

COMMON IMPLEMENTATION STRATEGY FOR THE WATER FRAMEWORK DIRECTIVE AND THE FLOODS DIRECTIVE



Natural Conditions in relation to WFD Exemptions

Document endorsed by EU Water Directors at their meeting in Tallinn on 4-5 December 2017

Disclaimer

This technical document has been developed through a collaborative framework (the Common Implementation Strategy (CIS)) involving the Member States, EFTA countries, and other stakeholders including the European Commission. The document reflects the informal consensus position on best practice endorsed by the EU Water Directors. However, the document does not necessarily represent the position of any of the partners.

To the extent that the European Commission's services provided input to this technical document, such input does not necessarily reflect the views of the European Commission.

Neither the European Commission nor any other CIS partners are responsible for the use that any third party might make of the information contained in this document.

The technical document is intended to facilitate the implementation of Directive 2000/60/EC and is not legally binding. Any authoritative reading of the law should only be derived from Directive 2000/60/EC itself and other applicable legal texts or principles. Only the Court of Justice of the European Union is competent to authoritatively interpret Union legislation.

Contents

1	Background	4
2	Exemptions and 'natural conditions' in the WFD.....	4
2.1	'Natural conditions' in Article 4(4).....	5
2.2	'Natural conditions' in Article 4(5) and difference to Article 4(4)	6
3	Practical examples for Article 4(4) time extensions on grounds of 'natural conditions' and considerations for other action	7
3.1	Article 4(4) time extensions on grounds of 'natural conditions'	7
3.1.1	Ecological status surface waters	8
3.1.2	Chemical status surface waters.....	9
3.1.3	Quantitative status groundwater	10
3.1.4	Chemical status groundwater	10
3.2	Evidence needs for Article 4(4) time extensions on grounds of 'natural conditions'	11
3.3	Considerations for other action	11
4	Summary	13
	ANNEX: Compilation of indicative case studies in relation to WFD Article 4(4) exemptions on grounds of 'natural conditions'	15

1 Background

This document outlines and discusses situations in which **'natural conditions' are considered as a reason for the use of exemptions** from meeting the environmental objectives as outlined in Article 4 of the Water Framework Directive (WFD). The document was elaborated in the context of discussions on the WFD 2027 deadline, which was identified by the Water Directors during discussions in 2016 as needing early attention, specifically in relation to the application of exemptions in the third River Basin Management Plans (RBMPs) which are due in 2021.

A parallel document has already been delivered by an Ad-hoc Strategic Group (ASG) set up by Water Directors on the use of time extensions according to Article 4(4) in the 2021 RBMPs on grounds of 'technical feasibility', 'disproportionate costs' and 'natural conditions'. It was endorsed by Water Directors at their meeting in Malta in June 2017. The focus of this document is on **further clarification and justification of time extensions based on 'natural conditions' according to Article 4(4)**. The document therefore has to be seen in conjunction with the document on time extensions according to Article 4(4) in the 2021 RBMPs¹.

In support of the elaboration of this document, case studies were provided by Member State and participating country representatives in the WFD Common Implementation Strategy (CIS) working groups for Chemicals, Ecological Status and Groundwater. The case studies provided the basis for further discussion and clarification of the concept of 'natural conditions' in relation to Article 4(4) and 4(5), although most addressed **Article 4(4) which was the main focus of the case studies and of this document**. In addition, several Member States and participating countries provided further thoughts and discussion points on the concept of natural conditions and potential issues that may justify this type of exemption. Discussions on the topic were also held at the meetings of the Working Groups Chemicals, Ecological Status and Groundwater during 2017 which helped in the elaboration of this document.

2 Exemptions and 'natural conditions' in the WFD

The term **'natural conditions' is used both in Article 4(4) and 4(5)** and refers to the conditions which dictate the rate or possibility of natural recovery. This is recognition that natural conditions may affect the possibility for reaching the conditions necessary to restore good status or potential of surface waters or the time needed to reach those conditions. This concerns in particular the decrease of pollutant concentrations and the re-colonisation or re-establishment by plants and animals. It also recognises that due to varying natural hydrogeological conditions, it may take time or even be impossible for groundwater bodies to reach good chemical and/or quantitative status.

Article 4(6) allows for temporary deterioration in water body status if this is the result of circumstances of natural cause or *force majeure*. **Note that the term 'natural cause' is different from 'natural conditions'** and deals with circumstances which are exceptional or could not reasonably have been foreseen. It refers to events like floods and droughts which give rise to situations leading to a use of the water environment in ways that results in deterioration of its status (e.g. by taking emergency

¹ The document "Clarification on the application of WFD Article 4(4) time extensions in the 2021 RBMPs and practical considerations regarding the 2027 deadline" is available under the following link: [https://circabc.europa.eu/sd/a/c81574c0-594b-4bf9-8374-37e50ec3b803/Paper%20on%20Article%204\(4\)%20time%20extensions%20in%202021%20RBMPs%20-%20FINAL.pdf](https://circabc.europa.eu/sd/a/c81574c0-594b-4bf9-8374-37e50ec3b803/Paper%20on%20Article%204(4)%20time%20extensions%20in%202021%20RBMPs%20-%20FINAL.pdf)

action to save life and property during floods; by supplying the public with drinking water during prolonged drought; by pollutants being washed into the water environment by floods).²

Exemptions can also apply in a transboundary context in cases where pressures affecting water bodies are outside the competence and jurisdiction of a Member State. An obligation to coordinate the programmes of measures for the achievement of the environmental objectives within river basin districts and river basins is laid down in Article 3(4) and 3(5) of the WFD, and Article 6(1)(c) of the EQS Directive³. A Member State causing the pressures should be obliged to provide enough information for the affected Member State to be able to justify applying exemptions. Endeavours should be made to establish appropriate coordination with relevant non-Member States. The WFD also includes the provision of Article 12 on the involvement of the Commission to come to a solution. The key issue in both applying an exemption and invoking Article 12 is the provision of evidence that the relevant Member States have taken all reasonable actions to fulfil the legal obligations and that the application of exemptions does not permanently exclude or compromise the achievement of the objectives in other water bodies within the same river basin district.⁴ Transboundary pollution may also arise from outside (international) river basins as a result of long-range transport. This possibility is referred to further in Table 2.

2.1 'Natural conditions' in Article 4(4)

The WFD requires Member States to protect, enhance and restore water bodies with the aim of achieving good status or potential⁵ by 2015⁶ (Article 4(1)). Article 4(4) allows for an extension of the deadline for the **phased achievement of the WFD objectives beyond 2015**, if Member States determine that all necessary improvements cannot reasonably be achieved by 2015 for at least one of the following reasons (Article 4(4)(a)):

- (i) the scale of improvements required can only be achieved in phases exceeding the timescale, for reasons of technical feasibility;
- (ii) completing the improvements within the timescale would be disproportionately expensive;
- (iii) natural conditions do not allow timely improvement in the status of the body of water.**

Article 4(4)(b) requires that the extension of the deadline, and the reasons for it, are specifically set out and explained in the RBMP. The objectives, exemptions and the measures need to be reviewed as part of the preparation of the updated RBMPs⁷.

While the extension of the deadline is limited to two further updates of the RBMPs for reasons of technical feasibility and/or disproportionate costs, **no time limitation** is specified for the **extension of the deadline on grounds of natural conditions**⁸ meaning natural processes occurring in and

² See CIS Guidance Document No. 20 on "Exemptions to the environmental objectives"

³ Directive 2008/105/EC as amended by Directive 2013/39/EU

⁴ See also Article 6 of Directive 2008/105/EC as amended by Directive 2013/39/EU and CIS Guidance Document No. 20 on "Exemptions to the environmental objectives" and WFD Article 4(8).

⁵ For heavily modified and artificial water bodies, Article 4.1 point (a) indent (iii) sets out "specific objectives" for these specific water bodies. In Article 4.3, criteria for the designation of artificial or heavily modified water bodies are described. References to "good status" in this document should also be construed as references to "good potential" for heavily modified and artificial water bodies.

⁶ Except for priority substances newly introduced by Directive 2013/39/EU for which good status should be reached in 2027, and for the 2008 priority substances whose EQS was revised by Directive 2013/39/EU, for which good status should be reached in 2021.

⁷ See WFD Article 4(4)(d), 11(5), 11(8), 13(7) and Annex VII B.

⁸ For the priority substances newly introduced by Directive 2013/39/EU, amending Directive 2008/105/EC, good status should be reached by 2027. The extension of time limits provided for by Article 4(4) is limited to two further updates of the RBMPs, hence up to 2033 for existing substances with stricter revised standards and up to 2039 for new priority substances, except in the case of natural conditions (see

characteristics of a river basin (e.g. hydrological, morphological, hydrogeological, chemical, ecological, etc.). Natural conditions in this sense also include circumstances in which the recovery process is delayed by remaining effects of former human activities, including also man-made substances.

This provision requires that the **measures needed to achieve good status have been taken by 2027 at the latest**, but the characteristics of the river basin or water body are such that the **recovery to good status is expected to take a longer time period**. Hence it is recognised that, after sometimes decades of unsustainable practices, the river basin or water body may take a long period of time to recover to good status even though the necessary corrective measures have been implemented.

Note that the application of the extension of deadlines according to Article 4(4) should not interfere with achieving the objectives and deadlines under other EU legislation (see Article 4(1)(c)).⁹

2.2 'Natural conditions' in Article 4(5) and difference to Article 4(4)

Article 4(5) is different in nature from Article 4(4). It allows Member States to derogate from the environmental objectives of good status and set "less stringent objectives" to those in Article 4(1). Less stringent objectives under Article 4(5) can be applied to specific water bodies when they are **so affected by human activity or their natural condition is such that the achievement of good status would be infeasible or disproportionately expensive**. Note that reference to the term 'infeasible' "*includes technical infeasibility, but could also refer to situations where addressing a problem is out of the control of a Member State*"¹⁰.

While there is no hierarchical relationship between Article 4(4) and 4(5) and Member States are free to use either as long as the relevant conditions are met, "*the conditions for setting less stringent objectives require more information and in-depth assessment of alternatives than those for extending the deadline*"¹⁰, meaning that the application of Article 4(5) should be grounded on a particularly solid evidential basis; furthermore the less stringent objectives have to be reviewed every 6 years.

A **distinction** needs to be made between the application of the concept of '**natural condition**' under **Article 4(4) and 4(5)**. Given the intrinsic difference in the character of the two exemptions, the way in which natural conditions are used to explain a delay in recovery to good status must be essentially different from the way in which they are used to justify the non-achievement of the objectives. The **exemption types Article 4(5) refers to are either that the achievement of good status would be 'infeasible' or 'disproportionately expensive'**, whereas the exemption types under Article 4(4) for a delayed achievement of the objectives can also include 'natural conditions' following the implementation of the required measures¹¹. Therefore 'natural conditions' as such is not an exemption type under Article 4(5).

Article 3(1a) of Directive 2008/105/EC as amended). Since the existing standards were to be met by 2015, the meeting of those existing standards by the original extended deadlines of 2021 or 2027 should not be delayed where measures can be taken, i.e. the allowance of an additional six years should be considered to apply only for closing the gap between the existing and the stricter standard.

⁹ For more details see document "Links between the Water Framework Directive and Nature Directives – Frequently Asked Questions": <http://ec.europa.eu/environment/nature/natura2000/management/docs/FAQ-WFD%20final.pdf>

¹⁰ CIS Guidance Document No. 20 on "Exemptions to the environmental objectives"

¹¹ See CIS Reporting Guidance 2016, Annex 8g including a list of exemption types for Article 4(4), 4(5), 4(6) and 4(7)

3 Practical examples for Article 4(4) time extensions on grounds of 'natural conditions' and considerations for other action

The following chapter outlines the concept of 'natural conditions' and related practical considerations in more detail. Examples for the potential use of Article 4(4) time extensions on grounds of 'natural conditions' are provided and their relevance described in relation to the status for surface and groundwater bodies (Chapter 3.1). Thereafter, additional issues are outlined which came up during the discussion process and which might qualify for other action than 'natural conditions' under Article 4(4) (Chapter 3.3).

3.1 Article 4(4) time extensions on grounds of 'natural conditions'

As outlined above, 'natural conditions' refers to the conditions which dictate the rate or possibility of recovery of the status of a water body. For the application of Article 4(4) time extensions on grounds of 'natural conditions', the measures required to achieve good status are implemented by 2027 at the latest, but water body recovery is expected to take longer such that good status can only be achieved after 2027. Table 1 provides an overview on the main reasons and examples for lag times of recovery which are further specified with examples in the following chapters.

Table 1: Overview of reasons for Article 4(4) time extensions on grounds of 'natural conditions'

Overview of main reasons for Article 4(4) time extensions on grounds of 'natural conditions'			
(a) Lag time for water quality recovery	(b) Lag time for recovery of hydromorphological conditions	(c) Lag time for ecological recovery	(d) Lag time for water level recovery
<p>Description:</p> <p>(i) Time for breakdown, dispersal (flushing) or dilution of pollutants (including chemicals and physico-chemical elements) already in a water body or the catchment, including other water bodies, sediments or the soils that are part of the hydrological system. Relevant to surface and groundwater bodies.</p> <p>(ii) Time for soil's buffering capacity to recover post-acidification; and enable the increase in the pH of the water body.</p>	<p>Description:</p> <p>(i) Time taken for hydro-morphological processes to re-create the appropriate range of habitats and substrate conditions following restoration measures.</p> <p>(ii) Time taken for appropriate structure and condition of riparian & shore zones to re-establish.</p>	<p>Description:</p> <p>(i) Time for re-colonisation by species; and</p> <p>(ii) Time taken for recovery of appropriate abundance and age structure of species.</p> <p>(iii) Time for recovery from the temporary presence of invasive alien species or for adjusting to a new species composition including invasive alien species.</p>	<p>Description:</p> <p>(i) Time taken for groundwater level recovery to good status once over-abstraction addressed (groundwater quantity).</p>

Note that the application of Article 4(4) time extensions on grounds of 'natural conditions' does not require that pressures are removed completely but that the 2021 RBMPs include the measures envisaged as necessary to achieve good status, and there is evidence that nevertheless the achievement of the objectives will require more time due to natural conditions.

For instance, if measures are taken to stop over-fertilisation of soils used for agricultural purposes, the reduced rate of fertiliser application for crop production, though expected to allow good status to be achieved, may still affect the time scale of the recovery of water bodies (e.g. phosphorus in surface water bodies or nitrates in groundwater bodies).

Another example is the presence of mercury (which is part of chemical status assessment). The emissions of mercury are expected to decrease, inter alia thanks to EU legislation on mercury¹² and the Minamata Convention¹³, and other relevant regulations for the achievement of the EQS, but the pollution is not expected to completely cease, e.g. due to long-range atmospheric transport, possibly causing further delay.

A third example is the construction of fish migration aids which need to be functional to reduce the pressure of dams interrupting river continuity. Despite their functionality, a certain pressure remains and continuity cannot completely be re-established by the measure as in the absence of a dam, causing delays in the recovery of fish populations.

Note that uncertainties may occur with regard to the influence of natural conditions as well as with regard to the effects of still ongoing pressures under specific natural conditions on the time horizon for achieving good status. These can be a supporting argument for invoking Article 4(4) time extensions on grounds of 'natural conditions' if made sufficiently transparent in the RBMPs. Examples can include natural fluctuations of the hydrological system and monitoring needs to reduce uncertainty, e.g. the identification of significant upward trends in concentrations of pollutants in groundwater.

With regard to uncertainty and transparency needs in general, see also document "Clarification on the application of WFD Article 4(4) time extensions in the 2021 RBMPs and practical considerations regarding the 2027 deadline".

3.1.1 Ecological status surface waters

The lag time for the recovery of ecological status of surface water bodies can depend on the lag time for individual quality elements (e.g. lag time for pollution reduction following the implementation of measures), but also on their interdependencies (e.g. lag time for re-colonisation of species following the re-establishment of hydromorphological processes and habitats). Therefore, the lag time for the overall recovery of ecological status is determined by the slowest responding quality element.

Furthermore, natural processes occurring in water bodies and the hydrological system (including soils and sediments) of which they are part, together with the characteristics of the historical and remaining pressures, can determine the timescale of the recovery. For example, water in lakes may have a long renewal time; or rivers and lakes with calcium-poor bedrock will take longer to recover from acidification impacts than rivers or lakes with calcium-rich bedrock.

In the following, a non-exhaustive list of examples and considerations is outlined for Article 4(4) time extensions on grounds of 'natural conditions' which are drawn from the practical case studies provided by the Member States.

¹² EU legislation on mercury: http://ec.europa.eu/environment/chemicals/mercury/index_en.htm

¹³ Minamata Convention on Mercury: <http://www.mercuryconvention.org/>

- **Water quality recovery:** The internal load in sediments and soils can be a common reason. After pollution with nutrients or other chemical substances has been stopped or reduced, water bodies can be prevented from achieving good ecological status (but also good chemical status) by the remaining load contained within sediments, or by runoff from adjacent soils. Specific measures may speed up recovery (e.g. hypolimnetic oxygenation or immobilization of nutrients in lake sediments, artificial flushing of lakes) or mitigate effects on the biological elements (e.g. biomanipulation in shallow lakes). Historical loads from groundwater sources can also create a lag time for recovery in the surface water sources they feed.
- **Recovery of ecological function:** Either by natural processes or after the implementation of restoration measures, it can take time for ecological functions to return following the removal or reduction of pressures. In some cases ecosystems can have a natural resilience to change (e.g. alternative stable states in shallow lakes) that may be overcome by specific measures (e.g. biomanipulation). Examples can include the time taken for the growth of trees and shrubs in the riparian zone to create shading and habitats, or the natural recolonisation time for species (e.g. eelgrass beds or fish populations).
- **Recovery from hydromorphological pressures, e.g. water abstraction pressure:** Historic over-abstraction can cause delayed ecological recovery following the implementation of measures to reduce or remove the abstraction pressure. Even after abstraction pressures (e.g. on adjacent groundwater bodies) have been removed or mitigated, water quality and quantity can take time to recover. Following the recovery of water quality and quantity, it can then take further time for the ecology to recover. In some cases ecosystems have a natural resilience to change back to the original ecological condition, thus delaying recovery times further.
- **Recovery from temporary presence of invasive alien species:** It can take time for the recovery of the ecosystem from the temporary presence of invasive alien species, or for adjusting to a new species composition including invasive alien species while meeting the conditions for good ecological status.

3.1.2 Chemical status surface waters

Case studies provided by Member States outline that, where feasible, the sources of pollution have been clearly reduced through measures such as banning of their use (in some cases for over 10 years), or through the cessation of activities (e.g. stopping of mining activities or manufacturing processes). Reasons for lag times for the achievement of good chemical status can include inter alia the following (these can be relevant also for river basin specific pollutants under ecological status):

- **Persistent pollutants**, including PBDEs, dioxins and dioxin-like PCBs, heavier PAHs, TBT, PFOS, HCH and mercury, which sorb strongly to bed sediments of rivers, lakes and transitional and coastal waters or bioaccumulate. Historic contamination therefore persists, especially in sediments, and may continue to affect the status of water bodies long after new anthropogenic emissions have ceased.
- **Specific conditions of the soil / water system** either through slow turn-over in the ecosystem of a lake, lagoon or pond sediments, which means that the breakdown of pollutants is further retarded, or through the presence of humic soils which can e.g. encourage the methylation of mercury to its more toxic form.

Where it is feasible and not disproportionately costly to apply remediation techniques, for example on a limited spatial scale in relation to contaminated sediments, such measures should be implemented.

Note that the existence of a high natural background concentration is not a reason for applying an exemption based on natural conditions. Instead, Member States have the possibility, when assessing the monitoring results against the relevant Environmental Quality Standards (EQS) according to the Priority Substances Directive¹⁴, to take into account natural background concentrations for metals and their compounds where such concentrations prevent compliance with the relevant EQS^{15,16} (see also Chapter 3.3).

3.1.3 Quantitative status groundwater

Water abstraction going beyond natural limits is indicated in case studies as the main reason for failing to achieve good groundwater quantitative status¹⁷. This can also cause saline intrusion into groundwater bodies or damage associated surface water bodies and terrestrial ecosystems.

The natural condition causing the time lag for recovery to good status, following the implementation of measures addressing the pressure, can be the slow recharge rate of the system (e.g. due to low precipitation), but also the low permeability / flow rates in the aquifer which means that water table recovery can be substantially delayed.

Reasons for time lags for the recovery to good quantitative status of groundwater can be historic over-abstraction. If abstraction is reduced as a result of implementing measures necessary to achieve good status but not completely stopped, lag times for the recovery of groundwater quantitative status may be prolonged due to the reduced but remaining pressure on the affected groundwater body.

3.1.4 Chemical status groundwater

Aquifer hydrogeological conditions are an important influencing factor for the time lag for the recovery of groundwater chemical status, including for instance porosity, confinement, absorptive properties of the superficial deposits and soils. A frequent cause of delays in the recovery of groundwater chemical status can be the time it takes for pollutants to pass through the unsaturated zone of aquifers into the saturated zone. Nutrients stemming from agricultural activities are one of the main pollutants. Aquifer conditions are an important influencing factor for the time lag, including for instance alluvial aquifers with a relatively fast turn-over rate for groundwater, to thick chalk aquifers with dual porosity and a store of historically leached nitrate in the matrix pore waters. Another frequent cause can be (banned) pesticides, which persist in the aquifer due to the very slow turnover for water and their long half-life in the aquifer. Here, time lags due to natural conditions can be linked to low recharge rates and hence slow turnover rates in the aquifer, causing a delay in the recovery of groundwater chemical status.

The recovery of groundwater chemical status can be linked with water abstraction and groundwater quantitative status. Where the groundwater flow regime has been altered due to over-abstraction, this may also have led to the inflow of waters with elevated concentrations of nitrates and pesticides or saline intrusion due to the change of the hydraulic gradient. Where there is intrusion from deeper saline waters, or due to the geochemistry of the aquifer host lithology (for example the presence of

¹⁴ Directive 2008/105/EC as amended by Directive 2013/39/EU

¹⁵ EQS Directive, Annex I Part B, point 3

¹⁶ Forthcoming guidance on implementing metals EQS will consider how to determine natural background concentrations; this could try to address biota concentrations.

¹⁷ Quantitative status is an expression of the degree to which a body of groundwater is affected by direct and indirect abstractions. Good quantitative status is defined in table 2.1.2 of Annex V of the WFD. See also relevant CIS Guidance Documents.

gypsum, sulphides or high-phosphorous-containing minerals), a delicate balance might exist between water abstraction and chemical status which needs to be considered.

Investigations which are carried out to quantify the lag time can include for instance geochemical analyses, numerical modelling or expert judgement. Note that the existence of high natural background levels is not a reason for applying an exemption based on natural conditions but should be taken into account in the derivation of threshold values¹⁸.

3.2 Evidence needs for Article 4(4) time extensions on grounds of 'natural conditions'

In order to support a coherent and transparent application of Article 4(4) time extensions on grounds of 'natural conditions', information on the following points should, where relevant, be provided in the 2021 RBMPs:

- (i) **Measures that have already been put in place and which are planned to be put in place in the programme of measures** for achieving good status: A record of measures to be put in place, so that any gaps in the required actions can be identified, and to be able to make a judgement on whether the necessary measures have been taken or are planned.
- (ii) **Assumption as regards the length of the time extension**: Soundly based estimate of expected time horizon for the achievement of good status in relation to the affected quality element following the implementation of measures by 2027.
- (iii) **Methodological information**: Information on the evidence available, the methods applied, and the level of confidence in predicting the effectiveness of the measures and estimating the expected time horizon for reaching good status.

In providing evidential information it is however recognised that **different scales** (national, basin, sub-basin, water body) **may be appropriate** for different assessments or different aspects of the same assessment. For example, transboundary issues have to be assessed on a transboundary scale. The choice of the scale should be justified by the provisions of the WFD and if the information used to justify an exemption is gathered at a more aggregated level it needs to be clear that the aggregated information is relevant for the concerned water body or group of water bodies¹⁹.

3.3 Considerations for other action

In the following, issues are outlined which came up during the discussion process and which might qualify for **action other than the application of Article 4(4) time extensions** on grounds of 'natural conditions'. These could include the correction/adaptation of reference conditions, the consideration of natural background concentrations in status assessment, or the application of exemptions according to Article 4(5) or 4(6), if the respective conditions are met. The different issues, brief practical examples and potential appropriate action are summarised in Table 2. Decisions can be case specific and need to be assessed in the respective context.

¹⁸ See CIS Guidance Document No. 18 "Guidance on Groundwater Status and Trend Assessment"

¹⁹ CIS Guidance Document No. 20, chapter "3.2.1 Scale"

Table 2: Overview of issues which might qualify for action other than Article 4(4) time extensions on grounds of 'natural conditions'

Overview of issues which might qualify for action other than Article 4(4) time extensions on grounds of 'natural conditions'		
Issue	Example	Action
Correction/adaptation of reference conditions; consideration of natural background concentrations		
Elevated naturally occurring levels of substances, including chemical and physico-chemical elements, determining surface water ecological status.	Base flow dominated stream where the groundwater is naturally high in certain substances, so it may never be possible for the stream water quality to be sufficiently high to reach GES/GEP based on the standards.	Correct the typology and reference conditions setting so that the water body is no longer at less-than-good status for this substance.
Natural background concentrations of metals and their compounds exceeding the value for the relevant EQS determining surface water chemical status.	Natural background concentrations for metals and their compounds	Member States may, when assessing the monitoring results against the relevant Environmental Quality Standards (EQS) according to the Priority Substances Directive, take into account natural background concentrations of metals and their compounds where such concentrations prevent compliance with the relevant EQS.
Global extinction of species	Species currently included in the reference condition is globally extinct.	Correct the reference conditions so that the water body is no longer at less-than-good status due to the absence of this species. A solid evidence base for the global extinction of the species is needed.
Reintroduction of species	Reintroduction of species which naturally occurred in a water body and their effects which are not yet reflected in the reference conditions being applied.	Correct the reference conditions in relation to the reintroduced species so that the water body can meet good status.
Effects of climate change	Change of water body conditions (e.g. hydrology, species composition, physico-chemical characteristics) as a result of climate change.	Transfer of water body type to the appropriate type and the corresponding reference conditions applied to them. However, reference conditions and default objectives should not be changed due to climate change projections unless there is overwhelming evidence to do so. ²⁰
Potential cases for Article 4(5) exemptions – less stringent objectives		
Impact of important on-going socio-economic activities, such that the achievement of good status would be infeasible or disproportionately expensive.	Inability of a water body to recover to good status due to a justified environmental and socio-economic need to continue abstracting, which cannot be achieved by other means, which are a significantly better environmental option not entailing disproportionate costs.	Need for justification and compliance with conditions of Article 4(5). For groundwater see also conditions of Article 6 of the Groundwater Directive.
"Re-contamination" of water bodies as a result of re-emission or recirculation of pollutants	Ongoing "fresh" inputs of historic pollutants as a result of, e.g. disturbance of contaminated sediment by ongoing essential economic activities or natural processes.	Need for justification and compliance with conditions of Article 4(5), including check of whether measures such as sediment remediation would be infeasible or disproportionately

²⁰ For more details see CIS Guidance Document No. 24 "River Basin Management in a changing climate"

Overview of issues which might qualify for action other than Article 4(4) time extensions on grounds of 'natural conditions'		
Issue	Example	Action
		costly, and whether re-contamination makes it impossible to reach good status within a defined period.
Effects of transboundary or global pollution	Impact on the water body is the result of trans-boundary or global pollution beyond the control of a Member State, e.g. continued uncontrollable contamination located in an upstream country (e.g. from historic mining) where measures to achieve good status are infeasible or disproportionately expensive) ²¹ .	Beyond control of Member State to address the pressure, therefore potential candidate for Article 4(5) exemption if the achievement of good status would be infeasible or disproportionately expensive. Otherwise also a potential candidate for Article 4(4) or 4(6). See also chapter 2 of this document on transboundary issues and Article 6 of the EQS Directive.
Potential cases for Article 4(6) exemptions		
Temporary deterioration due to circumstances of natural cause or <i>force majeure</i> which are exceptional or could not reasonably have been foreseen.	(i) Time to return to normal hydro-morphological conditions following extreme natural events, such as severe floods. (ii) Accounting for the impact of prolonged droughts. (iii) Time to return to normal chemical and physico-chemical conditions following accidents or one-off natural events such as volcanic eruptions or wildfires.	Need for justification and compliance with conditions of Article 4(6).

4 Summary

The term 'natural conditions', which is used in Article 4(4) and 4(5), refers to the **conditions which determine the rate or possibility of natural recovery**. It recognises that natural conditions may affect the time taken by a water body to achieve good status or the possibility of achieving it at all.

WFD Article 4(4) allows for the extension of the deadline to achieve the environmental objectives of good status if "*natural conditions do not allow timely improvement in the status of the body of water*". This provision assumes that the measures have been taken (by 2027 at the latest) but the characteristics of the water body are such that the recovery to good status is expected to take a longer time period.

The **main reasons for delayed water body recovery** to good status following the implementation of measures can include lag times for the recovery of **(i) water quality, (ii) hydromorphological conditions, (iii) ecology or (iv) water levels**. The lag time for the overall recovery of status is determined by the slowest responding quality element.

²¹ Note that CIS Guidance No. 20 outlines that the Member State has to demonstrate that the reasons for not achieving the environmental objectives are outside its jurisdiction and its competence, that the coordination mechanisms as outlined in WFD Article 3(4) and 3(5) should be exploited to the fullest extent, and that the Member State has to take all measures on its own territory that are not infeasible or disproportionately expensive contributing to achieving the highest possible status. See also WFD Article 4(8) and Article 12, and Article 6 of Directive 2008/105/EC as amended by Directive 2013/39/EU.

In order to support a **coherent and transparent application** of Article 4(4) time extensions on grounds of 'natural conditions', information on the measures planned to be put in place by 2027, the expected length of the time extension beyond 2027 and methodological information on the effectiveness of the measures should, where relevant, be provided in the 2021 RBMPs.

A **distinction needs to be made between the application of the concept of 'natural conditions' under Article 4(4) and 4(5)**. Article 4(5) allows Member States to derogate from the environmental objectives of good status and set "less stringent objectives", requiring more information and in-depth assessment of alternatives than those for extending the deadline. The exemption types Article 4(5) refers to are either that the achievement of good status would be 'infeasible' or 'disproportionately expensive', whereas the exemption types under Article 4(4) for a delayed achievement of the objectives can also include 'natural conditions' following the implementation of the required measures. Therefore 'natural conditions' as such is not an exemption type under Article 4(5).

Possible other appropriate action instead of Article 4(4) time extensions to be considered can include the correction/adaptation of reference conditions, the consideration of natural background concentrations in status assessment or setting of groundwater threshold values, or the application of exemptions according to Article 4(5) or 4(6) in case the respective conditions are met.

Exemptions can also apply in a **transboundary context** in cases where pressures affecting water bodies are outside the competence and jurisdiction of the Member State. The programmes of measures for the achievement of the environmental objectives need to be coordinated. A Member State causing the pressures should be obliged to provide enough information for justification of the application of exemptions for the affected Member State. Article 12 foresees the possibility to involve the Commission to come to a solution. The key issue in both applying an exemption and invoking Article 12 is the provision of evidence that the relevant Member States have taken all reasonable actions to fulfil the legal obligations.

ANNEX: Compilation of indicative case studies in relation to WFD Article 4(4) exemptions on grounds of 'natural conditions'

See separate document