streamlining of assessments are addressed in more detail in the subsequent chapters of the Guidance. A comparative overview table summarising relevant requirements of these directives is provided in Annex A.

2.8.1 Strategic Environmental Assessment (SEA) Directive

Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (SEA Directive)[41] aims to provide a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation of certain plans and programmes with a view to promote sustainable development. The SEA Directive seeks to protect the environment by laying down requirements with respect to the procedures to be followed by the Member States when identifying, recording and assessing the environmental effects of certain plans and programmes which are likely to have significant effects on the environment.

The SEA Directive applies to plans and programmes which meet all four criteria*:*

[39] https://circabc.europa.eu/sd/a/a88369ef-df4d-43b1-8c8c-306ac7c2d6e1/Guidance%20document%20n%2024%20-%20River%20Basin%20Management%20in%20a%20Changing%20Climate_FINAL.pdf

[40] For more detailed information of such approaches see e.g. Guidance on Streamlining environmental assessment procedures for energy infrastructure Projects of Common Interest (PCIs), http://ec.europa.eu/environment/eia/pdf/PCI_guidance.pdf; Commission guidance document on streamlining environmental assessments conducted under Article 2(3) of the EIA Directive http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:2016:273:FULL&from=DE

[41] Directive 2001/42/EC of the European Parliament and the Council on the assessment of the effects of certain plans and programmes on the environment, OJ L 197, 21.7.2001, p. 30–37.

(i) the plan or programme should be subject to preparation and/or adoption by an authority at national, regional or local level;
(ii) the plan and programme is required by legislative, regulatory or administrative provisions;
(iii) it is prepared for any of the sectors listed in Article 3(2)(a) of the SEA Directive (e.g. agriculture, fisheries, energy, industry, transport, water management, town and country planning or land use); and
(iv) sets the framework for future development consent of projects listed under Directive 85/337/EEC, or which, in view of the likely effect on sites, have been determined to require an assessment pursuant to Article 6 or 7 of Directive 92/43/EEC.

Therefore, plans and programs as described in the previous chapters might, prior to their adoption, be required to be subject to an assessment of their environmental effects under the SEA Directive.

Also CIS Guidance Document Nr 11 on the planning process[42] points out that land use planning and water planning should support each other as far as possible and that, where applicable, the SEA should be taken into account as well. The collection of baseline data, the identification and assessment of the reasonable alternatives and cumulative effects, the mitigation measures, the development of monitoring procedures, the development of consultation and public participation procedures are potential issues to consider for synergies between the SEA process and Article 4(7) related assessments. If the plans and programmes are expected to affect water bodies, it is recommended that the assessment under SEA includes a chapter on the WFD and Article 4(7). This can result in the saving of resources, strengthening of the assessment procedures and generation of a more holistic approach in management planning[43].

The application of the SEA procedure can in particular:

- be used as a first indication if Article 4(7) assessments might be required;
- help to assess cumulative effects of a number of individual projects in their entirety;
- facilitate relevant assessments on overriding public interest / weighing of interests and the assessment of better environmental options under an Article 4(7) procedure.

Therefore, to ensure the effectiveness and the efficiency of the two assessments (SEA and Article 4(7)), it is recommended that competent authorities coordinate and closely cooperate with each other throughout the process, e.g. by gathering of environmental information, assessing the likely significant impact of the particular activity on the environment including on water status, providing access to information, consultation and participation to the concerned stakeholders and the public.

2.8.2 Environmental Impact Assessment (EIA) Directive

Directive 2011/92/EU[44] on the assessment of the effects of certain public and private projects on the environment (EIA Directive) as amended by Directive 2014/52/EU aims to ensure that projects which are likely to have a significant effect on the environment are adequately assessed before they are approved. Hence, before any decision is taken to allow such a project to proceed, the possible impacts

[42] CIS Guidance Document No. 11 – Planning process; See: https://circabc.europa.eu/sd/a/4de11d70-5ce1-48f7-994d-65017a862218/Guidance%20No%2011%20-%20Planning%20Process%20(WG%202.9).pdf
[43] Carter, J.; Howe, J. (2006): The Water Framework Directive and the Strategic Environmental Assessment Directive: Exploring the linkages, Environmental Impact Assessment Review 26(3):287-300
[44] Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, OJ L 26, 28.1.2012, pp.1-21, as amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014, OJ L 124, 25.4.2014, pp. 1-18

it may have on the environment (both from its construction, operation or demolition) need to be identified and assessed.

An assessment is obligatory for projects listed in Annex I of the Directive, which are considered as having significant effects on the environment. Other projects, listed in Annex II of the Directive, are not automatically subject to an EIA procedure. For Annex II projects, the Member States have a margin of discretion to decide on a case-by-case basis or according to thresholds or certain criteria whether the project is to be made subject to an assessment because of its likely significant effects on the environment taking into account the relevant selection criteria set out in Annex III of the Directive. In the case where the Member State decides that the project will have significant effects on the environment an environmental impact assessment has to be carried out.

The relevance and potentials for synergies and streamlining of assessments required under the EIA and Article 4(7) are specified in more detail in the subsequent chapters of the Guidance (see in particular chapter 4.2 and Annex A).

2.8.3 Birds and Habitats Directives

Directive 92/43/EEC[45] on the conservation of natural habitats and of wild fauna and flora aims to ensure the survival of Europe's most endangered and vulnerable species. Together with the Birds Directive 2009/147/EC, it sets the standard for nature conservation across the EU and enables Member States to work together within the same legislative framework in order to protect the most vulnerable species and habitat types across their entire natural range within the EU. The protected areas designated under these directives form the Natura 2000 network.

Together with the Directives' species protection requirements the establishment and management of Natura 2000 sites[46] are the key tool for maintaining or bringing protected species and habitats into a favourable conservation status. The Birds Directive protects around 500 bird species naturally occurring in Europe. The Habitats Directive protects around 1,200 European species other than birds which are considered to be endangered, vulnerable, rare and/or endemic. Included in the Directive are sites hosting the natural habitat types listed in Annex I (e.g. coastal and halophytic habitats, fresh water habitats) and habitats of the species listed in Annex II such as mammals, reptiles, fish, crustaceans, insects, molluscs, bivalves and plants.

The key requirements for the protection and management of Natura 2000 sites are set out in Article 6 of the Habitats Directive. In particular, any plan or project likely to damage a Natura 2000 sites has to be subject to an appropriate assessment within the meaning of Article 6(3) of the Habitats Directive and can only be authorised if it does not affect the integrity of the site, or if it fulfils the conditions for derogations under Article 6(4) of the Habitats Directive[47]. A proposed project affecting a water body might therefore not only require assessments related to Article 4(7) of WFD; it might also lead to the need for assessments in relation to a Natura 2000 site hosting such a water body under Article 6(3) and 6(4) of the Habitats Directive[48].

[45] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

[46] Special Areas of Conservation under the Habitats Directive and Special Protection Areas under the Birds Directive.

[47] For more detailed information see Guidance documents on Articleof the 'Habitats Directive' 92/43/EEC at: http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm
http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/new_guidance_art6_4_en.pdf

[48] For more detailed information on links between those assessments see the relevant document, section 4.3, at: http://ec.europa.eu/environment/nature/natura2000/management/docs/FAQ-WFD%20final.pdf

591 Thus, both, the WFD and the Habitats Directive allow for the use of exemptions under certain
592 conditions, although there are some differences in the procedures and conditions. In both cases
593 authorities need to carry out the relevant procedures and tests under each Directive. However, there
594 are also potentials for synergies and streamlining of the related data collection and assessments,
595 which are outlined in more detail in the subsequent chapters of the Guidance.

596

597

3 GENERAL CONSIDERATIONS AND SCOPE OF ARTICLE 4(7)

3.1 Principle relationship between assessments

The following chapters provide a recapitulation of the WFD environmental objectives and clarification on the scope of Article 4(7), its applicability and examples for conditions under which an Article 4(7) Test is triggered.

The process for determining whether a

- new modification to the physical characteristics of a body of surface water / alterations to the level of bodies of groundwater might lead to deterioration / non-achievement of good status / potential, or
- a new sustainable human development activity might lead to deterioration from high status to good status

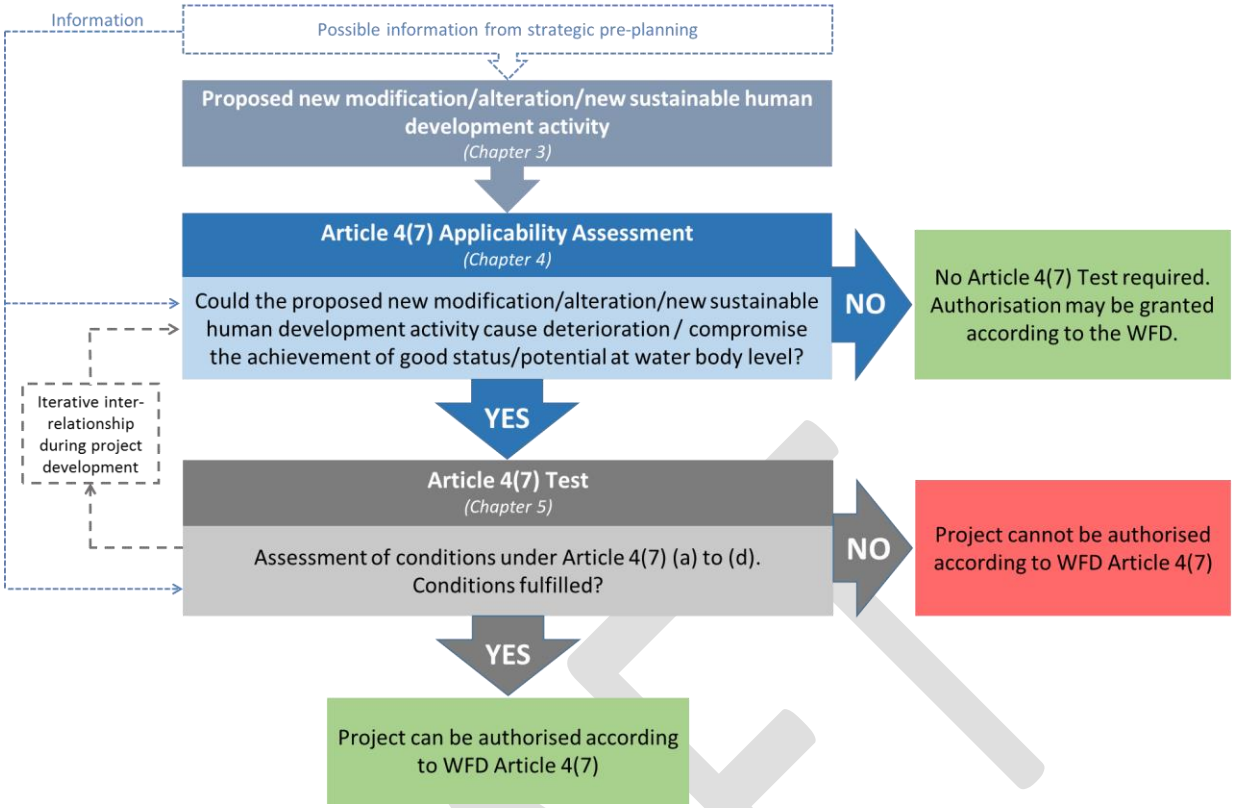
is a first step in an authorisation or licensing process and needs to be accomplished in advance. This process is called in this context "Applicability Assessment" in relation to Article 4(7) (see chapter 4). This step is necessary to give effect to the obligations of the Directive as it is essential to assess how a proposed project or licensable activity[49] is expected to affect the environmental objectives of the affected water bodies. It is an important first step to determine whether an "Article 4(7) Test" is required (see chapter 5). The "Applicability Assessment" needs to be distinguished from the "Article 4(7) Test". If a project is expected not to cause deterioration, or jeopardizing the achievement of good status/potential (e.g. due to the application of mitigation measures which should be an inherent element of a project), then no Article 4(7) Test is required and the project can be authorised under the WFD.

On the other hand, if the project may cause deterioration / jeopardizing the achievement of good status/potential, then it can only be authorised in case the conditions as outlined under Article 4(7) (a) to (d) are fulfilled, and hence the "Article 4(7) Test" is passed. It follows that if the conditions are not fulfilled and the Article 4(7) Test fails, the project cannot be authorised under the WFD.

Figure 1 illustrates the principle relationship between the "Article 4(7) Applicability Assessment" and the "Article 4(7) Test". Both are later on specified in more detail, including the iterative inter-relationship between "Applicability Assessment" and "Article 4(7) Test" during project development. Strategic pre-planning (e.g. for specific sectorial development plans) may inform the elaboration and selection of projects, WFD related assessments and overall the decision making process.

[49] In the remainder of this document, the term "project" should be taken to include other types of licensable activity with the potential to affect the status or potential of water bodies.

628 **Figure 1: Principle relationship between "Article 4(7) Applicability Assessment" and "Article 4(7) Test"**



629

630 Note that next to the conditions of Article 4(7) it needs to be ensured that other relevant WFD
631 requirements are fulfilled (e.g. Article 4(8) and 4(9), specified later in the document). The
632 investigations undertaken during the "Applicability Assessment" phase but also the "Article 4(7) Test"
633 provide the opportunity to utilise synergies with assessments which might be required under other EU
634 environmental legislation, in particular the Environmental Impact Assessment (EIA) Directive, the
635 Habitats Directive (HD) and the Strategic Environmental Assessment Directive (SEA). The
636 relationships are described later on in more detail.

637 3.2 Recap of the WFD Environmental Objectives and Article 4(7)

638 The objective of the Water Framework Directive is to 1) achieve good status/potential of all water
639 bodies by 2015 and 2) prevent further deterioration of any water body. These objectives apply to both,
640 surface water bodies (including natural, artificial and heavily modified), and groundwater bodies in
641 accordance to Article 4(1).

642 For natural surface water bodies, ecological status is defined through biological quality elements
643 (BQEs) as well as the hydromorphological, chemical and physico-chemical elements supporting the
644 biological elements (see WFD Annex V). Chemical status is defined by the environmental quality
645 standards for chemicals set at EU level in Directive 2008/105/EC amended by Directive 2013/39/EU
646 (priority substances and certain other pollutants).

647 MS are allowed, under certain conditions, to designate surface water bodies as artificial or heavily
648 modified water bodies (HMWBs). Artificial water bodies are surface water bodies created by human
649 activity. HMWBs are surface water bodies which, as a result of physical alterations by human activity,
650 are substantially changed in character (Article 4(3)). The environmental objective for artificial and
651 heavily modified water bodies is to achieve good ecological *potential* rather than good ecological
652 status (Article 4(3)), and good chemical status.

Groundwater status consists of both quantitative and chemical components. Quantitative status is defined by the available groundwater resource not exceeded by the long-term annual average rate of abstraction; and the groundwater levels and flows are sufficient to meet environmental objectives for associated surface waters and groundwater dependent terrestrial ecosystems; and anthropogenic alterations to flow direction resulting from level change does not cause saline or other intrusion. Chemical status is defined by conductivity and concentrations of pollutants (for details see WFD Annex V and Directive 2006/118/EC).

These objectives established by the WFD are legally binding. Article 4(7) sets out circumstances in which failure to achieve certain of the WFD objectives are permitted.

WFD Article 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.

Member States are required — unless an exemption under Article 4(7) is granted — to refuse authorisation for an individual project where it may cause deterioration of a water body or failure to achieve good status or potential[50]. The decisive governing factor on whether an Article 4(7) Test needs to be applied is the potential effect of the new modification/alteration or new sustainable development activity on the water body status (see chapter 3.4), irrespectively of whether it is an entirely new activity (new modification/alteration or new sustainable development activity) or amendments (e.g. expansions) to already existing activities or infrastructure (e.g. modifications or extensions at an existing dam or weir). In this context, note that also the renewal of an existing authorisation or licensed activity, e.g. a water abstraction permit, can require an Article 4(7) Test - if the conditions of the permit are changed and the change of activities undertaken according to the renewed permit could cause deterioration. For pressures on water bodies stemming from activities authorised under existing permits, a timely review, and potential amendment, is important for the achievement of the WFD objectives.

[50] See Case Ruling C-461/13 Bund für Umwelt und Naturschutz Deutschland e.V. versus Bundesrepublik Deutschland: http://curia.europa.eu/juris/document/document.jsf?text=&docid=165446&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=1112450

As outlined in Article 4(7), Member states will not be in breach of the Directive if a new modification/alteration/new sustainable human development activity leads to deterioration or compromising the achievement of good status/potential at water body level, and the conditions as outlined under Article 4(7) (a) to (d) are met. Following a precautionary approach, competent authorities may authorise a project in absence of an Article 4(7) Test only if there is no reasonable doubt that it will not cause deterioration or compromise the achievement of good status / potential (see chapter 4.1 for further considerations). Such evidence should be documented.

It follows that assessments as to whether a new modification/alteration may lead to deterioration or compromise the achievement of good status / potential need to be determined in advance (*ex-ante*), representing the Article 4(7) "Applicability Assessment" phase.

In this context it is important to bear in mind that the designation of artificial or HMWBs in accordance with Article 4(3) is not considered as a type of exemption. Artificial and HMWBs are considered as a specific water body category with its own classification scheme and objectives. Therefore, also for water bodies designated as artificial or heavily modified, non-achievement of good ecological potential or deterioration due to a new modification can only be allowed in case the conditions under Article 4(7) are met.

3.3 Scope of Article 4(7)

Under the first limb of Article 4(7), 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 addressed as the result of new modifications to the physical characteristics of a surface water body or alterations to the level of a groundwater body. Furthermore, under the second limb of Article 4(7), failure to prevent deterioration from high status to good status of a body of surface water is addressed as the result of new sustainable human development activities.

In the following, clarification on the above terms is provided[51]:

- New modifications: Modifications to the physical characteristics of surface water bodies mean modifications to their hydro-morphological characteristics (hydrological regime, river continuity, morphological conditions, tidal regime). There is no requirement here regarding the size or spatial extent of the modifications brought about by the project. Also small modifications are covered by this provision. The effects on status 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. Non-exhaustive examples can include hydropower plants, flood protection schemes, future navigation projects or abstractions which 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 (see also chapter 3.5). These may be different from those in an unmodified water body.

  The effects on status 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 effects in an associated surface water body and then an Article 4(7) Test might also be required in such an associated surface water body (see chapter 3.5).

[51] See also CIS Guidance No 20: http://ec.europa.eu/environment/water/water-framework/economics/pdf/Guidance_document%2020.pdf

- Alterations to the level of groundwater: These can result from new groundwater abstractions via new boreholes or increased abstractions from existing boreholes. Also modifications to surface waters can lead to alterations to the level of groundwater.

- New sustainable human development activities: The Directive does not give a definition of those activities; however, sustainability includes economic, social and environmental aspects. 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 aspects such as 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, the principle of rectification of pollution at source and the principle of sustainability.
  Guidance on sustainable development can be found in the UN Sustainable Development Goals as articulated, for example via the Communication on next steps for a sustainable European future and the related staff working document, which was adopted by the European Commission on 22 November 2016[52]. 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).

Table 2 provides an overview on the modifications and activities covered by Article 4(7) and the relationship and potential effects on the different quality elements of surface and groundwater bodies.

1. New modifications to the physical characteristics of surface water bodies (hydromorphological alterations) can have potential direct and/or indirect effects on the biological quality elements and relevant supporting quality elements of surface water bodies, as well as potential indirect effects on groundwater quantitative status (e.g. changes in surface water hydrology or morphology might lead to alterations to the levels of groundwater). There are also potential indirect effects on the chemical status of surface or groundwater bodies (e.g. abstraction might reduce dilution capacity and therefore increase concentrations).

2. Alterations to the level of groundwater can have potential direct effects on groundwater quantitative status but in some cases also indirect effects on quality elements determining surface water ecological status and/or the chemical status of groundwater (see also chapter 3.4.2).

3. The second point of Article 4(7) relates to deterioration of surface water bodies from high status to good status as a result of new sustainable human development activities. Deterioration of groundwater is not covered by this point (neither quantitative nor chemical status), and neither are heavily modified or artificial water bodies due to the direct reference to "status". It is also not relevant for surface water chemical status since the quality classes for chemical status only cover "good" or "failing to achieve good" (WFD Annex V 1.4.3), but not "high". An example where the second point of Article 4(7) could be relevant is a new urban waste water treatment plant (if it can be judged as a new sustainable human development activity) discharging into a high status

[52] Available at: http://ec.europa.eu/environment/sustainable-development/SDGs/implementation/index_en.htm

surface water body, where deterioration from high to good ecological status (but not below) would only be allowed in case 4(7) criteria are met.

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[53]. This because the first limb of Article 4(7) only addresses new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater, but not point or diffuse sources of pollution. Input of pollutants is therefore potentially only covered under the second limb of Article 4(7) - new sustainable human development activities - which only relates to deterioration of surface water bodies from high status to good status.

Table 2: Modifications according to Article 4(7), quality elements and possible effects

Modification / alteration / sustainable human development activity according to Article 4(7)	Surface water bodies				Groundwater bodies	
	Ecological status / potential			Chemical status	Quantitative status	Chemical status
	Biological quality elements	Supporting elements				
		Hydro-morphological quality elements	Chemical and physico-chemical quality elements			
1) Modification to the physical characteristics of a body of surface water	Possible direct and/or indirect effects	Possible direct and/or indirect effects	Possible direct and/or indirect effects	Possible indirect effects	Possible indirect effects	Possible indirect effects
2) Alterations to the level of bodies of groundwater	Possible indirect effects	Possible indirect effects	Possible indirect effects	Possible indirect effects	Possible direct effects	Possible indirect effects
3) New sustainable human development activities*	Possible direct and/or indirect effects	Possible direct and/or indirect effects	Possible direct and/or indirect effects	Not applicable (because no definition of high status)	Not applicable (because not addressed in this specific context)	

* Not further defined, potential effects could therefore be direct or indirect. Groundwater not addressed, only deterioration of surface waters from high to good, therefore not relevant for surface water chemical status since no definition for high chemical status for surface waters. Also not relevant for artificial or heavily modified water bodies and therefore the ecological potential since "new sustainable human development activities" only address deterioration of surface water bodies from high to good.

3.3.1 Considerations regarding the time-span of effects on water body status/potential

An issue to be considered is the time-span with regard to the effects of proposed activities on water body status/potential. Proposed activities can lead to

i. Temporary effects on quality elements, allowing water body status/potential to recover within a short period of time;
ii. Permanent effects, where water body status/potential is changed permanently or over a long period of time, and is not expected to recover.

If the status or potential of a water body is affected only temporarily over a short period of time and is expected to recover within a short period of time, such fluctuations do not constitute deterioration of status/potential and the application of an Article 4(7) Test will not be required. If the effects on water

[53] CIS Guidance Document No. 20: https://circabc.europa.eu/sd/a/2a3ec00a-d0e6-405f-bf66-60e212555db1/Guidance_documentN%C2%B020_Mars09.pdf

786 body status/potential are expected to be permanent over a long period of time, such activities should
787 be subject to an Article 4(7) Test.

788 No definition will be given of "short period of time" or "long period of time". However, the frequencies
789 mentioned for the monitoring programmes[54] can serve as an indication.

790 The time-span of effects depends on the nature of the proposed activity. Permanent long-term effects
791 can occur as a result of permanent or ongoing modifications or activities (e.g. deterioration due to
792 substantial hydromorphological changes, deterioration from high to good status due to the continuous
793 discharge of pollutants, deterioration of groundwater status due to continuous groundwater
794 abstraction).

795 Temporary short-term effects can occur as a result of short-duration human activities, such as
796 construction or maintenance works. For example, temporary effects due to the establishment of the
797 modification during the building phase are not required to be addressed if no deterioration of status or
798 potential could be expected thereafter in the water body.

799 With regard to maintenance, the frequency can have an influence on the effects on the status or
800 potential of a water body. A shift from frequent maintenance actions to more observing practice and
801 action on demand with only short-term effects can reduce impacts while allowing preserving the use.
802 However, in other cases if maintenance has not been carried out regularly or recently, it might also
803 have the same effects on ecological status/potential as completely new works. In other words, if water
804 body status/potential has recovered/stabilised since the last time maintenance was carried out, the
805 fact it is considered to be ‘maintenance’ from an engineering perspective does not necessarily mean
806 that it cannot affect water body status. In such cases, ‘maintenance’ activity should be assessed in the
807 same way as a proposed new physical modification and the Article 4(7) Test may need to be applied.

808 Note that regular maintenance works (e.g. maintenance dredging) can potentially contribute to a
809 failure to achieve good ecological status. However, whilst discontinued maintenance could enable the
810 water body to reach good status, stopping or constraining maintenance activities in designated heavily
811 modified water bodies could also result in a "significant adverse effect on the use" in the meaning of
812 Article 4(3), for which the designation has been made. In such cases, maintenance works could be
813 taken into account in the process of defining "good ecological potential" and would therefore not be
814 subject to an Article 4(7) Test.

815 In specific cases temporary negative effects on quality elements might also occur as a result of the
816 implementation of measures according to the Program of Measures meant for the improvement of
817 water body status or potential (e.g. morphological restoration measures). This due to the fact that
818 nature might require time to recover or measures might need time to reach full ecological effectiveness
819 following the intervention to the ecosystem. Such cases might be subject to exemptions according to
820 Article 4(4) based on 'natural conditions' (see chapter 5.5.3) but should not require an Article 4(7) Test.

821 Finally, the above time-span considerations with regard to effects in the context of Article 4(7) need to
822 be distinguished from 'temporary deterioration' in the meaning of Article 4(6), which is restricted to
823 *natural cause or force majeure* which are exceptional or could not reasonably have been foreseen
824 (e.g. deterioration due to extreme floods or prolonged droughts).

[54] See WFD Annex V 1.3.4 and 2.2.3

3.3.2 Considerations regarding the size of a modification and water body delineation

The size of a modification, or the obligation to carry out an EIA, is not necessarily a relevant criterion to answer the question whether an Article 4(7) Test is required. The relevant approach is to assess if a given project, whatever its importance is, may result in deterioration of the status/potential of a water body or prevent the achievement of good status/potential. Thus, projects of any size may fall under Article 4(7).

Potential effects of modifications on status/potential of the water body might differ, independently from the size of a proposed modification but depending e.g. whether important habitats for the status of a water body are affected. Therefore, effects might be different for modifications in sections of a water body without significant importance for the ecosystem, compared to very sensitive stretches hosting key habitats e.g. for spawning of a certain fish species.

Another important aspect in this context is the thorough delineation of water bodies. A “water body” should be a coherent discrete and significant element of surface or ground water in the river basin (district) to which the environmental objectives of the Directive must apply. Hence, the main purpose of identifying “water bodies” is to enable the status to be accurately described and compared to environmental objectives[55]. The thorough delineation of water bodies is therefore essential. This because the results of an assessment of the effects of a certain project on water body status/potential can differ depending whether the water body is properly delineated.

Furthermore, although the size of a modification can be relevant (e.g. the length of a morphological modification or the area where the groundwater level is altered), criteria which are purely considering the share of a water body which is proposed to be modified are not necessarily meaningful. For instance, smaller modifications in a certain sensitive stretch of a water body might have more severe effects compared to larger modifications in a less sensitive stretch of the same water body.

Hence, the relevant criterion is whether or not the proposed modification may affect the status/potential of a water body. Otherwise Member States will be unable to apply the Directive’s objectives correctly. Drawing from experiences gained during the pressures-impacts assessments of existing modifications can be useful in this context.

3.3.3 Projects outside the scope of Article 4(7)

The guidance focuses on projects which are within the scope of Article 4(7) and its applicability. For completeness projects which are outside the scope are here also briefly addressed. Projects which are not considered as new modifications to the physical characteristics of surface water bodies, alterations to the level of groundwater, or new sustainable human development activities, and which are therefore outside the scope of Article 4(7), may affect the status/potential of water bodies. The steps as outlined in the "Article 4(7) Applicability Assessment" can be useful in that wider context for the assessment whether such projects may lead to deterioration or jeopardize the achievement of the WFD objectives.

If the assessment concludes that such projects are not expected to lead to deterioration or jeopardize the achievement of good status/potential of water bodies, authorisation may be granted according to the WFD. Note that if the assessment concludes that deterioration or jeopardizing the achievement of

[55] Guidance Document No 2 - Identification of Water Bodies; See: https://circabc.europa.eu/sd/a/655e3e31-3b5d-4053-be19-15bd22b15ba9/Guidance%20No%202%20-%20Identification%20of%20water%20bodies.pdf

good status/potential is expected and such projects are outside the scope of Article 4(7), authorization may not be granted according to the WFD.

3.4 Conditions triggering an Article 4(7) Test

The environmental objectives of the WFD are set out in Article 4 of the Directive (for a summary see chapter 3.2). The scope of Article 4(7) and potential effects of projects in the meaning of Article 4(7) – 1) new modifications to the physical characteristics of a surface water body, 2) alterations to the level of groundwater, and 3) new sustainable human development activities – are explained in chapter 3.3. The two key objectives against which such new developments have to be assessed are whether they cause

- Deterioration of status (or potential) of a surface or groundwater body, and
- Preventing the achievement of good groundwater status, good ecological status / potential for water bodies currently failing to achieve this status / potential.

The following clarifications have been provided[56] on the way in which compliance with the Directive's environmental objectives should be interpreted in the assessment of new developments:

- consent for the development must not be granted by an authorising authority where the project may cause a deterioration in the status of a body of surface water or where it jeopardises the attainment of good surface water status or of good ecological potential and good surface water chemical status by the date laid down in the directive, unless a derogation is granted;
- "deterioration of the status" of the relevant body of surface water includes a fall by one class of any element of the "quality elements" within the meaning of Annex V of the WFD even if the fall does not result in a fall of the classification of the body of surface water as a whole;
- if the quality element is already in the lowest class, any deterioration of that element represents deterioration of status within the meaning of WFD Article 4(1)(a)(i).

The following chapters aim to illustrate examples and considerations for the practical application of the above outlined principles for surface and groundwater bodies. Note that the practical application of these principles and related assessments whether a planned project is expected to cause deterioration or jeopardise the attainment of good status/potential can be more straightforward and reliable for some projects, but pose greater challenges for other cases. Related practical considerations are also addressed in chapters 3.7 and 4.1 of the guidance.

3.4.1 Practical considerations and examples for surface water bodies

Based on the above clarifications the following practical examples are provided for surface water bodies to illustrate the conditions under which an Article 4(7) Test is triggered for taking a decision regarding authorisation of a new modification or new sustainable human development activity.

Example 1 illustrates a case, where the overall ecological status of a water body may deteriorate due to a proposed new modification, therefore triggering an Article 4(7) Test.

[56] Case C-461/13 Bund für Umwelt und Naturschutz Deutschland e.V. versus Bundesrepublik Deutschland: http://curia.europa.eu/juris/document/document.jsf;jsessionid=9ea7d0f130d6146e624bf57c46808158f287aced950b.e34KaxiLc3eQc40LaxqMbN4Pax8Le0?text=&docid=165446&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=11661

898 **Table 3: Example 1 - Deterioration of overall status**

Example 1									
Starting point: Overall ecological status determined by quality element in worst condition (in this case moderate). **Effect due to modification**: Overall status may deteriorate due to deterioration of individual quality elements (in this example benthic invertebrate and fish fauna), therefore triggering an Article 4(7) Test. The example includes in this case a change in overall status of the water body from moderate to poor.									
Quality elements	**Biological quality elements**			**Hydromorphological quality elements supporting the biological elements**			**Chem. and phys. chem. quality elements supporting the biological elements**		**Overall ecological status**
	Aquatic flora	Benthic invertebrate fauna	Fish fauna	Hydrology	Morphology	Continuity	General conditions	River basin specific pollutants	
Starting point	2	2	3	worse than 2**	2*	worse than 2**	2*	2	3
Effect due to modification	2	3	4	worse than 2**	worse than 2**	worse than 2**	2*	2	4

899 1: High; 2: Good; 3: Moderate; 4: Poor; 5: Bad
900 * Conditions consistent with the achievement of the values specified for good status
901 ** Conditions not consistent with the achievement of the values specified for good status
902

903 Example 2 illustrates a case, where the overall ecological status is maintained but one biological
904 quality element may deteriorate due to a proposed new modification, therefore triggering an Article
905 4(7) Test.

906 **Table 4: Example 2 – Overall status remains but deterioration of a biological quality element**

Example 2									
Starting point: Overall ecological status determined by quality element in worst condition (in this case good). **Effect due to modification**: Overall ecological status maintained as good but one biological quality element may deteriorate, in this example fish fauna due to deterioration of the quality elements hydrology and continuity, therefore triggering an Article 4(7) Test.									
Quality elements	**Biological quality elements**			**Hydromorphological quality elements supporting the biological elements**			**Chem. and phys. chem. quality elements supporting the biological elements**		**Overall ecological status**
	Aquatic flora	Benthic invertebrate fauna	Fish fauna	Hydrology	Morphology	Continuity	General conditions	River basin specific pollutants	
Starting point	2	1	1	1	1	1	2*	1	2
Effect due to modification	2	1	2	2*	1	2*	2*	1	2

907 1: High; 2: Good; 3: Moderate; 4: Poor; 5: Bad
908 * Conditions consistent with the achievement of the values specified for good status
909

910

911

912

Example 3 illustrates a case, where the overall ecological status of a water body may deteriorate from high to good due to a proposed new modification, therefore triggering an Article 4(7) Test.

Table 5: Example 3 - Deterioration from high status to good status

Example 3									
Starting point: Overall ecological status high since all quality elements in high status class. **Effect due to modification**: Individual quality elements may deteriorate (in this example benthic invertebrate fauna, fish fauna and morphology) and hence overall status may deteriorate from high to good, therefore triggering an Article 4(7) Test.									
Quality elements	**Biological quality elements**			**Hydromorphological quality elements supporting the biological elements**			**Chem. and phys. chem. quality elements supporting the biological elements**		**Overall ecological status**
	Aquatic flora	Benthic invertebrate fauna	Fish fauna	Hydrology	Morphology	Continuity	General conditions	River basin specific pollutants	
Starting point	1	1	1	1	1	1	1	1	1
Effect due to modification	1	2	2	1	2*	1	1	1	2

1: High; 2: Good; 3: Moderate; 4: Poor; 5: Bad

* Conditions consistent with the achievement of the values specified for good status

Example 4 illustrates a case, where the quality element which is already in the lowest class (bad) may further deteriorate. Note that any further deterioration of a quality element which is already in the lowest class is considered as deterioration, therefore triggering an Article 4(7) Test.

In practical terms, considerations with regard to any further deterioration of a quality element which is already in the lowest class can include aspects whether such further deterioration would be measurable, or have detectable adverse effects on the structure and function of the ecosystem based on a reasonable assessment. Furthermore, the overall context of the WFD and the specific requirements of Article 4(7) need to be reflected, i.e. that the **Article 4(7) conditions apply in cases where a proposed modification prevents the achievement of good status/potential**. Further deterioration of a water body which is currently failing to achieve this status or potential, and which is actually in the lowest class, drives the water body further away from achieving the WFD objectives and thus the need to protect, enhance and restore such water bodies. It follows that authorities should be particularly vigilant with regard to further deterioration of a quality element which is already in the lowest class.

Table 6: Example 4 – Deterioration of a quality element of a surface water body which is already in the lowest class

Example 4									
Starting point: Overall ecological status bad since one quality element in bad status class. **Effect due to modification**: The quality element which is already in the lowest class (bad) is further deteriorating (in this example e.g. further loss of composition or abundance of fish fauna due to morphological changes), therefore triggering an Article 4(7) test. Note that any further deterioration of a quality element which is already in the lowest class is considered as deterioration and drives the water body further away from achieving the WFD objectives.									
Quality elements	**Biological quality elements**			**Hydromorphological quality elements supporting the biological elements**			**Chem. and phys. chem. quality elements supporting the biological elements**		**Overall ecological status**
	Aquatic flora	Benthic invertebrate fauna	Fish fauna	Hydrology	Morphology	Continuity	General conditions	River basin specific pollutants	
Starting point	2	3	5	worse than 2**	2*	worse than 2**	worse than 2**	worse than 2**	5
Effect due to modification	2	3	5↓	worse than 2**	worse than 2**	worse than 2**	worse than 2**	worse than 2**	5

1: High; 2: Good; 3: Moderate; 4: Poor; 5: Bad

* Conditions consistent with the achievement of the values specified for good status

** Conditions not consistent with the achievement of the values specified for good status

Practical considerations for the role of supporting elements

The lists of quality elements for each surface water category are subdivided into 3 groups of 'elements': (1) biological elements, (2) hydromorphological elements supporting the biological elements; and (3) chemical and physico-chemical elements supporting the biological elements (see WFD Annex V).

Hydromorphological elements supporting the biological quality elements

As outlined in CIS Guidance Document No. 13[57], the values of the hydromorphological quality elements must be taken into account when assigning water bodies to the high ecological status class (and the maximum ecological potential class), i.e. when downgrading from high ecological status (or maximum ecological potential) to good ecological status (or potential). For the other status/potential classes, the hydromorphological elements are required to have conditions consistent with the achievement of the values specified for the biological quality elements. Therefore, the assignment of water bodies to the good, moderate, poor or bad ecological status/potential classes may be made on the basis of the conditions of the biological quality elements.

Note that the conditions of the supporting elements should be consistent with the achievement of the values specified for the biological quality elements and the competent authorities should be in a position to ascertain in a given case whether the supporting quality element has conditions consistent with the values specified for the biological quality elements. Examples 2 and 3 above illustrate cases where biological quality elements are expected to deteriorate because of the deterioration of individual hydromorphological quality elements, supporting the biological elements, due to the proposed modification, therefore triggering an Article 4(7) Test.

[57] See CIS Guidance Document No. 13, chapter 2 and Figure 1, on the overall approach to the classification of ecological status and ecological potential: https://circabc.europa.eu/sd/a/06480e87-27a6-41e6-b165-0581c2b046ad/Guidance%20No%2013%20-%20Classification%20of%20Ecological%20Status%20(WG%20A).pdf

Also the question whether a new modification may jeopardize the achievement of good status/potential needs to be considered in that context. An example can be a water body which is currently in less than good status/potential, e.g. due to pollution, but the hydromorphological conditions are consistent with the requirements to achieve good status/potential. A planned new modification, which is expected to deteriorate a hydromorphological quality element (e.g. morphology to values consistent only with moderate status/potential), may not immediately deteriorate a biological quality element (which are already in less than good status due to pollution), but may jeopardize the achievement of good status/potential following the implementation of measures for pollution reduction in line with the Program of Measures of the River Basin Management Plan. In such a case an Article 4(7) Test would be required, even though none of the biological quality elements is expected to deteriorate following the execution of the modification.

The above presupposes that assessment methods for the biological quality elements should be able to capture modifications in hydromorphological elements in order to determine whether these would be tantamount to deterioration of the status/potential or a failure to achieve good status/potential on the biological quality elements. If not, a more targeted methodology relating specifically to these supporting quality elements may be necessary.

As pointed out, there is a need that Member States have developed methodologies which allow capturing the expected effects of changed conditions of the supporting quality elements on the biological quality elements. This issue can be of particular relevance for cases where the biological quality elements are for instance in good status/potential, and a hydromorphological quality element is expected to deteriorate from high status to conditions not consistent with the high status class anymore following the execution of the modification. In absence of consistent methodologies it would be prudent to follow a precautionary approach, and therefore performing an Article 4(7) Test during the authorisation process of the planned modification.

Hence, in practical terms, information (i.e. from the monitoring programs) on the existing conditions of the quality elements for a water body, including the supporting elements, and pre-determined hydromorphological standards for different classes (e.g. high, good, moderate, poor, bad) can be instrumental to be able to assess the risk of a proposed new modification to the biology. Deterioration of any of them (hydrology, morphology or continuity) indicates a significant risk to one or more biological quality elements and supports decisions whether a proposed new modification may lead to deterioration and hence require an Article 4(7) Test (see also the respective case study from UK/Scotland).

Case study 1: How hydromorphological standards are used to prevent deterioration of status

Country: UK/Scotland

Under Scotland's regulatory framework, there is a requirement for prior-authorisation for any activity with the potential to adversely affect the water environment, including the abstraction of water; the building of impounding works; and the carrying out of any other building or engineering works in, or in the vicinity of, surface waters.

As a first step in the prior-authorisation process, the regulator (the Scottish Environment Protection Agency) assesses the risk posed by the proposed activity to the water environment.

This risk assessment involves predicting how:

(i) the water body's hydromorphological quality elements (hydrology, morphology and continuity) are likely to be altered by the proposed activity; and
(ii) how those alterations are likely to affect the water body's biological quality elements.

Predicting how the hydromorphological quality elements will be altered requires information on the elements' existing condition. This is provided by SEPA's monitoring and modelling programmes supplemented, if required, by information supplied by the developer. For example, SEPA maintains modelled estimates for all

rivers on the degree to which their flows have been altered by existing abstractions, discharges and impoundments.

To assess the risk to the biology, SEPA compares the changes a proposal will cause to the water body's hydromorphology with pre-determined hydromorphological standards for high, good, moderate and poor. These standards have been set such that a breach of any of them (hydrology, morphology or continuity) indicates a significant risk to one or more biological quality elements. Where SEPA considers that a proposal is likely to result in a breach and hence deterioration of status, it can only authorise the proposal if the requirements of Article 4(7) are met.

The hydromorphological standards are derived, and updated from time to time, via a nationally-coordinated process bringing together research, data and technical experts from across the UK and beyond. The standards are issued to SEPA in the form of Ministerial Directions. Among other things, the Directions list standards for river flows, lake levels and river morphological condition. In 2017, a major review of the standards for the latter will be completed and revised standards issued to reflect improvements in scientific understanding.

The standards allow SEPA to:

- efficiently and consistently assess the risk of deterioration posed by developments, whether that risk is to a water body's overall status or to the status of individual biological quality elements that are in a higher status class than that of the water body overall (e.g. where the water body is in good status overall but some biological elements are in a high status condition);
- in the case of water bodies that are worse than good status (e.g. because of pollution), assess the risk that the development will compromise the future achievement of good status (e.g. by breaching one or more of the hydromorphological standards for good); and
- assist prospective developers by providing information on the scales of development that are likely to be possible in different parts of the water environment without risking deterioration or compromising the future achievement of good status.

Chemical and physico-chemical elements supporting the biological elements

The chemical and physico-chemical quality elements supporting the biological elements include the general conditions and the river basin specific pollutants. The values of the chemical and physico-chemical quality elements supporting the biological quality elements must be taken into account when assigning water bodies to the high and good ecological status classes and to the maximum and good ecological potential classes (i.e. when downgrading from high status/maximum ecological potential to good ecological status/potential as well as from good to moderate ecological status/potential). For the other status/potential classes the chemical and physico-chemical elements are required to have "conditions consistent with the achievement of the values specified for the biological quality elements" (see WFD Annex V and CIS Guidance Document No. 13).

The **general conditions** appear to be relevant in the context of Article 4(7) due to the scope of Article 4(7) and related effects (see chapter 3.3). Note that the general conditions form a group of conditions. In practical terms the general conditions (transparency, thermal conditions, oxygenation conditions, salinity, acidification status, nutrient conditions) should also be reflected by the status of the biological quality elements and the competent authorities should be in a position to ascertain in a given case whether the supporting quality element has conditions consistent with the values specified for the biological quality elements. Deterioration of any of them indicates a significant risk to one or more biological quality elements and supports decisions whether a proposed modification may lead to deterioration and hence require an Article 4(7) Test. Similar considerations as outlined above for hydromorphological quality elements supporting the biological quality elements may be relevant.

Finally, it cannot be ruled out that concentrations of certain river basin specific pollutants might increase due to indirect effects of a proposed project (see chapter 3.3). If this was expected to lead to failure in meeting their (national) environmental quality standards, such failure would be considered as deterioration, thus triggering an Article 4(7) Test. Any further measurable increase in concentrations of pollutants already failing to meet their environmental quality standards would also be considered as deterioration, because it would drive the water body further away from achieving the WFD objectives.

Similar considerations apply in relation to the environmental quality standards set for the priority substances and other pollutants at EU level that determine chemical status.

In this context, it should be recognised that, for an Article 4(7) exemption to be applicable, the deterioration needs to result from activities within the scope of Article 4(7) (new modifications to the physical characteristics of a surface water body, alterations to the level of groundwater, new sustainable human development activities). Article 4(7) does not provide for exemption if deterioration to a status below good is caused by inputs of pollutants from point or diffuse sources unconnected with those activities (see chapter 3.3).

Practical considerations for heavily modified (HMWB) and artificial water bodies (AWB)

A new modification to the physical characteristics of a surface water body might also be planned in water bodies which have been designated as heavily modified or artificial in previous WFD planning cycles (existing HMWB or AWB). In principle, the tables above illustrating examples on the conditions under which an Article 4(7) Test is required for the authorisation of a modification in natural water bodies are also applicable to existing HMWBs and AWBs with reference to their ecological potential and related quality elements.

When assessing the impact of a new physical modification on the ecological potential of a HMWB it is important to be able to distinguish this impact from the impact caused by the existing physical modification which led to the HMWB designation. In practice, this distinction should be possible to do, if there is a proper assessment of the hydromorphological and biological quality elements in the current ecological potential.

Therefore, a precondition for determining during the Article 4(7) Applicability Assessment whether a new modification could lead to a deterioration or non-achievement of good ecological potential due to a new modification is that the environmental objective of the heavily modified or artificial water body (good ecological potential – GEP) has to be clearly defined according to WFD principles.

As explained in chapter 5.5.2, if an Article 4(7) exemption is granted for a new physical modification in an existing HMWB or AWB, the need to re-define the ecological potential of this water body needs to be checked, taking into account the additional physical modification.

3.4.2 Practical considerations and examples for groundwater bodies

In the following, practical considerations and examples are derived for groundwater bodies based on the above outlined principles described for surface water bodies. If the criteria are met, Article 4(7) exemptions can be applied for alterations to the level of groundwater (a physical characteristic of groundwater bodies) which can result in direct effects on groundwater status. **Alterations to the level of groundwater are particularly relevant for failure to achieve good groundwater quantitative status**. Groundwater quantitative status is defined as being either 'Good' or 'Poor'. The definition of good quantitative status is set out in WFD Annex V 2.1.2. Elements of quantitative status assessment are further specified in CIS Guidance Document No. 18[58]. For a groundwater body to be of good quantitative status the following criteria (objectives) covered by the definition of good status must be met:

[58] For details see Guidance Document No. 18 on Groundwater status and trend assessment: https://circabc.europa.eu/sd/a/ff303ad4-8783-43d3-989a-55b65ca03afc/Guidance_document_N%C2%B018.pdf

1) available groundwater resource is not exceeded by the long term annual average rate of abstraction;
2) no significant diminution of surface water chemistry and/or ecology resulting from anthropogenic water level alteration or change in flow conditions that would lead to failure of relevant Article 4 objectives for any associated surface water bodies;
3) no significant damage to groundwater dependent terrestrial ecosystems resulting from an anthropogenic water level alteration;
4) no saline or other intrusions resulting from anthropogenically induced sustained changes in flow direction.

According to Guidance Document No. 18, all relevant tests, considering those elements which are at risk, should be carried out independently of each other, with the results subsequently being combined for an overall assessment of quantitative status. The worst classification among the relevant tests for quantitative status is reported as overall quantitative status, and if any test results in poor status, then this overall classification of the groundwater body will be poor status. It follows that if one (or more) of the relevant groundwater tests could fail as a result of the alteration to the groundwater level, groundwater quantitative status would deteriorate from "good" to "poor" and an Article 4(7) test would be triggered.

For a groundwater body which is already in "poor" quantitative status due to existing conditions causing a failure of one or more of the criteria, failure to reach the objective of achieving "good status" due to further alteration to the level of groundwater is possible. Therefore, in case further alteration to the level of groundwater would lead to "*failure to achieve good groundwater status*", an Article 4(7) test would be triggered. Note that in case good status cannot be achieved due to prior and further alteration, exemptions according to Article 4(4) or 4(5) will have to be justified in the river basin management planning process according to their distinct conditions (see also chapter 5.5.3).

In the following text, examples are provided to illustrate the conditions under which an Article 4(7) test is required for taking a decision regarding authorisation. The tables are simplified for illustration purposes. CIS Guidance No. 15[59] should be taken into account for the assessment of the risk for deterioration.

[59] https://circabc.europa.eu/sd/a/e409710d-f1c1-4672-9480-e2b9e93f30ad/Groundwater%20Monitoring%20Guidance%20Nov-2006_FINAL-2.pdf

1096 **Table 7: Example 5 – Deterioration of overall groundwater quantitative status from "good" to "poor"**

Example 5					
Starting point: Overall groundwater quantitative status is classified as "good" since each criterion meets the conditions for "good". **Effect due to modification**: Due to the modification one criterion is expected to deteriorate from "good" to "poor" (in this example due to the damage of a groundwater dependent terrestrial ecosystem), as well as the overall quantitative status, therefore triggering an Article 4(7) test.					
	Criteria				Overall quantitative groundwater status
	1) Available groundwater resource is not exceeded by the long term annual average rate of abstraction	2) No significant diminution of surface water chemistry and/or ecology resulting from anthropogenic water level alteration or change in flow conditions that would lead to failure of relevant Article 4 objectives for any associated surface water bodies	3) No significant damage to groundwater dependent terrestrial ecosystems resulting from an anthropogenic water level alteration;	4) No saline or other intrusions resulting from anthro-pogenically induced sustained changes in flow direction.	
Starting point	G	G	G	G	G
Effect due to modification	G	G	P	G	P

1097 G: Good; P: Poor;

1098

1099 **Table 8: Example 6 – Groundwater body which is already classified as "poor" and one further criterion**
1100 **does not meet the conditions**

Example 6					
Starting point: Overall groundwater quantitative status is classified as "poor" since one criterion does not meet the conditions for "good" (in this example due to saline intrusions). **Effect due to modification**: Further alteration to the groundwater level would lead to further deterioration (in this example a terrestrial ecosystem would be damaged) and "*failure to achieve good groundwater status",* therefore triggering an Article 4(7) test.					
	Criteria				Overall quantitative groundwater status
	1) Available groundwater resource is not exceeded by the long term annual average rate of abstraction	2) No significant diminution of surface water chemistry and/or ecology resulting from anthropogenic water level alteration or change in flow conditions that would lead to failure of relevant Article 4 objectives for any associated surface water bodies	3) No significant damage to groundwater dependent terrestrial ecosystems resulting from an anthropogenic water level alteration;	4) No saline or other intrusions resulting from anthro-pogenically induced sustained changes in flow direction.	
Starting point	G	G	G	P	P
Effect due to modification	G	G	P	P	P

1101 G: Good; P: Poor;

Table 9: Example 7 – Further deterioration of a criterion which is already classified as "poor" leading to failure of achieving "good"

Example 7					
Starting point: Overall groundwater quantitative status is classified as "poor" since one criterion does not meet the conditions for "good" (in this example due to the damage of a groundwater dependent terrestrial ecosystem). **Effect due to modification**: Due to the modification the same criterion which is already failing is further deteriorated (e.g. further damages on the same or additional damage of another terrestrial ecosystem) leading to "*failure to achieve good groundwater status*" and therefore triggering an Article 4(7) test.					
	Criteria				Overall quantitative groundwater status
	1) Available groundwater resource is not exceeded by the long term annual average rate of abstraction	2) No significant diminution of surface water chemistry and/or ecology resulting from anthropogenic water level alteration or change in flow conditions that would lead to failure of relevant Article 4 objectives for any associated surface water bodies	3) No significant damage to groundwater dependent terrestrial ecosystems resulting from an anthropogenic water level alteration;	4) No saline or other intrusions resulting from anthro-pogenically induced sustained changes in flow direction.	
Starting point	G	G	P	G	P
Effect due to modification	G	G	P↓	G	P

G: Good; P: Poor;

The consequences for the Article 4(7) case can be very distinct depending on the actual effects of the alteration to the level of groundwater. For instance, in case the proposed alteration would cause deterioration of a quality element of an associated surface water body (see criteria no. 2 above), not only the quantitative status of the groundwater body would deteriorate but also the surface water body. An Article 4(7) test would in such a case have to address both water bodies (see also chapter 3.5 with regard to effects on other water bodies).

With regard to the groundwater balance test (available groundwater resource is not exceeded by the long term annual average rate of abstraction - see criteria no. 1 above), failure of meeting this test indicates over-abstraction and a long-term imbalance, which could lead to a "continuous" lowering of the groundwater table. If continued in the long-term this could lead to a loss of the resource.

Finally, **alterations to the level of groundwater can also cause deterioration of groundwater chemical status**. This can be the case for saline or other intrusion due to groundwater abstraction (see criterion 4 above), leading to failure of both groundwater quantitative status and groundwater chemical status. Alterations to the level of groundwater might also cause **indirect effects** and changes to geochemical processes influencing groundwater chemistry, leading to failure of groundwater chemical status (see Guidance No. 18, chapter 5.3.4). In this context, 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.

3.5 Effects on other water bodies

When applying an Article 4(7) 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*" (Article 4(8)).

In practice the modification of a water body might cause impacts in other (adjacent) water bodies, in specific cases even in another river basin district (e.g. an artificial water body that connects two river basins or an adjacent coastal water body in the neighbouring river basin district). Figure 2 illustrates an example for a modification in a water body (e.g. a proposed dam in Surface Water Body B), causing deterioration from good to moderate ecological status. The adjacent surface water bodies (Surface Water Body A and C) are impacted as well (e.g. due to impacts on continuity and important habitats), leading to deterioration of Surface Water Body A and C. Similar other examples can be drawn, e.g. impacts of a modification in a surface water body on the adjacent groundwater body, e.g. due to reduced flow in the surface water body and related drop of the groundwater table (Figure 3).

Figure 2: Example for effects beyond one surface water body

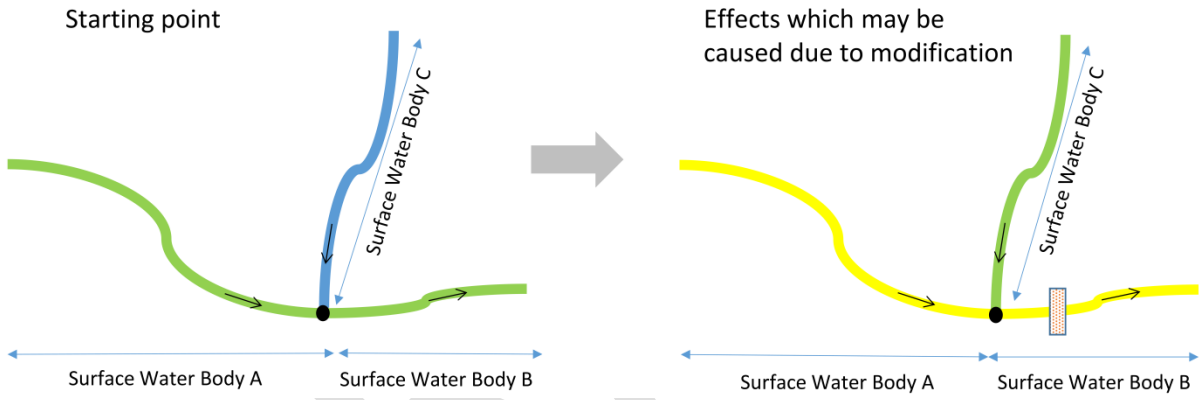
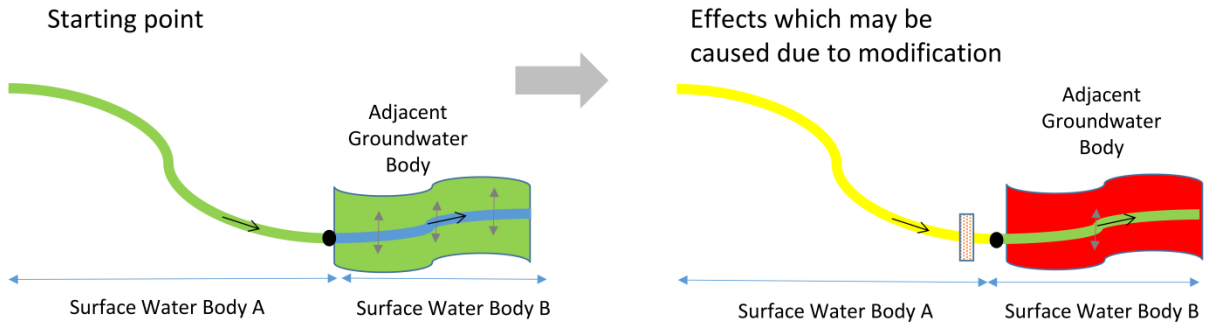


Figure 3: Example for effects beyond one water body in relation to groundwater



In the above examples[60] and as the result of an Applicability Assessment, an Article 4(7) Test needs to be applied for all water bodies in which deterioration occurs. Similarly, in case modifications are undertaken across several water bodies, an Article 4(7) Test needs to be applied for all water bodies concerned. This might increase the need for justification during the Article 4(7) Test. If the conditions are fulfilled for all water bodies concerned, the project can be authorised (see also Step 4 in Figure 6). Note that the number of water bodies actually requiring an Article 4(7) Test might be lower compared

[60] Note that the examples are simplified for illustration purposes. Deterioration / non-achievement of good status/potential needs to be understood as outlined in the previous chapters.

to the number of water bodies addressed in the Applicability Assessment. This since as a result of the Applicability Assessment deterioration might not be expected for all water bodies which were assessed.

Under certain circumstances it might also be the case that the water body, where the proposed modification is located, may not deteriorate, but another water body might be affected (to be assessed in the Applicability Assessment). In such a case an Article 4(7) Test needs to be applied for the water body which could deteriorate. In this context it is recapitulated that the Article 4(7) exemption needs to be applied within the limits of its scope, as outlined in chapter 3.3.

Finally, in case other Community environmental legislation is affected (e.g. a Natura 2000 site), it has to be pointed out that an Article 4(7) exemption does not replace the respective procedures and assessments which have to be undertaken according to other regulatory requirements under other Community environmental legislation, although the potential for synergies (i.e. during the Applicability Assessment procedure) can be utilised (see chapter 4).

3.6 Cumulative effects

Whilst a new project might not, on its own, have effects that trigger the application of an Article 4(7) Test, it is possible that two or more such actions could, cumulatively, cause deterioration or affect the ability of the water body to reach the objective of good status/potential. Practical examples can include cumulative effects of several modifications to the morphological features (e.g. flood risk measures) on habitats, multiple transversal structures like dams or weirs on fish migration and sediment transport, several projects of different nature in the same water body, widespread maintenance works, or multiple water abstraction points having commonly a significant effect on groundwater quantitative status. Therefore, in practical terms there is a need to consider effects of cumulative modifications when using Article 4(7)[61]. The spatial extent of impacts is a relevant consideration in deciding if this is the case[62].

The assessment of cumulative effects can be challenging in practical terms due to different reasons, e.g. due to administrative reasons (permitting authorities are not necessarily the water authorities), lack of availability of information on planned projects to the permitting authorities, or timing issues (e.g. simultaneous submission of projects within the same catchment.

A possible entry point for the assessment of cumulative effects of multiple proposed projects can be the screening stage during the Article 4(7) Applicability Assessment (see chapter 4.1). Data from the RBMPs, i.e. information on already existing pressures, planned measures and monitoring data on the current status of water bodies, can shape the starting point for the assessment. In order to be able to consider cumulative effects of multiple proposed projects, information on such proposed developments needs to be available to the permitting authority. Relevant sources can include existing applications for permits, information on planned projects from the flood risk management plans or sectorial development plans (e.g. for hydropower development or agricultural irrigation).

[61] See also WFD & Flood Risk Management, Workshop Manchester (UK) 2008: https://circabc.europa.eu/sd/a/5fedffc5-e4d1-427c-b9d8-b3047f1cb8d2/Key%20Conclusions%20Workshop%20WFD%20%26%20Flood%20Risk%20Management%20-%20Manchester%20-%20February%202008.pdf

[62] Key Conclusions Workshop WFD and Hydropower, Brussels 2011: https://circabc.europa.eu/sd/a/23d94d2d-6b9c-4f17-9e15-14045cd541f3/Issue%20Paper_final.pdf

As a result the permitting authorities can be enabled to come to better informed decisions with regard to the need for Article 4(7) Tests for individual projects which, cumulatively, may cause deterioration or affect the ability of the water body to reach the objective of good status/potential. Note that making full use of the RBMPs as a planning tool - by introducing also potential Article 4(7) cases – can provide the opportunity for authorities to take into account not only information on already existing pressures but also of the effects of potential future developments (see chapter 5.5.1). Also the use of information from SEAs can be of relevance in that context.

Case study 2: Cumulative impact of reservoirs on the aquatic environment. Joint scientific appraisal

Country: France

The creation of new water storage structures raise a whole host of environmental issues, such as the impact of reservoirs on the aquatic environment, particularly in areas where there are already a number of reservoirs and water resources are in high demand. By law, building a new reservoir requires a planning application or government authorization, which require an environmental impact study. Such studies must now assess the cumulative effects of the project together with other known similar projects. The "cumulative" aspect of the impact of water storage structures on a single catchment area is often poorly understood, probably due to a lack of relevant knowledge and methods. Consultants and government services therefore face a lack of operational tools for processing new reservoir applications, which gives rise to other problems around water management planning and the supervision of the development of new reservoirs. In this context, the French Ministry of the Environment, Energy and Marine Affairs (MEEM), supported by ONEMA, requested a joint scientific assessment (ESCo) from Irstea, in partnership with INRA, on the cumulative impact of reservoirs on the aquatic environment. It was produced by around fifteen experts from a range of disciplines and research organizations, and is based on analysis of a thousand or so international scientific articles and reports.

The scientific assessment has revealed a lack of knowledge about the cumulative environmental effect of reservoirs. Very few studies address the cumulative effect of reservoirs on all the different functional characteristics investigated in the assessment, even though there are strong interactions between them. The presence of reservoirs in a catchment area modifies all the functional characteristics. This modification can become problematic when it affects an already vulnerable river. Assessing the significance of effects on a given catchment therefore requires identification of the issues for a catchment, and characterization of its condition with respect to these issues. A two-pronged approach can be used to characterize the entirety of a catchment area by identifying the most vulnerable sub-basins and associated issues before starting to assess the cumulative effects of new projects on these sub-basins.

By analysing the cumulative effects of reservoirs, the processes involved and the influencing factors, the assessment identified the main interactions between the functional characteristics and the need to take them into account when assessing cumulative effects. The variety of contexts encountered in the scientific literature and the lack of data and knowledge noted here restricts the number of relevant indicators and validated methods for immediate characterization of the influence of a set of reservoirs on a catchment area, or indeed forecasting the effect of building one or more new reservoirs: The acquisition of knowledge and orders of magnitude in the hexagonal context remains necessary. The analysis performed can be used to develop a methodological framework to address the issue of cumulative effects of reservoirs on a given catchment area. This forms the focus of the operational phase which is following this scientific appraisal.

Links: t.b.d.

3.7 Managing uncertainty

Uncertainty is an inevitable feature of planning in general and also has to be managed in the context of Article 4(7). Uncertainty can be an issue in particular with regard to the question whether a proposed project is expected to cause deterioration or affect the ability of a water body to reach good status/potential since this assessment has to be undertaken ex-ante (before the implementation of the modification). It is also of relevance regarding the effects of mitigation measures, which should be an inherent element of (the design of) a new project, and the question how far deterioration / non-achievement of good status/potential can be avoided in the first instance due to the application of such mitigation measures.

Some specific actions can be taken in order to reduce uncertainty, including for instance:

- Establishment of a solid baseline regarding the current status/potential (which is essential for the estimation of effects) by using sensitive methods and monitoring designs but also by having a sensitive classification system (see respective CIS Guidance Documents on monitoring and status assessment for surface and groundwater bodies[63]). In case a quality element is just slightly above a threshold value distinguishing two status classes, deterioration due to a proposed project can be more likely and/or more difficult to ascertain;
- Additional monitoring for the improvement of the baseline regarding the current status/potential of a water body. This can particularly be an issue for water bodies where status was assessed based on grouping or where reliable information on certain quality elements is missing;
- Conduction of specific studies or modelling of the expected effects of the proposed project (e.g. specific studies assessing expected effects on the aquatic biology, application of a groundwater model for the assessment of the expected effects on groundwater quantitative status, etc.);
- Drawing from experiences on the pressure-impact relationship at existing modifications (monitoring data at already existing similar modifications);

A proportionate risk-based approach by distinguishing between clear-cut cases (e.g. large impoundments) from proposed projects where deterioration might be less certain can help to strike a balance between reducing uncertainty and the required resource input for assessments (e.g. question how far and which additional studies or modelling is needed – see also chapter 4.1 in that context).

An adaptive approach may also be considered, if applicable in the respective context of the planned activity, e.g. by issuing time constrained permissions assessed as not likely to cause deterioration. Any such constrained permission should be supported by an Article 4(7) Applicability Assessment and measures to control, monitor and assesses effects on water body status/potential from the time constrained new modification or alteration. Furthermore, follow-up monitoring results (e.g. in the frame of the project and regular WFD monitoring) can be used to verify effects on water body status/potential following project execution.

Finally, the application of the precautionary principle (including worst-case considerations) can help to avoid situations where ex-post evaluations provide evidence that deterioration actually occurred without applying an Article 4(7) Test. Such situations should be avoided by applying Article 4(7) Tests also in cases where no reasonable assessment of risk could be made, despite efforts to reduce uncertainty, and therefore the level of uncertainty about the effects of the planned activity remains significant. This can also be relevant for such cases in terms of transparency and documenting evidence which supports decisions by competent authorities whether an Article 4(7) Test needs to be undertaken.

[63] http://ec.europa.eu/environment/water/water-framework/facts_figures/guidance_docs_en.htm

4 ARTICLE 4(7) APPLICABILITY ASSESSMENT AND STREAMLINING WITH OTHER DIRECTIVES

As outlined above, during the authorisation procedure for a new modification, alteration or new sustainable human development activity, it needs to be determined prior to authorisation whether the proposed project is expected to lead to deterioration or affect the ability of a water body to reach good status/potential. This process is called in this context "Article 4(7) Applicability Assessment" and is an important step to determine whether an Article 4(7) Test is required (or not) during the permitting phase of a project.

The WFD does not prescribe specific steps how such an assessment has to be conducted. However, in the absence of such an assessment the question remains how competent authorities can come to a decision whether an Article 4(7) Test has to be performed and therefore – as a result - whether permission for the project can be granted or not. Moreover, the absence of an Applicability Assessment bears the risk of violating WFD requirements since a project might be authorised which leads to deterioration / non-achievement of good status / potential, while the Article 4(7) requirements are not met.

It follows that an "Applicability Assessment" should be an inherent element during the permitting phase of a new project. The results need to be well documented in both cases, when the conclusion is that an Article 4(7) Test is required during the permitting phase, but also in case deterioration / non-achievement of good status / potential is not expected and therefore no Article 4(7) Test has to be conducted. This in particular to ensure transparency of the decision making process, to demonstrate compliance and to avoid potential problems with stakeholders or other competent authorities (e.g. during an audit or check of compliance with WFD requirements).

The investigations undertaken during the "Applicability Assessment" provide the opportunity to utilise synergies with assessments which might be required under other EU environmental legislation, in particular the Environmental Impact Assessment (EIA) Directive and the Habitats Directive (HD). Note that also the provisions of the Aarhus Convention and related EU Directives can be relevant in that context[64].

4.1 Approach for an Article 4(7) Applicability Assessment

The objective of an Applicability Assessment in relation to Article 4(7) is to determine whether the proposed project is expected to cause deterioration / non-achievement of good status / potential (see chapter 3.4) and therefore require an Article 4(7) Test (see chapter 5) during the permitting phase. The Applicability Assessment provides answers to the following questions:

- Is the project likely to have effects on water body status / potential?
- Is the project expected to cause a deterioration / non-achievement of good status / potential?
- Is an Article 4(7) Test required during the authorisation phase?

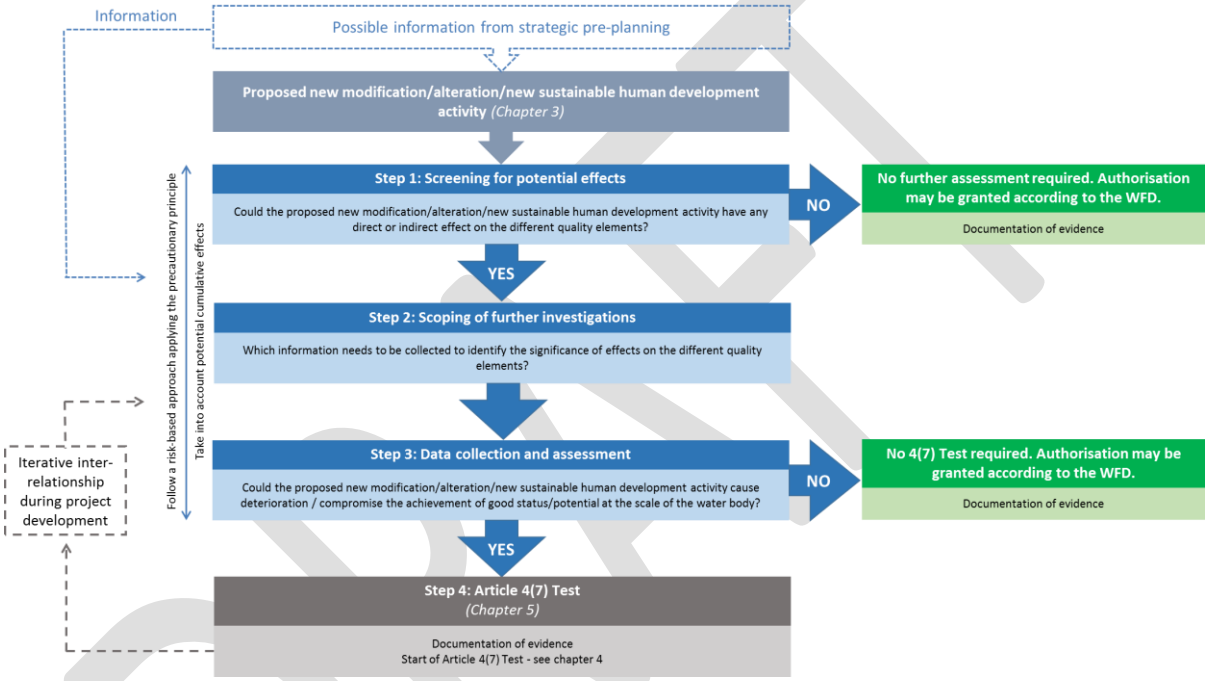
Pre-condition for performing the assessment effectively is the availability of an appropriately sound dataset, in particular with regard to monitoring data on water body status, as well as information on the proposed project in order to predict the effects on status/potential. Project-related data also needs to

[64] Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convnetion); See: http://www.unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf

include information on project-specific mitigation measures, which are an inherent part of the project and which need to be taken into account during the assessment since they are aimed towards reducing the negative effects.

Figure 4 below outlines a step-wise approach for an Applicability Assessment in relation to Article 4(7) which is then described in more detail. If the proposed project is modified (e.g. if it is concluded during an Article 4(7) Test that not all practicable steps are taken to mitigate the adverse effects - see feedback loop on the iterative inter-relationship during project development in Figure 1), relevant steps of the Applicability Assessment might need to be repeated in order to obtain a sound investigation of the expected effects of the proposed project. Possible information from strategic pre-planning (e.g. for specific sectorial development plans and their impacts) and related SEA's may inform the assessment.

Figure 4: Outline for a step-wise approach for an Article 4(7) Applicability Assessment



Note that for groundwater different criteria are applied to determine the status of the groundwater body (see chapter 3.4.2)

Step 1: Screening for potential effects

This is a screening step to determine whether there is a mechanism for any relevant direct and/or indirect effects on the different quality elements determining status/potential of the concerned water body(ies) (see chapter 3.3). The purpose of this step is to broadly filter and "screen out" projects that will clearly not affect water body status/potential and to identify quality elements which require in a second step (scoping) further attention for more detailed investigations. It focuses on identifying potentially affected elements and sub-elements to help ensuring that subsequent assessments are proportionate. Relevant data needs for the screening step can inter alia include the following:

- Information on project design (including alternatives) in sufficient detail and mitigation measures which are applied;
- Identification of potentially affected water bodies, including up- and downstream, as well as adjacent water bodies (e.g. an adjacent groundwater body next to a surface water body, or vice versa);
- Size of each water body;

- Existing pressures, current status/potential of relevant surface and groundwater water bodies and related quality elements, including failing elements and information on distance of particular EQRs to threshold values distinguishing two status classes, terrestrial ecosystems directly depending on groundwater, etc.;
- WFD objective for the water body / planned mitigation measures;
- Other projects which may cause cumulative effects;
- Other legislation which might be concerned (e.g. EIA, Habitats Directive or MSFD).

For small projects not falling within the scope of the EIA Directive (2011/92/EU) a more generic approach can be considered in order to reduce the assessment burden[65]. The result of Step 1 is a conclusion whether the proposed project may affect the status/potential of concerned water bodies (i.e. Is there a potential cause-and-effect mechanism?). Pre-determined standards (e.g. for hydromorphological modifications and their effects on the biological quality elements) or checklist tools, elaborated on a sound scientific basis, can help in assessing whether the project may have relevant effects.

- ➔ If no, then evidence supporting this conclusion should be documented in the frame of the authorisation procedure and no further assessments are required;
- ➔ If yes or uncertain, then continue to Step 2.

Step 2: Scoping of further investigations

Step 2 is a scoping step to identify further data needs and to define the necessary assessments which are required for determining the significance of the effects on quality elements. It is a preparatory step for Step 3 – data collection and assessment – which has the objective to answer the question whether the proposed project is expected to cause deterioration or compromising improvement to good status / potential.

Step 2 focuses on the necessary investigations for potentially affected quality elements and sub-elements (e.g. the different biological and hydromorphological quality elements, chemical and physico-chemical quality elements, criteria determining groundwater quantitative status, etc.). Step 2 also allows for the identification of existing data gaps (e.g. absent monitoring data for a certain quality element) requiring additional (ad-hoc) data collection and analysis for the completion of the data set.

For quality elements where potential causal mechanisms were identified, Step 2 allows for a first differentiation between effects that are expected to be temporary or local in a water body context vs. longer term or water body scale effects. For quality elements where no possible causal link was identified under Step 1, no further assessments are required. A precautionary approach should, however, be taken, which means that in cases where a causal link cannot be excluded with high certainty, further assessments should be performed.

At that point the potential for alignment of data collection and assessments which might be required under other environmental legislation (e.g. performance of an EIA or necessary assessments under the Habitats Directive) should be identified, providing the opportunity to gain from synergies (see chapter 4.2).

[65] See CIS Guidance Document No. 20

Step 3: Data collection and assessment

Under Step 3 the necessary data collection and assessments are performed, as defined under Step 2. The purpose of this step is to determine the expected effect the project (including its mitigation measures) on the status or potential of the concerned water bodies at quality element level (i.e. cause deterioration or compromise expected improvement). A judgment can for instance require investigations performed by experts and/or modelling. The potential for synergies for joint/coordinated data collection and assessments with other environmental legislation (e.g. EIA or Habitats Directive) is utilised under Step 3.

Investigations of the significance of the effects should not only consider the current status/potential but also planned improvements due to the implementation of measures from river basin management planning (e.g. restoration measures) to achieve good status/potential. Therefore, cumulative effects of other interventions may need to be taken into account (see chapter 3.6). The assessment should also conclude on the time-span of effects (see chapter 3.3.1).

If the result of Step 3 is that

- ➔ The proposed project is not expected cause deterioration of the water body at quality element level or compromise improvement, or if the effects are expected to be only temporary short-term, the evidence supporting this conclusion needs to be documented in the frame of the permitting procedure, no Article 4(7) Test is required and authorisation may be granted according to the WFD;
- ➔ If the project is expected to cause deterioration of the water body at quality element level or compromise improvement, proceed to Step 4.

Step 4: Article 4(7) Test

If the project is expected to cause deterioration / compromising the achievement of good status/potential, then evidence should be documented and the Article 4(7) Test needs to be launched. The project can only be authorised if the conditions as outlined under Article 4(7) a) to d) are fulfilled, and hence the Article 4(7) Test is passed. It follows that if the conditions are not fulfilled and the Article 4(7) Test fails, the project cannot be authorised according to the WFD. The conditions and requirements for the Article 4(7) Test are outlined in chapter 5.

Case study 3: A WFD compliance assessment checklist tool developed for JASPERS

Country: /

Joint Assistance to Support Projects in European Regions (JASPERS) aims at improving the quality of investment supported by EU Funds (European Regional Development Fund, ERDF and Cohesion Fund and IPA Funds). In order to comply with WFD Article 4(7) a four-step approach hast been developed:

1. Understand the context: Is there a potential causal mechanism for an effect on ecological or chemical status? If no, keep record for audit but no further assessment required. If yes perform step 2.
2. Determine scope: Consider whether effects are temporary or are not significant at the scale of the water body. WFD assessment required only for elements that could be affected
3. Investigations: data collection; evaluation; consider mitigation measures. Is there a residual effect on WFD status? If yes perform step 4
4. Apply the Article 4(7) tests (as set out in the CIS Guidance Nr. 20)

The approach was used for projects in Poland (for flood protection) and in Latvia (for port development including dredging), and will be further elaborated for wider application in the near future.

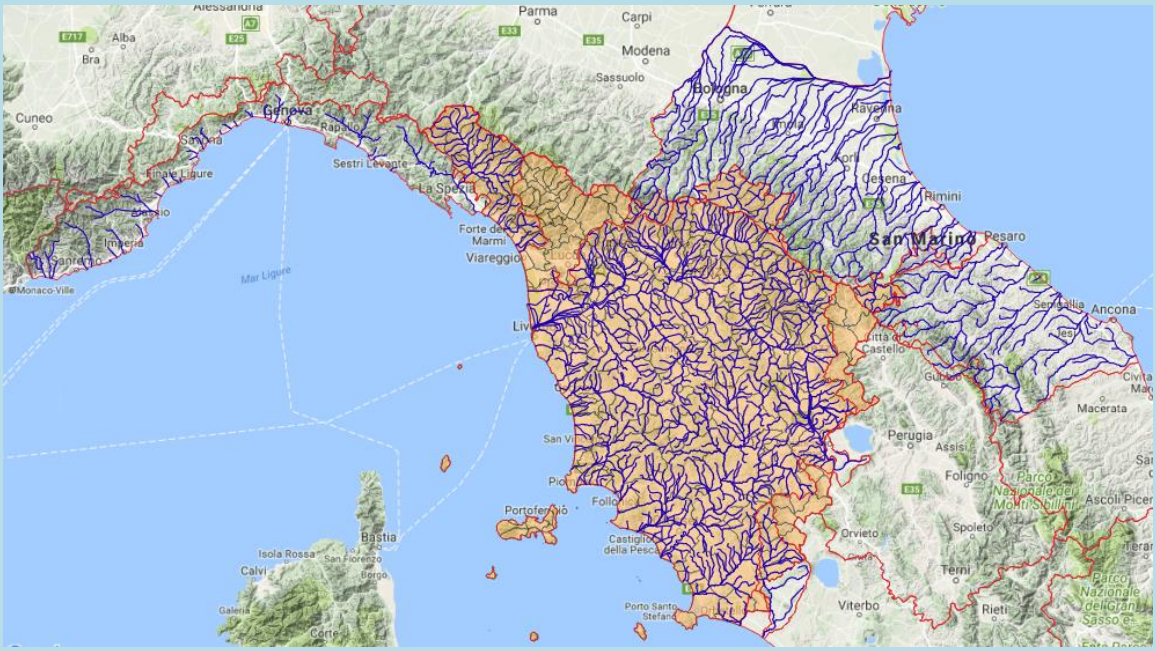
Links:

http://www.jaspersnetwork.org/download/attachments/19464342/WFD%20compliance%20-%20a%20checklist%20tool.pdf?version=1&modificationDate=1434121070000&api=v2

1368

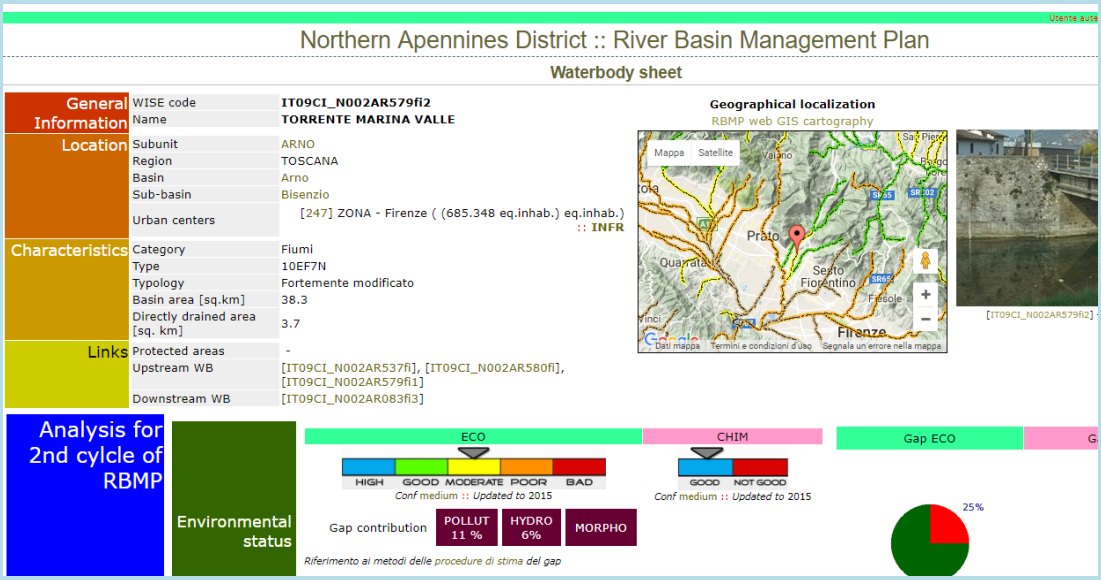
Case study 4: High Speed 2 Rail Construction scheme – Phase 1 (London to West Midlands)
Country: United Kingdom (UK)
HS2 is a multimillion pound national government scheme to provide a high-speed rail link from London and the south to the north of England. Phase1 covers four River Basin Districts (Thames, Anglian, Severn and Humber) and might have an impact on 61 surface waterbodies and 15 groundwater waterbodies. Of the 61 surface waterbodies originally assessed, no scheme elements were assessed as certain to result in objective non-compliance for the waterbodies. However, 5 have ultimately been assessed as being at risk from deterioration or prevention of achieving GES/GEP due to the construction of HS2 Phase1. Of the 15 groundwater bodies originally assessed, 4 groundwater waterbodies have been ultimately assessed as being at risk from deterioration or being prevented from achieving GES due to the construction of HS2 Phase1. The remaining surface and groundwater waterbodies were discounted as being assessed as not being at risk, or due to the inclusion of mitigation measures and other measures brought about by 'Additional Provisions'. A WFD Compliance Assessment Review document was published in March 2016 providing more details on the reasons why deterioration may occur for each of the waterbodies, along with generic mitigation measures, and providing information on how the four tests for Article 4.7 can be met. The assessment follows a precautionary risk based approach and was advocated by the Environment Agency to ensure that all potential adverse effects were to be reported and detailed, even where the likelihood an effect occurring was very low, or the extent of that effect was limited; the primary driver being to ensure that WFD effects continued to be considered and addressed through the design development and into the consenting phase.
Links: https://circabc.europa.eu/sd/a/e9885e5b-9638-4ff6-baee-2815c6300ce8/22 - MS United Kingdom - 4.7 Case Study.pdf https://www.gov.uk/government/publications/water-framework-directive-compliance-assessment-review

1369

Case study 5: Flood Risk Management Plan (FRMP) measures' impact evaluation for the assessment of Art. 4(7)
Country: Italy
The case study area is located in the Northern Apennines District (ITC), specifically in the area of the Region of Tuscany (about 20.000 sq.km, 60% of District's surface). The aim is to estimate the impacts of a structural measure of the FRMP on water status/potential.    The procedure has been applied to all surface waterbodies in the area ranging from small rivers with about 10 sq.km to main river channels like the Arno river (downstream reach), about 8.000 sq.km basin area.

The structural measures of the FRMP might cause a physical alteration of water body as it might embrace longitudinal or transversal rivers' modification, including levees' restoration, dams' elevation, diversion spillways, expansion areas with related inlet / outlet culverts, river bank restoration.

In order to pre-asses the possibility of Art. 4(7) application, the 2nd cycle RBMP of Northern Apennines Basin District includes a detailed analysis of FRMP's structural measures. Each intervention based on a physical alteration of river or lakes was georeferenced and related to one or more water bodies. The list of flood defences' interventions is reported in a specific section of WB's reporting sheet in the Executive Information System of RBMP (see below).



Extract from EIS – Executive Information System for the ITC RBMP. Top portion of WB's sheet.

Since the linked interventions are mainly planned measures to be defined in terms of hydraulic solutions and structural details, the aim of the proposed list, related to each water body, is to focus the attention on the future potential application of Art. 4(7) for the interested water bodies. The real impact in terms of physical alteration will be tested in the evolution of planned activities, applying common criteria for the evaluation morphological alteration and Art. 4(7) eligibility.

The described procedure has brought general benefits for an effective and coordinated analysis of RBMP and FRMP relationship. Reporting in an official information sheet all structural interventions potentially altering the physical characteristics of WBs allows public and private stakeholders to be aware of potential application of Art. 4(7). The discussion on the real impact of flood defence measures can be applied already in a preliminary project's phase, in order implement a more inclusive process regarding technical solutions' choices, and a specific awareness on the exemption to WFD's objectives.

As critical aspect, financial coverage issues can alter or invalidate technical analysis, bringing to incomplete or only partially useful project choices.

Links. http://www.appenninosettentrionale.it/eis/

4.2 Streamlining of assessments with the EIA and Habitats Directive

A proposed project might not only require assessments in the context of WFD Article 4(7) but also, depending on the size, nature and location of the project, an Environmental Impact Assessment (EIA) under the EIA Directive or appropriate assessments under the Habitats Directive in relation to Natura 2000 sites affected (see chapter 2.8). Compliance with other relevant legislation must be ensured (see also WFD Article 4(1)(c)). As such grouping of assessments and streamlining can be efficient (e.g. in

terms of data collection and public participation)[66], providing the opportunity to utilise synergies and reduce the work load in the assessments required for a proposed project under different legislation.

While such a streamlining is mandatory – 'where appropriate'– as regards the EIA and the 'appropriate assessment' under the Habitats Directive, it is up to the individual Member States to decide whether to apply it to the EIA Directive and the Water Framework Directive[67].

Referring to the approach and different steps for an "Applicability Assessment" in relation to WFD Article 4(7) as described in the previous chapter, equivalent steps are required under the EIA and the Habitats Directives that could be taken alongside with the steps under the WFD. This refers particularly to "Screening", "Scoping" and the necessary data collection. Such a streamlined approach can lead to significant cost and time savings, notably in relation to the data collection stage which can be jointly performed once the data requirements under each Directive are clarified during the previous steps.

However, it should be borne in mind that the focus of the various tests is quite distinct in each Directive, so the various steps of the process should be carried out in accordance with the requirements for each Directive[68]. If the conditions of one Directive are fulfilled but not of the other, then the authorities may not authorise the project because in such a case the project would still infringe EU legal provisions. Instead, it should be examined whether amendments can be made to the project so that it satisfies the requirements of all relevant directives.

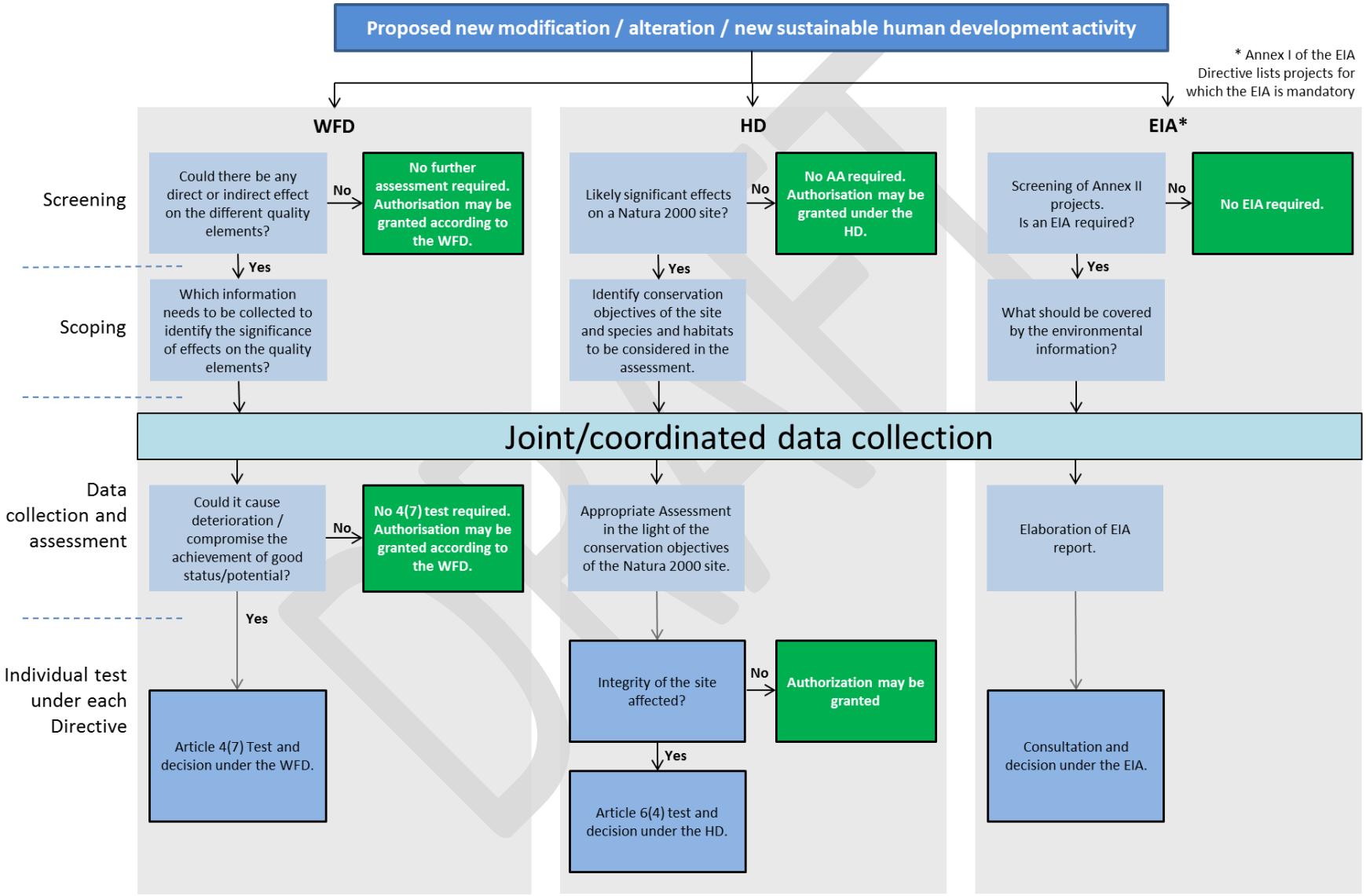
Figure 5 outlines the steps for an "Applicability Assessment" in relation to WFD Article 4(7), and the equivalent steps under the EIA and Habitats Directives. Following, the main requirements under the EIA and Habitats Directives, and the relationship and linkages with Article 4(7) are described in more detail. Further information can also be drawn from chapters 2.8.2 (EIA), 2.8.3 (Habitats Directive) and Annex A (comparative overview table).

[66] See for instance Guidance on Streamlining environmental assessment procedures for energy infrastructure Projects of Common Interest (PCIs), http://ec.europa.eu/environment/eia/pdf/PCI_guidance.pdf; Commission guidance document on streamlining environmental assessments conducted under Article 2(3) of the EIA Directive http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:2016:273:FULL&from=DE

[67] See Commission guidance document on streamlining environmental assessments conducted under Article 2(3) of the EIA Directive http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:2016:273:FULL&from=DE

[68] Where possible, synergies could still be used, for instance regarding the search for alternatives or mitigation measures.

1400 **Figure 5: Streamlining of assessments under the WFD, HD and EIA Directive**



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Projects which are subject to an EIA

The EIA Directive aims to ensure that projects which are likely to have a significant effect on the environment are adequately assessed before they are approved. Before any decision is taken to allow such a project to proceed, the possible impacts it may have on the environment (both from its construction, operation or demolition) need to be identified and assessed.

An assessment is obligatory for projects listed in Annex I of the Directive, which are considered as having significant effects on the environment (for example: dams and other installations designed for holding back or permanent storage of water, where a new or additional amount of water held back exceeds 10 million cubic metres (p.15, Annex I).

Other projects, listed in Annex II of the Directive (for example inland waterways, projects not included in Annex I, canalization and flood-relief works; urban development projects, etc.), are not automatically subject to an EIA procedure. The Member States have a margin of discretion to decide on a case-by-case basis or according to thresholds or criteria (for example size), location (sensitive ecological areas in particular) and potential impact (surface affected, duration) whether these projects are likely to have significant environmental effects and if they have to be liable to the EIA procedure. The process of determining whether Annex II projects may have significant effects on the environment and therefore be subject to an assessment is called "*screening*" under the EIA Directive. Scoping is not mandatory, but accepted as good practice.

EU law can sometimes require several assessments for a single project. Each assessment is designed to maximise environmental protection of a specific kind. However, the multiple statutory requirements and parallel assessments can lead to discrepancies, delays, duplication and administrative uncertainties. The EIA Directive provides for enhanced assessment procedures, leading to more effective and efficient outcomes (Article 2(3), EIA Directive, as revised).

The following potentials for synergies and streamlining of assessments required under the EIA and Article 4(7) have been identified:

- Assess whether the project may lead to deterioration of the status/potential of a water body or relevant quality element (WFD Article 4(7)). This assessment might be part of the assessment of the factor water (EIA Article 3);
- Defining mitigation measures to reduce the adverse effects;
- Assess the project specific component of the assessment of better environmental options according to WFD Article 4(7)(d) and Article 5(1)(d) EIA;
- Synergies in terms of consultation prior to a project's approval by using the EIA process for public consultation in case a project should be approved within an RBM cycle.[69]

In this context it is important to note that the level of detail in the environmental report required under the EIA may be less than what would be required for assessments in relation to WFD Article 4(7). An EIA does not require (but also does not prevent) an assessment on quality element level but rather the

[69] See page 11 and 12 of the PCI Guidance: http://ec.europa.eu/environment/eia/pdf/PCI_guidance.pdf

likely significant impact of the project on water (Article 3 EIA)[70]. This can be explained by the fact that an EIA assesses the impacts of a project on the environment, while an Article 4(7) assessment addresses the impacts on a water body. In other words, carrying out an EIA does not guarantee fulfilment of Article 4(7), but it could contribute if the assessments are streamlined.

In cases where a project is subject to an EIA, under good practice this could be done in close coordination with the Article 4(7) Applicability Assessment during the data collection and assessment stage[71]. In doing so Member States may nationally establish an EIA procedure/approach investigating all requirements of Article 4(7) where all projects potentially deteriorating water or precluding achievement of water environmental objectives will be assessed, even if they fall outside Annex I & II. Their integration offers the opportunity to adopt a new approach to optimize the mutual synergies and minimize conflicts between them.

Case study 6: Development of an Article 4(7) assessment framework and linkage to EIA

Country: Croatia (HR)

The Article 4(7) assessment in the Republic of Croatia is linked to the environmental impact assessment in order to decrease administrative burden and simplify procedures for new development. It is clear that EIA and Article 4(7) assessment have coinciding elements such as data collection and public participation processes.

In an integrated procedure, the competent authorities are given a possibility to reach a single decision based on the agreed pool of data and taking account of all environmental protection aspects (not only the achievement of objectives in terms of the WFD). The availability of complete information is extremely important particularly in the event of larger projects which have significant impacts and for which the justification required for the application of WFD Article 4(7) needs to be provided. As such, the author of an environmental impact study is required as part of the study to analyse the project's impacts on water bodies (in terms of the achievement of WFD objectives), thus identifying the scope and significance of such impacts. When required, they shall collect data and justify the application of the provisions of WFD Article 4(7).

It has to be noted that, if EIA is not required, a comparable procedure for Article 4(7) assessment is envisaged in the Water Act as a part of water-permitting procedure. It should be mentioned that the same procedure is followed for the Plans and Programmes that are subject to the SEA.

The overall procedure related to the identification of project impacts on the water status in terms of WFD objectives is based on the data and information contained in the current River Basin Management Plan, which – according to the provisions of the Water Act – contains a Flood Risk Management Plan adopted by the Croatian Government. In that way, the status of water bodies identified and the programme of measures foreseen by the current RBMP were made the starting point for the identification of potential impacts of future activities and projects in the basin. This has also enabled continuous communication and exchange of information between the RBMP and the (planned) developments in the basin, and the authors of the RBMP are given a better insight and sound background data for the RBMP updates.

Insights into the whole process leads to the following key conclusions:

- Data about water bodies collected for the purposes of RBMP is valuable resource for both EIA and Article 4(7) assessments and there is a significant need for such data.
- It seems convenient to have the Article 4(7) assessment "back to back" with EIA and sharing some elements of procedure.

Links: RBMP (including FRMP) and supporting documents are published at http://www.voda.hr/hr/plan-upravljanja-vodnim-podrucjima

[70] Art 3 EIA states: The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project (…).

[71] For more detailed information of such approaches see e.g. Guidance on Streamlining environmental assessment procedures for energy infrastructure Projects of Common Interest (PCIs), http://ec.europa.eu/environment/eia/pdf/PCI_guidance.pdf Commission guidance document on streamlining environmental assessments conducted under Article 2(3) of the EIA Directive http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:2016:273:FULL&from=DE

Projects with relevance for Natura 2000 sites

The Birds and Habitats Directives aim to contribute towards ensuring biodiversity through the conservation of natural habitats and wild fauna and flora. The establishment and sound management of sites under the Natura 2000 network is a key tool for that. Article 6 of the Habitats Directive lays down the requirements for the management and protection of the Natura 2000 sites, which are the "Sites of Community Importance" (SCIs) (subsequently designed by the Member States as Special Areas of Conservation (SACs)) under the Habitats Directive and the Special Protection Areas – SPAs – classified under the Birds Directive 2009/147/EC.

Both the WFD and the Habitats Directive allow for the use of exemptions, although there are some differences in the procedures and conditions. Under the Habitats Directive, Article 6(3) and 6(4) establish a procedure for the assessment and authorisation of plans or projects that may affect Natura 2000 sites. In particular, the aim of Article 6(3) is to avoid adverse effects of plans and projects on Natura 2000 sites and thereby maintain the integrity of the Natura 2000 sites and the coherence of the network and its features. Hence an appropriate assessment (AA) must be made of any plan or project likely to have a significant effect on a site in the light of the conservation objectives of the site.

The step of the Article 6(3) process where it is determined whether a project or a plan is likely to cause significant effects to a Natura 2000 site, either alone or in combination with other plans and projects, corresponds to what is commonly called "screening". If it cannot be excluded, following the screening, that the plan or project will have a significant effect on the site, an AA is required.

Similarly, even though not explicitly mentioned, scoping is accepted as good practice and aims to precisely identify the potential issues that the AA should cover, as well as the appropriate information to gather. The focus of the AA is on the conservation objectives of the site. Any possible mitigation measures (e.g. in relation to location of the project, timing, construction method, etc.) may be considered in the context of the AA so as to avoid adverse effects on the integrity of the site.

In case of a negative conclusion of the AA, the provisions of Article 6(4) may apply still if the relevant conditions are met (lack of alternative solutions, presence of imperative reasons of overriding public interest, implementation of compensation measures). Further detailed information can be obtained from the flow chart on the specific Article 6(3) and Article 6(4) procedure according to the Habitats Directive which is provided in Annex B[72].

[72] See relevant guidance, documentation and jurisprudence on the implementation of Article 6(3) and 6(4) at http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm

5 ARTICLE 4(7) TEST AND RELATIONSHIP TO THE RBMPs

If, as a result of the "Applicability Assessment" in relation to Article 4(7) (see chapter 4), a new modification, alteration or new sustainable human development activity is expected to cause deterioration or compromise the ability of the water body to reach the objective of good status/potential, an "Article 4(7) Test" needs to be performed during the authorisation procedure.

Via the Article 4(7) Test it is determined whether permission for a proposed project can be granted despite it may cause deterioration / compromise the achievement of good status/potential. This is the case if the relevant conditions as outlined in the WFD are fulfilled, which are described in more detail in the following chapters. If the conditions are not fulfilled, then the project cannot be authorised.

5.1 Step-wise approach for an Article 4(7) Test

An Article 4(7) Test requires a number of assessments which need to be performed. These are presented in Figure 6 below in a stepwise approach. This flow chart aims to be a practical tool illustrating the different steps and relationships of assessments when considering the application of an Article 4(7) Test for the affected water body(ies). It follows the basic logic of an earlier flow chart elaborated for CIS Guidance Document No. 20[73] and was further developed. The different steps of the Article 4(7) Test are specified in more detail, and the iterative relationship with the Applicability Assessment in relation to Article 4(7) is indicated, following the basic logic that modifications to the project can lead to changes with regard to the effects it may cause on the status/potential of water body(ies), which might require to be re-evaluated under the Applicability Assessment. Under specific circumstances a modified or re-design project may even not lead to deterioration or compromising the achievement of good status/potential, thus making an Article 4(7) Test obsolete.

The order of the different steps representing different requirements under the WFD is not strictly following the order of the text in the WFD. This was done for different reasons. For instance, the considerations under Step 1 (mitigation) and 2 (better environmental option), but potentially also step 3 (weighing process), may result in adaptations of the project. In such a case a re-assessment of relevant elements, also in the frame of the Applicability Assessment, may be needed in an iterative manner. This is not necessarily the case for later steps in the process.. Like all WFD exemptions, Article 4(7) cannot be applied when the provisions of Articles 4(8) and 4(9) are not fulfilled. In other words, the use of exemptions is only allowed when they guarantee at least the same level of protection as existing EU legislation and provided that they do not permanently exclude or compromise the achievement of the wider objectives of the WFD in other bodies of water within the same river basin district. The requirements for compliance with these provisions were further specified under Step 4 and 5.

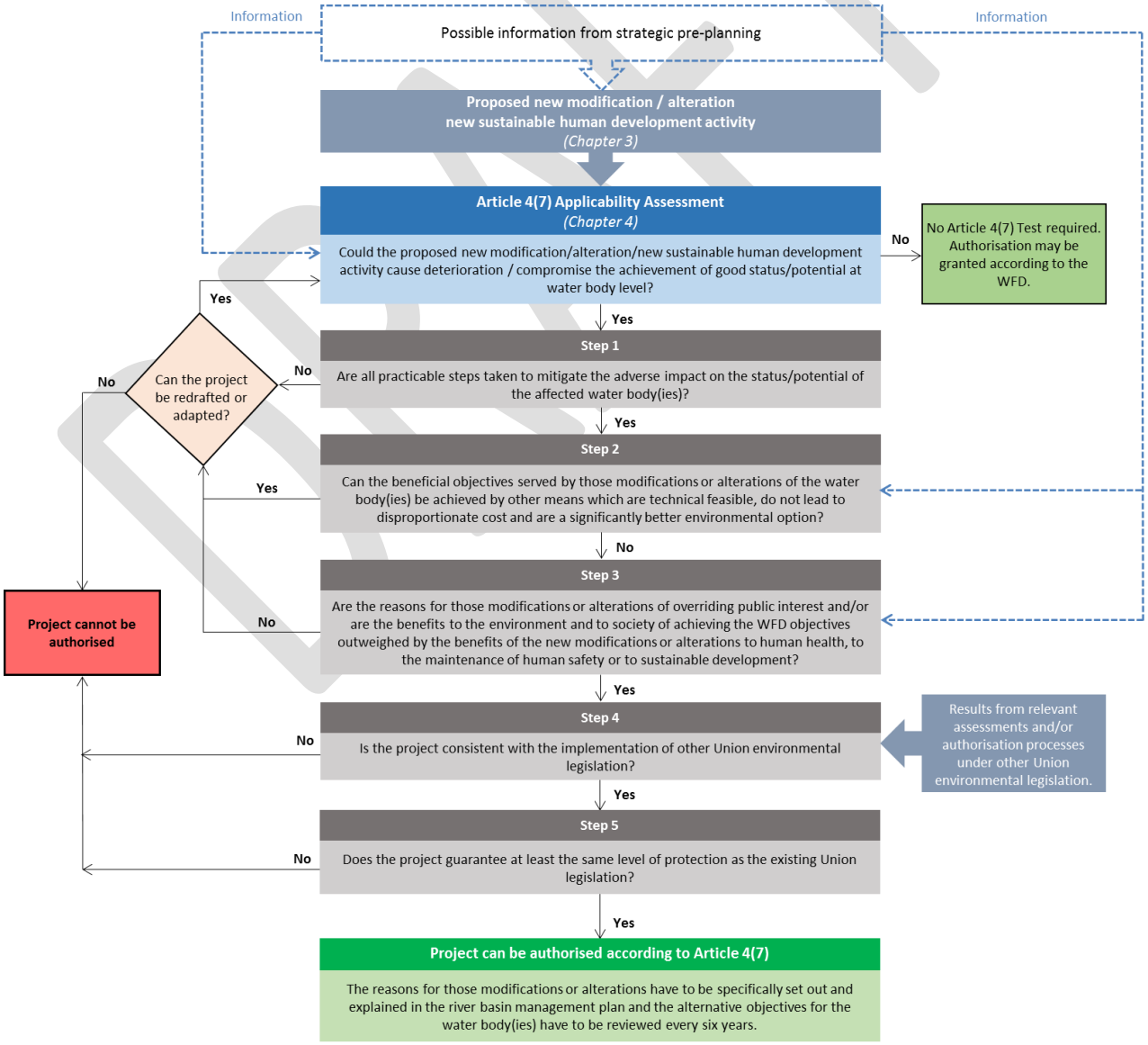
Where a project also causes effects on other bodies of water, it can only be authorised if exemptions can also be justified for these other affected water bodies. In such a case it can be considered as reasonable to apply the Article 4(7) Test for the affected water bodies within the same procedure (see also chapter 3.5). Information on the results from relevant assessments and/or permission processes under other EU legislation, where relevant, allows performing Step 4 of the Article 4(7) Test (e.g. relevant assessments under an EIA or appropriate assessment under the Habitats Directive – see

[73] See CIS Guidance Document No. 20, Figure 4

chapter 4.2).Finally, the Article 4(7) Test can be concluded and the project authorised in the case the conditions are fulfilled, including also the requirement that the reasons for those modifications or alterations have to be specifically set out and explained by the competent authority in the river basin management plan and the alternative objectives for the water body(ies) have to be reviewed every six years.

Note that strategic pre-planning mechanisms (e.g. for specific sectorial development plans) may inform the elaboration and selection of projects, WFD related assessments and overall the decision making process, including different steps of the Article 4(7) Test. Furthermore, the different steps, as outlined in Figure 6, do not necessarily have to be followed in a strict sense and the most appropriate order can depend on the approach and level of planning. For instance, for some projects it might be more reasonable to perform step 2 (better environmental option) before step 1 (mitigation measures), e.g. in case strategic pre-planning mechanisms are in place. However, it has to be ensured that the different requirements of Article 4(7) are fulfilled.

Figure 6: Example for a step-wise approach for an Article 4(7) Test and the iterative relationship with the Article 4(7) Applicability Assessment



In the following chapters, the different steps and considerations of the Article 4.7 Test are explained in more detail.

5.2 Taking all practicable steps to mitigate adverse impacts

One of the conditions for granting an exemption under Article 4(7) is that "*all practicable steps are taken to mitigate the adverse impact on the status of the body of water*" (Article 4(7)(a)). In other words, this condition requires taking all practicable actions leading to less deterioration of the conditions in the impacted water body.

Unlike the EU Habitats Directive where the terms mitigation and compensation are strictly differentiated[74], the WFD neither defines nor constrains the definition of mitigation measures. The 'practicable steps to mitigate the adverse impact on the status of the water body' required under Article 4(7)(a) can therefore cover a wide range of actions. What matters is that **the objective of these actions is to avoid or reduce an identified potential effect on the status** of a WFD quality element. In other words, the measure will minimise or even prevent the risk of deterioration or the compromising of an otherwise expected improvement in status.

The most appropriate type of action to mitigate the adverse effect will vary according to the specific local circumstances. For those not familiar with the requirements of the EU Habitats and EIA Directives, it is worth providing clarification on the following important points:

Compensatory measures under the Habitats Directive

As the final part of the Article 6(4) 'tests', the Habitats Directive requires that compensatory measures be provided to offset the negative effects of a plan or project so that the overall ecological coherence of the Natura 2000 network is maintained. In the context of the Habitats Directive, this typically means restoring or recreating habitat on a new or enlarged site that is subsequently incorporated into the Natura 2000 network as compensation for the impacts on an existing site caused by a project authorised under the Article 6(4) exemption.

There is no equivalent requirement for such compensatory measures under Article 4(7) of the Water Framework Directive. Rather the WFD accepts that – if it can be demonstrated that the requirements of the Article 4(7) Tests are met – there will be a residual adverse effect on the status of the water body in question.

Mitigation measures in the context of the EIA Directive

Unlike the Habitats Directive, the EIA Directive does not define or explicitly differentiate between mitigation and compensation measures[75]. Nonetheless, when different types of mitigation actions under EIA are being considered, evolving good practice – supported by the various references in the

[74] This distinction is highlighted in CIS Guidance Document No. 20, which notes that mitigation measures aim to minimise or even cancel the adverse impact on the status of the body of water, whereas compensatory measures aim to compensate in another body of water the "net negative effects" of a project and its associated mitigation measures.

[75] For example, Directive 2014/52/EU refers in various places to the 'measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment' and notes that Member States 'should ensure that mitigation and compensation measures are implemented'.

EIA Directive to measures that 'avoid, prevent or reduce and if possible offset' adverse impacts – favours measures taken at source (on-site) over those 'off site' and promotes the application of the so-called 'mitigation hierarchy'.

When a potential adverse impact is identified this hierarchy therefore emphasises the need, in order of priority, to:

1. Avoid adverse impacts, for example by changing the location, method or timing of the activity or by the use of other preventative measures at source;
2. Take measures at source or as close as possible to the source of the effect, which aim to minimise or reduce adverse impacts to negligible, low or otherwise acceptable levels;
3. Where there are residual adverse effects (i.e. impacts that are unavoidable or cannot be reduced further on site), to remedy, offset or otherwise compensate for these effects by taking measures elsewhere that help to reduce the net adverse impact to negligible, low or otherwise acceptable levels.

Whilst there is no specific requirement to apply the mitigation hierarchy when considering practicable steps to mitigate the adverse impact on the status of the water body in the context of the WFD, it is nonetheless recommended that good practice is applied and that all practicable measures that avoid, minimise or reduce effects at source are implemented before other, off site measures.

Mitigation measures in WFD Article 4(7)(a)

The notion of "steps" as outlined in Article 4(7)(a) addresses potentially a wide range of measures in all phases of development, including facilities' design, maintenance and operation conditions,, 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, not disproportionate costly and compatible with the new modification, alteration or new sustainable human development activity. Requirements for mitigation measures for different types of modifications can be set out in guidance documents (e.g. guidance for fish migration aids) or specific recommendation documents (e.g. Best Environmental Practice (BEP), Best Available Techniques (BAT)).Mitigation measures aim at minimising or even cancelling the adverse effects on the status of a water body and should be an integral part of the project. As such, these measures might also be taken in other water bodies as long as their effects occur in the water body for which Article 4(7) is applied. Depending on their scope, some mitigation measures might, in some cases, even allow the improvement of status. If all practicable mitigation measures are not taken, an exemption under Article 4(7) cannot be granted. If it is assessed that implementing all practicable mitigation measures would lead to avoidance of deterioration or failure to achieve good status/potential, there is no need to apply an Article 4(7) Test, as a result of the Article 4(7) Applicability Assessment (see iterative feedback loop in Figure 6).

As an example for mitigation measures, in the case of a new hydropower plant important mitigation measures normally include the construction of functional fish migration aids for relevant fish species and/or the establishment of ecological flows. Examples for related types of mitigation measures are

addressed in the frame of the CIS (e.g. work on Good Ecological Potential – Water Storage[76]). In the case of a new abstraction of groundwater, next to the limitation of the amount of groundwater allowed to be abstracted, mitigation measures might include natural water retention measures (NWRM) for additional groundwater recharge and therefore supporting to maintain a balance of groundwater abstraction and recharge.

Mitigation measures do not necessarily need to be only of hydromorphological nature. In some cases, e.g. for projects including water abstraction, mitigation measures might also include the reduction of pollution from point or diffuse sources in order to address the reduced dilution capacity of a water body due to the abstraction and hence avoiding increased concentrations of pollutants.

Bearing in mind the wide range of possible projects, impacts and types of mitigation, dealing with all the different types of mitigation measures to be considered under Article 4(7)(a) would exceed the scope of this guidance. Therefore, this section of the guidance concentrates on how and when all practicable mitigation measures should be considered, established and monitored in the Article 4(7) assessment procedure and permitting process for new projects.

Consideration of mitigation during the project design stage

Mitigation measures need to be considered both in the initial Article 4(7) Applicability Assessment to determine whether the project may cause deterioration / non achievement of good status/potential and therefore trigger an Article 4(7) Test, as well as in the Article 4(7) Test itself to determine whether the conditions for granting an exemption under Article 4(7) are met. Mitigation measures to reduce adverse effects can be required as conditions of the authorisation (permit/license) for a new project, including also requirements for the maintenance and monitoring of the effectiveness of mitigation measures (for example to ensure the functioning of fish migration aids) and for potential adaptation needs.

It is reasonable to consider "all practicable steps to mitigate adverse impacts" already in the early project design stage for the following reasons:

- To reduce or even eliminate impacts on water bodies;
- For consideration in the initial Article 4(7) Applicability Assessment - if deterioration / non-achievement of good status / potential can be avoided in the first instance, no Article 4(7) Test and therefore no Article 4(7) exemption will be required;
- If deterioration / non-achievement of good status / potential cannot be avoided – for the Article 4(7) Test itself since taking "all practicable steps to mitigate the adverse impacts" is an integral part of the requirements to allow for an Article 4(7) exemption;
- To avoid protracted discussions and uncertainty over the project which could unduly delay its authorisation;
- And finally, since the integration of mitigation measures is usually cheaper and easier in the early project design stage compared to exploring mitigation options once the design is already fixed, what can have several advantages, i.e. in terms of cost-savings but also in terms of efficiency gains for the administrative procedures during the project authorisation phase.

[76] Common understanding of using mitigation measures for reaching Good Ecological Potential for heavily modified water bodies - Part 1: Impacted by water storage: https://ec.europa.eu/jrc/en/publication/working-group-ecostat-report-common-understanding-using-mitigation-measures-reaching-good-ecological

During the Article 4(7) Test, competent authorities will have to evaluate whether all practicable steps to mitigate adverse impacts are included as part of the proposed project, or whether additional practicable mitigation measures will be required (additional to those proposed by the project owner) in order to further reduce the impacts. This may lead to modifications of the initial project design and therefore have an influence on the results of the Article 4(7) Applicability Assessment. Therefore, taking the effects of mitigation measures into account can be an iterative process, which may lead to an updated evaluation of the effects the project may have on the status / potential of a water body due to mitigation.

For defining specific mitigation measures, synergies can be gained with the process of an EIA for projects under its scope, but it is important to note that the Article 4(7) Test needs to be carried out in a distinct way.

Knowledge gained from monitoring results on the effects of mitigation measures implemented as part of the programs of measures in previous planning cycles can be useful for selecting relevant and effective mitigation measures. Possible mitigation requirements are usually set out in guidance documents used in authorisation processes or catalogues of measures elaborated at national level which list and describe state-of-the-art measures and Technology / Best Available Technology / obligatory minimum requirements for different types of modifications. The latter (catalogues of measures) are also relevant for other steps in WFD implementation such as the HMWB designation process and the consideration of mitigation measures when defining ecological potential.

Mitigation measures considered in the definition of good ecological potential (GEP) (measures that do not have significant adverse effects on the use of the HMWB or on the wider environment) are also relevant for the definition of practicable mitigation measures under Article 4(7)(a). They should be considered as a starting point, but the range of mitigation measures under Article 4(7) is potentially wider compared to mitigation measures for GEP definition of an existing HMWB. This because it can be easier to integrate mitigation measures already in the project design phase compared to the implementation of measures on existing infrastructure. Another important reason why GEP mitigation measures are only a sub-set of those that could be applied in the case of Article 4(7) is that construction methods can be modified to reduce impacts, whereas there is no construction phase for ongoing operations and activities.

Where practicable mitigation measures exist, but for some of them there is uncertainty about the magnitude or timing of their effects on status, adaptive management principles might be applied.

The adaptive management concept provides a potentially useful way forward in such situations (i.e. where there are residual uncertainties) because decisions on the need for and implementation of actions required to manage or mitigate the residual effects of a project or activity can be informed by the outcomes of an agreed programme of monitoring. Adaptive management can therefore be relevant in situations where:

- there is a reasonable level of understanding about the likely implications of the project or activity in question and
- the risks are negligible or low and/or there is high certainty in the ability of the proposed management actions (or mitigation measures) to address the effects.

Case study 7: City water supply development and mitigation
Country: Finland (FI)
New abstraction of ground water by pumping has been planned to secure drinking water supply of a large city depending on one water source, the nearby river. Of the designated water bodies at the proposed site, a few small lakes and a smaller amount of rivers were estimated to be possibly at risk due to water abstraction. There are also springs and brooks, not designated as water bodies, at the area. A. The waterworks initially applied for a permit for abstraction of 32,500 m3/day. The application was rejected due to impacts on areas protected by the habitats directive. The process restarted with survey on the alternatives for other water intake areas within a radius of 80-100 km from city centre. B. Based on the options found, an interactive multi-criteria decision analysis was carried out. The target was not only to find an economically, technically, socially and ecologically sustainable option, but also to support open discussion between parties. Two alternative options were eventually recommended by the project group; one of them being the original area, but, with a considerably smaller water abstraction volume. Uncertainty on the quantity and quality of ground water and also a considerably longer time period required for the implementation of the project were seen as major weaknesses of the alternative option. C. As mitigation means at the original site it was decided to relocate the water pumping sites, reduce their number and decrease the daily intake by two thirds, to 11,000 m3/day, which would be the lowest possible intake needed for raising the security level status for the city from low to medium. Also the regulation of water level at a lake was abandoned. The ground water flow modelling showed that in spite of these actions, changes in water quality would be observed in some lakes and brooks, especially during the low flow periods. Therefore, additional means of diminishing the impacts were suggested: directing water from some pumping stations to watersheds and reducing the intake of certain stations during low flow. Also blocking of forest drainage ditches in certain areas has been suggested. D. To compensate the losses for springs at the impact area, a large number of springs outside it will be restored. E. E. Natura 2000 impact assessment report for the renewed project and reports of field and modelling surveys have been forwarded together with the permit application to the authorizing body. During the permitting procedure, it will assess whether the methods and results are reliable and whether the mitigation and compensation actions are sufficient with respect to e.g. nature conservation act, water act and Art 4(7).
Links: http://www.ymparisto.fi/download/noname/%7B5DC260B6-B2EC-468B-9E83-90DC9F2C28EE%7D/78444

Practicability of mitigation

As mentioned above, practicable mitigation measures should be technically feasible, should not lead to disproportionate costs and should be compatible with the new modification, alteration or new sustainable human development activity.

Assessing which mitigation measures are practicable can be done on the basis of good-practice principles to be applied to all projects of a certain type. Nevertheless, the selection of practicable mitigation measures also has a case-specific component. Certain mitigation measures may not be technically feasible in a specific location or may not be reasonable due to type-specific natural conditions. For example, in the case of hydropower plants, ensuring ecological flow and the installation of fish migration aids are usually required as mitigation measures for water bodies within fish regions. The installation of fish migration aids will not be reasonable in water bodies outside of such regions where natural fish habitats have not existed. Note that fish habitats could be restored if they got lost due to an existing pressure.

5.3 Assessing significantly better environmental options

According to Article 4(7)(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*". It is therefore necessary to assess "alternative means" for proposed new modifications, alterations or new sustainable human development activities.

Guidance Document No. 20 already outlines in this context that those means or alternatives 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 (e.g. 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, but might not always be sufficient.

Technical infeasibility is justified if no technical solution is available. With regard to disproportionate costs, "disproportionality" is a judgment which has a political, technical and social dimension informed by economic information and analysis of costs and benefits[77].

The scope for "alternative means" can include two dimensions – the strategic level and the project specific level, whereas assessments at the strategic level can feed into the project-specific assessment for decision making.

5.3.1 Strategic level

For judging significantly better environmental options strategic components need to be considered, going beyond the local level. Examples for "other means" for the beneficial objectives served by those modifications can for instance include:

- Other forms of renewable energy generation, measures to increase energy efficiency or alternative locations for hydropower generation, other forms to balance energy supply and demand;
- Assessment of capacities and possibilities for other forms of transport, e.g. rail and/or road for navigation;
- Possibilities and effects of water retention measures with regard to flood protection;
- Potentials for water saving measures for drinking water supply or irrigation projects;
- etc.

Depending on the nature of the new modification, alteration or new sustainable human development activity, consideration of relevant sector policies is crucial in this context, including for instance the Renewable Energy Action Plans, TEN-T Programme, Flood Risk Management Plans, Rural Development Programmes, etc. (see Chapter 2). In other words, a strategic level assessment taking account of a range of possible options is required for an informed judgement on whether deterioration / non achievement of good status / potential can be justified or not. Life cycle considerations (such as

[77] For more details see CIS Guidance Document No. 1 Economics and the environment: https://circabc.europa.eu/sd/a/cffd57cc-8f19-4e39-a79e-20322bf607e1/Guidance%20No%201%20-%20Economics%20-%20WATECO%20(WG%202.6).pdf

energy demand) may also have a part to play in the decision process[78]. Consideration of the strategic component also helps to improve policy coherence. The results of Strategic Environmental Assessments according to the SEA Directive, which applies to plans and programmes, can be useful in this context, but might not always be sufficient.

Finally, there is a need to consider potential cumulative effects of modifications (see Chapter 3.6). Since the spatial extent of impacts is a relevant consideration, the strategic level can be the appropriate scale for related assessments.

Case study 8: ICPDR Guiding Principles on Sustainable Hydropower Development

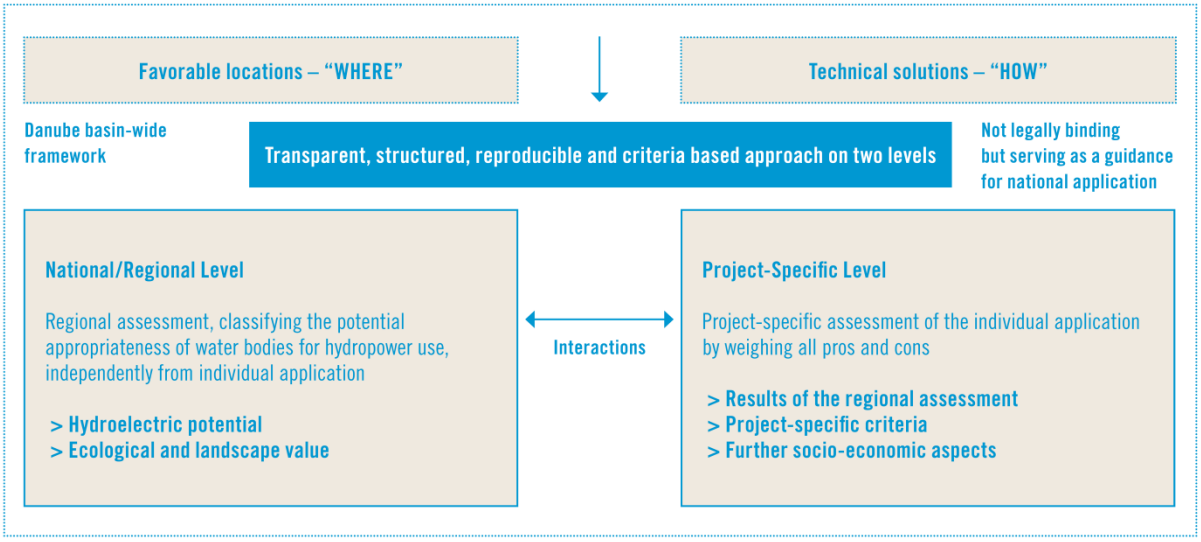
Country: International Commission for the Protection of the Danube River (Danube River Basin, including the 9 EU Member States AT, BG, CZ, DE, HR, HU, RO, SI, SK and 5 non EU Member States BA, MD, ME, RS and UA)

Countries in the Danube River Basin are planning new hydropower development in order to increase the share of renewable energy. At the same time countries are committed to meet the environmental protection objectives, including the WFD.

Acknowledging the challenge of sustainable hydropower development in the frame of the existing legal and policy framework, the ICPDR elaborated "Guiding Principles on Sustainable Hydropower Development". The Guiding Principles recommend the application of a strategic approach, including the strategic (national/regional) and project specific level. Criteria for both levels are included in the document. This is also due to the fact that the required assessments and acquisition of data is only feasible on the respective levels. Therefore, a two-level assessment is suggested for the strategic planning approach as illustrated below.

The Guiding Principles which have been developed by an interdisciplinary team, including representatives from authorities (energy and environment), the hydropower sector and NGOs, were finalised and adopted in June 2013 and recommended by the ICPDR for application at national level.

Strategic planning approach – national/regional and project-specific assessments *FIGURE 13*



Links: http://www.icpdr.org/main/activities-projects/hydropower

[78] See Royal Commission on Environmental Pollution (1988): 12th report: Best Practicable Environmental Option

5.3.2 Project level

At the project level alternatives have to be assessed against the criteria whether other means can serve the same purpose while being a significantly better environmental option. This includes for instance different project designs which are technically feasible and not disproportionate costly. Also other legislation (e.g. EIA or Habitats Directives) can require the assessment of alternative means[79].

Potential synergies can be gained with assessments according to the EIA Directive (if applicable) for determining environmental impacts of a planned project, prescribing a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment[80]. It has to be clarified in this context that neither the EIA (nor SEA) procedures prescribe the design of projects, nor recommend its improvement or change.

5.4 Weighing interests: Overriding public interest / benefits versus impacts

A further condition which needs to be complied with is that "*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*" (Article 4(7)(c)). To comply with this test at least one of the two criteria of Article 4(7)(c) has to be fulfilled (overriding public interest or the weighing test) by the new modification, alteration or new sustainable human development activity, or both[81].

5.4.1 Overriding public interest

In EU legislation the public or general interest can serve as a ground for justifying derogations. A range of "public interests" exist within the EU and at national level such as energy security, food security, economic activities and job creation, environmental protection, etc. Since not all public interests can automatically be "overriding", it is important to distinguish between "public interest" and "overriding public interest" which is addressed by Article 4(7)(c). "Overriding" practically means that the other interest overrides achieving the objectives of the WFD. Member States must be allowed a certain margin of discretion for determining whether a specific project is of such interest[82].

CIS Guidance Document No. 20 outlines that a similar concept is also used in the Habitats Directive (92/43/EEC) ("Imperative Reasons of Overriding Public Interest") and other EC law. The European Commission's "Guidance on the provisions of Article 6 of the Habitats Directive 92/43/EEC"[83] may bring some clarification. It is reasonable to consider that the reasons of overriding public interest[84] refer to situations where plans or projects envisaged prove to be indispensable within the framework of:

[79] See for instance Case C-239/04 Castro Verde special protection area - Lack of alternative solutions: http://curia.europa.eu/juris/liste.jsf?language=en&num=c-239/04

[80] See EIA Directive Article 5.1(d)

[81] See also Austrian National High Administrative Court Decision (VwGH 24.11.2016, Ro 2014/07/0101), ruling that the fulfilment of one criteria of Article 4(7)(c) is sufficient, thus overriding public interest or the weighing test, and not necessarily both.

[82] See Case C-346/14 Commission v Austria: http://curia.europa.eu/juris/document/document.jsf?text=&docid=177722&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=320623

[83] See Guidance on Article 6(4) and Methodological guidance on Assessment of Plans and Projects significantly affecting Natura 2000 sites available at: http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm; See Chapter 2.7

[84] Note that the consideration of "overriding public interest" only applies to the first part of Article 4(7) c, not to the second part.

- 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.

Case law from the European Court of Justice on the application of this concept to the Habitats Directive can bring further clarification[85]. Furthermore, public participation can contribute considerably in determining overriding public interest.

The following additional sources of information can help to provide further clarification on the question what to consider as "public interest" or "overriding public interest"[86]:

- The CIS Guidance Document No. 1 (WATECO)[87] outlines a number of key elements which need to be considered (e.g. to fulfil public interests, not all types of public interest can apply, aim to protect fundamental values for citizens' lives and society (e.g. health, safety), within the framework of fundamental policies for the State and society).
- The EU court has clarified[88] that irrigation and the supply of drinking water may[89] constitute an overriding public interest that can justify a water diversion project in the absence of alternative solutions (for considerations relating to human health or beneficial consequences of primary importance for the environment). It has also noted[90] that the construction of a hydropower plant may in fact be an overriding public interest.
- In the relation to hydropower projects, within the CIS process it was concluded that a hydropower activity is not automatically of overriding public interest just because it will generate renewable energy[91].
- In relation to the EU Habitats Directive (Natura 2000 sites which might also be affected by a new modification), Article 6(4) first subparagraph stipulates that imperative reasons of overriding public interest include those of social or economic nature, while the second subparagraph mentions human health, public safety and beneficial consequences of primary importance for the environment as examples of such imperative reasons of overriding public interests[92].

[85] See "Article 6 of the Habitats Directive - Rulings of the European Court of Justice" at: http://ec.europa.eu/environment/nature/legislation/caselaw/index_en.htm

[86] Note that the references provided do not claim completeness as new decisions might appear.

[87] https://circabc.europa.eu/sd/a/cffd57cc-8f19-4e39-a79e-20322bf607e1/Guidance%20No%201%20-%20Economics%20-%20WATECO%20(WG%202.6).pdf

[88] http://curia.europa.eu/juris/document/document.jsf;jsessionid=9ea7d0f130d679e412f3db944bbd8ceeb4d91f8fe99e.e34KaxiLc3eQc40LaxqMbN4Pah4Te0?text=&docid=126642&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=55628 ; http://curia.europa.eu/juris/document/document.jsf;jsessionid=9ea7d0f130d679e412f3db944bbd8ceeb4d91f8fe99e.e34KaxiLc3eQc40LaxqMbN4Pah4Te0?text=&docid=111201&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=55628

[89] Please note it is stated that such activities may be of "overriding public interests", what is important in the context of the whole judgment, and, by analogy, in the context of WFD 4(7)

[90] http://curia.europa.eu/juris/document/document.jsf?text=&docid=177722&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=320623

[91] https://circabc.europa.eu/sd/a/23d94d2d-6b9c-4f17-9e15-14045cd541f3/Issue%20Paper_final.pdf

[92] Please note that the WFD does not use the term "imperative" as it is used in Article 6.4 of the Habitats Directive, what is important to be considered for a comparison. As regards the "other imperative reasons of overriding public interest" of social or economic nature, it is clear from the wording that only public interests, irrespective of whether they are promoted either by public or private bodies, can be balanced against the conservation aims of the Directive. Thus, projects developed by private bodies can only be considered where such public interests are served and demonstrated.

- On the national level, additional issues related to the application of WFD Article 4(7) might also play a role such as military security (e.g. causing Article 4(7) cases on coastal areas)[93].

Based on the above sources which summarize approaches to distinguish "public interests" from "overriding public interests", it can be reasonably considered that a simple declaration without further well-grounded assessments is not sufficient to declare a planned new modification or new sustainable human development activity as "overriding public interest". A broad and transparent discussion process underpinning such assessments with involvement of relevant authorities and stakeholders can help in this regard, including a transparent and clearly documented decision making process for each case. Guidance on the different levels of public participation and how to organise public participation can be found in CIS Guidance No. 8 - Public Participation in Relation to the Water Framework Directive.[94]

Results from an SEA on relevant plans and programs can also be helpful in this regard, next to the public participation process required under WFD Article 14 which can support the debate to determine overriding public interests. However, it should be noted that a specific project context will in most cases be needed as Article 4(7) cases can have a different scale, different timing and different stakeholder groups which might need to be involved compared to the consultation process of the RBMPs.

5.4.2 Weighing benefits of the modification versus foregone benefits and opportunities

The second part of Article 4(7)(c) addresses the question whether "*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*".

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. The benefits of achieving the environmental objectives of Article 4 include[95]:

- In case of deterioration of status, those benefits and opportunities foregone as a result of the deterioration of status (e.g. loss of biodiversity, loss of ecosystem services); 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 no longer possible[96] or the foregone benefits due to the necessary increase in the level of purification treatment; if a water body may deteriorate from moderate to poor the gap between good and poor).

[93] See Treaty on European Union Art 42 (3)

[94] https://circabc.europa.eu/sd/a/0fc804ff-5fe6-4874-8e0d-de3e47637a63/Guidance%20No%208%20-%20Public%20participation%20%28WG%202.9%29.pdf

[95] For an extended list see Annex I: Costs & Benefits of CIS Guidance No. 20

[96] Note that WFD Article 7(3) requires that Member States shall ensure the necessary protection for the bodies of water identified with the aim of avoiding deterioration in their quality in order to reduce the level of purification treatment required in the production of drinking water.

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[97]. Thus, other categories of possible benefits and costs will have to be considered and - if possible – calculated, taking into account the specific quality element which is expected to deteriorate or be compromised to improve.

In addition, CIS Guidance Document No. 1[98] outlines the following steps:

1. Investigating issues similar to those considered in analysing the “sustainability status” of new activities. These include: improvement in human health, improvements in human safety (e.g. in the case of flood protection projects), increase in economic activity or production.
2. Assessing the foregone benefits resulting from the failure to achieve the environmental objectives of the Directive, based on the evaluation of the environmental, economic and social water-related benefits. In both cases, it should be attempted to quantify and express benefits or foregone benefits in monetary terms so as to make both parts of the analysis comparable. In many cases, however, it will be difficult to express and quantify all benefits or foregone benefits in monetary terms. Thus, the different benefits and impacts should be presented, whether in monetary terms, quantified or assessed qualitatively, in a multidimensional table.

Hence, this does not mean that it will be necessary to monetise or even quantify all costs and benefits to make such a judgement as this might be methodologically challenging. 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[99]. In this context and due to the range of expertise which may be needed for such assessments, close cooperation of the relevant competent authorities is considered as good practice.

The challenge in quantifying and monetizing the environmental benefits and losses arise in an economic assessment. Thus one could perform a multi-criteria analysis which might produce more relevant information and results than a cost-benefit analysis. This method can enable to consider a wide range of criteria[100], with not only monetary indicators, and can therefore lead to better informed decisions. In the event of two analyses being performed separately to assess the benefits and losses to the environment and the welfare effects, one should keep in mind that a methodology will need to be designed in order to compare the results of both analysis and perform the final judgement on the overall benefits. Regardless of the methodology and assessment tool which is applied to make a judgement, it should be noted that the assessment of economic and social welfare is linked to the environmental one, and its justification needs to be transparent and accountable.

[97] http://ec.europa.eu/environment/sustainable-development/SDGs/implementation/index_en.htm
[98] http://ec.europa.eu/environment/water/water-framework/economics/pdf/Guidance%201%20-%20Economics%20-%20WATECO.pdf
[99] For assessing benefits or comparing benefits, inspiration can be found in the Guide to Cost-Benefit Analysis of Investment Projects - Economic appraisal tool for Cohesion Policy 2014-2020: http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/cba_guide.pdf
[100] Also the use of results from mapping and assessment of ecosystems and their services (MAES process), if available, may be useful in that context; See: http://biodiversity.europa.eu/maes

Case study 9: Criteria Catalogue for Hydropower

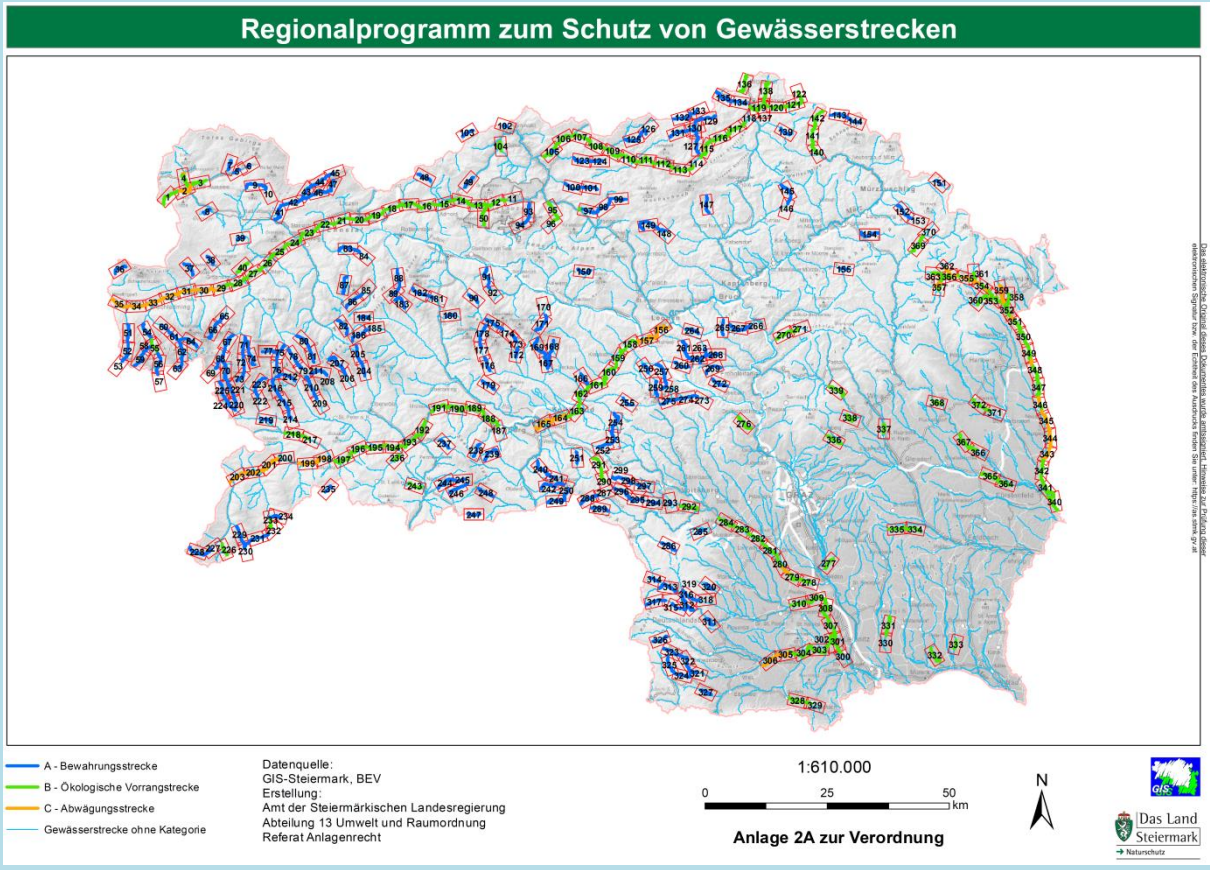
Country: Austria (AT)

Austria has laid down principles for hydropower development in the first RBMP as well as the "Criteria Catalogue for new hydropower development" (Österreichischer Wasserkatalog: Wasser schützen – Wasser nutzen. Kriterien zur Beurteilung einer nachhaltigen Wasserkraftnutzung) which is a decision support system as basis for regional planning. The main goals of the catalogue are:

- to assist water authorities in weighing the diverse public interests
- to summarise technical knowledge on most relevant aspects (energy management, ecology and other relevant water management aspects)
- give information on the criteria to assess the ecological value of WBs
- to ensure an Austrian wide common understanding and application of Art. 4 (7) test
- to assist transparency
- supporting tool - not forestalling the final decision of authorization body
- additional support for the assessment of better environmental options
- basis for further strategic planning for hydropower development on regional level
- will help hydropower planners to evaluate at a very early stage the chances of a new project to get an approval before detailed project planning is done

In order to implement this approach, in a first step the development of the criteria catalogue was included as a measure in the Program of Measures (PoM) of the 1st River Basin Management Plan to be used for weighing public interests in case of status deterioration (Article 4(7) WFD) as well as a basis for regional planning of hydropower development. The catalogue was published by the Ministry and provided to the regional authorities as an order for application (Erlass).

As an example for the second step (practical application), the regional program from the provincial government of Styria is provided, outlining "preservation stretches", "ecological priority stretches", and "weighing stretches" (see map).



Links:

https://www.bmlfuw.gv.at/wasser/wasser-oesterreich/wasserrecht_national/planung/erneuerbareenergie/Kriterienkatalog.html and

https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrStmk&Gesetzesnummer=20001250

1872

5.5 Relationship to the River Basin Management Plans

Article 4(7) exemptions are linked to a number of issues with the River Basin Management Plans. The main ones are outlined as follows.

5.5.1 Reporting in the River Basin Management Plans

Article 4(7)(b) includes a general provision that "*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*". Furthermore, WFD Annex VII A.5, A.7 and B1 is referring to Article 4(7) exemptions and the need to report them in the RBMP. The core rational behind these requirements is to support the public participation process and to ensure that the use of exemptions is made transparent and traceable, allowing for public scrutiny. The public participation process can also be useful in other terms, e.g. for determining overriding public interest due to feedback provided by relevant actors and stakeholder if potential Article 4(7) cases are included in the draft RBMPs.

Guidance Document No. 20 outlines in this context that 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[101] 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 judgment 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 part way through a river basin management planning cycle, the reason for that modification or alteration must be set out in the subsequent (update of the) RBMPs.

Furthermore, the PCI Guidance[102] for energy infrastructure Projects of Common Interest, which is a Commission Guidance, provides some further direction, outlining that *"where a project is put forward in the middle of the 6 years cycle and was not included in the previous RBMP, under strict and short time limits, Member States will be de facto amending their RBMPs and with no public consultation.*

[101] Note that the provisions of the Aarhus Convention can be relevant in that context.

[102] Guidance on Streamlining environmental assessment procedures for energy infrastructure Projects of Common Interest (PCIs), https://ec.europa.eu/energy/sites/ener/files/documents/20130919_pci-en-guidance.pdf

Therefore, the preferred course of action would be to formally update the existing RBMPs. An alternative would be to rely on a proper ad hoc public consultation, e.g. using the EIA process or other proper consultation. (…) Failing to carry out a proper public consultation could run the risk that Member States lose sight of the links between the proposed project and other water uses in the basin or that citizens are partly deprived of their right to be consulted as provided under the WFD. It is therefore recommended that time limits for the consultations are sufficient to allow a proper consideration of the project in the RBMP context. In cases where the projects are developed in the middle of the WFD planning cycle, they will then need to be included in the subsequent RBMP, which will be subject to public consultation in its entirety."

In addition, the following information can be considered as useful to be included the RBMPs (and the draft RBMPs) that is available at the time of publishing the plans:

- Potential 4(7) cases before the project is assessed or where assessment is ongoing, e.g. flood protection measures outlined in the FRMP, other infrastructure projects (e.g. navigation, hydropower, irrigation schemes) which may be subject to an Article 4(7) Test, or other projects for which an authorisation procedure was launched;
- Other projects which may have effects on water body status/potential but which may not trigger, individually, an Article 4(7) Test;
- Information on potential interaction with existing pressure and uses in the basin;
- Information and links to relevant background documents;

An added value can also be information in the RBMP about projects where an Article 4(7) Test was not required (since the proposed project was assessed to not cause a deterioration / non-achievement of good status / potential). This information can inter alia be relevant for the update of the review of the environmental impact of human activity and the economic analyses required under WFD Article 5 and Annex III. Here in particular for the identification of pressures, the assessment of impacts and the risk of failing to achieve the environmental objectives. It can also be useful for transparency reasons, i.e. if information is requested by interested parties[103].

Case study 10: Instruction of the Spanish Water Director in relation to Article 4(7)
Country: Spain (ES)
Spain has developed technical Instruction that applies to all interregional RBDs in the country. The instructions establish a technical procedure to analyse new modifications of physical characteristics of water bodies, new sustainable human development activities and alterations to the level of groundwater bodies that could lead to the consideration of possible art 4(7) exemptions. For each potential Art 4(7) case a fact sheet needs to be filled out. The final factsheet that has to be included in the RBMP as a summary of the 4(7) evaluation. It can be used as a summary (that can be used in the public participation process) but also as a check list for water planning officers to follow all the steps of a complete analysis. Furthermore, it enables to compile all the information as structured data in a computer system.
Links: https://circabc.europa.eu/sd/a/f72ae44f-23e3-4cb6-9cba-74a79bf5c331/19 - MS Spain - 4.7 Case Study 1.pdf

[103] See for example Court Case C-75/08, concerning the EIA Directive, available at http://curia.europa.eu/juris/document/document.jsf?text=&docid=73330&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=194020

5.5.2 Article 4(7) and the designation of heavily modified water bodies (HMWB)

If Article 4(7) is applied for a new modification to the physical characteristics of a surface water body (hydromorphological alteration), a water body might then qualify to be designated as HMWB in the next RBMP where the water body is deteriorated / cannot reach Good Ecological Status.

Guidance Document No. 20 outlines in this context that 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".

There are similarities between the Article 4(7) exemption and HMWB designation test, addressing e.g. physical modifications or requiring mitigation measures. CIS Guidance Document No. 4 already outlines that HMWB designation tests according to Article 4(3) can become relevant for newly modified water bodies, for instance for water bodies that have become substantially changed in character as a result of the application of the Article 4(7) derogation[104]. Therefore it can be reasonable to ensure coherence between the required assessments under Article 4(7) and the tests according to Article 4(3). At the same time, a new hydro-morphological alteration will not always lead to a designation of the respective water body as heavily modified (e.g. in case of deterioration from high to good).

Once a water body is designated as HMWB following the Article 4(7) exemption and Article 4(3) test, HMWB designation needs to be checked every 6 years in subsequent RBMPs whether the requirements for HMWB designation and GEP are achieved. This is required for proving if new approaches and possibilities for mitigating impacts might have emerged which have to be considered.

In case an Article 4(7) exemption is granted for a new physical modification in an existing HMWB (see chapter 0), the ecological potential of this water body might subsequently need to be re-defined based on the WFD 6-years planning cycle to take account of the additional physical modification.

5.5.3 Relationship of Article 4(7) to Article 4(4) and 4(5)

In case the Article 4(7) criteria are met it is possible to apply Article 4(7) exemptions under the first limb (new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater) to water bodies which are already subject to exemptions under Article 4(4) or 4(5). This question is not relevant for exemptions under the second limb (new sustainable human development activities) since it only applies to deterioration of surface water bodies from high to good status, for which there is no need to consider the application of exemptions under Article 4(4) or 4(5).

[104] See chapter 8.3.2 of CIS Guidance Document No. 4: https://circabc.europa.eu/sd/a/f9b057f4-4a91-46a3-b69a-e23b4cada8ef/Guidance%20No%204%20-%20heavily%20modified%20water%20bodies%20-%20HMWB%20(WG%202.2).pdf

There can be cases where the application of Article 4(4) or 4(5) exemptions may need to be justified following the application of an Article 4(7) exemption and modification of a water body. An example can be to apply an Article 4(7) exemption for a new modification which deteriorates water status, followed by an Article 4(4) exemption based on natural conditions since it takes the ecosystem longer to recover although the necessary mitigation measures to reach good status are implemented (see also chapter 3.3.1 in this context). Similarly, in case Article 4(7) is applied for an alteration to the level of groundwater, exemptions according to Article 4(4) or 4(5) will have to be justified in the following river basin management planning process according to their distinct conditions and reviewed every 6 years. Therefore it can be reasonable to ensure coherence between the required assessments and tests under Article 4(7) and the required assessments according to Article 4(4) or 4(5).

Take note that the application of Article 4(7) exemptions on water bodies which are subject to Article 4(4) or 4(5) exemptions does not obviate the need for measures to improve status. The drivers and pressures that underpin the application of Article 4(4) or 4(5) still need to be addressed what may or may not be influenced by a new modification for which an Article 4(7) exemption is applied.

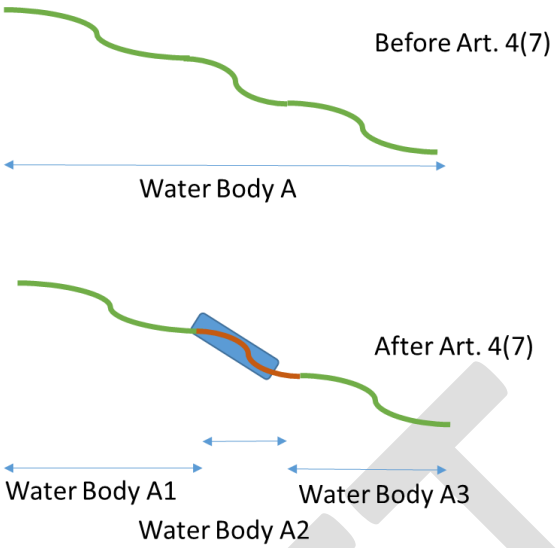
Inter-relations with existing pressures from other uses on a water body need to be considered. A typical example could be a water body where an Article 4(4) exemption is applied due to nutrient pollution from agriculture (for a phased implementation of measures taken by the polluter addressing the existing pressure) and at the same time an Article 4(7) exemption is applied for a new modification. Generally the impacts of nutrient pollution may not be affected but in some cases, and depending on the nature of the new modification, it may actually make impacts of pollution worse (e.g. hydromorphological changes that affect the capacity of the ecosystem to absorb nutrients). Therefore, it should be considered how mitigation measures for a new project can be combined and interact with other measures necessary to improve status (e.g. a fish ladder combined with morphological measures for habitat recreation and ecological flow requirements).

5.5.4 Change in water body delineation and/or typology due to an Article 4(7) exemption

Once the project is implemented, a change in water body delineation might be required (for subsequent RBMPs). According to CIS Guidance Document No. 2[105], physical features (geographical or hydromorphological) that are likely to be significant in relation to the objectives of the Directive should be used to identify discrete elements of surface water. It further makes clear that HMWBs should be designated as single water bodies. In other words, depending on the water body size before the application of Article 4(7), a further split into water bodies might be needed. For the water bodies that result from the split, a reassessment in terms of objectives and exemptions is needed, considering what was applied in the previous RBMP.

[105] https://circabc.europa.eu/sd/a/655e3e31-3b5d-4053-be19-15bd22b15ba9/Guidance%20No%202%20-%20Identification%20of%20water%20bodies.pdf

Figure 7: Changing water body designation due to the application of Article 4(7)



In cases where water bodies are grouped, such a grouping might not be longer possible after a modification has taken place as the criteria for grouping (contiguous elements of surface water within a type are of the same status)[106] will not be longer given.

Note that the need for an update of the typology might also stem from measures for the improvement of water body status, e.g. by re-introducing natural processes (e.g. removal of a sluice, re-introducing tidal processes) leading to a change of the water body type.

5.5.5 Article 4(7) in a transboundary context

Transboundary coordination is a key issue for international river basins and addressed by the WFD. Article 3.4 outlines that "*Member States shall ensure that the requirements of this Directive for the achievement of the environmental objectives established under Article 4, and in particular all programmes of measures are coordinated for the whole of the river basin district. For international river basin districts the Member States concerned shall together ensure this coordination and may, for this purpose, use existing structures stemming from international agreements*".

This is of particular relevance in cases where a proposed project requires Article 4(7) assessments for water bodies which form the border between two countries, where the water body is crossing the border, or where the proposed project might cause transboundary impacts in more than one water body. Practical examples might be flood protection measures, hydropower plants or water abstraction from transboundary groundwater bodies. In such cases the Member States concerned need to coordinate the Article 4(7) Applicability Assessment as well as Article 4(7) Test, ensuring that common/coordinated procedures, thresholds and methodologies are used. Bilateral and multilateral transboundary river basin commissions might act as facilitators of such coordination[107].

[106] See Guidance document number 2, available at: https://circabc.europa.eu/sd/a/655e3e31-3b5d-4053-be19-15bd22b15ba9/Guidance%20No%202%20-%20Identification%20of%20water%20bodies.pdf

[107] See also the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the UN Watercourses Convention in that context.

6 OUTLOOK AND FOLLOW-UP

The guidance aims to further clarify different aspects in relation to the practical application of exemptions to the environmental objectives according to WFD Article 4(7). While many issues gained in clarity and understanding, the constraints of the CIS process are also recognised, since for many aspects no "one-size-fits-all approach" can be elaborated in the frame of the CIS, requiring more specific attention, methodologies, tools and suitable approaches at Member State level.

Therefore, the practical application of the guidance would benefit from further follow-up activities, potentially covering a range of topics. These can include for instance the following:

- Exchange on experiences with assessments whether a planned project is expected to cause deterioration or jeopardize the achievement of the WFD objectives (Applicability Assessment);
- Assessments of the cause-and-effect relationships between modifications/alterations and different quality elements;
- Exchange of practical experiences on aspects related to the Article 4(7) Test itself, e.g. exchange on mitigation measures for different modifications, assessing alternative options, weighing of interests/overriding public interest, etc.;
- Strategic planning approaches for different sectors and linkage to the WFD and Article 4(7) assessments, including sector-specific workshops;
- Streamlining of assessments with other Directives;
- Administrative settings at Member State level for project authorisation.

The CIS process can provide an appropriate framework for such potential follow-up activities. Therefore some of these issues may be given specific attention when developing the next CIS work programme. However, it may also be explored whether other coordination mechanisms and supporting tools might provide opportunities for a continued follow-up exchange and capacity building.

2054 ANNEX A: Comparative overview table WFD, HD, EIA and SEA Directive

Legislation	WFD 2000/60/EC	Habitats Directive 92/43/EEC	EIA Directive 2011/92/EU	SEA Directive 2001/42/EC
Aims of the procedure	The Directive aims at maintaining and improving the aquatic environment. The Directive requires that Member States implement measures to prevent deterioration of the status and to achieve good status of all water bodies. The planning of "new modifications" requires the carrying out of an assessment of the impacts on the status of the affected water bodies. If the new modification is liable to cause deterioration or prevent the achievement of good status, the competent authority needs to ensure that the conditions of Article 4.7, but also 4.8 and 4.9, are met before granting the project authorisation.	The Habitats Directive aims to contribute towards ensuring biodiversity through the conservation of natural habitats and wild fauna and flora. It requires Member States to take measures to maintain or restore habitats and species to a favourable conservation status, including through the establishment and conservation of sites (SCIs and SACs) for the Natura 2000 network. The Birds Directive 2009/147/EC contains similar provisions for wild birds. SPAs classified under the Birds Directive form part of the Natura 2000 network. Art. 6 of the Habitats Directive lays down the requirements for the management and protection of the Natura 2000 sites. Art. 6(3) and (4) establish a procedure for the assessment and authorisation of plans or projects that may affect Natura 2000 sites. The aim to maintain the integrity of the Natura 2000 sites and the overall coherence of the network.	To ensure a high level of protection of the environment and of human health, through the establishment of minimum requirements for the environmental impact assessment of projects. Hence, Member States shall adopt all measures necessary to ensure that, before development consent is given, projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects on the environment (Article 2(1)).	To provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment (Article 1).
Types of developments covered	Any project and activity that can lead to deterioration or otherwise affect the status/potential of a water body. Article 4(7) allows under certain conditions for exemptions for new modifications to the physical characteristics of a surface water body, alterations to the level of a groundwater, or new sustainable human development activities. Even if certain projects are not covered by the EIA Directive, Article 4(7) may apply. The determining factor is whether the project is liable to cause deterioration of the status/potential of the affected water bodies or prevent the achievement of good status/potential. Some measures to improve status may fall within the scope of the EIA Directive and hence require an EIA (e.g. urban waste water treatment plants).	Any plan or project likely to have adverse effect on a Natura 2000 site	Projects listed in Annex I, EIA Directive. Annex II projects determined on a case by case basis and/or through thresholds or criteria.	All plans and programmes and their modifications: (a) which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent of projects listed in Annexes I and II to the EIA Directive or (b) which, in view of the likely effect on sites, have been determined to require an assessment pursuant to Article 6 or 7 of the Habitats Directive Other plans and programmes (P/P), P/P for the use of small areas at local level or minor modifications to P/P determined on a case by case basis and/or by specifying types of P/P.
Screening	No specific prescription, however, the step of the Art. 4(7) process where it is determined whether a new modification/alteration/new sustainable human development activity may affect water body status/potential. If the results of the screening step indicate that no significant effects are to be expected, there is no need to carry out further assessments.	The step of the Art. 6(3) process where it is determined whether a project or a plan is likely to cause significant effects to a Natura 2000 site, either alone or in combination with other plans and projects, corresponds to what is commonly called "screening procedure". If the results of the screening step indicate that no significant effects are to be expected, there is no need for an AA to be carried out.	Annex I of the EIA Directive lists projects for which the EIA is mandatory. For projects listed in Annex II of the Directive, the Member States have to determine if an EIA should be undertaken, based on the characteristics of the project; through a case-by-case examination and/or setting thresholds or criteria7. This is known as "screening procedure". The screening have to take into account the criteria set in Annex III, i.e. the characteristics of the project; its location, and the characteristics of the potential impact.	Identify whether a plan or programme is a "plan or programme" as defined by Article 2(a) and whether it is likely to have significant environmental effects (Article 3(4)). If the answer to both of the above is "yes" then the plan or programmes will require SEA.

Legislation	WFD 2000/60/EC	Habitats Directive 92/43/EEC	EIA Directive 2011/92/EU	SEA Directive 2001/42/EC
	No specific prescription, however, scoping aims to identify the assessments which are needed to determine the effects on water body status/potential at quality element level.	Although not explicitly mentioned, scoping is accepted as good practice and aims to precisely identify the issues that the AA should cover, as well as the appropriate information to gather.	Scoping is not mandatory, but accepted as good practice.	Mandatory requirement to consult designated authorities on the "scope and level of detail of the information which must be included in the environmental report"(Article 5(4)).
Scope and level of detail of the environmental information	Information is needed about the status of the quality elements that form the definition of ecological status (e.g. fish, macroinvertebrates, etc.) and the potential impact of the project on those. This is the first assessment that needs to be carried out, to assess whether the project may deteriorate status or prevent the achievement of good status. If this is the case, then the project cannot be authorised unless the conditions in article 4(7) are fulfilled. 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 alternatives 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 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. Additional conditions are that the project is of overriding public interest (similar concept as used in the Habitats Directive) or that the projects benefits outweigh the impacts of not achieving the WFD objectives. In addition, all practicable mitigation measures need to be included in the project. Again the EIA procedures can be helpful to identify adequate mitigation measures. It is important to realise that the WFD is only concerned about permanent impacts at water body level, whereas the EIA also deal with local impacts of temporary nature.	If it cannot be excluded, following the screening, that the plan or project will have a significant effect on the site, an Appropriate Assessment is required. The focus of the AA is on the conservation objectives of the site, which relate to the species and habitat for which the site was designated. (NB: Although the HD does not specify the content of the AA, this is clarified through relevant Commission guidance drawing on Court rulings). All kinds of effects, including cumulative, have to be assessed. Any possible mitigation measures (e.g. in relation to location of the project, timing of operations, construction method, etc.) can be considered in the context of the AA so as to avoid adverse effects on the integrity of the site. In case of a negative conclusion of the AA, the provisions of Art. 6(4) may apply and they define key elements to be considered (alternative solutions, imperative reasons of overriding public interest, compensation measures). (NB: These elements are clarified in relevant Commission guidance on Article 6 of the Habitats Directive. The examination of alternatives does not fall within the scope of Article 6(3) but within the scope of Article 6(4) (C-441/03, C-241/08).	The environmental impact assessment report to be provided by the developer for a project should include a description of reasonable alternatives studied by the developer which are relevant to that project, including, as appropriate, an outline of the likely evolution of the current state of the environment without implementation of the project (baseline scenario), as a means of improving the quality of the environmental impact assessment process and of allowing environmental considerations to be integrated at an early stage in the project's design (Article 5(d), Annex IV, EIA Directive as amended).	The environmental report shall be prepared and it shall identify, describe and evaluate "reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme" (Article 5(1)).
Public participation and consultation	One of the conditions of article 4(7) is that the reasons for the project are specifically set out and explained in the river basin management plan, which is compulsory subject to a 6 months public consultation. This provision allows consultation of the project in the context of the plan, which enables the assessment of interactions with other	Not obligatory in the context of decision making under Art. 6(3) but encouraged ("if appropriate").	The authorities likely to be concerned by the project by reason of their specific environmental responsibilities or local and regional competences are given an opportunity to express their opinion on the information supplied by the developer, and on the request for development consent. The public shall be informed electronically and by	The draft plan or programme and the environmental report shall be made available to (i) the authorities which by reason of their specific environmental responsibilities are likely to be concerned by the environmental effects of implementing the plans and programmes and (ii) the public. The

Legislation	WFD 2000/60/EC	Habitats Directive 92/43/EEC	EIA Directive 2011/92/EU	SEA Directive 2001/42/EC
	new projects and existing water uses in the basin.		public notices or by other appropriate means. (Article 6(1)-(2)). The public concerned shall be provided with access to the information described in Article 6(3) (a)-(c) within reasonable time-frames. The public shall be given early and effective opportunities to participate in the environmental decision making procedures.	authorities and the public shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Article 6 (1)-(2)).
Decision-making	The environmental objectives are binding for plans and projects. This means that if a new project is liable to cause deterioration of status or prevent the achievement of good status in the affected water bodies, the authorities are bound to refuse the authorisation unless the conditions in article 4(7) are fulfilled.	The results of the AA are binding, i.e. the competent authorities can authorise the plan or project only if the AA concludes that it will not adversely affect the integrity of a Natura 2000 site. However, if the AA concludes that adverse effects cannot be ruled out, the competent authority must be satisfied that all conditions set out in Article 6(4) are met (there are no alternative solutions, there are imperative reasons of overriding public interest, compensation measures for damage have been found to ensure coherence of the Natura 2000 network. In that case the Commission must be informed, and, in specific circumstances, give an opinion.	The objective of an EIA is to describe the potential environmental impacts of a project, to ensure that results of consultations and information gathered during the EIA process is duly taken into account in the decision making process and to inform of the final decision taken. (Article (8), (8a) and (9)).	The environmental report, the opinions expressed and the results of any transboundary consultations, shall be taken into account during the preparation of the plan or programme and before its adoption or submission to the legislative procedure (Article 8). When a plan or programme is adopted Member States shall ensure that the authorities which by reason of their specific environmental responsibilities, the public and any Member State consulted in a transboundary consultation are informed and the information described in Article 9(1) (a)-(c) is made available.
Monitoring	The WFD includes the requirement to establish monitoring programmes for the monitoring of water status in order to establish a coherent and comprehensive overview of water status within each river basin district (Article 8 and Annex V).	Considered good practice. In particular, monitoring of the mitigation or compensation measures will be important to ensure their effectiveness with regard to their objective (respectively no adverse effects on the integrity of the site, or maintenance of the coherence of the network).	Member States shall ensure that the features of the project and/or measures envisaged to avoid, prevent or reduce and, if possible, offset significant adverse effects on the environment are implemented by the developer, and shall determine the procedures regarding the monitoring of significant adverse effects on the environment. The type of parameters to be monitored and the duration of the monitoring shall be proportionate to the nature, location and size of the project and the significance of its effects on the environment. Existing monitoring arrangements resulting from Union legislation other than this Directive and from national legislation may be used if appropriate, with a view to avoiding duplication of monitoring. (Article 8a(4). Where appropriate the monitoring measures shall be incorporated in the decision to grant development consent (Article 8a (1)(b)).	Member States shall monitor the significant environmental effects of the implementation of plans and programmes in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action" (Article 10(1)). The Environmental Report shall include "a description of the measures envisaged concerning monitoring" (Annex I (i)). Monitoring allows the actual significant environmental effects of implementing the plan or programme to be tested against those predicted. It thus helps to ensure that any problems which arise during implementation, whether or not they were foreseen, can be identified and future predictions made more accurately. As good practice monitoring can be integral to compiling baseline information for future plans and programmes, and to preparing information which will be needed for EIAs of projects.

ANNEX B: Flow chart of the Article 6(3) and 6(4) procedure of the Habitats Directive