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FAQ note on the links between the Nature Directives and the Nitrates Directive

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Summary

This FAQ note presents the links between the Birds and Habitats Directives¹ and the Nitrates Directive².

The FAQ note specifies the legislations' objectives, highlight the interactions between both areas of legislation, and points to the opportunities for greater coordination between the directives.

¹ Council Directive 92/43/EEC, OJ L 206, 22.7.1992, p. 7–50 and Directive 2009/147/EC, OJ L 20, 26.1.2010, p. 7–25.

² Council Directive 91/676/EEC of 12 December 1991, OJ L 375 of 31.12.1991, p. 1.

1 Introduction and Scope

Under Action 4 of the Action Plan for nature, people and the economy, the Commission has committed to support Member States improving synergies while implementing the Nature Directives and the Nitrates Directive (see COM(2017) 198 final and SWD(2017) 139 final – fiche Action 4).

This FAQ note presents the links between the Nature Directives and the Nitrates Directive. The FAQ note specifies the legislations' objectives, highlight interactions between both areas of legislation, and points to the opportunities for greater coordination between the directives.

It is recalled that guidance³ already exists on the Birds and Habitats Directives and their links with the Water Framework Directive⁴, the Marine Strategy Framework Directive⁵, and the Floods Directive⁶.

2 Introduction to the Directives and their objectives

2.1 The Nitrates Directive

The Nitrates Directive⁷ (1991) aims at protecting water quality across Europe by reducing and preventing ground and surface water pollution caused by nitrates from agricultural sources, including by promoting the use of good farming practices and adopting Action Programmes.

The Nitrates Directive forms an integral part of the Water Framework Directive and is one of the key instruments in the protection of waters against agricultural pressures.

The main elements of its implementation are the following:

1. Identification of water polluted, or at risk of pollution, such as:

- surface freshwaters, in particular those used or intended for the abstraction of drinking water, containing or that could contain (if no action is taken to reverse the trend) a concentration of more than 50 mg/l of nitrates

³ Frequently Asked Questions on links with the Water Framework Directive, <http://ec.europa.eu/environment/nature/natura2000/management/docs/FAQ-WFD%20final.pdf>; Frequently Asked Questions on links with the Marine Strategy Framework Directive, <http://ec.europa.eu/environment/nature/natura2000/marine/docs/FAQ%20final%202012-07-27.pdf>; Case studies on synergies between WFD, MSFD and Nature Directives, <http://ec.europa.eu/environment/nature/natura2000/management/docs/Compilation%20WFD%20MSFD%20HBD.pdf>; "A Starter's Guide - Overview on the main provisions of the Water Framework Directive, the Marine Strategy Framework Directive, the Birds and Habitats Directives, and the Floods Directive: similarities and differences", http://ec.europa.eu/environment/nature/natura2000/management/docs/starter_guide.pdf.

⁴ Directive 2000/60/EC establishing a framework for Community action in the field of water policy, OJ 327 of 22.12.2000, p. 1.

⁵ Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy, OJ L 164, 25.06.2008, p. 19.

⁶ Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks, OJ L 288, 6.11.2007, p. 27

⁷ Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources, OJ L 375, 31.12.1991, p. 1–8.

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- groundwater containing or that could contain (if no action is taken to reverse the trend) more than 50 mg/l of nitrates
 - freshwater bodies, estuaries, coastal waters and marine waters, found to be eutrophic or that could become eutrophic (if no action is taken to reverse the trend)

2. Designation as "Nitrate Vulnerable Zones"(NVZs) of areas of land which drain into polluted waters or waters at risk of pollution and which contribute to nitrate pollution. Member States can also choose to apply measures to the whole territory (instead of designating NVZs).

3. Establishment of Codes of Good Agricultural Practice to be implemented by farmers on a voluntary basis. Codes should include:

- measures limiting the periods when nitrogen fertilizers can be applied on land in order to target application to periods when crops require nitrogen and prevent nutrient losses to waters;
- measures limiting the conditions for fertilizer application (on steeply sloping ground, frozen or snow covered ground, near water courses, etc.) to prevent nitrate losses from leaching and run-off;
- requirement for a minimum storage capacity for livestock manure; and
- crop rotations, soil winter cover, and catch crops to prevent nitrate leaching and run-off during wet seasons.

4. Establishment of Action Programmes to be implemented by farmers within NVZs on a compulsory basis, or across the whole territory of the Member State if its authorities decided to avail themselves of whole-territory option. These Programmes must include (see Annex III of the Directive):

- measures already included in Codes of Good Agricultural Practice, which become mandatory in the areas covered by the Action Plan; and
- other measures, such as
 - periods when the land application of certain types of fertilizers is prohibited
 - capacity of storage levels for livestock manure, which must exceed that required for storage during the longest period in which land application is forbidden
 - limitation of fertilizer application (mineral and organic), taking into account crop needs, soil conditions and climatic conditions, and based on a balance between the foreseeable requirements of the crops and the nitrogen supply to the crops from the soil and fertilization ("balanced fertilization").
 - the maximum amount of livestock manure to be applied (corresponding to 170 kg nitrogen/hectare/year).

As confirmed by a recent Judgement of the Court of Justice⁸, as soon as it becomes apparent that the above measures will not be sufficient to achieve the Directive's objectives, Member States are obliged, within the framework of the Action Programmes, to take additional measures or reinforced actions. In the selection of these measures or actions, Member States have to take into account their effectiveness and their cost relative to other possible preventive measures.

Member States are required to review and, if necessary, revise their Action Programmes (including any additional measures) at least every four years.

⁸ Judgment of the Court (Ninth Chamber) of 21 June 2018. European Commission v Federal Republic of Germany. Case C-543/16. <http://curia.europa.eu/juris/liste.jsf?num=C-543/16>

5. National monitoring and reporting. Every four years Member States are required to report on:

1. Nitrates concentrations in groundwaters and surface waters;
2. Eutrophication of surface waters;
3. Assessment of the impact of action programme(s) on water quality and agricultural practices;
4. Revision of NVZs and action programme(s)

On the basis of this data, the Commission publishes a Report. The last one (published in 2018), can be found on: http://ec.europa.eu/environment/water/water-nitrates/index_en.html

2.2 The Nature Directives

The Birds Directive⁹ and the Habitats Directive¹⁰ (also hereafter referred to as the Nature Directives) form the backbone of the EU biodiversity policy.¹¹ The Birds Directive aims to maintain the population of all wild bird species naturally occurring in the EU territory of the Member States at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level. The Habitats Directive aims to maintain or restore habitats and species of Community interest to Favourable Conservation Status (FCS). According to ETC/BD (2011), FCS can be described in simple terms, as 'a situation where a habitat type or species is prospering (in both quality and extent/population) and with good prospects to do so in the future as well'.¹² FCS is assessed across the whole national territory or across biogeographical or marine regions within the national territory if there is more than one such region within the Member State.

The Nature Directives have a similar design and structure, with a similar set of specific and operational objectives requiring not only the conservation of species but also their habitats, through a combination of site and species protection and management measures, supported by monitoring and research. One of the key tools introduced in the Habitats Directive (Art. 3) to achieve these objectives has been the establishment of Natura 2000, which aims to be a coherent network of protected areas comprised of Special Protection Areas (SPAs) designated under the Birds Directive and Special Areas of Conservation (SACs) designated under the Habitats Directive¹³ (some Natura 2000 sites can be both SPA and SAC).

In the case of a protected species covered by the Habitats Directive, a favourable conservation status means that (Art. 1(i)):

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and

⁹ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds, OJ L 20, 26.1.2010, p. 7–25.

¹⁰ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, OJ L 206, 22.7.1992, p. 7–50.

¹¹ European Commission, Nature and Biodiversity Website, http://ec.europa.eu/environment/nature/index_en.htm

¹² ETC/BD (2011) Assessment, monitoring and reporting under Article 17 of the Habitats Directive: Explanatory Notes & Guidelines for the period 2007-2012. Final version, European Topic Centre on Biological Diversity, Paris.

¹³ After their initial identification by Member States and adoption by the European Commission as Sites of Community Interest - SCIs.

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- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
 - there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

In the case of a protected habitat type, a favourable conservation status is achieved when (Art. 1(e)):

- its natural range and the areas it covers within that range are stable or increasing; and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist in the foreseeable future; and
- the conservation status of its typical species is favourable.

Article 6 of the Habitats Directive sets management, conservation and protection provisions for the sites designated under this Directive. However, paragraphs 6(2) on prevention of deterioration and disturbance, 6(3) on appropriate assessment and 6(4) also apply to SPAs designated under the Birds Directive.

According to Article 6(1) *“for special areas of conservation, Member States shall establish the necessary conservation measures involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans, and appropriate statutory, administrative or contractual measures which correspond to the ecological requirements of the natural habitat types in Annex I and the species in Annex II present on the sites”*.

Whereas Art. 6(1) and 6(2) concern the day-to-day management, protection and conservation of Natura 2000 sites, Art. 6(3) and 6(4) lay down the permit procedure for a plan or project that is not directly necessary for the management of the site but likely to have a significant effect on it. Such a plan or project is subject to an appropriate assessment of its implications for the site in view of the site’s conservation objectives. Taking into account the conclusions of the appropriate assessment and subject to the provisions of Article 6(4), the competent authorities agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned (see also Chapter 5.3).

Both Nature Directives require Member States to report regularly on progress made in implementing the directives and on the main results of research and surveillance carried out (Birds Directive reporting according to Article 12 and Habitats Directive reporting according to Article 17). Every six years, Member States are asked to report back to the European Commission, following an agreed format, on the conservation status of those species and habitats protected under the directives that are present on their territory. The Commission compiles all the data in collaboration with the European Environment Agency and produces the EU State of Nature report¹⁴.

The Article 17 reports¹⁵ prepared by Member States include assessment of the conservation status of the habitats and species protected under the directive, based on information on status and trends of species and habitats and on information on the main pressures and threats acting on them. The Article 17 reporting covers in the whole territory of the Member State concerned,

¹⁴ https://ec.europa.eu/environment/nature/pdf/state_of_nature_en.pdf

¹⁵ https://bd.eionet.europa.eu/activities/Reporting/Article_17

not only Natura 2000 sites. The conservation status of each habitat and species is assessed separately for each biogeographical or marine region in which it occurs.¹⁶

Similar to Article 17, the Article 12 reports¹⁷ contain information on status and trends of bird populations together with information on main pressures and threats. The information on birds' status and trends is provided for all species occurring on the Member State's territory.

The basis of the Article 17 reporting is the surveillance work required by Article 11 of the Habitats Directive. Furthermore, for many species information is available from volunteer networks, often organised by NGOs or scientific societies.

3 Links between the Directives

3.1 What are the impacts of nitrates on water-dependent habitats and species, and which are most vulnerable?

The latest Commission Report on the implementation of the Nitrates Directive¹⁸ shows that water pollution caused by nitrates has decreased in Europe in the last two decades, but in sectors such as agriculture good practices need to be further extended in some regions. Despite the positive overall trend, nitrates pollution and eutrophication continue to cause problems in many Member States. Agricultural pressures on water quality are still increasing in some areas, as some agricultural practices are heavily dependent on fertilisers that can cause local water quality to deteriorate. The trends observed in the Report thus may have a bearing on the supply of clean drinking water, and the costs that public authorities have to carry to treat polluted water.

Since the adoption of the EU Nitrates Directive, nitrates concentrations have fallen in both surface and groundwater. Eutrophication – the excess growth of weeds and algae that suffocates life in rivers, lakes and seas – has also decreased, while sustainable agricultural practices in relation to nutrients' management have become more widespread. Despite this positive overall trend, nitrates pollution and eutrophication continue to cause problems in many Member States.

Nitrogen is an essential element for all living organisms, including plants and animals. In soil and water environment, it is largely transferred in dissolved nitrate form, which is highly mobile and easily transported by leaching in soils and later in waters.¹⁹ However, increased nitrate concentrations in the water can be considered to be a contaminant, acting together with phosphates as a trigger of eutrophication process. A combination of poor agricultural management, resulting in e.g. excessive use of mineral and organic fertilizers, and high connectivity to sensitive aquatic environment are the main sources of increased levels of

¹⁶ Conservation status is assessed using a standard methodology as being either 'favourable', 'unfavourable-inadequate' and 'unfavourable-bad', based on four parameters as defined in Article 1 of the Habitats Directive. The parameters for habitats are range, area, structure and functions and future prospects and for species they are range, population, habitat of species and future prospects.

¹⁷ https://bd.eionet.europa.eu/activities/Reporting/Article_12

¹⁸ http://ec.europa.eu/environment/water/water-nitrates/pdf/nitrates_directive_implementation_report.pdf

¹⁹ Gilles Pinay, Chantal Gascuel, Alain Ménesguen, Yves Souchon, Morgane Le Moal (coord), Alix Levain, Claire Etrillard, Florentina Moatar, Alexandrine Pannard, Philippe Souchu. Eutrophication: manifestations, causes, consequences and predictability. Joint Scientific Appraisal, report, CNRS - Ifremer - INRA - Irstea (France), 136 pages. Synthesis - November, 2017. http://www.cnrs.fr/inee/communication/breves/docs/Eutrophisation_synthese_ENG.pdf

nitrites, as they cannot be taken up by plants and are leached to groundwater and reach surface waters through surface runoff and interflow.

Natural background levels of nitrates in water usually do not have a direct effect on aquatic species. However, nitrates concentrations above natural background ones can create unsuitable conditions especially for sensitive species. Aquatic insects and fishes do not utilize nitrates, but aquatic plants do. As the amount of nitrate may be limiting for the growth of algae and aquatic plants, any excess nitrate in the water bodies is a source of fertilizer for them. An excessive growth changes water ecosystem characteristics, by reducing light availability, increasing amounts of organic matter and causing an unstable amount of dissolved oxygen. This brings aquatic ecosystem functioning in imbalance and leads to eutrophication. The eutrophication mechanism leads to a chain reaction, notably a change in the structure of biological communities and trophic networks, as well as changes in biogeochemical cycles.²⁰ Such conditions endanger many aquatic insects and fishes, leading in the long-term to reduced reproduction, leaving of the area or death, as well as potential extreme changes in habitats. For example, fishes that need gravel or sand for spawning may find nothing but mats of vegetation and so will be unable to breed (WRIG Website)²¹. Furthermore, fishes and macroinvertebrates serve as prey for other species and represent a limiting factor in their populations, for example the European Otter (*Lutra Lutra*) (Bedford, 2009). Table 1 summarises some of the main negative effects eutrophication can cause on the aquatic ecosystems.

Table 1 Adverse effects caused by eutrophication in aquatic ecosystems

<i>Effects of eutrophication</i>
<ul style="list-style-type: none"> • Increased biomass of phytoplankton and macrophyte vegetation • Increased biomass of consumer species • Shifts to bloom-forming algal species that might be toxic or inedible • Increases in blooms of gelatinous zooplankton (marine environments) • /Increases in blooms of benthic and epiphytic algae and in some cases subsequent clogging • Changes in species composition and macrophyte vegetation • Decline in coral reef health and loss of coral reef communities • Increased incidence of fish kills • Reduction in species diversity • Reduction in harvestable fish and shellfish biomass • Decreases in water transparency • Disappearance of certain life stages for aquatic species • Taste, odour and drinking water treatment problems • Oxygen depletion • Decreases in perceived aesthetic value of the water body

Source: Smith and Schindler (2009) in ENA (2011), modified

Different types of water bodies have different sensitivities to nutrients (the same nutrient concentration does not necessarily have the same effect), for example in small rivers versus lakes, or in freshwaters versus coastal and/or marine waters (CIS Eutrophication Guidance, 2009). While in freshwaters, phosphorus enrichment is generally the main cause of eutrophication, in transitional and coastal waters – it is anthropogenic nitrogen enrichment.

²⁰ Gilles Pinay, Chantal Gascuel, Alain Ménesguen, Yves Souchon, Morgane Le Moal (coord), Alix Levain, Claire Etrillard, Florentina Moatar, Alexandrine Pannard, Philippe Souchu. Eutrophication: manifestations, causes, consequences and predictability. Joint Scientific Appraisal, report, CNRS - Ifremer - INRA - Irstea (France), 136 pages. Synthesis - November, 2017.

http://www.cnrs.fr/inee/communication/breves/docs/Eutrophisation_synthese_ENG.pdf

²¹ <http://www.wheatleyriver.ca/media/nitrates-and-their-effect-on-water-quality-a-quick-study/>

Nitrogen can be limiting in estuarine and marine waters, too.²² There are also cases where both nutrients may be limiting, but during different seasons (CIS Eutrophication Guidance, 2009). Furthermore, nitrates can accumulate in aquifers, which are their main reservoir in the inland environment.²³ 'Closed' water bodies, such as ponds, natural lakes, dams or lagoons, are particularly vulnerable to eutrophication.

Eutrophication affects species abundance and diversity. Due to many uncertainties in the role of nutrient ratios (N:P) or the forms of nitrogen (inorganic or organic) for the water biomass productivity, literature does not provide a systemic overview of impacts caused by nitrates on water-dependent habitats and species. In most cases, the term 'eutrophication' is used to express the impact of both nutrients.

In principle, all surface water- and groundwater-dependent habitats (e.g. lakes) are to some extent sensitive to eutrophication. Curtis et al. (2009)²⁴ focuses on surface water- and groundwater-dependent habitats and species for Ireland. According to this source, most vulnerable to nitrogen are surface water-dependent habitats and species, particularly: Coastal lagoons, Blanket bogs and Freshwater pearl mussel. The following non-exhaustive list summarize the habitats and species that are specifically or exceptionally vulnerable to nitrogen:

Groundwater-dependent

- Petrifying springs with tufa formation (*Cratoneurion*). This habitat is dependent only on groundwater. It is more sensitive than alkaline fen to N, due to the absence of the inherent buffering capacity of peat. The habitat is vulnerable to groundwater with a high concentration of nitrate.
- *Hamatocaulis (drepanocladus) vernicosus* (slender green feather-moss). This species is dependent only on groundwater. Too much N (same as P and Ca²⁺) has negative effects on it.
- *Machairs* habitat is mainly dependent on groundwater, but there are some surface water influences too. It is vulnerable to N and P inputs, especially from fertilizers.
- Alkaline fens habitat is dependent on groundwater. This habitat has a high buffering capacity, and both P and to a lesser extent N are the limiting nutrients to growth in most fens, and to the loss of true fen species. The habitat is sensitive to changes in water levels and significant changes in water chemistry and nutrient supply.
- Calcareous fens with *Cladium Mariscus* and species of *Caricion davallianae* is a habitat dependent on groundwater. Although it has a high buffering capacity, as for alkaline fens, P and to a lesser extent N are the limiting nutrients.
- Transition mires and quaking bogs habitats are vulnerable to eutrophication in general and the base enrichment of groundwater.
- *Turloughs* is mainly dependent on groundwater, but there may be some surface water influence. Many of the rare terrestrial and aquatic species associated with this habitat are very sensitive to chemical changes in the water. A particular concern is related to

²² Hornung M. (1999) The Role of Nitrates in the Eutrophication and Acidification of Surface Waters. Managing Risks of Nitrates to Humans and the Environment, p. 155-174.

<https://www.sciencedirect.com/science/article/pii/B9781855738089500170?via%3Dihub>

²³ http://www.cnrs.fr/inee/communication/brevets/docs/Eutrophisation_synthese_ENG.pdf

²⁴ Curtis T., Downes Sh. and Ní Chatháin, B. (2009) The ecological requirements of water-dependent habitats and species designated under the Habitats directive. Biology and Environment: Proceedings of the Royal Irish Academy, Vol. 109B, No. 3, 261–319 (2009), <http://www.rpsgroup.com/Ireland/News/pdf/The-Ecological-Requirements-of-Water-Dependend-Spe-en.aspx>, DOI: 10.3318/BIOE.2009.109.3.261

P. However, turlough plant communities are also known to be sensitive to N (cp. Regan 2007)²⁵.

Surface water-dependent

- Natural dystrophic lakes and ponds. Either N or P could be limiting, but both should be low (special investigations of the requirements for this habitat type are still required).
- Lagoons. Eutrophication problems may involve N or P due to marine and freshwater influences. Generally, for lagoons with a tidal inlet, the frequent flushing is enough to alleviate eutrophication problems.
- Blanket bog (active only). This habitat is vulnerable to N deposition, especially in the form of aerosol ammonia. Direct application of N and P is damaging, as is general fertilisation. High N deposition has a deleterious effect on *Sphagna* species (moss) on the bog surface and can initiate increased rates of peat decomposition due to the competitive relationships between species on the bog surface.
- Bog woodland. This habitat is oligotrophic systems, and therefore any trophic change would be damaging.
- *Margaritifera margaritifera* (freshwater pearl mussel). This species is extremely sensitive to chemical changes and is extremely vulnerable to siltation and eutrophication. Any increases in P and N are likely to have a significant negative effect on pearl mussel populations, particularly juveniles.
- Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia*) habitat is predominantly dependent on surface water but it can be groundwater-dependent. It is vulnerable to eutrophication and acidification.
- Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.* is a habitat that is primarily groundwater dependent, but it can also be surface water dependent. This habitat is vulnerable to eutrophication.
- Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* type vegetation is a habitat that is dependent on surface water and groundwater. It is vulnerable to eutrophication.
- *Najas Flexilis* (*Slender Naiad*) is a species dependent on surface water, but sometimes there may be a groundwater influence. Increased nutrient loads, eutrophication or acidification damage *Najas* populations.

Another good example is Hickey and Martin (2009)²⁶ and Hickey (2013)²⁷, which provide a review of literature evaluating nitrate toxicity to freshwater aquatic species. These publications develop recommendations for freshwater guidelines in Canterbury in New Zealand. Hickey and Martin (2009) includes the nitrate database with the list of 50 species, including fishes, invertebrates and amphibians. The findings showed that overall, macroinvertebrates were the more sensitive organisms to acute nitrate exposure, while fishes to long-term (chronic)

²⁵Regan, E. C., Skeffington, M. S., Gormally, M. J. (2007): Wetland plant communities of turloughs in southeast Galway/north Clare, Ireland in relation to environmental factors. *Aquatic Botany* 87 (1): p. 22–30.

²⁶ Hickey C. W. and Martin M.L. (2009) A review of nitrate toxicity to freshwater aquatic species. Technical Report: Investigations and Monitoring Group. Report No. R09/57. ISBN 978-1-86937-997-1. https://www.researchgate.net/publication/238774969_A_review_of_nitrate_toxicity_to_freshwater_aquatic_species

²⁷ Hickey C.W. (2013) Updating nitrate toxicity effects on freshwater aquatic species. Prepared for Ministry of Building, Innovation and Employment: Funded by Envirolink, January 2013. NIWA. <http://envirolink.govt.nz/assets/Envirolink/1207-ESRC255-Updating-nitrate-toxicity-effects-on-freshwater-aquatic-species-.pdf>

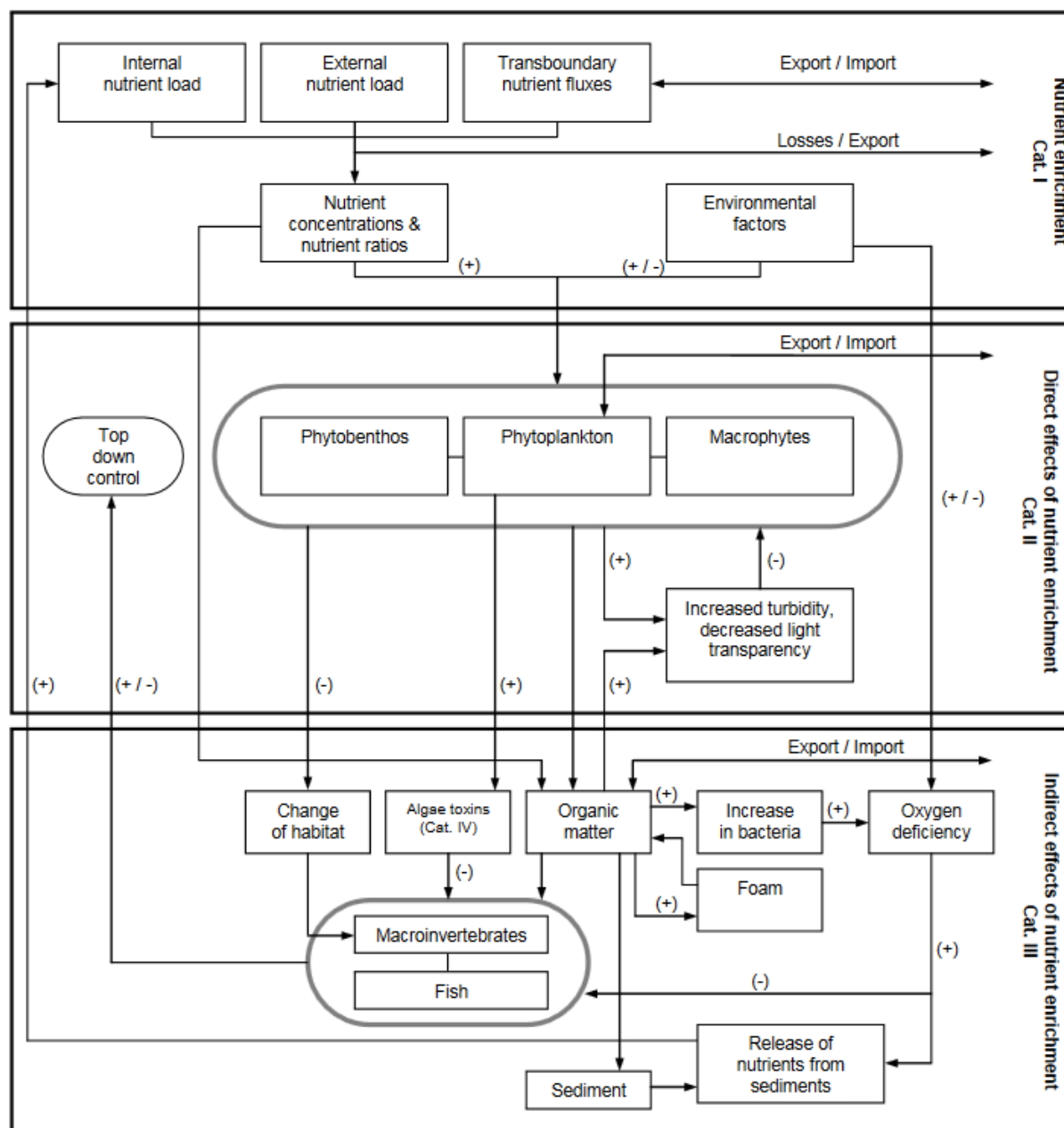
exposures. This literature however is particularly lacking in species, which are known to be of high sensitivity to contaminants and dominate the fauna in river environments.

In addition, there are indirect effects related to nitrates that affect functionality of ecosystems. For example, in the case of eutrophication, the activity of the bacteria is increased, which decomposes the organic matter and produces acid byproducts, so reducing the water pH. This can mobilize heavy metals contained within the sediment, the process that can significantly decrease species richness and abundance. For example, species of the Mayflies family (*Caenidae*, *Ephemeridae*) and family of Caddisflies (*Leptoceridae*) are highly sensitive to heavy metals (Bedford, 2009).

The CIS Eutrophication Guidance (2009) developed the common conceptual framework of eutrophication, as presented in Figure 3-1 below. This diagram presents the eutrophication process, its different elements and partial processes involved, as well as the potential ecological impacts.

Figure 3-1: General conceptual framework to assess eutrophication in all categories of surface waters

(+) indicates increase; (-) indicates decrease;
round boxes indicate biological quality elements of WFD



Source: CIS Eutrophication Guidance, 2009

In some countries, the issue of eutrophication due to excess nitrogen loading is observed in estuaries and coastal waters.²⁸ Furthermore, nitrogen is increasingly becoming recognised as a significant pressure impacting the ecology of freshwater Natura 2000 sites, including wetlands affected by polluted groundwater bodies.²⁹

²⁸ Natural England IPENS Site Improvement Plans and N2K Diffuse Water Pollution Plans, unpublished reports.

²⁹ EEA 2012 Water state and pressures report: <https://www.eea.europa.eu/publications/european-waters-assessment-2012>

3.2 How do the measures under the Directives interrelate?

As the Nitrates Directive has the objective to protect the water environment, it mainly directly affects freshwater and marine habitats. However, the application of good agricultural practices to regulate nitrates for the protection of the water environment can affect positively water-dependent terrestrial habitats and species. For example, grass buffer strips are required to be applied along water courses in the Action Programmes and these have a very positive effect on biodiversity. The reduction in eutrophication periods is favourable to biodiversity in aquatic environments.³⁰ It should be noted that measures addressing water pollution by nitrates from agricultural sources also often contribute to soil protection (contributing to reduce soil erosion and improve its structure and biological quality) and air quality. For example, measures limiting applied amounts of fertilisers reduce at the same time nitrate losses to waters and ammonia emissions to air.³¹

Under the Nitrates Directive, Member States must establish Codes of Good Agricultural Practices, to be implemented by farmers on a voluntary basis. These Codes must include at least the following measures:

1. periods when the land application of fertilizer is inappropriate;
2. the land application of fertilizer to steeply sloping ground;
3. the land application of fertilizer to water-saturated, flooded, frozen or snow-covered ground;
4. the conditions for land application of fertilizer near water courses;
5. the capacity and construction of storage vessels for livestock manures, including measures to prevent water pollution by run-off and seepage into groundwater and surface water of liquids containing livestock manures and effluents from stored plant materials such as silage;
6. procedures for the land application, including rate and uniformity of spreading, of both chemical fertilizer and livestock manure, that will maintain nutrient losses to water at an acceptable level.

These measures thus contribute to the protection of natural resources.

The Codes of Good Agricultural Practice are applied on voluntary basis by farmers. However, they become mandatory, as part of the Action Programmes that Member States must adopt in NVZs (or in the whole territory of the Member State if its authorities have opted for the “whole-territory” approach).

In addition to rendering the Codes of Good Agricultural Practice mandatory, Action Programmes must include the following measures:

- periods when the land application of certain types of fertilizers is prohibited
- capacity of storage levels for livestock manure, which must exceed that required for storage during the longest period in which land application is forbidden

³⁰ Gault J., Guillet M., Guerber F., Hubert C., Paulin F. and Soulié M.-Ch. (2015) Analysis of implementation of the Nitrates Directive by other Member States of the European Union: Germany, Belgium (Flanders), Denmark, Spain (Catalonia), Ireland, the Netherlands

³¹ Whitfield, C. & McIntosh, N. (2014) Nitrogen Deposition and the Nature Directives Impacts and responses: Our shared Experiences. Report of the Workshop held 2–4 December 2013, JNCC Peterborough. JNCC Report No. 521, http://jncc.defra.gov.uk/pdf/Report_521_web_revised.pdf

- limitation of fertilizer application (mineral and organic), taking into account crop needs, soil conditions and climatic conditions, and based on a balance between the foreseeable requirements of the crops and the nitrogen supply to the crops from the soil and fertilization ("balanced fertilization").
- the maximum amount of livestock manure to be applied (corresponding to 170 kg nitrogen /hectare/year).

Agriculture is a significant threat/pressure within Natura 2000 sites and for certain protected habitats and species. Thus the rules set in Codes of Good Agricultural Practices and Action Programmes are highly relevant in terms of contributing to the maintenance and restoration of protected habitats and species to Favourable Conservation Status.

Consequently, when establishing conservation and protective measures under Article 6(1) and 6(2) of the Habitats Directive due account should be taken of those measures taken in the context of Codes of Good Agricultural Practices and Action Programmes under the Nitrates Directive. However, the application of Article 6(1) and 6(2) might require the establishment and implementation of agriculture-related measures going beyond those set under the Action Programmes and Codes of Good Agricultural Practices.

For example, eutrophic water bodies within an NVZ would be benefitting from the implementation of the Action Programme established for that NVZ under the Nitrates Directive. However, a Natura 2000 site overlapping with that NVZ might require protection/conservation measures going beyond those set by the Action Programmes, if, e.g. the ecological requirements of the habitats/species for which the Natura 2000 site has been designated include the reduction of nutrient inputs causing the eutrophication going beyond what can be achieved through the application of the Action Programme under the Nitrates Directive.

4 Designation of NVZs in relation to Natura 2000 sites

4.1 Are there spatial overlaps between NVZs and Natura 2000 sites?

Natura 2000 stretches across all Member States and currently covers over 18% of the EU's land area and almost 10% of its marine territory, and is the largest coordinated network of protected areas in the world.^{32,33} The national land coverage of Natura 2000 sites varies from about 9% to almost 38% depending on the Member State.³⁴ Both, the terrestrial and marine areas of this EU wide network currently (in 2018) includes over 27,700 sites.³⁵ Agricultural practices have a particular influence on Natura 2000 sites as farmland covers almost 50% of the EU territory and agro-ecosystems represent almost 40% of the surface of Natura 2000 sites.³⁶ Further, nutrients from agricultural land may be transported into freshwater and marine Natura 2000 sites. The large geographic presence of farming in the EU is also reflected in significant areas in the Member States designated as NVZ or where Action Programmes applies: in 2015, the area to which Action Programmes applied was approximately 61% of the total agricultural land in the EU, including the Member States that apply a whole-territory approach³⁷ (Austria, Denmark, Finland, Germany, Ireland, Lithuania, Luxembourg, Malta, the

³² http://ec.europa.eu/environment/nature/natura2000/index_en.htm

³³ http://ec.europa.eu/environment/nature/index_en.htm

³⁴ http://ec.europa.eu/environment/nature/natura2000/faq_en.htm

³⁵ <https://www.eea.europa.eu/data-and-maps/dashboards/natura-2000-barometer>

³⁶ THE N2K GROUP and IEEP (2012) Guidance on management of farmland in Natura 2000 areas. Contract N° ENV.B.3/SER/2010/0041. Guidance Document - First Draft, 10 September 2012.

³⁷ Report from the Commission on the implementation of the Nitrates Directive for period 2012–2015, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0257&from=en>

Netherlands, Romania, and Slovenia). Since 2017 also Poland applies the whole-territory approach.

Taking into account the considerable geographical extent covered by the measures applied in the framework of the Nitrates Directive, it is to be expected that there are significant overlaps between NVZs and Natura 2000 sites. There is no EU tool to date that shows the spatial overlap of Natura 2000 sites and NVZs across all member states. In the case of England, however, the Nature 2000 Network Viewer allows to visualise the spatial overlap of Natura 2000 sites and NVZs.³⁸ This information can also be found on the UK's MAGIC website, which provides geographic information about the natural environment from across government.³⁹ Furthermore, some countries evaluate the overlap between Natura 2000 sites and the sites adversely affected by diffuse water pollution from agriculture (including both P and N). To take the example of England again, Natural England's Improvement Programme for England Natura 2000 sites (IPENS – 2015⁴⁰) clarified that a significant proportion (63%) of water dependent Natura 2000 sites is reported in Site Improvement Plans (SIPs) to be affected by water pollution. Ninety three percent of these specifically identify diffuse water pollution. Undertaking the recommendations in the theme plan will help meet the objectives of the EU Nature Directives with regard to the conservation of natural habitats and species and the Natura 2000 site network.⁴¹

Table 2 presents examples on spatial overlaps between NVZs and Natura 2000 sites in three Member States. Of course, there is 100% overlap in case of the twelve Member States which apply their Action Programmes on their whole territory.

Table 2: Spatial overlaps between NVZs and Natura 2000 sites in three Member States

France	In 2013, 781 Natura 2000 sites (SPAs / SICs / SACs) are included completely or partially in NVZ. ⁴²
Portugal	Eight of nine NVZs overlap with Natura 2000 sites. However, in most cases this overlap is a small area. The NVZs represent only 4% of the area of the national territory, so the overlapping area is even smaller.
Slovakia	The Slovak Republic has only 13.9% of the area of vulnerable areas overlapping with Natura 2000 sites. The main overlap is with SPAs (13.76%).

³⁸ EEA Natura 2000 Network Viewer, <http://natura2000.eea.europa.eu/> via the Add Data function (search for NVZ).

³⁹ The UK's MAGIC Website, <https://magic.defra.gov.uk/home.htm>

⁴⁰ Funded as an EU LIFE Prioritised Action Framework project.

⁴¹ Diffuse water pollution theme plan,

<http://publications.naturalengland.org.uk/publication/5848526737113088?category=5605910663659520>

⁴² This information is available in the report „Impact assessment of the Nitrates Directive on Habitats and Natura 2000 species“, MNHN, 2013,

http://spn.mnhn.fr/spn_rapports/archivage_rapports/2013/SPN%202013%20-%202011%20-%20Rapport_Dir_Nitrates_vfinale_12_04_13.pdf

4.2 How are overlaps dealt with from a management perspective? Are Action Programmes adjusted to reflect protection and conservation requirements in Natura 2000 sites?

The Action Programmes under the Nitrates Directive do not provide explicit information on how the interactions with Natura 2000 sites are dealt with from a management perspective.

The table below presents some examples provided by the Member States experts during the preparation of the present FAQ note.

Examples from the Member States on how they take into account the Nitrates Directives and Natura 2000 needs in areas of overlap.

United Kingdom: The UK uses a combination of national and targeted regulation and local action plans. Each Natura 2000 site has its own Diffuse Water Pollution Plan.

In England there are several lakes and estuaries which are designated under both sets of policies and the NVZ (and Urban Waste Water Treatment Directive and Water Framework Directive (WFD)) measures will help to achieve the conservation objectives. The conservation interest of water bodies is considered as part of the Environment Agency's (EA) NVZ methodology, as are other water uses such as drinking water abstraction. Thus whether a lake or estuary is an Natura 2000 site with water-dependent features sensitive to eutrophication is something the EA take into account in their NVZ method. Natural England (NE), the government's statutory nature conservation advisor, is part of the EA's national panel for deciding on eutrophication related designations.

France: In the regional Action Programmes, zonings can be defined, for example municipalities classified as SPAs for birds of agricultural plains. In these particular areas, the measures in the Action Programmes can be adapted for the benefits of the species concerned (see chapter 5.2).

Denmark: In Denmark the emission-based regulation consists among other of an individual requirement for holdings using organic manure such as livestock manure to establish catch crops which is aimed at ensuring the sufficient protection with regards to nitrogen leaching to sensitive Natura 2000-areas and at contributing to the reduction of nitrogen leaching to coastal waters. The conditions concerning nitrogen regulation of manure application are included in the Nitrates Action Programme as mandatory measures.

Austria: The strategic environmental assessment⁴³ of the revised Nitrates Action Programme has taken into account Natura 2000 sites. The establishment of River Basin Management Plans according to WFD is done in close cooperation between federal and regional administrations. This includes information on the measures for the achievement of environmental objectives of WFD (programme of measures, including NAP for addressing pressures from diffuse sources of nitrogen from agriculture), what applies also for water-related Natura 2000 protected areas. If environmental objectives for water-related Natura 2000 protected areas go beyond the environmental objectives of WFD, appropriate measures have to be applied.

Malta: Water-dependent ecosystems in Natura 2000 sites are also delineated as WFD water bodies and synergies are sought across all three Directives.

⁴³ <https://www.bmnt.gv.at/wasser/wisa/fachinformation/fachthemen/ap-nitrat-2017.html>

5 Potential synergies as regards to the key measures required under the different Directives

5.1 How can the Directives complement each other achieving integrated policies and planning?

Objectives

The Nitrates Directive defines pollution by nitrates of agricultural sources in water bodies in not only chemical, but also in ecological terms: eutrophic water bodies, or water bodies which would become eutrophic if no action is taken, have to be addressed. The definition of water bodies includes estuarine and coastal surface waters.

Since eutrophic waters are certainly also an issue in terms of maintaining and restoring at favourable conservation status of protected habitats and species under the Habitats Directive, there is significant common ground between the Nitrates Directive and the Nature Directives, in terms of their objectives for freshwater, estuarine and coastal surface waters and water-dependent habitats and species.

On the other hand, the value of 50 mg/l of nitrates referred to in the Nitrates Directive is not necessarily sufficient, or is rather most of the times insufficient, to maintain and restore all water dependent protected habitats and species to a favourable conservation status.

Pressures

There is also overlap regarding the pressures involved. By definition, as the Nitrates Directive covers nitrates of agricultural origin, the only relevant pressures in its implementation are pressures due to agriculture. Agriculture represents a significant group of pressures for Natura 2000 sites and many of them relate to the farm management practices leading to high nitrogen surplus.

Measures

There is also some level of complementarity in terms of the measures under the Directives at stake. Conservation measures under the Nature Directives which address nitrogen inputs (e.g., reduction of livestock load on certain habitats) will support the Nitrates Directive objectives. At the same time, and considering that the Nitrates Directive Action Programmes imply a reduction of nitrogen-related agricultural pressures, e.g. by establishing maximum limits for the livestock manure that can be applied on land, and that these Programmes are implemented in large areas of EU territory, their implementation will certainly contribute reaching the Nature Directives objectives.

However, conservation measures for Natura 2000 sites that are related to fertilisation can imply quite drastic restrictions in fertiliser application (e.g. no fertilisation on pasture land) which go very much beyond the typical requirements of the Action Programmes of the Nitrates Directive, since they reflect the ecological requirements of protected habitats and species, that are sometimes very sensitive to nitrogen.

Potential for synergies at the level of measures seems to exist, e.g. for measures applied in areas adjacent to water-dependent habitats. Restrictions for fertilisation “near water courses” under the Nitrates Directive (including buffer strips next to rivers, lakes and wetlands) could be aligned with the Nature Directives conservation measures related to riparian habitats.

Examples of Member State approaches that aim at enhancing complementarity in the implementation of both directives:

France: Three major points of Nitrates Action Programmes can be complementary with the actions covering the Nature Directives:

- **buffer zones** along streams and lakes, in which no fertilization and plant protection products are applied, and for which measures of maintenance adapted to the species are implemented (link with the Good Agro-Environmental Conditions (GAEC) within the framework of the Common Agricultural Policy (CAP))
- **autumn soil cover:** the absence of bare soil is generally favorable for biodiversity. The only negative point could be for some species the "food resource" aspect of certain stubble fields, which will no longer be available (or only for a shorter period) if they are replaced by a catch crop. In this regard it is necessary to diversify the type of catch crops to avoid a standardization of landscapes. Avoiding the chemical destruction of catch crops is also favourable to biodiversity.
- the **duration of a catch crop** may also be of interest for some terrestrial species if the plant cover can flower and seed.

Denmark: In Denmark the emission-based regulation consists among other requirements of an individual requirement for holdings which use organic manure (such as livestock manure) to establish catch crops. This aims to ensure sufficient protection with regards to nitrogen leaching to sensitive Natura 2000-areas and a contribution to the reduction of nitrogen leaching to coastal waters. The conditions concerning nitrogen regulation of manure application are included in the Nitrates Action Programme as mandatory measures.

Austria: The Austrian Nitrates Action Programme is applied to the whole national territory but follows the concept of focus areas. This means that in focus areas with intensive agriculture and unfavourable natural conditions (low precipitation), more stringent provisions have to be applied than in other regions. Natura 2000 sites benefit from the focus area approach in these regions. However, if objectives of Natura 2000 require specific regional measures to be applied, this is considered within the programmes of measures under the WFD.

Belgium (Flanders): The Flemish region has special fertilisation restrictions on agricultural land in nature areas. These restrictions are applicable in parts of the Natura 2000-sites. Restrictions are the prohibition of the use of fertilisers. The only fertilisation possible is by direct excretion through grazing by a maximum of 2 livestock units per ha.

5.2 How to best uphold the needs and requirements applicable to Natura 2000 sites covered also by Nitrates Directive Action Programmes?

In case of NVZs covering a limited geographical area overlapping or adjacent to Natura 2000 site(s), the Action Programme's measures and restrictions could be aligned relatively easily with the necessary conservation measures for the site(s).

However, in the opposite scenario, e.g. those cases where Action Programmes are applied to the whole territory of a Member State, or when a single Action Programme is developed for

many /large NVZs in a Member State, a full alignment of the content and measures of Nitrates Directive Action Programmes' measures with the nature protection/conservation measures applicable to every single covered site does not seem viable.

In this case, the measures established in the Action Programmes will *in principle* benefit protected habitats and species. This can be further promoted by selecting measures that can simultaneously contribute to the environmental objectives of different directives and ensure the needs and requirements applicable in Natura 2000 areas are met. However, it is also important to consider the following situations:

- As already mentioned, some Natura 2000 sites will require stricter targeted measures, according to the ecological requirements of the habitats and species for which they have been designated. For instance, the relevant timeframes in which certain agricultural practices are not to be implemented can be different in relation to the implementation of the different directives, which has implications for Natura 2000 sites. The directives themselves do not set out such timeframes, it is for the relevant Member State to define them. For example, restrictions on fertilisers application under the Nitrates Directive tend to apply in late autumn and winter (when there is hardly any vegetation growth and thus crop uptake of nitrogen; fertiliser application during this period would increase the risk of nitrate leaching). Whereas these restrictions are important for the protection of water habitats from eutrophication, other important requirements from the nature conservation perspective are likely to be related to breeding seasons of birds and other species on fields and grassland during springtime. The Nitrates Directive does not, however, include temporal restrictions on nitrogen application in the growing season.
- Also, it is clear that Action Programmes should not lead to a breach of Article 6(2) of the Habitats Directive, which requires that the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the Natura 2000 sites have been designated is avoided in Natura 2000 sites.
- Finally, the Nitrates Directive allows the possibility to derogate from the maximum amount of 170 kg of nitrogen per hectare per year from livestock manure in areas covered by the Action Programme, provided that objective criteria set in Annex III to the Directive are met and that the derogated amounts do not prejudice the achievement of the Directive's objectives. The standards of management required to farmers who benefit from derogations are higher than those of the Action Programmes, with additional obligations for nutrient planning and extra constraints on land management. The application of derogations allowing higher amount of manure than 170 kg of nitrogen per hectare per year should not lead to a breach of Article 6(2) of the Habitats Directive.

5.3 Does Article 6(3) of the Habitats Directive apply to action programmes and /or derogations granted under the Nitrates Directive?

Article 6(3) of the Habitats Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of Article 6(4), the competent national authorities shall agree to the plan or project

only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public⁴⁴.

The Habitats Directive does not define the term “plan”. The European Court of Justice has clarified the following:

- Measures taken outside or inside a protected area may be subject to an assessment of the implications under the Habitats Directive.⁴⁵
- Land use plans require an appropriate assessment under Article 6(3) Habitats Directive although they do not as such authorise development and planning as they have great influence on the final development or planning decision.⁴⁶
- Action Programmes should be subject to strategic environmental assessment⁴⁷.
- Article 6(3) of the Habitats Directive must be interpreted as meaning that the grazing of cattle and the application of fertilisers on the surface of land or below its surface in the vicinity of Natura 2000 sites may be classified as a ‘project’ within the meaning of that provision, even if those activities, in so far as they are not a physical intervention in the natural surroundings, do not constitute a ‘project’ within the meaning of Article 1(2)(a) of the EIA Directive⁴⁸.
- Article 6(3) of the Habitats Directive must be interpreted as precluding national programmatic legislation, such as that at issue in the main proceedings, which allows a certain category of projects, in the present case the application of fertilisers on the surface of land or below its surface and the grazing of cattle, to be implemented without being subject to a permit requirement and, accordingly, to an individualised appropriate assessment of its implications for the sites concerned, unless the objective circumstances make it possible to rule out with certainty any possibility that those projects, individually or in combination with other projects, may significantly affect those sites, which it is for the referring court to ascertain.⁴⁹

According to the Commission notice “Managing Natura 2000 sites”⁵⁰ the term “plan” has a potentially very broad meaning for the purpose of Article 6(3) of the Habitats Directive. Examples of such plans are land-use or spatial plans as well as sectoral plans provided they are likely to have significant effects on Natura 2000 sites. Examples for sectoral plans might include transport network plans, energy plans, waste management plans, water management plans or forest management plans. In the event that potential adverse effects of a draft Nitrates Directive Action Programme are identified on one or several Natura 2000 sites, including in the

⁴⁴ See “Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC” and “Managing Natura 2000 sites The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC” available at https://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm

⁴⁵ C-98/03, Judgement of 10 January 2006, *Commission v. Germany*, paras. 39-45.

⁴⁶ C-6/04, Judgement of 20 October 2005, *Commission v. United Kingdom*, para 52.

⁴⁷ Joint cases C-105/09 and C-110/09, 17 June 2010, *Terre wallonne ASBL (C-105/09) and Inter-Environnement Wallonie ASBL (C-110/09) v Région wallonne*, para. 35-42.

⁴⁸ Joined Cases C-293/17 and C-294/17, REQUESTS for a preliminary ruling under Article 267 TFEU from the Raad van State (Council of State, Netherlands) Judgement of 7 November 2018, para 73.

⁴⁹ Joined Cases C-293/17 and C-294/17, REQUESTS for a preliminary ruling under Article 267 TFEU from the Raad van State (Council of State, Netherlands) Judgement of 7 November 2018, para 120.

⁵⁰ European Commission (2018), Commission notice Managing Natura 2000 sites – The provision of Article 6 of the ‘Habitats’ Directive 92/43/EEC, C(2018) 7621 final, pp. 37 et seq., http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm

context of the Strategic Environmental Assessment of the Action Programme, an assessment under Article 6(3) would have to be conducted.

The practice concerning the application of Article 6(3) of the Habitats Directive to Action Programmes varies from Member State to Member State.

Appropriate assessment under Article 6 (3) Habitats Directive in Member States

Austria has conducted a strategic environment assessment for its 2016 revision of the nitrate Action Programme. This assessment covered Natura 2000 sites.⁵¹

France has adopted nitrate Action Programmes on national and regional level. Prior to the adoption of these programmes, an appropriate assessment under Article 6(3) of the Habitats Directive has been conducted.

Germany has conducted a strategic environment assessment for its nitrate Action Programme in 2016. This did not explicitly cover an appropriate assessment according to Article 6(3) of the Habitats Directive.⁵²

Ireland conducted an appropriate assessment according to Article 6(3) Habitats Directive for its draft nitrates action programme.⁵³ It has been conducted concurrently, but separately from the strategic environment assessment. The Natura Impact Statement issued to document the results describes the content of the draft Action Programme, gives an overview of the receiving environment, describes a two-step assessment with a screening as the first step and the appropriate assessment as the second step, and identifies mitigation measures. The competent authorities have consulted interested parties and the public during the assessment procedure.

Malta carried out a screening for its 2011 nitrate Action Programme and came to the conclusion that it was unlikely to have significant effects on Nature 2000 sites. Therefore, no appropriate assessment according to Article 6(3) of the Habitats Directive was conducted.

Denmark: In Denmark the Nitrates Directive is not implemented in a single legal act or order. The Nitrates Action Programme consists of different legal instruments, which are assessed individually.

Slovakia: At present, the Slovak Republic has not performed such an assessment of the impact of Action Programmes on Natura 2000 sites.

Belgium (Flanders): In the region of Flanders an appropriate assessment according to Article 6(3) of the Habitats Directive was conducted for the 6th Action Programme 2019-2022.

⁵¹ Ministerium für ein Lebenswertes Österreich (2016), Aktionsprogramm 2016, Umweltbereich im Rahmen der Strategischen Umweltprüfung gem. RL 2001/42/EG, <https://www.bmnt.gv.at/wasser/wisa/fachinformation/fachthemen/ap-nitrat-2017.html>.

⁵² Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (2016), Umweltbericht zum Nationalen Aktionsprogramm nach der Nitratrichtlinie, p. 9, https://www.bmu.de/fileadmin/Daten_BMU/Download_PDF/Binnengewasser/umweltbericht_jgs_anla_gen_bf.pdf.

⁵³ Department of Housing, Planning and Local Government (2017): Natura Impact Assessment for Ireland's Draft Nitrates Action Programme, https://www.housing.gov.ie/sites/default/files/public-consultation/files/natura_impact_statement_-_october_2017.pdf.

5.4 How to best uphold the implementation of strict species protection rules in areas covered also by Nitrates Directive Action Programmes?

Strict species protection rules established under Articles 12 and 13 of the Habitats Directive and Article 5 of the Birds Directive apply in the whole territory of the Member States, i.e. beyond Natura 2000 sites.

Article 12, paragraph 1, of the Habitats Directive requires Member States to take the requisite measures to establish a system of strict protection for the animal species listed in Annex IV (a) in their natural range, prohibiting (a) all forms of deliberate capture or killing of specimens of these species in the wild; (b) deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration; (c) deliberate destruction or taking of eggs from the wild; (d) deterioration or destruction of breeding sites or resting places.

Article 13, paragraph 1, of the Habitats Directive requires Member States to take the requisite measures to establish a system of strict protection for the plant species listed in Annex IV (b), prohibiting: (a) the deliberate picking, collecting, cutting, uprooting or destruction of such plants in their natural range in the wild; (b) the keeping, transport and sale or exchange and offering for sale or exchange of specimens of such species taken in the wild, except for those taken legally before this Directive is implemented.

Therefore, Action Programmes under the Nitrates Directive, as well as the application of derogations granted under the Nitrates Directive, should not lead to a breach of the above provisions.

There is little information available concerning the application of these provisions of the Habitats Directive in relation to Action Programmes under the Nitrates Directive in Member States.

According to French experts, in France, the only measure of National Action Programme identified as having an impact on species and habitats of community interest is the fall plant cover measure for birds. To overcome this, derogations may be implemented in the Regional Action Programmes (RAP). The following examples can be given:

- RAP Grand-Est and Bourgogne-Franche Comté: adaptation of the measure "fall plant cover of the soil" (fine grinding of the canes behind maize, sorghum and sunflower) to leave the canes when they have a role in the feeding of the cranes in migration or wintering,
- RAP Occitanie: non-compulsory interculture in the communes classified as "zones with issues for the pigeon and migratory avifauna" where the canes of corn cannot be buried,
- RAP Pays de la Loire: in two SPAs of the N2000 network, possibility of 30% regrowth of cereals (instead of the 20% required at national level),
- RAP New Aquitaine: adaptation of the autumn soil cover in the priority zones identified in the NAP "Petit Dustard" (100% regrowth of cereals) – SPAs.