Nordisk Miljörättslig Tidskrift

Nordic Environmental Law Journal

2015:2

www.nordiskmiljoratt.se

Nordisk Miljörättslig Tidskrift/Nordic Environmental Law Journal 2015:2
ISSN: 2000-4273
Redaktör och ansvarig utgivare/Editor and publisher: Gabriel Michanek
Webpage http://www.nordiskmiljoratt.se/omtidskriften.asp (which also includes writing instructions).

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Introduction

Gabriel Michanek, editor

The fourteenth issue of Nordic Environmental Law Journal includes seven articles. Two of them address the issue of legal control of nitrogen pollution. In *Agricultural nitrate pollution – regulatory approaches in the EU and Denmark*, Helle Tegner Anker points out that despite almost 25 years since the adoption of the EU Nitrates Directive, agricultural nitrate pollution remains a major concern in most EU Member States, not least in Denmark. She argues for further efforts in terms of a mix of regulatory approaches and instruments. The second article – *Atmospheric Nitrogen Deposition and the Habitats Directive: Tinkering with the Law in the Face of the Precautionary Principle?* – is written by Hendrik Schoukens. The critical loads for nitrogen deposition are exceeded in many Natura 2000-sites across Europe. The article discusses how to reconcile continuous economic development with increased attention to adverse effects of excessive nitrogen deposition on natural habitats. Schoukens analyses critically new regulatory approaches at Member States' level, such as the Dutch Programmatic Approach Nitrogen (PAN). In line with the precautionary principle, he proposes a strategy where new economic development is allowed only when further reductions of nitrogen deposition levels have been established and the effectiveness of restoration measures on the ground is guaranteed.

Two articles focus on the national implementation of the Water Framework Directive, more specifically in relation to control of water operations (in particular ditching). Anna Christiernsson is the author of *Åtgärdsprogrammens funktion vid länsstyrelsernas prövning och tillsyn av vattenverksamheter* [The Function of Programmes of Measures in the County Administrative Boards' Licensing and Control of Water Operations]. According to the 2009 Swedish programmes of measures, the County Administrative Boards (CBAs) were obliged to review and regulate water operations in order to achieve a good water status. The article shows however that the programmes of measures had no effect on the outcome of CBAs permits and other decisions on ditching operations. Moreover, few CBAs had applied for reviews of old water permits or taken other concrete measures to achieve a good status. In *The Impact of the Water Framework Directive on Diffuse Pollution Control: the Case of Ditch Network Maintenance in Finnish Forests*, Minna Pappila & Lea Halonen emphasize

that while Finnish legislation seems to work relatively well for individual ditching projects, there are flaws in the law and in practice that do not enable authorities to take cumulative effects properly into account.

Anna Christiernsson analyses, in her second article of this journal issue, the Swedish implementation of the Marine Strategy Framework Directive (MSFD) in relation to fisheries: *God miljöstatus och fiske – Hur effektiva är miljökvalitetsnormer?* [Good Environmental Status and Fisheries – How effective are environmental quality standards?]. The study shows a lack of integration between fisheries and Swedish environmental legislation with several loopholes and deficits impeding the achievement of a good status of marine ecosystems.

In the article *Investigator Self-Interest in the Environmental Process*, My Pettersson and Lena Wahlberg discuss the risk that investigator self-interest decreases the adequacy of environmental impact assessments. The article also presents a newly made empirical study of whether and how arguments about investigator self-interest are considered and taken on board by Swedish environmental courts.

Simon Mashden is the author of *The Helsinki Water Convention: Implementation and Compliance in Asia.* The article reviews the application of the Helsinki Convention in Asia, with a particular focus on implementation and compliance. The development of a regime within the Helsinki Convention is needed because of the absence of formal reporting and compliance mechanisms, which are considered to be essential to modern multilateral environmental agreements.

Agricultural nitrate pollution – regulatory approaches in the EU and Denmark

*Helle Tegner Anker**

Abstract[1]

Despite the passing of almost 25 years since the adoption of the EU Nitrates Directive, agricultural nitrate pollution remains a major concern in most EU Member States. This is also the case in Denmark, although a fairly strict regulatory regime has resulted in almost a 50 per cent reduction in nitrogen leaching since the mid-80s. Nevertheless, further effort is needed, particularly in ecologically sensitive areas. This article discusses different regulatory approaches – and in particular the need for a differentiated nitrate regulation tailored to meet site-specific ecological demands – from a legal perspective drawing on EU and Danish experiences. It argues that there is a need for a mix of regulatory approaches and instruments taking into account concerns regarding the unequal treatment of farmers and potential interference with private property rights. One option might be a differentiation of the mandatory specification standards of the Nitrates Directive combined with additional instruments to address the need for severe restrictions on fertiliser use or cultivation practices in the most ecologically vulnerable areas.

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[1] This article is partly based on conference papers presented at the Nordic Environmental Social Science Conference – NESS 2015, Trondheim 9–11 June 2015 and the Environmental Law on Three Continents Research Conference on Comparative Environmental Law in China, USA and EU, Uppsala 25–28 August 2015.

1. Introduction

Almost 25 years have passed since the adoption of the EU Nitrates Directive in 1991.[2] While some improvements to the aquatic environment have been noted during the years,[3] nitrate pollution from agriculture remains one of the biggest challenges to achieve a good status of both surface water and groundwater.[4] The implementation of the Nitrates Directive in the Member States may, thus, still be lagging behind.[5] Yet, it must be kept in mind that regulating agricultural nitrate

[2] Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources, OJ (1991) L 375/1.

[3] According to the most recent implementation report from the European Commission, for the reporting period 2008–2011 compared to the period 2004–2007, there has been a slight improvement from 15 % to 14.4 % regarding the number of groundwater monitoring stations exceeding 50 mg nitrate/l. A similar improvement can be seen for freshwater monitoring stations, although it is difficult to compare the trophic status due to a lack of data (see European Commission, Report from the Commission to the Council and the European Parliament on the implementation of Council Directive 91/797/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources based on Member State reports for the period 2008–2011, COM (2013)0683 final).

[4] European Environment Agency (EEA), 2015, The European environment – state and outlook 2015: synthesis report, Copenhagen. The report estimates that more than 40 % of rivers and coastal waters are affected by diffuse pollution from agriculture, although nutrient levels in European rivers declined by 57 % for phosphate and 20 % for nitrate between 1992 and 2011.

[5] As of June 2013, ten infringement cases were open against Member States as well as seven requests under the EU Pilot scheme, see European Commission (2013), supra n. 3 p. 10.

pollution is very complex, the reasons for which are manifold. In particular, the diffuse character of most agricultural nitrate pollution combined with a highly complex multitude of factors, e.g. crop and cultivation practices, soil characteristics as well as climatic conditions, makes it difficult to measure – or even predict – pollution levels resulting from the application of fertilisers. Furthermore, local soil conditions, e.g. the capacity to retain nitrogen, and ecological conditions in individual catchments or water bodies may determine the extent to which a certain nitrogen load is harmful or not. The latter implies that a general reduction in nitrate pollution is insufficient to address site-specific problems of euthrophication or high nitrate concentrations in river basins or water bodies. Hence, there is a need not only for a general reduction in agricultural nitrate pollution, but also for a differentiated nitrate regulation tailored to meet site-specific environmental objectives, e.g. established in accordance with the EU Water Framework Directive.[6] While farmers often resist any kind of restrictions on farming practices, in particular the need for a tailored or differentiated regulation may raise pertinent questions regarding the scientific basis for differential treatment of farmers as well as the potential interference with private property rights due to individual hardship for some farmers. Consequently, a crucial question is how to ensure an appropriate regulation of agricultural nitrate pollution both from an environmental and legal point of view. This article discusses different regulatory approaches – and in particular the need for a differentiated nitrate regulation tailored to meet site-specific ecological demands – drawing on EU and Danish experiences.

At the EU level, the 1991 Nitrates Directive specifically addresses agricultural nitrate pollution through a set of mandatory measures to be applied in the so-called nitrate vulnerable zones (NVZs) designated by the Member States. This reflects a differentiated approach. However, in several Member States, it has been appropriate to adopt a whole territory approach under the Nitrates Directive as only few or no areas could be excluded as nitrate vulnerable.[7] Since 2000, the Water Framework Directive (WFD)[8] obliges Member States to adopt a river basin management approach, including the setting of environmental objectives and environmental quality standards for relevant surface and groundwater bodies as well as the the necessary measures to achieve these objectives. As nitrate pollution is a major concern for both surface and groundwater quality, the WFD sets an overall framework for nitrate regulation in combination with the Nitrates Directive requiring a tailored nitrate regulation. To what extent the Member States will succeed in linking the environmental objectives of the WFD with the measures under the Nitrates Directive, however, remains to be seen.

In Denmark, agricultural nitrate pollution has been a major concern in Danish environmental policy and legislation since the mid 1980s. This has resulted in a fairly complex and detailed regulation addressing non-point as well as point sources. The regulation resulted in almost a 50 % reduction in agricultural nitrate pollution to the aquatic environment from 1985 to 2003.[9] Howev-

[6] See also A.M. Keesen et. al. The Need for Flexibility and Differentiation in the Protection of Vulnerable Areas in EU Environmental Law: The Implementation of the Nitrates Directive in the Netherlands, JEEPL 8.2 (2011) 141–164 and S. Boyle. The Case of Regulation of Agricultural Water Pollution, Env L Rev 16 (2014) 4–20.

[7] For the Netherlands, see e.g. Keesen et .al. supra n. 6. A similar situation applies in Denmark.

[8] European Parliament and Council Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy (2000) OJ L327/1.

[9] B. Riemann et. al. Recovery of Danish Coastal Ecosystems after Reductions in Nutrient Loading: A Holistic

er, the improvement in water quality in coastal waters, in particular, has been lagging behind.[10] Furthermore, the Danish nitrate regulation is increasingly being criticised for putting an unnecessary burden on farmers. Thus, nitrate regulation in Denmark – and most likely also in other countries – stands at a crossroads where there is a need to carefully consider the most appropriate regulatory approach and, in particular, the need to tailor or differentiate nitrate regulation to meet site-specific ecological demands.

This article analyses the characteristics of nitrate regulation within the EU and Denmark with a particular view to the legal and regulatory challenges associated with the need for a tailored or differentiated regulation. Before going into detail with nitrates regulation at the EU and national level, a short account of key concepts and distinctions in relation to regulatory approaches and instruments is presented.

2. Regulatory approaches and instruments – a nitrate perspective

The notion of regulatory approaches is somewhat ambiguous and often used in different ways. One may choose a broad notion covering a variety of different approaches most commonly divided into: 1) command and control regulation; 2) economic instruments; 3) self-regulation; 4) voluntarism, and; 5) information strategies.[11] Alternatively, one may choose a narrow notion primarily referring to command and control regulation, i.e. regulation in a more traditional or narrow sense.[12] The latter, however, disguises the fact that not only command and control regulation, but also the use of economic instruments, self-regulation, etc. often requires some degree of regulation to set a framework for the use of such instruments.[13] This article adheres to the broad notion of regulatory approaches. Yet, when it comes to the analysis of regulatory approaches with regards to nitrate pollution in the EU and Denmark, they primarily operate within the more narrow or traditional category of regulatory instruments – although economic incentives, voluntary or informative measures are also used to some extent. Furthermore, it must be kept in mind that a regulatory approach may include a mix of instruments or even express a mix of different regulatory approaches.

Another distinction regarding regulatory instruments is the distinction between general regulation or standards, e.g. general standards on the use of fertilisers, and individual regulation, e.g. individual permit requirements or individual orders at the farm or field level. In relation to diffuse pollution from agriculture, *Gunningham & Sinclair* have distinguished the following three types of general standards – performance, specification and process. Performance standards set a limit on the level of pollution, e.g. emission limit standards, or an objective to be achieved, e.g. environmental quality standards. Specification standards dictate a particular type of design or physical change, e.g. standards on input use or technology choices and may also include landscape changes, e.g. riparian zones.

Ecosystem Approach, Estuaries and Coasts (2015) DOI 10.1007/s12237-015-9980-0.

[10] Ibid.

[11] See e.g. Gunningham & Sinclair. Regulatory Pluralism: Designing Policy Mixes for Environmental Protection, Law & Policy, Vol. 21, No. 1, 1999, pp. 49–76.

[12] See, e.g. the identification of different options for addressing diffuse pollution in agriculture in Gunningham & Sinclair. Policy Instrument Choice and Diffuse Source Pollution, Journal of Environmental Law (2005) Vol. 17 No. 1, 51–81.

[13] Gunningham has defined regulation as a broader category (than state-based law) including "more flexible, imaginative and innovative forms of social control", yet involving the state as a central player as opposed to governance, which does not privilege the state, Gunningham. Environmental Law, Regulation and Governance: Shifting Architectures, Journal of Environmental Law (2009) 21:2, 179–212.

Process standards, on the other hand, dictate management decision-making processes, e.g. nutrient management plans.[14] In addition, *Gunningham & Sinclair* point to changes in land-use patterns as important mechanisms to address the broader scale of, e.g. catchment or sub-catchment level, e.g. through planning mechanisms and possibly the use of subsidies. According to *Gunningham & Sinclair,* changes in land-use patterns at the catchment scale make it possible to target different instruments at the locations or farms likely to generate the greatest improvements in water quality. The latter signifies the crucial point in regulating diffuse nitrate pollution; it is not sufficient to focus on farm level practices alone. As it will be argued in this article, there is a need to tailor farm level practices to meet the ecological demands of individual river basins or water bodies.[15] This is likely to entail a combination of different regulatory instruments and approaches.

The need for a tailored or differentiated regulation is, to some extent, reflected in the Nitrates Directive as well as the Water Framework Directive. From the outset, both Directives combine the use of planning instruments with the use of different types of standards. While the Nitrates Directive primarily focuses on specification standards, the WFD employs overall performance standards at the river basin (or sub-basin) level. Furthermore, both Directives reflect an adaptive approach where, in particular, monitoring requirements and planning cycles allow the continuous adaptation of appropriate measures in order to meet the environmental objectives.[16]

How nitrate regulation can be tailored or differentiated is likely to be quite country-specific drawing on regulatory traditions, natural conditions as well as the level of scientific knowledge available to justify and preferably also control a differential treatment. Thus, the potential scale or character of differentiation may vary from one country to another. In a Dutch study, *Keesen et al.* have identified four options for the differentiation of nitrate regulation based on: 1) the NVZ approach under the Nitrates Directive; 2) environmental conditions (soil types); 3) farm performance, and; 4) the river basin level under the WFD. Differentiation based on soil types is regarded as the most feasible solution in the Netherlands, whereas differentiation based on farm performance would require monitoring efforts that are not considered technically feasible.[17]

A similar – possibly slightly more detailed form of differentiation – has been suggested in Denmark based on the existing system of nitrogen norms for crops combined with a differentiation based on the capacity of the soil to retain nitrogen as well as the ecological sensitivity of river basins or water bodies.[18] The initial broad political support for such a new differentiated

[14] For an analysis of, in particular, specification and process standards in EU nitrate regulation as well as options for economic instruments, see Boyle, supra n. 6.

[15] See also Keesen et al., supra n. 6 and Boyle, supra n. 6 at 17.

[16] Green et al. identify the following seven critical elements for adaptive governance: 1) multiple overlapping levels of control with one level of control or strong coordination at the relevant social-ecological scale; 2) horizontal and vertical flow of information and coordination of decision-making; 3) meaningful public participation; 4) local capacity building; 5) authority to respond to changes across a range of scenarios; 6) monitoring and system feedback, and; 7) enforcement, see Green et al. EU Water Governance: Striking the Right Balance between Regulatory Flexibility and Enforcement? Ecology and Society 18(2):10 (2013).

[17] Keesen et al. (2011) supra n. 6, p. 158–159.

[18] Natur- og Landbrugskommissionen, Natur og Landbrug – en ny start (2013), available at http://www.naturoglandbrug.dk/slutrapport_2013.aspx?ID=52071. Natur- og Landbrugskommissionen (Nature and Agriculture Committee) was an expert committee established by the former Government in 2012 with the aim of recommending policy initiatives which reconcile agricultural and environmental interests. The report with 44 recommendations was published in April 2013.

nitrate regulation, however, seems to have faded and the new liberal government, which came into power in June 2015, has signalled a relaxation of the general fertiliser regulation, without more precise indications of how to meet site-specific water quality objectives. It appears that despite a relatively broad consensus on the need for a differentiated regulation tailored to meet ecological demands at the individual river basin, sub-basin or water body level, such a regulation is likely to face a number of regulatory (and political) challenges associated with a potential differential treatment of farmers and potential interference with private property rights due to individual hardship for some farmers. In this article, however, it is argued that such issues can be resolved by carefully designing an appropriate mix of regulatory approaches and instruments at least from a legal point of view.

3. EU nitrate legislation

In 1991, the EU adopted specific legislation to address nitrate pollution from agriculture. The Nitrates Directive, together with the 1991 Urban Waste Water Directive,[19] was adopted as a follow up to the existing legislation on water quality (surface water and groundwater) addressing two specific – partly diffuse – sources of water pollution. The relevant EU legislation on ecological water quality was subsequently superseded by the 2000 EU Water Framework Directive establishing close links to the Nitrates Directive. More recently, the 2008 Marine Strategy Framework Directive[20] lays down the overall objective of good environmental status to be achieved by 2020 for marine waters. Furthermore, water quality is also an important element in the 1992 EU Habitats Directive[21] as many habitat types and species are dependent upon the aquatic environment. In Denmark, a significant part of the Natura 2000-sites are aquatic and eutrophication is a major concern. In addition, other EU directives address livestock installations and to some extent also the management of livestock manure at the farm level. This includes the 1985 Environmental Impact Assessment Directive (codified in 2011)[22] and the 1996 Integrated Pollution Prevention and Control (IPPC) Directive[23] – now replaced by the 2010 Industrial Emissions Directive (IED).[24] The implications of, and linkages between, these Directives are not crystal clear, which adds to the complexity when seeking an appropriate nitrate regulation at the Member State level.

In the following, the focus is on the Nitrates Directive and the Water Framework Directive, but it should be kept in mind that, in particular, the requirements of the Habitats Directive have strong implications with regards to nitrate pollution of aquatic Natura 2000-sites. Furthermore, the project- or activity oriented requirements of the EIA and IE Directives also impose certain obligations to include water quality issues in individual assessment or permit procedures regarding livestock installations, e.g. the so-called combined approach of the IE Directive and the WFD.

[19] Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (1991) OJ L 135/40.

[20] European Parliament and Council Directive 2008/56/EC of 17 June establishing a framework for community action in the field of marine environmental policy (2008) OJ L 164/19.

[21] Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, (1992) OJ L 206/7.

[22] European Parliament and Council Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (codification), (2012) OJ L 26/1 as amended by European Parliament and Council Directive 2014/52/EU, (2014) OJ L 124/1.

[23] European Parliament and Council Directive 2008/1/EC on integrated pollution prevention and control (codified version), (2008) OJ L 24/7.

[24] European Parliament and Council Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (2010) OJ L334/17.

3.1 Nitrates Directive

The 1991 Nitrates Directive specifically addresses nitrate pollution from agricultural sources. The objective is to reduce and prevent such pollution by focusing mainly on diffuse sources related to the excessive use of fertilisers, including livestock manure. Yet, the Nitrates Directive does not set a clear requirement to achieve a specific environmental outcome.[25] In this respect, the WFD now provides more specific environmental objectives and quality standards, including those related to nitrates.

According to the Nitrates Directive, Member States shall identify all waters that are or could be affected by nitrate pollution. The criterion for identifying these waters is the actual or potential excess nitrate concentration of 50 mg/l in surface freshwater or groundwater in accordance with the drinking water thresholds laid down in the former Drinking Water Directive 75/440/EEC. Another criterion is whether surface waters are, or in the near future may become, eutrophic, cf. Annex I.[26] The identification of waters that are, or may be, affected by nitrate pollution serves the purpose of designating nitrate vulnerable zones (NVZs) defined as, "all known areas of land … which drain into the waters identified … and which contribute to pollution," cf. Article 3(2). A Member State may, however, choose to adopt a whole territory approach. Several countries have chosen a whole territory approach including Denmark.[27] The consequence of choosing a whole territory approach is that the so-called action programmes must be mandatory throughout the national territory of the Member State. In countries that have chosen to designate NVZs, the action programmes are only mandatory in the NVZs, whereas general codes of good agricultural practice, to be implemented by farmers on a voluntary basis, apply outside NVZs, cf. Article 4. Codes of good agricultural practice shall contain at least the items listed in Annex II of the Directive including inappropriate periods or other conditions for land application of fertilisers.

According to Article 5, the action programmes applying in NVZs – or alternatively the whole territory – must include a number of mandatory measures listed in Annex III of the Directive together with the measures in the codes of good agricultural practice which have not been superseded by Annex III measures. The mandatory measures in Annex III include prohibition periods regarding fertiliser application, storage capacity for livestock manure equivalent to the longest prohibition period, limitation of the land application of fertilisers based on a balance between foreseeable crop requirements and nitrogen supply from soil and fertilisers (balanced fertilisation) and a maximum load of 170 kg N/ha/year of livestock manure. The Court of Justice of the European Union (CJEU) has maintained that a clear and precise transposition and implementation of the mandatory measures is required. In C-322/00 *Commission v Netherlands*, the Court rejected the Dutch use of loss standards as not satisfying the balanced fertilisation requirement,

[25] See also Boyle, supra n. 6 and William Howarth, Diffuse Water Pollution and Diffuse Environmental Laws. Tackling Diffuse Water Pollution in England, Report by the Comptroller and Auditor General HC 186, Session 2010-2011, 6 July 2010, Journal of Environmental Law 23:1 (2011), 129–141, at 132.

[26] For a critical analysis of the criteria of the Nitrates Directive (and the WFD), see William Howarth, The Progression Towards Ecological Quality Standards, Journal of Environmental Law 18:1 (2006), 3–35.

[27] According to the 2013 implementation report from the European Commission, COM(2013)0683 supra n. 2 ten Member States (Austria, Denmark, Finland, Germany, Ireland, Lithuania, Luxembourg, Malta, the Netherlands and Slovenia) and two regions (Flanders and Northern Ireland) have chosen a whole territory approach. The share of NVZs in the remaining Member States varies, but there has been an increase in some countries – possibly as a response to pressure from the European Commission.

which presumed standards regarding the use of fertilisers.[28] According to the Court, "use standards are applied beforehand and appear to be necessary for the purpose of reducing and preventing pollution, while the loss standards under the MINAS system are applied at a subsequent stage of the nitrogen cycle, and any exceeding of those loss standards will necessarily contribute to pollution" (para. 74). More recently, in C-237/12 *Commission v France,* the Commission, amongst other issues, questioned the volatilisation coefficients used for different types of manure to calculate the nitrogen level in land application of manure.[29] The Court stated that "only by establishing volatilisation coefficients on the basis of the data which estimates the loss of nitrogen by volatilisation at the lowest percentage is it possible to ensure that the limit laid down by Directive 91/676 for the land application of manure is properly observed by all French livestock units" (para. 141). Furthermore, France had failed to ensure the full and correct implementation of other mandatory measures including a failure to provide rules that enabled farmers and monitoring authorities to calculate exactly how much nitrogen can be applied in order to ensure balanced fertilisation (paras. 97–110).

It follows from Article 5(5) that if it becomes apparent that the mandatory measures are insufficient to achieve the objectives, the action programmes must include additional measures. The Directive does not specify the character of such additional measures, but the Court has stated that additional measures must be taken when the Member State first observes a need for them.[30] The action programmes must be reviewed at least every four years. The Court has ruled that the action programmes are, "plans and programmes" within the meaning of Directive 2001/42 on the assessment of the effects of certain plans and programmes on the environment.[31] This means that a (strategic) environmental assessment must be carried out prior to the adoption of an action programme. This is also the case if an action programme is adopted by legislative means. The Nitrates Directive also establishes certain monitoring requirements as Member States have to draw up suitable monitoring programmes to assess the effectiveness of the action programmes.[32]

The Nitrates Directive combines the use of specification and process standards (in Annex II and III) with a planning element in the form of the designation of NVZs. Thus, it can be argued that the Nitrates Directive encourages a differentiated or tailored regulation in the sense that (strict) mandatory measures apply in NVZs, whereas less strict measures apply on a voluntary basis outside NVZs. This differentiation is, however, partly undermined when a Member State adopts a whole territory approach even though the result is mandatory requirements in the entire territory. There is no direct requirement under the whole territory approach to establish a linkage between the mandatory measures and the ecological needs of, e.g. particularly sensitive water bodies, even though additional measures are required in Article 5(5). As demonstrated by Keesen et al., differentiation may, however, also be an option under a whole territory approach.[33] Yet, it is unclear to what extent this is actually

[28] C-322/00 Commission v Netherlands, ECLI:EU:C:2003:532.

[29] C-237/12 Commission v France, ECLI:EU:C:2014:2152.

[30] C-322/00 Commission v Netherlands, ECLI:EU:C:2003:532, paragraph 166.

[31] Joined cases C-105/09 and C-110/09 Terre Wallone, ECLI:EU:C:2010:355.

[32] On monitoring requirements in the Nitrates Directive and other EU Directives, see B. Beijen, H.F.M.W Rijswick and H.T. Anker, The Importance of Monitoring for the Effectiveness of Environmental Directives A Comparison of Monitoring Obligations in European Environmental Directives, Utrecht Law Review 10:2 (2014), 126–135.

[33] Keesen et al., supra n. 6.

being applied in the Member States. As will be demonstrated below, this has only been the case to a limited extent in Denmark.

The Nitrates Directive reflects an adaptive approach through the requirements for monitoring and the adoption of additional measures if the basic measures are insufficient to meet the objectives of the action programmes. The Nitrates Directive does not, however, require that environmental objectives should be specified in the action programmes and environmental quality objectives do not follow clearly from the Directive itself. *Howarth*[34] and *Boyle*[35] have argued that the lack of environmental quality standards or performance standards in the Nitrates Directive is a deficiency, although this deficiency is now acknowledged in the WFD. Since 2000, the WFD has set an overall environmental objective and prescribed the establishment of environmental objectives and environmental quality standards for water bodies. A crucial point is, of course, to what extent the Member States will succeed in linking and tailoring the measures under the Nitrates Directive to the environmental objectives of the WFD and the River Basin Management Plans.

3.2 Water Framework Directive

The key elements of the EU Water Framework Directive in relation to nitrates are the setting of environmental objectives for water bodies as well as the identification of the necessary measures to meet these objectives in the so-called programme of measures. The setting of environmental objectives as well as the identification of appropriate measures must take place as part of the river basin management approach and be (at least) summarised in the river basin management plans (RBMPs). An important element in the river basin management approach is the six-year monitoring and revision structure, which implies a continuous adaptation of objectives as well as measures.

The overall environmental objectives in the WFD are to achieve good surface water and groundwater status by December 2015, cf. Article 4, however, with the possible use of exemptions. Member States must also prevent the deterioration of the status of all water bodies.[36] Good surface water status means that both the ecological status and the chemical status are at least "good," while good groundwater status means that both the quantitative and chemical status are at least "good." What constitutes "good" ecological status is determined more precisely by the Member States in accordance with Annex V of the WFD. In general, "good" ecological status can be described as no or limited deviation from undisturbed conditions, e.g. that nutrient concentrations do not exceed the levels established to ensure the functioning of the ecosystem and the values specified for certain biological quality elements. Thus, nitrate pollution is an important element of good ecological status, although the acceptable nitrate level can be difficult to quantify. Good chemical status of groundwater has been defined more precisely in the 2006 Groundwater Directive (GWD)[37] which lays down a maximum threshold of 50 mg nitrate/l for all

[34] William Howarth, Diffuse Water Pollution and Diffuse Environmental Laws. Tackling Diffuse Water Pollution in England, Report by the Comptroller and Auditor General HC 186, Session 2010-2011, 6 July 2010, Journal of Environmental Law 23:1 (2011), 129–141, at 132.

[35] Boyle supra n. 6.

[36] In C-461/13Bund für Umwelt und Naturschutz Deutschland, ECLI:EU:C:2015:433 interpreted the concept of "deteroration" as "meaning that there is deterioration as soon as the status of at least one of the quality elements… falls by one class.." (para. 70) and stated that a project authorization should be refused if it may cause deterioration of the status of a water body (para. 51).

[37] European Parliament and Council Directive 2006/118/EC on the protection of groundwater against pollution and deterioration (2006) OJ L 372/19.

groundwater bodies. The general environmental objectives of the WFD (and the GWD) as well as the more specific environmental quality standards supplement the Nitrates Directive. This is reflected in the so-called combined approach of WFD Article 10 according to which Member States must not only ensure the proper implementation of, e.g. the Nitrates Directive, but also the setting of more stringent emission controls if needed to meet the water quality objectives or standards of the WFD.

According to the WFD, a programme of measures must include a description of the measures necessary to achieve the environmental objectives, cf. Article 11 – the first programmes were to be established by December 2009 with the measures becoming operational by December 2012. This includes a number of "basic" measures, i.e. regulatory measures to prevent or control point as well as non-point source pollution. Furthermore, "additional" measures must be included if the basic measures are insufficient to achieve the environmental objectives, cf. Article 11(5). Additional measures may include a range of different initiatives including the restoration of wetlands, codes of good practice, etc. The basic measures include a direct reference to the Nitrates Directive and it could be argued that this in fact also includes additional measures in accordance with Article 5(5) of the Nitrates Directive. Furthermore, it also follows from the "combined approach" in the WFD that additional or supplementary measures should be adopted if the "basic" measures of the Nitrates Directive are insufficient to achieve at least good ecological status and good chemical groundwater status. In this way, it could be argued that the WFD necessitates a differentiated (and more adaptive or tailored) approach to nitrate regulation also in Member States that have adopted a whole territory approach.

It is unlikely that the "basic" measures of the Nitrates Directive will be sufficient to meet the relevant objectives of the WFD as specified in the RBMPs.[38] Consequently, it is likely that there will be a need to adopt additional measures in view of the sensitivity of the individual water bodies or river basins including the option to differentiate the mandatory measures of the Nitrates Directive. Additional measures could include different regulatory instruments, e.g. informative measures, voluntary measures as well as incentives/subsidies, e.g. as provided under the EU Rural Development Programme.[39] The only requirement according to the Nitrates Directive and the WFD with regards to additional measures is that they should be suitable to meet the environmental objectives and quality standards considering also their effectiveness and their cost relative to other possible preventive measures. Thus, there is a relatively high degree of flexibility so that Member State can choose among different types of regulatory instruments or approaches when it comes to additional measures. On the other hand, the Nitrates Directive offers little flexibility with regards to the mandatory specification standards that, in accordance with the rulings of the Court of Justice, must be implemented quite precisely at the national level. Hence, it appears appropriate to build a tailored or differentiated

[38] According to the EEA 2015 report, supra n. 4, p. 64 good ecological status is estimated to be achieved in 53 % of surface water bodies and concerns about the ecological status are most pronounced in areas with intensive agricultural practices and high population densities.

[39] Boyle argues that the cross-compliance scheme under the EU Common Agricultural Policy (CAP) holds a significant unmet potential to make real reductions in agricultural pollution, Boyle supra n. 6, p. 19. Yet, it must be noted that art. 4 and 5 of the Nitrates Directive are part of the mandatory cross-compliance requirement, which includes not only the "basic" measures of the Nitrates Directive, but also those additional measures that are needed to fulfil the objectives. This means that all measures necessary for the implementation of the Nitrates Directive should in fact already be part of the cross-compliance schemes in the Member States.

approach upon the basic measures of the Nitrates Directive, e.g. by differentiation of specification standards such as the maximum load of animal manure or standards for fertiliser use – and then to use additional measures to deal with more severe restrictions on farming practices.[40]

4. Danish nitrate legislation

Nitrate regulation in Denmark includes a variety of different regulatory instruments and measures – predominantly based on a command-and-control approach.[41] Danish nitrate regulation has been steered by a number of political agreements since the mid-1980s. The first Aquatic Action Plan adopted in 1987 established a reduction target of 49 per cent regarding nitrogen leaching from agriculture and stipulated a number of measures to achieve this objective. The Danish nitrate regulation, thus, pre-dates the 1991 EU Nitrates Directive,[42] but has gradually been adjusted and strengthened to ensure implementation of the Nitrates Directive and more recently the Water Framework Directive. Denmark has chosen a "whole territory" approach under the Nitrates Directive applying mandatory measures in the entire country and not only in designated NVZs. Nevertheless, some differentiated or tailored measures have been applied as additional measures and as part of individual permits for livestock installations. Thus, a distinction can be made in Danish nitrate regulation between general fertiliser standards applying to (almost) all farmers, e.g. on fertiliser use, cultivation practices and nutrient management schemes, and individual measures applying to some farmers, e.g. individual orders or restrictions on cultivation practices at the farm level or permit conditions for livestock installations. In Denmark, since 2007, permits for livestock installations have not only included controlling pollution from the installation, but also nitrate pollution resulting from the application of manure on land and cultivation practices.

The relatively detailed and comprehensive nitrate regulation resulted in the target of a 49 per cent reduction in nitrogen leaching from agriculture being achieved in 2003.[43] There has also been a general improvement in the aquatic environment – in particular in watercourses, whereas improvements in coastal waters have been lagging behind.[44] Thus, further reductions and restrictions have been deemed necessary, e.g. to fulfil the Water Framework Directive. However, there has been no significant reduction in nitrogen leaching in the last ten years despite new reduction targets and a tightening of the regulation. In 2009, a political Green Growth Agreement was made which set a new (additional) reduction target of 19,000 tons N

[40] See also Boyle, supra n. 6 p. 20 arguing for tailored specification and process standards as well as tighter GAEC rules, i.e. rules on Good Agricultural and Environmental Conditions (GAEC) under the EU Common Agricultural Policy.

[41] For a more detailed analysis of Danish nitrate regulation, see L. Baaner & H.T. Anker, Danish Law on Controlling Emissions of Nutrients in the Baltic Sea Region (2013), available at http://www.su.se/ostersjocentrum/english/beam/legal-aspects-of-the-ecosystem-approach/country-studies. The following is partly based on this report.

[42] On the potential influence of Danish and Dutch nitrate policies on the Nitrates Directive, see Andersen, M.S. & Liefferink, D., Introduction. The Impact of the Pioneers on EU Environmental Policy, in Andersen, M.S. & Liefferink, D. (eds.), European Environmental Policy. The Pioneers, Manchester University Press (1997), pp. 1–39.

[43] Ruth Grant and Jesper Waagepetersen, Vandmiljøplan II – Slutevaluering, Danmarks Miljøundersøgelser, Miljøministeriet, 2003, p. 31. More precisely, a 48 per cent reduction was achieved in nitrogen loads from agriculture based on estimated figures of a nitrogen load of 311,000 tons in the mid-1980s to a total load of 162,000 tons in 2003.

[44] Natur- og Landbrugskommissionen (2012), Statusrapport, p. 324, available at: http://www.naturoglandbrug.dk/statusrapport_2012.aspx?ID=51058. See also Riemann et.al., supra n. 8.

and identified the measures necessary to achieve at first a 9,000 tons N reduction.[45] This included mandatory 9–10 m riparian zones along all watercourses (50,000 ha),[46] 140,000 ha additional catch crops as well as the (re-)establishment of 10,000 ha wetlands – the latter to be achieved by voluntary agreements or public purchase. Both the reduction target as well as the measures have, however, been challenged by farmers claiming, in particular, that the environmental effectiveness of the measures lacked documentation and that they violated private property rights. Currently, a court case on the riparian zones is pending before the Eastern High Court. Meanwhile, a 2014 Growth Agreement[47] resulted in the riparian zone being halved to cover only 25,000 ha, while the additional catch crop requirement was abolished. Furthermore, the new liberal government, which came into power in June 2015, has announced their intentions to abolish the riparian zones entirely, as well as to ease the general standards on fertiliser use.

Hence, Danish nitrate regulation is currently highly contested and stands at a cross-roads. As mentioned above, calls have been made for a tailored or differentiated nitrate regulation,[48] but so far not much has happened, although it is quite clear that the current legislation is not well-suited to achieving the environmental objectives for individual water bodies under the WFD (or the EU Habitats Directive).[49] In the following, the main elements in Danish nitrate regulation are analysed focusing on the options for a tailored or differentiated regulation.

4.1 General fertiliser regulation

The general fertiliser regulation is centred around a mandatory fertiliser management – or account – system at the farm level in the Act on Fertiliser Use and Plant Cover.[50] The fertiliser management system mainly aims to ensure compliance with the requirement of balanced fertilisation under the Nitrates Directive. In addition to the fertiliser management system, the general regulation includes mandatory requirements regarding catch crops, cultivation practices, maximum application of manure as well as the more recent – but highly contested – mandatory riparian zones (9 m) along watercourses and lakes. Thus, the Danish fertiliser regulation combines fairly detailed specification and process standards.

According to the fertiliser management system, it is mandatory to prepare and submit an annual fertiliser account documenting that the total fertiliser consumption does not exceed a calculated nitrogen quota for the farm.[51] The nitrogen quota is based on information on crops and their corresponding nitrogen norms as well as a nitrogen forecast determining how much nitrogen is available for the crops at the start of the growth season, e.g. depending on past climatic conditions. This means that for each farm, accounts must be made of the crops grown on individual fields and their associated nitrogen norms as well as the amount of fertiliser, including manure and other organic fertiliser, available.

[45] Aftale om Grøn Vækst, June 2009.

[46] Since 1992, a mandatory 2 m cultivation free zone has applied along natural watercourses.

[47] Aftale om Vækstplan for Fødevarer, April 2014.

[48] Natur- og Landbrugskommissionen, Natur og Landbrug – en ny start (2013), available at: http://www.naturoglandbrug.dk/slutrapport_2013.aspx?ID=52071.

[49] In Denmark, approximately 85 % of the land areas drain to (aquatic) Natura 2000 sites most of which do not meet the environmental objectives.

[50] Consolidated Act 500/2013 (lov om jordbrugets anvendelse af gødning og plantedække).

[51] The management system is mandatory for farmers with an annual turnover above 50,000 DKK *and* who have a minimum level of livestock or receive more than 25 t manure or other organic manure. Other farmers with an annual turnover above 20,000 DKK may register under the system and will then be exempt from a fertiliser tax.

The general regulation of agricultural nitrate pollution has gradually been strengthened over the years as a result of political agreements – i.e. the aquatic action plans – based on a perceived need for further reduction of agricultural nitrate pollution. Currently, it is estimated that the nitrogen norms are set 14–18 % lower than the calculated optimal norm for the crops. Furthermore, the general catch crop requirement has been tightened to 10–14 % catch crops at the farm level and new measures have been introduced including the contested the riparian zones in 2011.

Although the current general regulation of fertiliser use is based on a certain level of scientific knowledge, e.g. for the purpose of setting nitrogen norms for crops, the system does not include specific knowledge about the ecological sensitivity in local areas or the retention capacity of the soil. Thus, the current general fertiliser regulation is not tailored or differentiated with the purpose of achieving environmental objectives and quality standards at the catchment or water body level. Moreover, recent scientific knowledge indicates that, in some areas, there is no or limited justification for the tightening of the nitrogen norms, e.g. due to a high retention capacity of the soil.[52] Thus, the general fertiliser regulation appears to be inadequate to address site-specific needs for further reduction of nitrogen loads, whereas in other areas the regulation is likely to be stricter than needed for environmental purposes. This clearly calls for a tailoring of the Danish nitrate regulation. So far, however, such a tailored or differentiated regulation has only been part of the individual regulation at the farm level as is explained below.

[52] A.C. Erichsen et al. På vej mod et godt vandmiljø, Vand & Jord, Vol. 22:1 (2015), p. 13 indicating the variations in demands for reduction of nitrogen at the catchment level (from <10 to 75 per cent).

4.2 Individual restrictions

Individual restrictions on fertiliser use and cultivation practices with the purpose of reducing nitrate leaching exist in two different regulatory settings. The first set of rules dating back to 1998 is individual restrictions on existing fertiliser use or cultivation practices settled either by voluntary agreements or by an individual order accompanied by economic compensation for loss in accordance with the Environmental Protection Act.[53] The second set of rules is the option for setting individual restrictions on fertiliser use and cultivation practices in environmental permits for livestock installations according to the 2007 Act on Environmental Permits for Livestock Installations.[54] In both respects, the setting of individual restrictions is presumed to be based on a certain level of knowledge about the environmental sensitivity in the local area, i.e. a tailored or differentiated regulation.

The voluntary agreements or individual orders on fertiliser use or cultivation practices under the Environmental Protection Act only address drinking water issues, i.e. groundwater aquifers that currently, or in the future, could be used for drinking water abstraction.[55] There are no parallel rules with regards to the protection of surface water quality in general. It is a prerequisite that a local "action plan" (indsatsplan) is produced by the local authorities in areas designated as "action areas" (indsatsområder). Furthermore, it is a requirement that the restrictions on fertiliser use or cultivation practices are necessary to protect drinking water resources, i.e. reflecting the proportionality principle. According to the preparatory works, the extent to

[53] Consolidated Act 879/2010 (lov om miljøbeskyttelse).
[54] Consolidated Act 868/2015 (lov om miljøgodkendelse m.v. af husdyrbrug).
[55] See L. Baaner & H.T. Anker, Indsatsplaner og grundvandsbeskyttelse, Tidsskrift for Landbrugsret (2012), 88–101.

which the specific piece of land contributes to nitrate pollution should not necessarily be documented. It is sufficient to document that there is a nitrate problem in the area as a basis for the local "action plan." In order to justify this view, the preparatory works of the Act refer to the requirement that compensation should be paid to landowners for loss as a consequence of an individual order. This compensation rule is based on the view that individual orders restricting existing cultivation practices may mount to an undue interference with private property rights, i.e. a "rule of reasonableness."

Individual restrictions on fertiliser use and cultivation practices that are laid down as conditions in environmental permits for livestock installations under the Act on Environmental Permits for Livestock Installations[56] have, to a certain extent, replaced the need to issue individual orders under the Environmental Protection Act. A major difference is that compensation is not paid to farmers when establishing individual restrictions in an environmental permit. The reasoning behind this is quite clear in that it is not a direct restriction on existing fertiliser use or cultivation practices, but rather a condition that is linked to a permit for a new, expanded or otherwise restructured livestock installation. However, in some cases, it might be difficult to draw a clear distinction between such conditions for new or amended activities and the potential interference with existing fertiliser use or cultivation practices. In principle though, the farmer can avoid such new conditions by not expanding or modifying the installation in which case a permit would normally not be required.

The environmental permits regulate point as well as diffuse pollution, e.g. nitrate and phosphorus to the aquatic environment, and the impact of ammonia on the surrounding environment including terrestrial nature areas. The acceptable level of pollution has been standardised in the form of so-called 'protection levels' in a Statutory Order on Permits for Livestock Installations.[57] The protection levels for nitrate stipulate a differentiation of the so-called livestock balance requirements in three "nitrate classes" designated on the basis of the sensitivity of the aquatic environment and the retention capacity of the soil. The livestock balance requirement primarily serves to implement the maximum load of 170 kg N/ha of the Nitrates Directive, which in Denmark varies between 140–170 kg N/ha depending on the type of livestock.[58] Within the designated nitrate classes, the livestock balance requirement is reduced to 85 %, 65 % and 50 % respectively of the 140–170 kg N/ha, i.e. expressing a differentiated specification standard to be included in an environmental permit.

In addition, the protection of aquatic Natura 2000 sites has led to the establishment of strict assessment criteria in a guidance note partly based on the decisions of the Nature and Environment Appeals Board. According to the guidance note, the livestock pressure in the area must not be increasing and the total nitrogen load from the farm must not exceed 5 % of the total load to the water body – or 1 % in the case of very nutrient sensitive water bodies.[59] If these criteria are not

[56] The Act on Environmental Livestock Permits sets the framework for issuing environmental permits for livestock installations. The act applies to farms with more than three livestock units (1 AU is equivalent to 100 kg N). Small farms, with fewer than 75 livestock units are, in most cases, subject to a simplified permit process, while larger farms are subject to a detailed and comprehensive environmental permit process.

[57] Statutory Order 1283/2014 (bekendtgørelse om tilladelse og godkendelse m.v. af husdyrbrug).

[58] An exemption to 230 kg N/ha has been granted for cattle farms complying with specific environmental requirements.

[59] The guidance is only accessible online on: www.mst.dk/husdyrvejledning.

met, a permit cannot be granted unless individual restrictions are established in order to ensure that nitrogen leaching does not exceed leaching from cultivation practices based on inorganic fertilisers.[60] The strict requirements for the application of manure can partly be replaced by alternative measures with the same effect in reducing nitrogen leaching. The use of catch crops may be one option, the use of alternative crop rotations another. Such measures are widely used in the permits in order for farmers to be able to obtain a permit and continue to spread the maximum amount of manure over their land.[61]

Thus, the individual permit system includes a detailed and differentiated regulation of manure spreading and cultivation practices at the farm level, which is based on a certain level of scientific knowledge primarily about the environmental sensitivity of water bodies and the retention capacity of the soil. However, this regulation is unlikely to meet the environmental objectives and quality standards of the water bodies as it only addresses the effects of animal manure application – and not the effects of fertiliser application in general, which in Denmark is considered to be the major contributor to agricultural nitrate pollution.[62]

4.3 Differentiated nitrate regulation – regulatory challenges

As demonstrated above, the current Danish nitrate regulation is not well-suited to meeting the water quality objectives of individual water bodies or even at the river basin or sub-basin level. The general fertiliser regulation is not tailored towards local conditions or ecological sensitivity, whereas the differentiated individual restrictions in the livestock permits only address the use of manure and not fertiliser use in general. A recommendation from the Nature and Agriculture Committee[63] in 2013 to introduce a differentiated fertiliser regulation initially gained broad political support as reflected in a 2014 political Growth Plan for Agriculture.[64] The core element in the recommendation was to differentiate the general fertiliser regulation, e.g. the nitrogen norms, on the basis of knowledge about the nitrogen retention capacity of the soil as well as the ecological sensitivity of water bodies. In its simple form, such a new differentiated nitrate regulation would transfer the system of differentiated "nitrate classes" used in the environmental permit scheme to the general regulation of fertilisers. This would imply that the differentiation based on local soil characteristics and ecological sensitivity would apply to all fertilisers and not only to the application of manure on farms with an environmental permit. At the same time, this differentiation would be combined with the nitrogen norms for different crops and the fertiliser account system. It was also recommended that the new regulation should allow the farmer to use flexible measures on a voluntary basis, e.g. catch crops or riparian zones, with the purpose of counterbalancing lower nitrogen norms in sensitive areas. Furthermore, the Committee stressed that other instruments, e.g. incentive schemes,

[60] MAD2011.2694 (Miljøretlige Afgørelser og Domme).

[61] Natur- og Landbrugskommissionen (2012), *Natur- og Landbrugskommissionens statusrapport*, 355.

[62] It has been estimated that the application of animal manure accounts for 37,000 tons N/year as opposed to 157,000 tons N/year from the application of all fertilisers (including manure), Natur- og Landbrugskommissionen (2012) supra n. 61 p. 343.

[63] Natur- og Landbrugskommissionen (2013) supra n. 17. A similar recommendation had been made by a previous committee established by Ministry for the Environment in 2010, see Husdyrreguleringsudvalget (2011), Anbefalinger fra Husdyrreguleringsudvalget, available at http://mst.dk/media/mst/66628/Endelig%20rapport%20-%20Husdyrreguleringsudvalget%20pdf.pdf.

[64] Aftale om Vækstplan for Fødevarer, april 2014. The Growth Plan noted that a new regulation should be based on a sound scientific assessment of the state of the aquatic environment as well as of the factors affecting water quality.

should be available to address the most sensitive areas. How more precisely a new tailored, differentiated and flexible regulation should be constructed was, however, not elaborated by the Nature and Agriculture Committee. Many difficult issues were left to the relevant ministries to elaborate, including the question of scale, e.g. geographical (river basin, sub-basin or water body level) and scope, e.g. the degree or span of differentiation.

Despite the initial broad support – also from farmer organisations – it appears that political support for such a new regulation has faded and the new liberal government, which came into power in June 2015, has announced its intentions to adopt less strict fertiliser standards for all farmers, without clear indications of how to meet environmental objectives at the same time. A key concern from a political point of view might have been how to justify the differential treatment of farmers, i.e. what level of scientific knowledge is needed to justify the differential treatment of farmers and how to cope with individual hardship for farmers in the most environmentally sensitive catchments with a low retention capacity in the soil.

Such concerns must be taken into consideration when designing a differentiated nitrate regulation and are likely to require a combination of different regulatory instruments – as also mentioned by the Nature and Agriculture Committee. It is important that other regulatory instruments are available to address those areas where more severe restrictions on fertiliser use and cultivation practices are necessary to achieve the environmental objectives. This could be in the form of different types of incentive schemes, e.g. under the EU Rural Development Programme, combined with voluntary agreements or public purchase obligations.

It is pertinent that a new tailored or differentiated fertiliser regulation steers clear of a potential interference with private property rights.[65] If the differentiated norms in effect severely restrict the cultivation of land and cause individual hardship, the question of potential interference with private property rights is likely to undermine the regulation. It is unlikely that a sufficient scientific basis for justifying severe restrictions of existing cultivation practices can be established as part of a general regulation. Furthermore, a general compensation rule to soften such requirements does not appear to be feasible either. Other individual measures, e.g. voluntary agreements, acquisition or expropriation, are likely to be necessary to deal with individual hardship in the most sensitive areas, where there is a need for severe restrictions in existing fertiliser use and cultivation practices.

Another important question is what level of scientific knowledge is needed to underpin a differentiated fertiliser regulation including the question of whether it would require a higher level of scientific knowledge than the existing system, i.e. the implications of shifting from differentiation based on individual conditions in permits for livestock installations, to differentiation following directly from the general standards. From a legal point of view, the mere shift in type of regulation – from individual conditions to general norms – does not necessarily imply a need for more scientific underpinning. This, however, depends upon the level of detail in the regulation – and in particular the span in differ-

[65] In a European context, law-makers normally enjoy a fairly wide margin of appreciation with regards to general restrictions and their potential interference with private property rights, e.g. as reflected in a decision of the European Court of Human Rights stating that a Dutch regulation reducing "pig entitlements", i.e. pig production rights, with 15 % for all farmers did not conflict with the Protocol to the Convention for the Protection of Human Rights and Fundamental Freedoms, see *Lohuis a.o. v the Netherlands*, no. 37265/10, 30. April 2013.

entiation, i.e. the potential unequal treatment of farmers, and the intensity of the restrictions, i.e. the potential interference with private property rights. It is quite clear that a relatively large span in the differentiated norms would require a relatively high level of scientific underpinning to justify the unequal treatment. Hence, a full differentiation of specification standards on, e.g. fertiliser use does not appear to be feasible – at least not in a Danish context. Additional measures will continue to be necessary, e.g. incentive schemes, nature restoration, public purchase or expropriation, to address "hot-spots" where severe restrictions on existing cultivation practices are needed to meet the environmental objectives for ecologically sensitive water bodies.

5. Conclusion

Despite the passing of almost 25 years since the adoption of the EU Nitrates Directive, agricultural nitrate pollution remains a major concern in many Member States. This is also the case in Denmark, although a fairly strict regulatory regime has resulted in almost a 50 per cent reduction in nitrogen leaching since the mid-1980s. Nevertheless, further efforts are needed particularly in ecologically sensitive areas. Nitrate regulation stands at a cross-road where there is a need for differentiated regulation tailored to meet ecological demands at the river basin, sub-basin or water body level. This is illustrated by the EU Water Framework Directive adding a new dimension to the Nitrates Directive through the setting of environmental objectives and more specific environmental quality standards for relevant water bodies. Thus, the site-specific performance standards of the WFD must be combined with the specification standards of the Nitrates Directive as well as any additional measures necessary to achieve the objectives. This calls for a new differentiated nitrate regulation tailored to meet ecological needs at the sub-basin or water body level and continuously adapted according to monitoring results and perceived ecological demands for improved water quality.

The Danish nitrate regulation clearly illustrates the need for a differentiated and tailored regulatory approach. Denmark has adopted a whole territory approach under the Nitrates Directive and has focused on a continued tightening of general specification and process standards on fertiliser use in order to comply with the Nitrates Directive. This has resulted in the application of nitrogen norms for crops that are now 14–18 per cent below the calculated optimal level in the entire country, i.e. also in areas where there is no or limited ecological demand for further nitrogen reduction. According to farmers, the result is an unjustified loss of agricultural productivity and soil fertility. Calls have been made for a differentiation of the nitrogen norms based on knowledge of the retention capacity of the soil as well as the ecological sensitivity of the water bodies. Such a differentiated regulation is already used in the Danish permit system for livestock installations, albeit applying only to animal manure and not to fertiliser use in general. Nevertheless, it appears that the initial support for a new, differentiated fertiliser regulation has faded partly due to perceived regulatory challenges, e.g. with regards to the level of scientific knowledge needed to justify differential treatment of farmers as well as potential interference with the private property rights of farmers subject to the most severe restrictions.

As it has been argued in this article, such regulatory challenges depend on how a differentiated or tailored regulation is more precisely constructed. The need to justify the differentiated (or unequal) regulation of farming activities with reference to scientific knowledge will increase the more differentiated or "unequal" the regulation becomes – and in particular if the regulation results in individual hardship for some farmers, it

may interfere with the protection of private property rights. Hence, the use of differentiated specification standards on the use of fertilisers has its limitations regarding the scope of differentiation. It is unlikely that sufficient scientific knowledge at the field or farm level will be available to justify major differential treatment from one field or one farm to another. Furthermore, individual hardship in the form of severely restricted cultivation practices in most cases must be addressed through individual regulation at the farm level, e.g. voluntary agreements, incentive schemes, public purchase or possibly even expropriation. Thus, it is necessary to combine a differentiation of specification (and process) standards with additional instruments to address the most sensitive areas. The latter will often require a more flexible regulatory approach based on economic incentives and voluntarism, however, backed by command-and-control mechanisms if needed.

Thus, addressing agricultural nitrate pollution is likely to require a mix of regulatory approaches and instruments. Within the EU, the specification standards of the Nitrates Directive must be complied with as a minimum, but it is feasible to differentiate or tailor such standards to meet the ecological needs at the river basin or water body level also where a whole territory approach has been chosen. It is unlikely that the NVZ differentiation between relatively strict mandatory requirements (within NVZs) and voluntary recommendations (outside NVZs) is sufficient to accommodate such needs. Rather, there appears to be a need to differentiate the mandatory specification standards of the Nitrates Directive. Furthermore, additional measures are needed to address the need for severe restrictions on fertiliser use or cultivation practices in the most ecologically sensitive areas in accordance with the Water Framework Directive – and in some cases also the Habitats Directive. Although, regulating farmers is known to be particularly controversial in many countries, it should be possible to strike an appropriate balance to avoid unnecessary restrictions on farming practices, while at the same time addressing the site-specific ecological sensitivity of river basins and water bodies.

Atmospheric Nitrogen Deposition and the Habitats Directive: Tinkering with the Law in the Face of the Precautionary Principle?

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Abstract

The implementation of the EU Habitats Directives has urged the permit issuing instances to apply more scrutiny when assessing the local impacts of nitrogen deposition. At present, the critical loads for nitrogen deposition are exceeded in many Natura 2000-sites across Europe, making it one of the most important bottlenecks for the achievement of the good conservation status. This article addresses the legal conundrum of how to reconcile continuous economic development with increased attention for the adverse effects of excessive nitrogen deposition on natural habitats. In this respect, the exact implications of the protection scheme tied to Natura 2000 sites for nitrogen-emitting activities are further discussed. In particular, a focus is placed on the novel regulatory approaches that have recently been implemented at Member States' level in order to better align nitrogen-emitting activities with the recovery rationale underpinning the Habitats Directive. The Dutch Programmatic Approach Nitrogen (PAN), which aims to make preservation and restoration of protected habitats possible without impeding room for further economic development, stands out as one of the most notable regulatory tools in this regard. This article reveals that the majority of the recently implemented regulatory solutions, such as the PAN, heavily rely upon the expected benefits linked to additional reduction efforts and restoration measures that will have to be implemented in nitrogen-sensitive Natura 2000-sites. Given the current doubts surrounding the effectiveness of ecological restoration efforts in offsetting impairments to natural habitats, it remains debatable whether such rationale is appropriate and fully in line with the precautionary principle. A more cautious strategy would be to only allow for new economic development once further reductions of nitrogen deposition levels have been established and the effectiveness of the restoration measures on the ground is guaranteed. If it turns out the PAN is not capable of reversing the ongoing deterioration in nitrogen-sensitive Natura 2000-sites, the additional room for economic development might quickly evaporate.

1. Introduction

Nitrogen deposition describes the input of reactive nitrogen from the atmosphere to the biosphere both as gas, dry deposition and in precipitation as wet deposition.[1] Since the start of the 20th century, the skyrocketing human-induced nitrogen emissions have significantly disrupted the natural nitrogen cycle.[2] Recent research unveils that human activities currently contribute twice as much terrestrial nitrogen fix-

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[1] N. Dise, 'Nitrogen as a threat to European terrestrial biodiversity' In M. Sutton et al. (eds.), *The European Nitrogen Assessment* (Cambridge, Cambridge University Press: 2011), pp. 463–494; R. Bobbink et al., 'Global Assessment of Nitrogen Deposition Effects on Terrestrial Plant Diversity: a synthesis', (2010) *Ecological Applications* 20, pp. 30–59.

[2] See also: Live Science Staff, 'Nitrogen Fingered As Latest Ecosystem Evildoer' (2010), http://www.livescience.com/8720-nitrogen-fingered-latest-ecosystem-evildoer.html (Accessed 20 June 2015).

ation as natural resources, and provide around 45 percent of the total biological useful nitrogen of the total biological useful nitrogen produced annually on earth.[3] Nitrous oxide levels are currently higher than at any other time during the last 800,000 years.[4] Ecosystems are overloaded with nitrogen. Among the primary causes of this sharp rise of the atmospheric concentration of nitrous oxide are processes such as the industrialization of agriculture, fossil fuel combustion and other industrial processes.[5] Since the eutrophying and acidifying effects of atmospheric nitrogen deposition are seen as part of the long-range transboundary air pollution, they have been subject to international and EU air pollution abatement rules for several decades.[6]

Even when, generally speaking, nitrogen emissions are expected to further decline until 2030, they are still far too high to re-establish the so-called '*favourable conservation status*' of many endangered natural habitats across Europe. Currently, the critical loads of nutrient nitrogen are exceeded on 62 % of the ecosystem area in the EU-27 countries.[7] Among the most vulnerable habitats in Europe to elevated levels of nitrogen deposition are many of the semi-natural grassland communities, heather and peatlands in Europe, which are dominated by species with low nutrient requirements.[8] According to the recent findings of the European Environmental Agency (EEA), approximately 50 % of the vulnerable natural or semi-natural habitats in the EU are expected to be at risk of excessive nitrogen deposition in 2020. Across Europe, and particularly in the Atlantic Biogeographic Region, high background concentrations of nitrogen and ammonia continue to stand in the way of the much-needed recovery of many nitrogen-sensitive terrestrial habitats.[9] Accordingly, nitrogen deposition has become one of the major challenges for the management and conservation of many natural habitats in the Atlantic Region. For instance, in the United Kingdom 68 % of the area of sensitive habitats is at risk due to exceedance of the critical loads[10], whereas the bulk of the Dutch EU protected sites are severely impacted by excessive nitrogen deposition levels.[11] In its 2015 Report on the State of Nature of the EU, the EEA stressed that the overwhelming majority of the protected natural habitats have an unfavorable

[3] D.E. Canfield et al., 'The Evolution and Future of Earth's Nitrogen Cycle', (2010) Science, pp. 192–196.

[4] A. Schilt et al., 'Glacial–interglacial and millennial-scale variations in the atmospheric nitrous oxide concentration during the last 800,000 years', (2010) *Quaternary Science Reviews* 29, pp. 182–192.

[5] European Environment Agency, *Effects of air pollution on European ecosystems. Past and future exposure of European freshwater and terrestrial habitats to acidifying and eutrophying air pollutans* (Copenhagen: 2014), http://www.eea.europa.eu/publications/effects-of-air-pollution-on (Accessed 20 June 2015).

[6] Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants, OJ L 309, 27 November 2001.

[7] M. Posch et al., *Modelling and mapping of atmospherically-induced ecosystem impacts in Europe. CCE Status report 2012* (The Netherlands: Coordination Centre for Effects, RIVM: 2012).

[8] C. Nelleman and M.G. Thomsen, 'Long-term changes in forest growth: potential effects of nitrogen deposition and acidification', (2001) *Water, Air and Soil Pollution* 128, pp. 197–205.

[9] A. Nordin et al., 'New science on the effects of nitrogen deposition and concentrations of Natura 2000-sites', In W.K. Hicks et al. (eds.) *Nitrogen Deposition and Natura 2000: Science and practice in determining environmental impacts* (COST729/Nine/ESF/CCW/JNCC/SEI Workshop proceedings, COST: 2011) http://cost729.ceh.ac.uk/n2k-workshop (Accessed 20 June 2015), pp. 114–128.

[10] Joint Nature Conservation Committee, The UK's approach to assessing N impacts in relation to Article 17 reporting (UK, Workshop proceedings: 2013) http://ec.europa.eu/environment/nature/natura2000/platform/documents/whitfield_wg1_presentation_uk_approach_eng.pdf (Accessed 20 June 2015).

[11] Secretary of State for Economic Affairs and the Minister of Infrastructure and the Environment, *Programmatic Approach Nitrogen (PAN) –Version to be submitted to the Advisory Division of the Dutch Council of State* (The Netherlands: 2012) https://zoek.officielebekendmakingen.nl/blg-206138.pdf (Accessed 20 June 2015), pp. 8–10.

status, with a staggering 47 % of the national assessments being unfavorable-inadequate and 30 % being unfavorable-bad.[12] What makes the nitrogen deposition threat for the EU's biodiversity even more palpable is that the recovery of over-burdened ecosystems from excessive nitrogen deposition constitutes a slow process.

In recent years, however, the issue of nitrogen deposition has not stayed confined to the domain of ecological management and restoration. It also has become a major obstacle for economic development in some Member States, such as the Netherlands, Germany and Denmark. The application of the protection rules set out in the 1992 Habitats Directive to nitrogen-emitting activities and projects, such as dairy farming and industrial operations, has resulted in an increasing number of rejections of planning applications.[13] In sharp contrast to the more generic air pollution rules, the Habitats Directive sets forth a more localized approach to major environmental threats, such as nitrogen deposition, through its so-called '*habitats assessment-test*' (Article 6(3) of the Habitats Directive) for new plans and projects.

This is particularly important for agricultural emissions since the deposition of ammonia from cattle farms is relatively high in the vicinity of that source in comparison with the deposition at a greater distance from that source. The increasingly stringent – some submit rigid[14] – interpretation of the habitats assessment-procedures linked to EU protected sites has tightened up the terms and conditions for the issuance of permits to plans and projects likely to impact Natura 2000-sites through their nitrogen emissions. As a result of that, the construction of a new road bypass or the expansion of an existing cattle farm is no longer to be presented as a given whenever it is located in the immediate vicinity of nitrogen-sensitive natural habitats.

In order to avoid a complete economic paralysis for nitrogen-emitting activities in the vicinity of Natura 2000-sites, some Member States, among which the Netherlands, have come forward novel regulatory solutions aimed at better aligning the achievement of the conservation objectives for Natura 2000 with allowing additional room for economic development.[15] Certain of these regulatory approaches are grounded on a more liberal reading of the second sentence of Article 6(3) of the Habitats Directive. For example, the recently promulgated Dutch *Programmatic Approach to Nitrogen* (PAN) is based on the assumption that the implementation of additional reduction efforts by the agricultural sector, when taken together with the implementation of robust restoration measures in the already affected Natura 2000-sites, will create room for economic development without leading to further environmental degradation due to excessive levels of nitrogen deposition.

This analysis presents a critical overview of the recently emerged regulatory approaches to the issue of nitrogen deposition. In particular, it will be investigated to what extent the incrementing reliance on restoration measures in the context of permit policies is in line with the precautionary principle, as upheld by the Court of Justice of the EU (ECJ/CJEU) in its recent case-law regarding the Habitats Directive. The present analysis mainly focuses on the

[12] European Environmental Agency, *State of Nature in the EU* (Technical report No 2/2015, Copenhagen: 2015) http://www.eea.europa.eu/publications/state-of-nature-in-the-eu (Accessed 20 June 2015).

[13] Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and Wild Fauna and Flora, OJ L 206, 22 July 1992 (Habitats Directive).

[14] F.H. Kistenkas, 'Rethinking European nature conservation legislation: toward sustainable development?', (2013) *Journal for European & Planning Law* 10, pp. 69–81.

[15] J. Zijlmans and H. Woldendorp, Compensation and mitigation: Tinkering with Natura 2000 Protection Law, (2014) *Utrecht Law Review* 10, pp. 172–193.

current legislative and administrative trends in the Netherlands, a Member State renowned for its relatively high number of law suits by which the EU nature directives are enforced before courts, also in nitrogen-related cases. Seeing that the Netherlands are currently a frontrunner in their dealing with the environmental impacts of nitrogen deposition, it can be expected that the below presented analysis will also serve as a useful jumping-off point for future research in other EU Member States.

This article is structured as follows. In order to set the legal context for the subsequent discussion, *section 2* elaborates on the generic features of the protection scheme applicable for the Natura 2000 Network and, subsequently, its application in the specific context of decision-making procedures for industrial and agricultural activities liable to emit nitrogen compounds in the vicinity of a Natura 2000-site. *Section 3* sheds light on the distinct flexible techniques that have been promulgated at national level in order to provide permit issuing authorities with more leeway in the context of nitrogen-related cases. The purpose of *section 4* is to discuss the much-anticipated ruling of the CJEU in the Dutch *Briels*-case, which touches upon the margin for flexibility when authorizing nitrogen-emitting projects adjacent to Natura 2000-sites. Thereafter, *Section 5* reflects on the wider implications of the latter ruling and discusses how it might affect the margin of manoeuvre for national authorities in the context of economic development nearby nitrogen-sensitive Natura 2000-sites. More specifically, it is examined to what extent the Dutch Programmatic Approach to Nitrogen (PAN), which is regarded by some as an exemplary approach in this context, is deemed compatible with the strict requirements set out the Habitats Directive.

2. The Habitats Directive and nitrogen deposition: Toward more scrutiny?

2.1 A paradigm shift from status-quo to restoration?

The Habitats Directive is, together with the earlier enacted Birds Directive[16], considered to be one of hallmarks of EU environmental law.[17] By requiring Member States to take measures to maintain or restore natural habitats and wild species listed on the annexes to the Habitats Directive at a favorable conservation status, the Habitats Directive lays down a set of robust protection and restoration duties for those habitats and species of European importance.

Due to the explicit reference to the concept of '*restoration*' in the Habitats Directive, Member States cannot confine their conservation efforts to merely maintaining a status quo of the conservation status of the degraded natural habitats that are currently present on their territory. Whenever protected natural habitats are at an unfavorable conservation status, Member States will have to consider measures aimed at the restoration of these habitats.[18]

In view of the high number of critical load exceedances for nitrogen, the nitrogen deposition threat persists as one of the most prominent

[16] Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (Birds Directive), OJ L 103, 25.4.1979, p. 1, replaced by Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (hereafter 'Birds Directive'), OJ L 20, 26.1.2010, p. 7.

[17] G. Wandesforde-Smith and N.S.J. Watts, 'Wildlife Conservation and Protected Areas: Politics, Procedure, and the Performance of Failure Under the EU Birds and Habitats Directive', (2014) *Journal of International Wildlife Law & Policy* 17, pp. 62–64.

[18] See on the topic of ecological restoration: A. Cliquet, K. Decleer, H. Schoukens, 'Restoring nature in the EU: the only way is up?', In C.-H. Born et al. (eds.), *The Habitats Directive in its EU Environmental Law Context: European Nature's Best Hope?* (Routledge: 2015), pp. 265–283.

obstacles for the much-needed recovery of many Natura 2000-sites across the EU.[19]

As alluded to above, when compared to the higher inputs throughout the sixties and seventies, the projected lower inputs will certainly slow down the rate of further damage to natural habitats. However, they will still compromise the recovery patch which is mandatory for degraded natural habitats. In many instances, the expansion and the ecological improvement of the natural habitats that are adversely affected by excessive levels of historic nitrogen loads remains the only sustainable pathway to the achievement of the good conservation status at site-level.[20]

2.2 Article 6 of the Habitats Directive and nitrogen deposition: increasingly intertwined?

So far, this article mainly focused on the ecological underpinnings of the threat elevated levels of nitrogen deposition are posing for natural habitats. However, In order to understand the full scope of the regulatory challenges Member States are facing in this respect, a further analysis of the protection duties incumbent on the Member States is warranted. Article 6 of the Habitats Directive provides a useful starting point for a further discussion. In particular, the habitats assessment-rules included in Article 6(3) and (4) of the Habitats Directive have, due their major impact on spatial and economic planning policies, risen to the fore in many Member States. In former days, economic interests were capable of easily trumping nature conservation-based arguments. With the implementation of the Habitats Directive more weight needs to be given to the conservation and, as explained above, the restoration of degraded natural habitats and species. Judges no longer refrain from halting projects that have not observed the protection rules linked to Natura 2000-sites. Yet Member States also have to take into account the more generic conservation duties set out in Article 6(1) and 6(2) of the Habitats Directive. Therefore also the latter provisions are further analyzed.

2.2.1 Article 6(1) of the Habitats Directive: implementing restoration measures for overburdened Natura 2000-sites?

Pursuant to Article 6(1) of the Habitats Directive Member States are required to take proactive management measures for the Natura 2000-sites that have been designated on their territory. The latter provision lays down the groundwork for the Member States when implementing the substantive protection requirements for their Natura 2000-sites. It thus provides a first touchstone for their nitrogen-related policies. The positive management measures referred to in Article 6(1) of the Habitats Directive have to enable the Member States to maintain or, as the case may be, restore the natural habitat types and species, listed in Annex I and II of the Habitats Directive, at a favourable conservation.[21]

Although often overlooked, Article 6(1) of the Habitats Directive has an important bearing on the scope of the implementation duties that are resting upon the shoulders of the Member States in the context of excessive nitrogen deposition levels.

For starters, nitrogen impacts will have to be taken into account when establishing the site-specific conservation objectives for many Natura 2000-sites. It is clear that, whenever a Natura

[19] See more extensively: W.K. Hicks et al., *Nitrogen deposition and Natura 2000: Science and practice in determining environmental impacts* (COST729/Nine/ESF/CCW/JNCC/SEI, Workshop proceedings: 2011) http://jncc.defra.gov.uk/pdf/airpol_WG6article63assessments.pdf (accessed 20 June 2015).

[20] Nordin et al., supra n 9.

[21] European Commission, *Establishing conservation measures for Natura 2000-sites* (Brussels: 2014) http://ec.europa.eu/environment/nature/natura2000/management/docs/conservation%20measures.pdf.

2000-site finds itself in a severely degraded state, for instance due to its exposure to elevated nitrogen deposition levels throughout the past decades, restoration objectives will have to be set up. Consequently, the conservation measures, will also have to cover restoration efforts, aimed at reducing the nitrogen burden for the affected natural habitats.[22] For instance, in cases where Natura 2000-sites are not expected to recover in the short run from overexposure to elevated levels of nitrogen deposition, active on-site management measures are to be considered as an appropriate tool to accelerate the natural processes of nitrogen removal. In cases where such measures, such as habitat maintenance or grazing are already implemented, more robust and ambitious restoration measures will have to be contemplated.[23] This could include the implementation of additional measures against acidification by restoring the water cycle, the removal of nutrients by excavation, sod cutting, shopping, measures aimed at restoring wind and water dynamics.[24] It is obvious that the financial and economic burden associated to these measures will considerably affect the political feasibility thereof, especially in times of economic austerity. In the absence of any direct trade-offs with economic development, it remains doubtful whether many Member States will be found ready to take their restoration duties seriously, at least on the short term.

Be that as it may, non-compliance with Article 6(1) of the Habitats Directive, for example in cases of continuous degradation due to excessive nitrogen deposition, might considerably limit the room for further economic development when application is made of Article 6(3) of the Habitats Directive. In cases where the natural habitats are already at an unfavourable conservation status, any additional impact on degraded natural habitats could be qualified as '*significant*' in view of Article 6(3) of the Habitats Directive (cf. *infra*). In this respect, it is important to underline that Article 6(1) of the Habitats Directive does not put forward an explicit deadline for the achievement of the favourable conservation status for the natural habitats. However, the CJEU has recently underlined that the conservation and restoration measures need to be put in place within six years after the inclusion of a Natura 2000-site in the list of Sites of Community Importance.[25]

2.2.2 Article 6(2) of the Habitats Directive: avoiding further deterioration by ongoing and new activities?

Article 6 of the Habitats Directive does not merely focus on the implementation of positive management measures for Natura 2000-sites. For instance, article 6(2) of the Habitats Directive establishes a general obligation to take appropriate protective steps to avoid the deterioration of natural habitats and the disturbance of species, in so far as such disturbance could be significant in relation to the objectives of that directive. Also this protection duty plays an increasingly prominent role in determining the room for manoeuvre conferred upon the Member States when assessing the threat posed by excessive nitrogen deposition to nitrogen-sensitive Natura 2000-sites. In contrast to Article 6(1), which focuses on additional recovery measures, Article 6(2) of the Habitats

[22] Ibid.

[23] C. Stevens et al., *Review of the effectiveness of on-site habitat management to reduce atmospheric nitrogen deposition impacts on terrestrial habitats* (CCW Science Series Report No: 1037 (part A), CCW, Bangor: 2013), p. 83.

[24] See more extensively on recovery strategies: N.A.C. Smits and D. Bal (eds.), *Recovery strategies for nitrogen-sensitive habitats* (The Netherlands: 2012) http://ec.europa.eu/environment/nature/natura2000/platform/documents/part-i-chapter-1_nov-2012_2013-09-10_en.pdf (Accessed 20 June 2015).

[25] CJEU, Case C-90/10, Commission v Spain (2011) ECR I-134, para. 64.

Directive lays emphasis on the duty to take preventative measures in order to avoid further significant deterioration.

At first sight, the standard of protection imposed by Article 6(2) of the Habitats Directive appears to be relatively high. The latter provision, when interpreted literally, seems to explicitly prohibit all forms of deterioration, even those who do not usually produce a significant effect on a Natura 2000-site[26]. Evidently, such interpretation is not without relevance for the issue of nitrogen deposition, since it entails that Member States also have to take into account the impact of small-scale emission sources nearby Natura 2000-sites. Opposite to that interpretation, some Dutch authors have advocated for a more reasonable approach to Article 6(2) of the Habitats Directive, assuming that non-significant deteriorations can be left out of consideration.[27] In a 2009 infringement procedure against France, Advocate General Kokott debunked the latter reasoning when holding that the French implementing rules, according to which human activities could only be restricted if they have significant effects, stand at odds with Article 6(2) of the Habitats Directive.[28] Still, in its final ruling the CJEU did not pronounce itself on the matter, thereby leaving the issue essentially moot.[29]

In terms of economic impact, Article 6(2) of the Habitats Directive has consistently been interpreted by the ECJ/CJEU as an overarching '*catch all-clause*', obliging Member States to scrutinize all harmful activities with adverse consequences on the protected natural habitats for which the site has been designated.[30] By consequence, Member States are barred from exempting certain categories of ongoing activities, such as existing cattle farming activities and the use of nearby roads by vehicle traffic, from Article 6(2) of the Habitats Directive with reference to the economic importance attached thereto.[31] Moreover, the duty to avoid deterioration also clearly applies to ongoing activities that have been authorized and/or initiated before the area at hand had been designated as a Natura 2000-site.[32] Consequently, in cases of excessive nitrogen deposition, also already authorized nitrogen-emitting activities are to be reconsidered whenever they are responsible for a further deterioration of an adjacent Natura 2000-site. This might urge Member States to redraw their permit policies and impose stricter permit conditions to ongoing cattle farming operations. In cases of continuing environmental degradation, Member States will even have to consider the withdrawal of existing permits for major nitrogen polluters in the vicinity of a Natura 2000-site. The stark economic consequences of such actions for the holder of the permit could be mitigated through financial compensation or the availability of subsidy schemes.

As is widely known, Article 6(2) of the Habitats Directives establishes an obligation of result. Most importantly, the latter provision could also force the Member States to contemplate active restoration measures in some instances. This

[26] Article 6(2) of the Habitats Directive does, however, only rule out disturbances to protected species '*in so far as such disturbance could be significant in relation to the objectives of that directive*'.

[27] Backes et al., *Stikstofdepositie en Natura 2000. Een rechtsvergelijkend onderzoek* (Universiteit Maastricht/Alterra: 2011) http://www.rijksoverheid.nl/documenten-en-publicaties/rapporten/2011/09/13/stikstofdepositie-en-natura-2000.html (Accessed 20 June 2015), pp. 29–31.

[28] Advocate General Kokott, Case C-241/08 Commission v France, Opinion of 25 June 2009, para. 20.

[29] CJEU, Case C-241/08 Commission v France (2010), ECR I-01697, para. 18–24.

[30] See more extensively: H. Schoukens, 'Ongoing Activities and Natura 2000: Biodiversity Protection vs Legitimate Expectations', (2014) *Journal for European Environmental & Planning Law*, pp. 1–30.

[31] Ibid,

[32] CJEU, Case C-404/09 Commission v Spain (2011) ECR I-11853, paras. 144–160.

will, among others, be the case whenever restoration is crucial to halt or reverse an ongoing deterioration due to excessive nitrogen impacts. For instance, in its notable decision on the deterioration of the habitat of the Red Grouse in Ireland, the ECJ ruled that it was necessary for the authorities '*not only to take measures to stabilise the problem of overgrazing, but also to ensure that damaged habitats are allowed to recover*'[33]. A similar reasoning is to be applied in the context of elevated levels of nitrogen deposition. This begs the question to what extent Member States are still obliged to consider robust restoration measures for Natura 2000-sites that have been severely affected by historic levels of nitrogen deposition. In its recent ruling in the *Cascina Tre Pini Ss*-case, the CJEU underscored that a declassification of a Natura 2000-site can only be considered where, despite compliance with Article 6(2) of the Habitats Directive, the site has become irretrievably unsuitable to meet the objectives of the Habitats Directive, so that its classification no longer appears justified.[34] To that end, a mere allegation of environmental degradation will not suffice. Thus, in order to successfully apply the declassification-option for severely degraded Natura 2000-sites, a Member State will have to demonstrate it has taken all the necessary measure to restore the site, thereby avoiding further deterioration.[35] Member States are therefore in principle required to find comprehensive solutions in order to halt the ongoing degradation of Natura 2000-sites caused by current nitrogen deposition impacts, even if the majority of the damage has been incurred before the designation of the area as Natura 2000-site. Only if it can be established that the bulk of the degradation is to be assigned to pre-designation activities, sufficient recovery measures have been implemented in the meantime and have proven to be not successful, a declassification option might possibly still be in line with the protection duties enshrined in Article 6(2) of the Habitats Directive.

2.2.3 *Article 6(3) and (4) of the Habitats Directive: assessing the adverse effects of new nitrogen-emitting developments?*

Whereas Article 6(2) of the Habitats Directive includes a clear-cut result obligation, it leaves it to the Member States to consider which specific regulatory actions are necessary in order to avoid further deterioration. By contrast, the procedural rules laid down by Article 6(3) and (4) of the Habitats Directive are more straightforward in terms of legal procedures to be applied in the context of permit policies and other decision-making processes. The latter provision explicitly sets out the procedures to be followed in respect of a plan or project which is not directly connected with or necessary to the management of the Natura 2000-site but which is likely to have a significant effect thereon.

Pursuant to the first sentence of Article 6(3) of the Habitats Directive, any plan or project likely to have a significant effect on a Natura 2000-site, either individually or in combination with other plans or projects, shall undergo an appropriate assessment to determine its implications for the site. The competent authorities can only agree to the plan or projects after having ascertained that it will not adversely affect the integrity of the site concerned. Only in exceptional circumstances, a plan or project could still go ahead, in spite of a negative assessment. Evidently, these procedural assessment obligations have major implications for the permit policies pertaining to new and, in some instances, also ongoing nitrogen-emitting activities.

[33] ECJ, Case C-117/00, Commission v Ireland [2002] ECR I-5335, para 31.
[34] CJEU, Case C-301/12, Cascina Tre Pini Ss (2014), para. 32.
[35] Opinion Advocate General Kokott, Case C-301/12 Cascina Tre Pini Ss, 20 June 2013, para.50

Stock-taking of the ECJ's notable ruling in the *Waddenzee*-case, which related to ongoing mechanical cockle fishing activities, one might be inclined to hold that ongoing nitrogen loads emitted by farm holdings fall firmly within the scope of the habitats assessment-rules.[36] Yet, in view of more recent case-law developments at EU level, this conclusion needs to be adjusted. In its jurisprudence pertaining to the Environmental Impact Assessment (EIA) Directive, the CJEU pointed out that the mere renewal of an existing permit to operate an ongoing installation, in the absence of any works or interventions involving alterations to the physical aspects of the site, cannot be classified as a '*project*' which falls within the scope of the rules on EIA.[37] Likewise, the CJEU steadfastly reasserted that ongoing activities that had been authorized before the designation of a site or before the entry into force of the Habitats Directive, even when they entail physical interventions, fall outside of the realm of the assessment rules laid down by Article 6(3) of the Habitats Directive.[38] Therefore, depending on the national policy options, ongoing nitrogen-emitting activities such as the continuing use of a motorway will not necessarily fall within the scope of the habitats assessment-rules.

To be more precise, a permit renewal for the operation of an existing farm nearby a Natura 2000-site will not necessarily qualify as a '*project*' within the meaning of Article 6(3) of the Habitats Directive if it does not entail physical expansion works. The same goes for a governmental decision to rise the speed limit on a highway adjacent to a Natura 2000-site. By contrast, it remains uncontested that new plans and projects that are prone to emit additional nitrogen emissions, such as road development projects or the extension of an existing cattle farm, remain subject to the assessment procedures included Article 6(3) of the Habitats Directive. In other words, also changes in ongoing activities, which include physical interventions in the natural environment (e.g. the construction of a new stable), will trigger the application of Article 6(3) of the Habitats Directive. Evidently, Member States can decide to opt for a more broad understanding of the term '*project*' in their national or regional legislation, thereby rendering also ongoing activities subject to a prior assessment in cases of permit renewal.

Lastly, it is not unimportant to address the specific articulation between Article 6(3) and Article 6(2) of the Habitats Directive. As alluded to above, Member States are required to avoid further deterioration of protected natural habitats pursuant Article 6(2) of the Habitats Directive. That said, whenever an authorisation is granted in accordance with Article 6(3) of the Habitats Directive for a plan or project, this necessarily assumes that it is considered not likely to affect the integrity of the affected Natura 2000-site and, accordingly, not to give rise to deterioration within the meaning of Article 6(2) of the Habitats Directive.[39] Only if the project would, due to unforeseen circumstances, still give rise to significant effects, Member States are forced to avoid additional deterioration through the application of Article 6(2) of the Habitats Directive. Additional monitoring schemes will have to ensure that further deterioration is avoided in such instances.

[36] ECJ, Case C-127/02, Landelijke Vereniging tot Behoud van de Waddenzee en Nederlandse Vereniging tot Bescherming van Vogels (2004) ECR I-7405 (Waddenzee), paras. 23–27.

[37] CJEU, Case C-275/09, Brussels Hoofdstedelijk Gewest [2011] ECR I-01753, para. 24.

[38] CJEU, Case 226/08 Stadt Papenburg v Bundesrepublik Deutschland (2010), ECR I-00131, para. 47; CJEU, Case C-90/10, Commission v Spain (2011) ECR I-134 (Papenburg), para. 124–125.

[39] Waddenzee, supra n 36, para. 36.

2.3 Precautionary approach vs. economic development?

The above-conducted analysis has indicated that Member States are, at least in theory, obliged to adopt and implement ambitious recovery schemes for Natura 2000-sites that are or have been affected by an overload of nitrogen deposition. In addition, the Habitats Directive requires the Member States to tighten up the permit conditions for new nitrogen-emitting activities. The fundamental question now arises to what extent the protection rules leave room for balancing the continuation of economic activities with the conservation objectives for Natura 2000-sites.

2.3.1 In dubio pro natura?

The over-arching protection duty laid down by Article 6(2) of the Habitats Directive is to be regarded as a major touchstone for the decision-making process for ongoing and, to a lesser extent, new detrimental activities. However, for now, it is clear that the habitats assessment-rules included in Article 6(3) of the Habitats Directive are gaining the most traction at national level. By and large, they are more relevant for new economic developments, such a road construction works or the expansion of an existing agricultural holding, which might adversely affect Natura 2000-sites.

In recent years, the environmental issues related to excessive nitrogen deposition particularly rose to the surface in the context of the habitats assessment-rules. This should not come as a surprise since the CJEU has consistently asserted that the authorisation criterion laid down in the second sentence of Article 6(3) of the Habitats Directive integrates the precautionary principle. Hence, competent national authorities are only permitted to allow projects or plans if they have made certain, in the light of the appropriate assessment and the applicable conservation objectives, that they will not adversely affect the integrity of that site. That is the case where no reasonable scientific doubt remains as to the absence of such effects.[40] In cases where the Natura 2000-site at issue finds itself already at an unfavourable conservation status due to high levels of nitrogen deposition, putting forward the required degree of certainty as to the absence of adverse effects for new nitrogen-emitting activities could prove to be difficult, if not impossible. Moreover, the CJEU has reaffirmed that the applicable site-linked conservation objectives for the Natura 2000-site, which might reflect restoration options for severely degraded natural habitats, are determinative for the outcome of decision-making procedure under the second sentence of Article 6(3) of the Habitats Directive.[41] For example, in its recent *Sweetman*-decision, which concerned the development of a road leading to the permanent loss of approximately 1.47 hectares of limestone pavement, the CJEU underscored the importance of the obligation to maintain or restore a Natura 2000-site to a favorable conservation status.[42]

Accordingly, plans or projects capable of compromising the attainment of these conservation and/or restoration objectives will in principle not pass the significance-test. Also cumulative effects have to be considered in the appropriate assessment, which even further reduces the room for manoeuvre in cases of excessive nitrogen deposition levels which are the accumulate result of the operation of several cattle farms in the vicinity of a Natura 2000-site. In some instances, also future recovery options will have to be taken into consideration in the context of an appropriate as-

[40] Waddenzee, supra n 36, para. 59.
[41] Ibid, para. 53.
[42] CJEU, Case C-258/11, Sweetman (2013), paras. 39 and 46. See more extensively: H. Schoukens, 'The ruling of the Court of Justice in Sweetman: How to avoid a death by a thousand cuts?', (2014) *ELNI Review*, pp. 2–12

sessment. This might raise the bar even higher for many harmful project developments nearby Natura 2000-sites.

2.3.2 Critical loads as new yardstick?

Over time, the concept of '*critical load*' has emerged as the determining factor to assess the significance of nitrogen emissions in the context of Natura 2000-sites. It is commonly defined as '*a quantitative estimate of an exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge*'[43] and also serves as a benchmark against which to measure the significance of permitted nitrogen contributions in the context of a Natura 2000-site.[44] In recent years, site relevant critical loads for acidification and eutrophication have been established in several Member States, such a Germany, the Netherlands and Belgium (Flemish Region).[45] While the use of threshold values could be defendable from a pragmatic point of view, an exclusive focus on critical loads blurs the fact that the ongoing deterioration of a Natura 2000-site is often not exclusively attributable to elevated levels of nitrogen deposition. Depending on the specific factual circumstances of the site at hand, it can also be related to other factors, such as the absence of sound hydrological management. Indeed, when approached from the perspective of EU nature conservation law, the achievement of the '*overall*' good conservation status, which is dependent on many factors, prevails over the observance of critical loads for nitrogen. Even more so, the Habitats Directive does not include a specific reference to the latter concept. As result, the use of critical loads, while highly recommendable in assessing the significance of additional nitrogen emissions on a Natura 2000-site, will not necessarily leads to conclusive results in this regard.

Be that as it may, several national courts, such as the Dutch Council of State, have ruled that any extra nitrogen emission, regardless of its exact size, can be deemed have significant effects to a Natura 2000-site in which the critical loads for nitrogen deposition have already been exceeded.[46] Against the backdrop of the aforementioned case-law developments, it is not hard to understand how the image emerged of the EU nature directives as rigid pieces of legislation, characterized by a '*dogmatic*' and '*strict*' assessment rules. This was particularly the case in the Netherlands, Germany, Denmark and the UK, where the EU nature directives are frequently invoked in lawsuits against new project developments.[47]

2.3.3 The derogation-clause of Article 6(4) of the Habitats Directive: merely a theoretical option in many instances?

The increasingly tight case-law has created a backlash for EU nature conservation law, which is now often regarded as an inflexible set of rigid protection rules by project developers and business people. As has become obvious through-

[43] J. Nilsson and P. Grennfelt (eds.), *Critical loads for Sulphur and Nitrogen* (UNECE/Nordic Council workshop report, Sweden, Nordic Council of Ministers, Copenhagen: 1988).

[44] Hicks et al., supra n 19.

[45] W.J. Bealey et al., 'Approaches to Assessing the Impacts of New Plans and Projects on Natura 2000-sites', In W.K. Hicks et al. (eds.,) *Nitrogen deposition and Natura 2000: Science and practice in determining environmental impact* (COST729/Nine/ESF/CCW/JNCC/SEI Workshop proceedings: 2011) http://jncc.defra.gov.uk/pdf/airpol_WG6article63assessments.pdf (Accessed 20 June 2015), pp. 12–19.

[46] See more extensively: M. Uittenbosch, 'Nederland toch op slot; helaas geen aprilgrap', (2009) *Milieu en Recht*, pp. 482–488.

[47] On the Netherlands, see more extensively: Beunen M. and M. Duineveld, 'Divergence and Convergence in Policy Meanings of European Environmental Policies: The Case of the Birds and Habitats Directive', (2010) *International planning studies* 15, pp. 321–334.

out the past decade, the image of the habitats assessment-rules as an obstacle course is to be nuanced in view of the poor application and lax enforcement of the protection rules on the ground.[48] Moreover, it is often overlooked that the Habitats Directive contains a specific clause allowing planning authorities to derogate from the general system of protection for reasons of overriding public interest.

By virtue of Article 6(4) of the Habitats Directive, plans or projects may be authorized, by way of derogation and in spite of a negative assessment of the implications for the site, where there are imperative reasons of overriding public interest (IROPI), there are no alternative solutions and all compensatory measures necessary to ensure the overall coherence of the Natura 2000 Network have been taken.

Still, a closer analysis of the 2012 Guidance document produced by the European Commission as to Article 6(4) of the Habitats Directive[49] indicates that the derogation conditions are to be interpreted in a restrictive manner and thus not offer a general fall-back option for economic development. This appears to be reaffirmed in the ECJ/CJEU's more recent jurisprudence.[50] In addition, the simple fact that private interests are, as a matter of principle, not up for consideration under Article 6(4) of the Habitats Directive[51], severely restricts its application for private activities, such as cattle farming, in the vicinity of an overburdened Natura 2000-site. The set of stringent conditions that have to be observed in order to apply the derogation clause partly explains the reluctance at national level to apply this derogation clause for detrimental project developments giving rise to additional nitrogen emissions. Even for plans or projects that are eligible as '*imperative reasons of overriding public interest*', such as large-scale road development projects and power stations, the mere prospect of a thorough alternatives assessment, in which the aim of the project needs to be tested against the background of other reasonable alternatives, might scare off many project developers.

In other words, whereas it could be submitted that Article 6(4) poses no insurmountable obstacle to authorisation for large-scale project developments that might lead to additional nitrogen emissions, the scrutiny and time delays associated thereto help to explain its limited application so far. This stands in sharp contrast to the recent administrative practice of the European Commission under the second subparagraph of Article 6(4) which, at least according to some authors, gives too much weight to economic factors and thus insufficiently takes into account the preventative approach upon which the Habitats Directive is grounded.[52]

3. Towards more flexibility: Novel regulatory approaches to avoid additional deadlocks?

The above-portrayed interpretation of the precautionary principle in the context of the EU nature directives poses additional constraints for the issuance of permits for both new and ongoing activities that create additional nitrogen

[48] J. López-Bao et al., 'Toothless wildlife protection laws', (2015) 24 *Biodiversity and Conservation*, pp. 2105–2108.

[49] European Commission, *Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the Concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory measures, Overall Coherence, Opinion of the Commission* (Brussels: 2012) http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/new_guidance_art6_4_en.pdf (Accessed 20 June 2015).

[50] See ECJ, Case C-239/04, Commission v. Portugal [2006] ECR I-10183.

[51] CJEU, Case C-182/10, Marie-Noëlle Solvay and Others v. Région Wallonne (2012), paras. 75 and 76.

[52] D. McGillivray, 'Compensating Biodiversity Loss: The EU Commission's Approach to Compensation under Art 6 of the Habitats Directive', (2012) *Journal of Environmental Law* 24, pp. 417–450.

emissions. Given the fact that the accumulated nitrogen deposition levels currently exceed nutrient nitrogen critical loads over a substantial area in Europe, neither the mere continuation of cattle farms nor the construction of new road development projects can be presented as a given in a Natura 2000-context.

3.1 Quick fixes for short-term certainty?

In order to alleviate the administrative burden associated to the afore-mentioned protection rules, Member States have tried to further formalize the use of the assessment procedure for project developers. Different approaches have emerged in this regard. Throughout the past years, the use of the afore-mentioned critical loads has enabled the national permit issuing authorities to further rationalize the application of the habitats assessment-rules both in the screening stage (first stage) and, later on, in the decision-making stage (integrity-test). In some Member States, generic *de minimis*-thresholds based on critical loads are being used to further guide the project proponents and permit issuing authorities through the so-called '*screening stage*' of Article 6(3) of the Habitats Directive.

By applying these thresholds, activities whose contribution to the total level of nitrogen deposition in an area is deemed trivial at best, are liberated from the duty to carry out a more laborious and time-consuming appropriate assessment. At the same time other Member States have started to apply critical loads as a reference criterion in the decision-making process under the second sentence of Article 6(3) of the Habitats Directive. In earlier times, relatively generous threshold values were applied by permit issuing instances. For instance, in the Flemish Region a 10 % threshold had been used in relation to cattle farms until some years ago, while in the UK an acceptable process contribution of 20 % of the critical load had been applied in the assessment of nitrogen emissions originating from existing livestock installations.[53]

In recent years, however, the bulk of these thresholds have been tightened up by the national authorities in the light of the poor conservation status of many protected natural habitats. For example, in Germany a 3 % threshold is now used in order to determine whether or not a new activity should be subject to a prior appropriate assessment. The use thereof is, among others, grounded on the assumption that these small project contributions are not detectable in the environment because of natural fluctuations and the lack of sensitivity of measuring instruments.[54] According to the German competent authorities, a causal link between the emission of such negligible amounts of nitrogen and the deterioration of a Natura 2000-site is hard, if not impossible, to establish. This reasoning was reasserted by the German *Bundesverwaltungsgericht* in its recent case-law, in which the validity of the above-mentioned thresholds was explicitly upheld.[55]

That said, if not balanced with an assessment of possible cumulative effects, a wide-spread use of generic *de minimis* thresholds entails the risk that the so-called '*in combination*'-effects linked to the operation of permitted facilities in the vicinity of a Natura 2000-site are left out of consideration. In order to avoid a so-called '*death by a thousand cuts*'-scenario it appears seminal to keep the threshold values as low as possible and to

[53] Bealey et al., supra n 45, pp. 15–16.

[54] R. Uhl, 'Approaches to assessing and permitting plans and projects (where they are sources of air pollution) for Article 6.3 assessments'. In Department for Environment Food and Rural Affairs and Joint Nature Conservation Committee, *Nitrogen Deposition and the Nature Directives. Impacts and Responses: Our shared experiences* (Workshop Proceedings: 2013) http://jncc.defra.gov.uk/pdf/airpol_WG6article63assessments.pdf (Accessed 20 June 2015).

[55] Bundesverwaltungsgericht (2014) BVerwGA25.12.

avoid a too generous application thereof in cases of severe degradation of a Natura 2000-site.

Another regulatory technique to avoid additional deadlock scenarios consists in exempting ongoing use from the assessment rules set out by Article 6(3) of the Habitats Directive. This approach was, among others, implemented in the Dutch 2010 Crisis and Recovery Act and, albeit in a slightly more ambiguous manner, in the Flemish 2014 Nature Conservation Decree[56]. Accordingly, permitted activities that were ongoing at the moment of designation of a Natura 2000-site and have not been intensified or modified since then, are excluded from the obligation to carry out a prior appropriate assessment. The rationale underpinning the Dutch law reform was confirmed in the subsequent national caselaw[57], partly because it implemented the reasoning put forward by the CJEU in its ruling in the *Stadt Papenburg*-case.[58] Moreover, as was mentioned above, the mere renewal of an environmental permit of an ongoing installation does not necessarily qualify as a '*project*' under EU environmental law, creating even more leeway for Member States in this regard.

However, critics submit that the inclusion of this exemption clause in the applicable regulatory framework basically comes down to a legalization of the historic nitrogen exceedances that were present at the time of the final designation of a Natura 2000-site.[59] In addition, excluding the majority of the ongoing uses from a prior assessment, and thereby stricter scrutiny, puts even more weight on the shoulders of the developers of new plans and projects giving rise to additional nitrogen emissions. In other words, an overly generous use of this exemption scheme is capable of further compromising the achievement of the restoration targets for Natura 2000-sites that have already been severely affected by excessive nitrogen loads throughout the past decades.

Henceforth, pursuant to Article 6(2) of the Habitats Directive competent authorities are still required to consider adjusting or, as the case may be, revoking the permits of ongoing installations which are a source of continuing deterioration of a Natura 2000-site.[60] In this respect, due regard must be given to the applicable restoration targets for the Natura 2000-sites at hand. Or, differently put, exemption rules should mainly be regarded as a useful '*regulatory trick*' to offer short term relief for ongoing activities, which are given additional time to readjust their operations or, alternatively, phase out. Yet, the use of exemption clauses offers no fundamental breakthrough or long-term solution for the authorization of new plans and projects causing additional nitrogen emissions on adjacent nitrogen-sensitive Natura 2000-sites. Even more so, if overly relied upon, the use of exemption clauses could backfire for nature conservation as it will be invoked by public authorities as additional justification for the absence of more robust restoration policies toward heavily degraded Natura 2000-sites. Admittedly, the additional flexibility could help in relieving the much-feared additional burden associated with the Habitats Directive in cases of existing activities. However, in turn, this might lead competent authorities to believe that coming forward with more comprehensive solutions for the issue of nitrogen deposition is less urgent.

[56] See more extensively: H. Schoukens et al., 'Het vernieuwde Natuurdecreet: a Game Changer', (2014) *Tijdschrift voor Omgevingsrecht en Omgevingsbeleid*, pp. 473–513.

[57] Dutch Council of State (2010), case no. 200903784/1.

[58] Stadt Papenburg, supra n 38, para. 47.

[59] Along similar lines, see: C.J. Bastmeijer, 'Natuurbeschermingsrecht in crisistijd: 'opzij, opzij, opzij… maak plaats, maak plaats, maak plaats… wij hebben ongelofelijke haast', (2009) Milieu en Recht, pp. 628–633; J. Veltman and G. Smits, 'De voorgestelde regeling van stikstofdepositie in de Crisis- en Herstelwet', (2009) *Milieu en Recht*, pp. 638–641.

[60] Backes et al., supra n 27, pp. 45–47.

3.2 *'Banking'* with nitrogen emissions as mid-term solution for new project developments?

In order to provide the permit issuing authorities with more discretionary margin when authorizing *new* or *modified* projects, the Dutch 2010 Crisis and Recovery Act introduced yet another flexible regulatory tool. It provided the opportunity for permit appliers to offset their nitrogen emissions with reductions that are implemented at other operational facilities (in Dutch: '*salderen*'). By doing so, the Dutch legislator codified a rationale that had already been applied in the existing case-law of the Dutch Council of State.[61] By allowing permit issuing authorities to take into account emission reduction efforts, which are the immediate result of permit withdrawals or revocations for other operating facilities, additional room for manoeuvre is created in scenarios where the exceedance of the critical loads would normally lead to a deadlock for economic activities. In some instances, an operator can also offset additional emissions linked to a new installation with the revocation of an environmental permit for another installation on the same site. The offsetting rules, if applied strictly, will not lead to a net-increase of the total amount of nitrogen deposition in the adjacent Natura 2000-site. Hence, the instrument also seems to be compatible with Article 6(3) of the Habitats Directive. In some Dutch provinces, the competent authorities have gone that far to establish '*nitrogen emission banks*', from which permit applicants can withdraw the necessary permit rights needed for their new operations. As a result, formal negotiations were no longer needed with holders of existing permits.

That said, the promulgation of the novel offsetting rules did not pass unnoticed in the Dutch legal literature.[62] While some of the counter-arguments that were raised against it appear well-founded from environmental perspective, they can be, at least partly, refuted on legalistic grounds.[63] As to the risk of in-combination effects linked to the additional nitrogen emissions, it remains indeed hard to see how this risk will exacerbated by the application of the offsetting rules. Provided the offsetting rules are applied in a rigorous and consistent manner, no additional net contribution of nitrogen will be deposed on the adjacent Natura 2000-sites.

However, at least some part of the criticism seems to hold ground when approached from the perspective of the *standstill*-obligation laid down by Article 6(2) of the Habitats Directive. Indeed, whenever additional reduction efforts are merely used to create so-called '*development room*' for new economic project developments that lead to additional nitrogen deposition, the further degradation of Natura 2000-sites will probably not be halted in the long run. As already alluded to above, a clear distinction must be drawn between the habitats assessment-rules laid down by Article 6(3) of the Habitats Directive and the *standstill*-obligation laid down by Article 6(2) of the Habitats Directive. The former merely requires permit issuing instances to ensure that plans or projects will not give rise to adverse effects in a Natura 2000-site. This obligation seems to be complied with whenever the project at hand does not lead to an increase of the nitrogen deposition levels, at least on a net-level. Still, when all additional reductions are immediately '*re-used*' in order to authorize new development projects, the Netherlands could eventually be held accountable for not observing its obligations under Article 6(2) of the Habitats

[61] C.J. Visser, 'Stikstof en saldering; vallen nu ook de depositiebanken om?', (2013*) Tijdschrift voor gezondheidsschade, milieuschade en aansprakelijkheidsrecht*, pp. 155–160.

[62] Bastmeijer, supra n 59.

[63] Backes, supra n 27, pp. 46–47.

Directive if the existing deterioration continues. In other words, a generous use of the offsetting rules might further compromise the attainment of the EU conservation goals in general and thus lead to possible infringement proceedings before the CJEU.

The application of the offsetting rules is also severely restricted as a result of the more recent case-law developments before the Dutch Council of State.[64] For instance, it is not possible re-use the withdrawal of a permit for an activity which has adverse effects on another habitat type or Natura 2000-site as an offset for a new economic development. Also under the banking rules, it must be guaranteed that nowhere in the affected Natura 2000-site a net-increase of nitrogen deposition levels can be detected. In addition, the Dutch Council of State has highlighted that the proposed mitigating measure needs to be inextricably linked to the filed permit application. In order to fulfil this requirement, is has to be ascertained that the permitted activity, which serves as mitigating measure under the second sentence of Article 6(3) of the Habitats Directive, will be effectively withdrawn or revoked in a short time frame.[65] Also a clear-cut link is to be established between the withdrawn permit and the purported nitrogen emissions.[66] Whereas the latter case-law developments at the national should definitely not be read as an outright rejection of the instrument of deposition banks, they do serve as a cautionary tale that also in this respect no quick wins are possible.[67]

3.3 '*Nature inclusive design*' as long-term go-between for project developments in the context of nitrogen-sensitive Natura 2000-sites?

Absent more generic regulatory solutions to defuse the deadlock scenarios that have emerged in certain scenarios, planning authorities continued searching for novel flexible strategies vis-à-vis mitigation. Interestingly, a recent shift toward a more lenient approach to mitigation is detectable in the planning policies of some Member States, such as the Netherlands and Belgium (Flemish Region). It was submitted that, by taking into account the positive effects of restoration measures that are functionally linked to a project development, additional leeway for permit issuing authorities in the context of over-burdened Natura 2000-sites might be created. The latter approach is built on the premise that such restoration measures can be coined as '*mitigating measures*' under the second sentence of Article 6(3) of the Habitats Directive. It was assumed that such approach could trump the overly strict application of the precautionary principle in permit policies for nitrogen impacts.

Whereas, as a matter of principle, plans and projects prone to create residual significant effects cannot be authorized under the second sentence of Article 6(3) of the Habitats Directive, this more liberal approach seems to offer more flexibility. Accordingly, a permit application leading to additional nitrogen deposition would not have to be rejected if restoration measures in other parts of the affected Natura 2000-sites are capable of offsetting this damage by, for instance, setting forth the restoration of resilient habitats in the coming years. Evidently, such approach will create more flexibility within the decision-making process for harmful activities.

The sudden rise of such novel techniques should therefore not come as a surprise. Increasingly, ecological restoration and management

[64] See also: Zijlmans and Woldendorp, supra n 15.
[65] Dutch Council of State (2011), case no. 200908730/1.
[66] Dutch Council of State (2013), case no. 201303243/1, 201303324/1, 201303514/1 and 201303816/1.
[67] See also more recently: Dutch Council of State (2015), case no. 201402973/1/R3 and 201308952/1/R3.

measures are presented as a key mechanism to combat the adverse effects of nitrogen deposition on protected natural habitats. The incorporation of such measures into spatial developments was seen as the ultimate gateway to a more streamlined permit approach in regions which are already characterized by high background levels of nitrogen deposition. Its success lies in the fact that it allows permit issuing authorities to negate the current unfavourable conservation status of natural habitats by anticipating on the beneficial effects of future restoration measures.[68]

By accepting this more progressive approach to the habitats assessment, the EU nature directives would no longer be perceived as an obnoxious brake on economic development. At the same time nature would also benefit from the additional restoration measures. Depending on the context, this more facilitative approach to the habitats assessment is referred to in Dutch legal literature as '*nature inclusive design*' or '*integral planning*'[69]. Regardless of the specific name tag, all these approaches clearly depart from a more legalistic interpretation of the habitats assessment-procedure and give way to a more flexible reading of Article 6(3) of the Habitats Directive.[70] In spite of the promising results in terms of flexibility at permit level, the legal qualification of measures aimed at creating, restoring or enhancing an area of to-be-affected protected habitat remained unclear at best.

Initially, the Dutch Council of State displayed a remarkable openness to the more liberal reading of the habitats assessment. One of the first notable cases in which the above-mentioned progressive approaches toward mitigation had been successfully applied, was the so-called Dutch '*IJburg-case*'. In these proceedings, a large-scale building project implied the destruction of mussel beds serving as a foraging site for different protected bird species which nested in a nearby Natura 2000-site. However, by having integrated the creation of 132 hectares of new mussel beds in the project design, the project developers were able to submit that the integrity of the Natura 2000-site would not adversely affected by the purported works. When faced with legal challenges, the Dutch Council of State qualified these measures as '*mitigation*', which could be taken into account in the appropriate assessment for the construction of the housing zone in the IJmeer.[71] Interestingly, the Dutch Council of State seemed poised to apply a similar reasoning in nitrogen-related cases.

In a more recent ruling concerning the extension of the Port of Eemshaven, the Dutch Council of State accepted a so-called '*system-based approach*'. Under this interpretation, the integrity of the affected Natura 2000-sites, which were already at an unfavourable conservation status, would not be significantly impaired by the limited increase of nitrogen deposition levels. The additional nature conservation measures that had been attached to the contested nature permits would ensure the resilience of the affected sites. It was assumed that the envisaged nature conservation and restoration measures, which included the removal of nitrogen by stripping off the upper layer of the soil as well as excluding the ongoing shrimp fishers in one of the affected Natura 2000-sites, would render the nitrogen-sensitive habitats in the site more resilient and thus enable them to absorb the additional nitro-

[68] See more extensively: H. Schoukens and A. Cliquet, 'Mitigation and compensation under EU nature conservation law in the Flemish region: beyond the deadlock for development projects?', (2014) *Utrecht Law Review* 2, pp. 194–215.

[69] Zijlmans and Woldendorp, supra n 15.

[70] Kistenkas, supra n 14.

[71] Dutch Council of State (2010), case no. 200901224/1.

gen deposition without any risk for further deterioration.[72]

Be that as it may, not all national courts were swayed by this more progressive interpretation of the habitats assessment. In seemingly sharp contrast with the allegedly '*liberal*' Dutch case-law, the Belgian Council of State displayed more reluctance vis-à-vis the use of restoration measures in an appropriate assessment.[73] This was strikingly illustrated by its 2013 ruling in the legal proceedings concerning the construction of a road bypass ('*Noordzuidverbinding*') in the province of Limburg. In this case, the appropriate assessment had taken into the beneficial effects of a to be created nature corridor zone, located several kilometres away from the affected Natura 2000-site. The Belgian Council of State, however, reasserted the counter-claims raised by the opponents of the project. It took the line that such measures are to be ruled out as mitigation. Instead they are to be tagged as compensatory measures and application should have been made of the derogation clause included in Article 6(4) of the Habitats Directive. This led the Council to conclude that the requirements of the derogation clause had been violated in the present case.[74]

The latter case was not a stand-alone ruling. In a more recent decision the Belgian Council of State again had to shed light on the function of autonomous restoration measures for Natura 2000-sites in an appropriate assessment for a harbour development project. Instead of replicating its earlier rationale vis-à-vis mitigation, the Council confined itself to pointing out that the integral planning-approach had not been adequately strict translated in the conditions attached to the planning permit. No clear-cut guarantees for the attainment of the conservation objectives had been included in the planning permit and thus Article 6(3) of the Habitats Directive had not been complied with. Consequently, the planning permit was suspended.[75]

4. The Briels-ruling of the CJEU: One step back for the flexible approaches toward the habitats assessment?

4.1 Persisting legal uncertainty?

The above-portrayed integrative approaches to the habitats assessment might lead to additional '*win-win scenarios*'. Indeed, given the limited political weight that is attached to nature conservation, many harmful projects will eventually go through, regardless of environmental objections. Thus, from a pragmatic viewpoint, it would be better to implement these project developments while at least having the explicit assurance that the necessary robust restoration measures are attached to it. Some environmentalists, however, counter the latter assumptions by pointing out that a wide-spread application of the latter approach could well undermine the preventative approach that is underpinning the Habitats Directive.

Translated in legal terms, this debate basically revolves around the question whether restoration measures can serve as a general means to outweigh and/or balance the detrimental impact of a purported project in the assessment stage under Article 6 (3) of the Habitats Directive, or, alternatively, can only be taken into account as '*compensation*' when application is made of the restrictive derogation clause under Article 6 (4) of the Habitats Directive.

The CJEU was offered the opportunity to shed light on this matter when the Dutch Coun-

[72] Dutch Council of State (2014), case no. 201304768/1.
[73] See more extensively: Schoukens and Cliquet, supra n 68.
[74] Belgian Council of State (2013), case no. 223.083 Vzw Natuurpunt Limburg.
[75] Belgian Council of State (2013), case no. 225.676 Hilde Orleans.

cil of State decided to refer the so-called '*Briels*'-case to Luxemburg. The proceedings revolved around the broadening of a section of the A2 motorway between the cities of Eindhoven and Den Bosch. According to the appropriate assessment the further increase of motorway traffic would give rise to adverse effects on the nitrogen-sensitive blue marshes in the neighboring Natura 2000-site, which were already at an unfavorable conservation status. The CJEU was asked by the Dutch Council of State to indicate to what extent measures with a view to ensure the creation of new blue marshes elsewhere in the same time, to replace and augment the natural habitats affected by the increase of nitrogen deposition levels linked to the extension of the motorway, could be qualified as '*mitigating measures*' in the context of an appropriate assessment under the second sentence of Article 6(3) of the Habitats Directive or, alternatively, could merely be taken into account when application is made of the derogation clause. In the case at hand, the purported restoration measures allowed the appropriate assessment to conclude that the integrity of the nearby Natura 2000-site would not be adversely affected by the purported project development.

4.2 The CJEU rejects the broad interpretation of the second sentence of Article 6(3) of the Habitats Directive

In its highly readable Opinion of 27 February 2014, Advocate General Sharpston was not swayed by the arguments raised by the proponents of the newly emerged mitigation strategy.[76] While accepting that measures incorporated in project which effectively minimize its impact may be taken into account when assessing whether that project adversely affects the integrity of a site[77], she refused to qualify the creation of new meadows as mitigating measures. In any event, according to the Advocate General '*the new habitat will be, to some extent, artificially created and cannot become a true natural habitat for some, possibly quite considerable time*'[78]. In addition, the Advocate General pointed to the importance of the applicable conservation objectives for the site at hand, which indicated that an expansion of the area of blue marshes and improvement of its quality was needed in order to attain a favorable conservation status.[79]

The CJEU basically reasserted the viewpoints raised by the Advocate General in its ruling of 15 May 2014. The progressive reading of the second sentence of Article 6(3) of the Habitats Directive, which underpinned the appropriate assessment for the Dutch road development project, was ultimately dismissed.[80] In the light of the subsequent analysis, it is interesting to take a closer look at the exact steps of the reasoning used by the CJEU in its ruling.

In a first section, the CJEU further elaborated on the semantic difference between mitigation and compensation. The EU judges firmly rejected the more liberal interpretation approach that had been applied in the appropriate assessment for the extension of the Dutch motorway. In the CJEU's view, the application of the precautionary principle requires the competent national authority to assess the implications of the project for the Natura 2000-site concerned in view of the site's conservation objectives and taking into account the protective measures forming part of that project aimed at avoiding or reducing any direct adverse effects for the site, in order to ensure that it does not adversely affect the integrity

[76] Advocate General Sharpston, TC Briels and Others v. Minister van Infrastructuur en Milieu, Opinion of 27 February 2014.

[77] Ibid, para. 32.

[78] Ibid, para. 42.

[79] Ibid, para. 41.

[80] CJEU, Case C-521/12 TC Briels and Others v. Minister van Infrastructuur en Milieu (2012).

of the site.[81] This entails that protective measures provided for in a project which are aimed at compensating for the negative effects of the project on a Natura 2000-site cannot be included in an appropriate assessment.[82]

As a result of that, the future creation of an area equal or greater size of the affected habitat type in another part of the site which will not be directly affected by the project, cannot be qualified as avoidance measures under Article 6(3) of the Habitats Directive.[83] Instead such measures basically seek to counterbalance the unavoidable negative impacts that go along with the project and therefore should be tagged as compensatory measures within the meaning of Article 6(4) of the Habitats Directive.[84] Since none of the restoration measures tied to the road development project were aimed at avoiding nor reducing the effect on the affected patches of habitat, they were not eligible as mitigation.

However, given the absence of an explicit referral to mitigation in the Habitats Directive, the CJEU needed to come forward with additional arguments in order to refute the claims for a more lenient interpretation of the habitats assessment-procedure. Also in this regard, the CJEU followed in the footsteps of the Advocate General. In its decision, it heavily relied upon the precautionary principle which is underpinning Article 6(3) of the Habitats Directive. In particular, the CJEU noted that any positive effect of a future creation of a new habitat which is aimed at compensating for the loss of area and quality of that same habitat type on a protected site, even where the new area will be bigger and of higher quality, are highly difficult to forecast with a degree of certainty and, in any event, will be visible only several years into the future.[85] In the light of the continuing uncertainty on the effectiveness of habitat management techniques to mitigate nitrogen deposition impacts, this statement is not without relevance for the remainder of this analysis.

Interestingly, the CJEU also rebuked the criticism which pointed to the alleged rigidity to which such an interpretation might lead. It did so by underlining that the restoration and enhancement measures, if inextricably linked to the road development project, could still be taken into account as compensatory measures in the context of the derogation clause of Article 6(4) of the Habitats Directive. Under the CJEU's approach, the fact that the measures are to be implemented in the affected Natura 2000-site has no bearing on it being principally eligible as a compensatory measure under Article 6(4) of the Habitats Directive.[86]

4.3 A first assessment of the *Briels*-decision

The *Briels*-ruling is to be seen as a landmark-decision in the field of EU nature conservation law, especially given its major implications for permit policies at national level in relation to Natura 2000-sites. Compared to the lenient approach to mitigation put forward in some national or regional planning policies, the rationale of the *Briels*-ruling seems to restrict the conditions under which new projects can be authorized in the context of over-burdened Natura 2000-sites. Still, before addressing the wider consequences of the *Briels*-ruling for the Natura 2000 permit policies at national level, it is appropriate to assess the decision from a wider perspective.

First, when assessed from a legalistic perspective, the reasoning applied by the CJEU does appear justified. In the light of the well-

[81] Ibid, para. 28.
[82] Ibid, para. 29.
[83] Ibid, para. 30.
[84] Ibid, para. 31.
[85] Ibid, para. 32.
[86] Ibid, paras. 35–37.

vested mitigation hierarchy, which is implicitly underpinning Article 6(3) of the Habitats Directive, the outcome of the *Briels*-proceedings before the CJEU can hardly be called surprising. In the case at hand, no genuine steps were taken to further reduce the risk of the increased nitrogen deposition levels linked to the extension of the motorway. While it is true that, for instance in the United States, restoration measures are often dubbed '*mitigation*' in the context of offsetting schemes, the basic semantic distinction between mitigation (or minimization or reduction) and compensation (or offsetting) is not controversial, especially not in the view of the prevention principle.

Thus, at semantic level, it remained uncontested that the restoration and enhancement measures would not be capable of preventing the environmental damage to materialize in the first place. The measures merely comprised of the creation of similar habitats elsewhere in the affected Natura 2000-site. Likewise, the stress that is placed on the precautionary principle should not come as a surprise either, given the ECJ/CJEU's earlier reliance on the precautionary approach in the notable *Waddenzee*-ruling.[87]

However, the CJEU's alleged stringent reasoning also seems reasonable when assessed against the backdrop of the available scientific research on the effectiveness of ecological restoration. Indeed, recent reports consistently point to the relative ineffectiveness of restoration efforts in the context of biodiversity offsetting schemes.[88] Restoration efforts, also when applied in the context of planning permit schemes, only rarely equal those of the reference state, even for '*easy to restore*' natural habitats such as wetlands and grasslands. Replicating ecosystems that have been lost to human development will give rise to considerable uncertainty and time delays, especially when it concerns old growth habitats. All too often current offset practices fail to take into account the uncertainty in restoration and its considerable time lags.[89]

In general, the afore-mentioed conclusions also apply in the specific context of the adverse ecological effects caused by the high levels of nitrogen deposition. There indeed exists an apparent lack of comprehensive studies on the subject of ecological restoration and intensified management as a mechanism to combat the adverse effects of nitrogen deposition on Natura 2000 habitats.[90] Even more so, a recent review of the effectiveness of on-site habitat management to reduce atmospheric nitrogen deposition impacts on terrestrial habitats revealed that, while on-site management techniques might improve habitat suitability, it could also lead to unintended consequences.[91]

Thus, as a preliminary conclusion, it can be submitted that the CJEU had common sense at its side when it decided to limit the room left for implementing habitat creation and restoration measures within the framework of the habitats assessment. Whereas a more widespread integration of restoration measures in spatial and economic developments must be welcomed as

[87] Waddenzee, supra n 36.

[88] D. Moreno-Mateos et al., 'Structural and Functional Loss in Restored Wetland Ecosystems', (2012) *Plos Biol.* 10: e1001247, http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1001247 (Accessed 20 June 2015).

[89] M. Curran, S. Hellweg and J. Beck, 'Is there any empirical support for biodiversity offset policy?', (2014) *Ecological Applications* 24, pp. 617–632.

[90] H. Kros and D. Bal, 'The effectiveness of on-site (intensified) habitat management measures and restoration measures to mitigate impacts and to promote recovery', In Department for Environment Food and Rural Affairs and Joint Nature Conservation Committee, *Nitrogen Deposition and the Nature Directives. Impacts and Responses: Our shared experiences* (Workshop Proceedings: 2013) http://jncc.defra.gov.uk/pdf/airpol_WG7Ecologicalrestorationmeasures.pdf (Accessed 20 June 2015).

[91] Stevens et al., supra n 23.

such, since it at least avoids additional losses for nature, an over-reliance on restoration measures in assessment schemes could effectively put into jeopardy the preventative approach underpinning the habitats assessment scheme. In the CJEU's eyes, the creation of new natural habitats should basically be seen as a last resort-option, in order to offset unavoidable damages linked to projects that are necessary for imperative reasons of overriding public interest. Given the poor compliance with procedural and substantive requirements of the habitats assessment-test on the ground in many Member States, the CJEU's reluctance appears warranted.[92]

4.4 Toward more scrutiny?

While the CJEU's approach might have science and the law on its side, critics could tag the ruling as yet another stark illustration of the inability of the Habitats Directive to support more progressive approaches vis-à-vis biodiversity offsetting and nature conservation. Even more, it could eventually backfire at EU nature conservation law. The stringent interpretation-line might be capable of further jeopardizing the legitimacy of the Habitats Directive among policy-makers and the wider public. For one, it could be portended that the achievement of the conservation objectives will, as such, not be guaranteed by applying strict scrutiny to nitrogen-emitting projects whose contributions have, in themselves, no notable effect on nitrogen-sensitive Natura 2000-sites. Accordingly, it can be argued that, by excluding the use of restoration measures in an appropriate assessment under Article 6(3) of the Habitats Directive, the CJEU clearly narrows down the already limited leeway available to national permit issuing instances for future project developments in a Natura 2000-context. This could be seen as the ultimate proof of the dogmatic and inflexible approach of the CJEU to the EU nature directives and its fundamental unwillingness to accommodate a more pragmatic approach to economic development.[93]

Along the same lines, it could be contended that large-scale project developments offer a unique opportunity for implementing robust restoration efforts for degraded Natura 2000-sites because of the large sums of money that are available in such instances. Therefore, adopting a too restrictive stance could do away with one important trigger for ecological restoration. In the end, the additional rigidity brought about by the *Briels*-ruling might be detrimental for the EU's biodiversity in the long run, especially since the compliance with the autonomous restoration duties under Article 6(1) of the Habitats is far from satisfactory.

By holding that habitat restoration and creation measures are compensation, the CJEU seemingly indicated that such measures can only be taken into account in exceptional cases, *i.e.* when application is made of the derogation clause set out by Article 6(4) of the Habitats Directive. Yet, as alluded to above, the additional constraints and possible delays linked to the application of the derogation clause have rendered it increasingly unpopular among planning authorities. Even in the case of large infrastructure projects, which might still meet the standard of '*imperative reason of overriding public interest*', authorities are often quite reluctant in considering the application of Article 6(4) of the Habitats Directive.

[92] See, among others: Milieu ltd. et al., 'National legislation and practices regarding the implementation of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora, in particular Article 6' (Brussels: 2009) http://www.europarl.europa.eu/document/activities/cont/200910/20091013ATT62399/20091013ATT62399EN.pdf (Accessed 20 June 2015).

[93] Kistenkas, supra n 14.

Having said that, in my view, this weariness on the part of the permit issuing authorities is not completely justified. In most instances, the application of Article 6(4), will not represent an insurmountable obstacle to the authorization of the purported project development, even in the context of increasing levels of nitrogen deposition. This is further evidenced by the fact that the European Commission, when being asked to deliver an opinion on the acceptability of a request for application of the derogation clause, has only in one instance delivered a negative response.[94] *Ergo* it should not *a priori* ruled out as last resort-solution in the context of large-scale infrastructure works.

4.5 Nature inclusive design and nitrogen banking in the *post-Briels*-era?

In *post-Briels*-times a reconsideration of the limited use of Article 6(4) of the Habitats Directive might bring about additional leverage for large infrastructure projects. Yet it will not avoid the predicament that many private projects are facing, for instance in regions with high background values of nitrogen deposition. Private projects, such as the extension of a pig farm, will not meet the standards set out by the derogation clause since they do not relate to '*imperative reasons of overriding public interest*'. It is apparent that the prospects for private project development in the *post-Briels*-era are less promising, at least in the context of the application Natura 2000-rules at permit level. However, it remains to be seen whether all margin for manvoeuvre has indeed completely disappeared with the *Briels*-ruling.

Remarkably so, the final outcome of the *Briels*-proceedings itself before the Dutch Council of State does not display a shift toward more rigidity. Rather ironically, a new appropriate assessment had been drafted up for the contested project, which concluded that, contrary to earlier reports, the blue marshes were still at a favorable conservation status in the affected site and thus no extension of the affected natural habitats was deemed necessary. Therefore, the discussion on the legal qualification of the creation of new natural habitats had become irrelevant in order to assess the validity of the new planning permit that had been issued for the purported road extension works.[95]

Obviously, a newly drafted appropriate assessment will not be able to provide for an alternative escape route in every single case. The more recent jurisprudence of the Dutch Council of State clearly points to more rigidity for the authorization of new project developments in the Natura 2000-context.[96] In several of its recent decisions, the Dutch Council of State rejected the use of restoration measures for projects which led to the outright destruction of protected habitats located inside a Natura 2000-site.[97] It was only found ready to accept the use of restoration measures in cases where project development interfered with foraging areas that were located in the immediate vicinity of a Natura 2000-site (but not

[94] In recent years, several authors have contended that many of the Commission's opinions, which are issued under the second subparagraph of Article 6(4) of the Habitats Directive, do not fulfil the applicable derogation requirements set about by Article 6(4) of the Habitats Directive. All too often mere economic considerations seem to overrule the conservation objectives of the Habitats Directive. See among others: D. McGillivray, 'Compensating Biodiversity Loss: the EU Commission's Approach to Compensation under Art. 6 of the Habitats Directive', (2012) *Journal of Environmental Law*, pp. 417–450.

[95] Dutch Council of State (2014), case no. 201110075/4 and 201201853/3.

[96] See more extensively: R. Frins, 'Het onderscheid tussen mitigatie en compensatie: alea jacta est?', (2015) *Tijdschrift voor Bouwrecht*, pp. 198–205.

[97] Dutch Council of State (2015), case no. 201401736/1; Dutch Council of State (2014), case no. 201202327/1 and 201300125/1.

within its boundaries).[98] By contrast, the Dutch judged adopted a more rigid approach in cases where the authorized project was liable to cause adverse effects to protected natural habitats that are effectively located within the boundaries of a Natura 2000-site. For example, in yet another nitrogen-related case, the Council of State ruled that the increase of nitrogen deposition levels cannot be balanced at site level unless the mitigating measures effectively prevent the occurrence of adverse effects on the protected habitats that will be affected by the project.[99] In line with the allegedly strict stance of the CEU, the Dutch Council of State assumed that habitat creation or restoration measures can only be qualified as mitigation under the second sentence of Article 6(3) of the Habitats Directive whenever they relate to the same affected habitat. Consequently, measures relating to other patches of habitats that will not be impacted by the purported project development can not be taken into account.

Still, it would be erroneous to assume that with the *Briels*-ruling all room for discretion has disappeared. As such, the underlying *Briels*-logic does not preclude the integration of genuine avoidance and minimizing measures in project developments, such as additional nitrogen-capture measures and other means to abate nitrogen and ammonia emissions at facility-level. In other cases, the withdrawal or revocation of one or more permits for other cattle farms that are located in the immediate neighbourhood of the proposed activity might still prevent a net-increase of nitrogen deposition on the protected habitats of an adjacent protected site. Indeed, offsetting nitrogen additional emissions with reduction efforts that are implemented in nearby operational facilities has not been rendered illegal by the *Briels*-decision. That is, provided that they both relate to the same affected patches of natural habitats. In itself, the *Briels*-proceedings did not revolve around the question whether the withdrawal of a permit for an activity which is impacting the same habitat as the one that will be affected by a new plan or project qualifies as mitigation. In contrast to the creation of new natural habitats, the withdrawal of a permit for an activity which is located in the immediate vicinity of the purported plan or project will effectively avoid any additional adverse effects to materialize in the first place. Hence, nitrogen banking, when applied with the necessary caution, would not necessarily go against the precautionary principle. However, as already underlined in the above-conducted analysis, it must be ensured that the withdrawal of an existing permit is not merely an autonomous measure, which would have taken place anyway, regardless of the purported project development. If that were to be the case, it cannot be taken into account as a mitigating measure. Moreover, it needs to be guaranteed that the territorial scope of the permit overlaps with the impact area of the projected new activities.[100]

On a more general note, it might be contended that the CJEU does, as such, not rule out the use of habitat creation and restoration measures as mitigation for excessive nitrogen deposition loads *per se*. While it does certainly limit the possibility for relying on the positive effects of habitat creation and restoration measures in the context of an appropriate assessment not all room for flexibility appears to have vanished. Pursuant to one interpretation-line, restoration measures that are directly related to the same patch of habitat as the one that will be affected

[98] Dutch Council of State (2014), case no. 201309630/1.
[99] Dutch Council of State (2014), case no. 201309655/1.
[100] H. Woldendorp and H. Schoukens, 'De Habitatrichtlijn als Doos van Pandora: het A2-arrest van het Europese Hof van Justitie', (2015) *Milieu en Recht*, pp. 2–15.

by the increased level of nitrogen deposition, remain eligible as a genuine mitigating measure under the second sentence of Article 6(3) of the Habitats Directive. It could be portended that such measures still qualify as mitigation since they immediately relate to the affected habitats. They could yield more resilient natural habitats, which are better equipped to absorb additional nitrogen emissions.

Still, the more pressing question remains whether an appropriate assessment can explicitly anticipate on the beneficial ecological effects that will be produced by the purported restoration measures in the context of a harmful project development, regardless of whether they relate to the affected habitats themselves or more distantly located natural habitats. In the light of the limited effectiveness of ecological restoration in general, especially when applied in the context of a biodiversity offsetting scheme, it remains uncertain whether the precautionary principle does not pose a more fundamental additional constraint in this regard. If that were to be the case, also the use of restoration measures that are directly linked to the affected patches of natural habitats is to be ruled out in the context of an appropriate assessment.

For the time being, the Dutch Council of State does not seem to adopt such a strict stance. In one case, it at least implicitly accepted that restoration measures which are legally guaranteed in a planning permit, provided they relate to the to-be-affected protected habitat, can still be of use under Article 6(3) of the Habitats Directive. However, so far, the Dutch Council of State has only touched upon that issue indirectly, which makes it hard to draw general conclusions in this regard.[101]

When approached with the necessary caution, the *Briels*-ruling could be framed as an implicit invitation to project developers to implement restoration measures in a more early stage of the planning process. This would allow permit issuing authorities to take into account the positive effects which have already materialized in the meantime during a subsequent ecological assessment. Yet, understandably, awaiting the final results of restoration measures will not be an appealing prospect for many project developers. It will create additional delays. Therefore, one might ponder whether adaptive management techniques, if attached to a strict monitoring protocol, could not provide for a more elegant go-between for the inherent contradiction that arises in this respect.[102] In itself, adaptive management does not necessarily have to go against the precautionary approach laid down by the CJEU. Interestingly, the European Commission has already pointed to the obvious link between mitigation and monitoring in some of its recent guidance documents[103], whereas Advocate General Kokott herself has already underscored the underlying rationale of adaptive management in the context of Article 6(3) of the Habitats Directive. In cases where scientific uncertainty remains, the Advocate General accepted that it must be possible to gain further knowledge of the adverse effects by means of associated scientific observation and implementation of the plan and project accordingly.[104] Likewise, national

[101] Frins, supra n 96.

[102] P.F.M. Opdam, M.E.A. Broekmeyer and F.H. Kistenkas, 'Identifying Uncertainties in Judging the Significance of Human Impacts on Natura 2000-sites', (2009) *Environmental Science & Policy* 12, pp. 912–921.

[103] European Commission, EU Guidance on Wind Energy Development in Accordance with the EU Nature Legislation (Brussels: 2010) http://ec.europa.eu/environment/nature/natura2000/management/docs/Wind_farms.pdf (Accessed 20 June 2015), pp. 83–84.

[104] Advocate General Kokott, Landelijke Vereniging tot Behoud van de Waddenzee en Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij, Opinion of 29 January 2004.

case-law reasserts, albeit under strict conditions, the use of adaptive management protocol as a means to reconcile a rather stringent precautionary approach with harmful new project developments.[105]

The particularity of adaptive management in the context of elevated levels of nitrogen deposition would be that it allows tracking the effective progress of the restoration measures on the ground. Thus, it might serve as back-up for mitigating measures that have been included at permit level. A gradual approach is thinkable whereby additional nitrogen emissions are only allowed whenever preliminary monitoring results indicate the effectiveness of the restoration measures on the ground. Obviously, the specific monitoring conditions and the legal consequences attached to negative monitoring results need to be precisely circumscribed in the planning permits in order to comply with the precautionary principle.

5. The Dutch Programmatic Approach to Nitrogen (PAN): A panacea for all ills?

5.1 A more integrated approach to excessive nitrogen deposition levels in Natura 2000-sites

In spite of the looming legal uncertainty surrounding the qualification of habitat restoration and creation measures in the context of Article 6(3) of the Habitats Directive, the Dutch government was poised to implement a similar rationale on a more generic level.

The key insights deduced from the inclusion of restoration measures at project-level, are integrated in a national program aimed at comprehensively addressing the excess of nitrogen deposition in all affected Natura 2000-site. Also some of the other above-discussed regulatory tools – such as the *de minimis*-thresholds, the exemption for ongoing use and internal offsetting practices – are partly included in the newly established integrated approach to nitrogen, coined *Programmatic Approach Nitrogen (PAN)*. The PAN entered into force on the 1 of July 2015 after several years of tense political negotiations.[106] With its choice for a programmatic approach to the nitrogen issue, the Dutch government aims to solve the ever-recurring conflict between the strict nature protection rules and economic issues in a more lasting manner.

Given its novelty and its linkages to above-suggested solutions, a closer analysis of the PAN is merited. The core of the PAN, which has a runtime of (at least) 15 years, is to make preservation and restoration of the nature quality possible without jeopardizing economic development. The PAN, which takes into account an expected economic growth of 2,5 %, includes binding agreements that have made about remedial measures in the Natura 2000-sites and additional reductions of the nitrogen load from agriculture, transport and industry. It is an integral program of the Dutch government and the joint provinces, which also relies on the cooperation and involvement of many different actors, such as the Association of Dutch Municipalities, the Association

[105] See more extensively: R. Frins and H. Schoukens (2014) Balancing wind energy and nature protection: from policy conflicts towards genuine sustainable development. In L. Squitani, B. Vanheusen, M. Reeze and B. Vanheusden (eds.), *Sustainable Energy United in Diversity – Challenges and Approaches in Energy Transition in the European Union*, (Groningen, Europa Law Publishing: 2014), pp. 84–110.

[106] Decision of the Secretary of State for Economic Affairs and the Minister of Infrastructure and Environment of 10 June 2015 nr. DGAN-NB/15076652 to adopt the Programmatic Approach Nitrogen, Dutch Official Gazette 29 June 2015. The Programmatic Approach Nitrogen (final version) can be consulted at the following (Dutch) website: http://pas.natura2000.nl/ (Accessed 20 June 2015). See also: H. Woldendorp and H. Schoukens, 'De Programmatische Aanpak Stikstof (PAS) in Nederland als inspiratiebron voor Vlaanderen: pas op de plaats of een stap vooruit?', (2015) *Tijdschrift voor Omgevingsrecht en Omgevingsbeleid*, pp. 320–344.

of Water Boards, the agricultural and horticultural organisations, the employers' organisation VNO-NCW and the various land management organisations. In terms of territorial range, the PAN has a wide range, since it includes generic reduction measures for all relevant nitrogen producing sectors. Most importantly, it specifically focuses on the Natura 2000-sites with over-sensitive natural habitats to which specific recovery goals are linked.

In itself, the PAN has a double purpose. Not only does it aim to ensure compliance with the conservation duties incumbent upon the Netherlands for its nitrogen-sensitive Natura 2000-sites (cf. *infra*), it also re-uses the positive nature effects of the reduction efforts in order to create more so-called '*deposition room*' for economic development, such as the expansion of industrial facilities and dairy farms. The integrated approach rests upon two pillars: (1) reducing point-based emissions from agriculture, transport and industry through on-site measures; (2) reducing the effects of nitrogen deposition in Natura 2000-sites through appropriate restoration and management measures. The additional reduction efforts will create some room for economic development. To be more precise, 50 % of the additional reductions will be returned to economic operators as '*development room*'. The restoration efforts should, in turn, guarantee that the authorized ongoing nitrogen-emitting activities do not further deteriorate the already affected Natura 2000-sites.

While the nature management and restoration measures do not as such create additional room for development, they do ensure that Article 6(2) of the Habitats Directive is complied with and that, on the long run, also the achievement of the conservation goals under Article 6(1) of the Habitats Directive remains a realistic objective. The restoration measures are needed since the reduction efforts alone would not succeeding in stopping the ongoing deterioration in many overburdened Natura 2000-sites.

A significant part of the '*deposition room*' will be turned into '*development room*' for new economic activities and projects, of which the most important are outlined in the PAN itself. The remaining part of the room for development will serve to offset the additional contributions linked to autonomous activities, such as the increase of motorway traffic. The source-related reduction efforts (which are primarily implemented in the agricultural sector) and nature management measures that are set forth will be used as justification for allowing new project developments in the vicinity of Natura 2000-sites.[107]

The PAN goes off the beaten track by opting for a cross-sectoral approach, which tries to reduce nitrogen deposition in all relevant societal sectors (agriculture, industry and transport) by generic source-related measures, that go beyond the existing commitments. This should guarantee a further decrease of the levels of nitrogen deposition. With the purported restoration measures, the Dutch government tries to halt the continuing deterioration of natural habitats in the Natura 2000-sites that are affected by atmospheric nitrogen deposition. Such measures might include measures against acidification by adding basic substances and/or restoration of the water cycle, the removal of nutrients by excavation, dredging, moving, burning or litter removal, … and interventions in the vegetal succession by, among others, coppice management. If a certain effect of nitrogen on this quality can be reduced by measures that are themselves not focused on nitrogen deposition, such a measure can be characterised as a mitigating measure under the integrated PAN-approach. For this reason, measures

[107] G.C.W. Van der Feltz, 'Stikstof, recente ontwikkelingen in wetgeving en rechtspraak', (2014) *Tijdschrift voor Bouwrecht* 2014, p. 53.

aimed at hydrological restoration have, among others, gotten a prominent place within the recently established recovery strategies.

For each separate Natura 2000-site a site-analysis has been produced, in which the specific challenges and possible restoration and management measures are being enumerated and assessed. This site-specific analysis has been subjected to a prior appropriate assessment, while also the PAN in its entirety has been assessed in the light of Article 6(3) of the Habitats Directive. After having outlined the necessary site-related recovery measures, the analysis explicitly lays down the room for economic development that becomes available if these measures are implemented. Within the context of a site-specific analysis the beneficial impacts tied to the additional reductions and management measures are balanced with the room for economic development. Provided the purported project developments can be framed in the room for economic development which has been assigned by the PAN, the analysis will serve as appropriate assessment for these projects. By doing so, it will significantly alleviate the administrative burden for new plans and projects.

The latter permit applications will thus no longer have to be subject to a comprehensive appropriate assessment. Instead the project proponent is merely required to demonstrate that the purported project development can be framed within the applicable PAN-approach and the associated site-analysis. It is assumed that the restoration measures provided for in the area analysis will ensure that no further deterioration of the Natura 2000-site will ensue. The calculation tool AERIUS is crucial in this regard. It calculates nitrogen emissions and deposition levels for Natura 2000-sites, caused by new or expanding economic activity. AERIUS support the process of permits being granted for economic activities involving nitrogen emissions and monitors whether the total nitrogen burden will continue to decline.[108]

Taking into account the measures aimed at reducing point based emissions from agriculture, transport and industry, on the one hand, and the positive effects of the on-site restoration measures, on the other hand, new economic development can be allowed, also in the vicinity of nitrogen-sensitive Natura 2000-sites. In addition, new projects that do not cause a nitrogen deposition of more than 1 mol nitrogen per hectare on a protected habitat are exempted from a prior permit requirement[109], while also the exemption for certain ongoing uses, which has been treated above, in section 3.1, remains applicable.

5.2 The programmatic approach as ultimate go-between?

In itself, the PAN constitutes a prime example of how to reconcile new economic development with nature conservation. In 2014, the foundations for a similar approach have also been implemented in Flemish nature conservation law.[110] Its appeal lies in the fact that it allows economic development in the context of over-burdened Natura 2000-sites at a time when critical levels are still exceeded. The latter sites will be subject to robust restoration measures, which go beyond current management measures. In exchange for further reduction and restoration measures, project developers are offered more flexibility when applying for new project developments. In the absence of this shift to more ambitious reduction and recovery efforts, no room for further economic development would be available, at

[108] See also: https://www.aerius.nl/nl (Accessed 20 June 2015).

[109] Projects and activities that are prone cause an additional nitrogen deposition between 0,05 and 1 mol on a nearby protected habitat will be subject to a prior declaration.

[110] Schoukens et al., supra n 56.

least not at short-term. However, the Dutch approach is also not uncontested, especially in view of the outcome of the *Briels*-proceedings. In 2012, the Advisory Division of the Dutch Council of State issued a very readable Opinion on the PAN, in which some interesting points relating to its compatibility with the EU nature directives were raised.[111]

By accepting that part of the '*nature gains*' will not be primarily used to comply with Article 6(1) of the Habitats Directive – the achievement of the favourable conservation status – the Council explicitly reasserted the main premise upon which the PAN is built. The absence of a concrete time schedule in Article 6(1) of the Habitats Directive (cf. *supra*) seems to leave the Member States a certain discretion in this regard, as long as the achievement of the good conservation status is not definitively compromised.

This being the case, the Council voiced additional concerns as to the observance of the *standstill*-principle which is enshrined in Article 6(2) of the Habitats Directive. In its view, it remained uncertain whether the PAN had taken into account the deterioration that had taken place in between the designation of the Natura 2000-sites and the entry into force of the PAN. Pertaining to Article 6(3) of the Habitats Directive, the Council principally accepted that both the source-related and the area-oriented restoration measure, upon which the room for economic development is based, can serve as a mitigation at project-level. The Council acknowledged that there is a direct and inextricable link between the allocated room for economic development at site level and the additional reduction measures that will be implemented within the agricultural sector. Still, it stipulated some additional conditions which will have to be observed in order to ensure compliance with Article 6(3) of the Habitats Directive. Only if the restoration measures are being implemented according to plan, it is sufficiently ascertained that the allocated room for economic development will not harm the integrity of the Natura 2000-sites. In order to avoid adverse effects, the Dutch Council of State recommended to allocate the room for additional economic development in a gradual manner.

The 2014 *Briels*-ruling seems to have compounded matters even further. At first sight, one of the basic premises upon which the PAN is grounded – *i.e.* safeguarding the necessary room for economic development by, among others, anticipating on the effectiveness of purported restoration measures – remains dubious at best.

On the surface, the CJEU seems to dismiss approaches to the habitats assessment-test which explicitly anticipate on the beneficial effects of future habitat creation and restoration measures. Thus, by indirectly accepting the effectiveness of the restoration measures from beforehand as a means to justify the allocation of development space, the PAN seems to stand at odds with the strict interpretation of the precautionary principle as set out by the CJEU in its *Briels*-ruling. Pursuant to the latter ruling, room for economic development should only become available whenever the effectiveness of the restoration measures has been established. Along the same lines, some authors have pointed to the ambiguity of the exact wording of some of the site-specific analyses that have been carried out for the involved Natura 2000-sites.[112] Moreover, the implementation of additional restoration measures will, in some instances, also give rise to additional ecological impacts. Several natural habitats, such as peatlands, do not require further intensive management and restoration measures. Hence, the implementation of restoration measures in order to offset

[111] Advisory Division of the Dutch Council of State (2012) No.W 15.12.0046/IV.

[112] Frins, supra n 96.

future nitrogen emissions might, in the long run, lead to even more degraded ecosystems. At any rate, whenever the future adequacy of some of the restoration measures that are included in the site-analyses is openly denounced in the PAN-related documents and analyses, the PAN will indeed fall short of the standards set out by the CJEU. In addition, the PAN is also explicitly moving away from the traditional approach to mitigation, in which ad hoc-restoration measures are explicitly linked to a specific project development. Even more so, with its reliance on generic source based efforts and restoration measures, the PAN also no longer provides for an explicit link between a plan or project and a collection of mitigating measures at site-level.

5.3 A silver lining?

In spite of the additional difficulties to which the *Briels*-ruling might lead for the further implementation of the PAN, there could be a silver lining to it.

First, as alluded to above, it could be argued that the CJEU does not rule out the use of restoration measures *per se* in the context of an appropriate assessment. In that regard, it is not unimportant to point out that the PAN has been preceded by comprehensive ecological research which aimed to scientifically evaluate the capabilities for mitigating the adverse effects caused by excessive nitrogen deposition levels in Natura 2000-sites.[113] This research, which is ground-breaking in its own right, led to the conclusion that, on general grounds, the presented management measures are effectively capable of offsetting the adverse effects related to elevated nitrogen deposition levels. This conclusion is further backed up by the site-specific analyses, in which the most appropriate restoration measures are selected and the correlating room for economic developments has been enumerated. Following that line of reasoning, one might indeed contend that the PAN does not allow a scenario to unfold which is similar to the facts that led to the *Briels*-ruling.[114] In itself, the PAN is not about discounting adverse effects in one part of a Natura 2000-site with the positive effects linked to restoration measures in another part of the Natura 2000-site.

The PAN ensures that no deterioration takes place over the whole surface of the Natura 2000-sites that are included in the program. Moreover, the additional room for development is in itself only linked to the additional reduction pledges by the relevant economic sectors. In addition, the final version of the PAN explicitly underlines that every area analysis is based on the best scientific knowledge available and that, for none of them it can be concluded that serious doubts remain as to whether the continuing deterioration will be halted and the applicable conservation objectives will be met.[115]

Second, the monitoring requirements that are linked to the PAN could help in ensuring the compatibility of the programmatic approach with the EU nature directives. The monitoring rules will allow the competent authorities to continuously monitor the progress of the implementation of the PAN but, most importantly, will also check the effectiveness of the restoration measures and the results linked to the additional reduction measures. If the monitoring results would reveal that, in spite of the implemented reduction and restoration measures, the ongoing deterioration of a Natura 2000-site still continues, the competent authorities are required to revise these measures, contemplate additional source-

[113] Smits and Bal, supra n 24.

[114] Secretary of State for Economic Affairs and the Minister of Infrastructure and Environment, *Note of Reply*, 1 July 2015, available at http://pas.natura2000.nl/ (Accessed 20 June 2015), pp. 25–26.

[115] PAN, supra n 106, pp. 24–25.

based or restoration measures or, ultimately, temporarily adjust the development room that has been allocated for future economic activities in the immediate surroundings of the Natura 2000-site. Moreover, as a corollary of this adaptive management-approach, the room for economic activities that are not already explicitly enumerated in the PAN, will be allocated in a gradual manner. Under the final version of the PAN, at maximum 60 % of the economic development room will be allocated in the first three years after the entry into force of the PAN. Only when it can be demonstrated that the restoration measures have indeed yielded the predicted positive effects, a bigger share of the room for economic development can be allocated.

By and large, the above-listed guarantees, if properly implemented, could enable the PAN to generally come forward to at least some of the above-portrayed concerns. Yet the latter safeguards do not take away the risk that some of the restoration measures will not yield the expected positive ecological effects on the ground. Moreover, in terms of timing it remains rather worrisome that further economic development is allowed at a time when the beneficial effects of the ecological restoration measures have not yet materialized. The soundness of the ecological fundamentals upon which the PAN is grounded will therefore be instrumental to ensure the legal underpinnings of the PAN. Awaiting the first results of the effectiveness of the restoration measures, however, new economic activities will already be authorized under the PAN-approach. Taking into account that no significant reduction of nitrogen deposition have taken place at least in some Dutch Natura 2000-sites during the past ten years, this strategy might further undermine the ecological quality of at least some of the Dutch Natura 2000-site. Admittedly, given the allegedly robust ecological underpinnings of the PAN, it can be entertained that such a scenario is not very likely to unfold. Yet nature is unpredictable. Seeing the degraded status of many nitrogen-sensitive Natura 2000-sites it is not unreasonable to think that, at least in some instances, additional restoration measures are required in order to avoid a further decline.

Obviously, if monitoring result were indeed to display a further decline of most Natura 2000-sites, the basic fundamentals of the PAN might quickly evaporate. This will be the case whenever the expected decrease of nitrogen deposition does not see itself translated in the monitoring results on the ground. However, even assuming that the EU and/or national judges would reassert the legality of the Dutch adaptive management approach, it is certainly worth pointing out that a more fundamental concern on the viability of the PAN is still looming around the corner. One of the basic premises of the PAN is to re-use the beneficial effects tied to the purported restoration measures as a counterbalance for the creation of new development space. The measures should avoid additional significant effects to materialize in the first place. Thus, it remains to be seen whether restoration measures in the context of a degraded Natura 2000-sites can be used as leverage for authorizing new economic activities while, at the same time, Member States are also required to implement measures in order to achieve the favorable conservation status for the affected natural habitats. In other words, it could be entertained that Member States should first focus on the implementation of Article 6(1) of the Habitats Directive. Only when this obligation has been complied with, new room for economic development should become available. Under the PAN-approach, the beneficial effects linked to restoration measures are immediately re-used in exchange for further economic expansion.

The PAN tries to solve this last riddle by pointing out that, while the restoration measures are indeed primarily seeking to avoid further

deterioration, they are also ambitious enough to maintain the recovery-path needed to achieve the favorable conservation status according to Article 6(1) of the Habitats Directive.

6. Conclusion and outlook

Excessive atmospheric nitrogen deposition levels represent a major anthropogenic impediment for the recovery of many Natura 2000-sites across the EU. This paper has demonstrated that, in the light of the rigid interpretation of the precautionary principle by the CJEU, national and regional permit issuing authorities in many Member States are facing increasingly tight margins when granting authorizations for plans or projects leading to additional nitrogen emissions. Implementing more scrutiny in relation to unsustainable economic development would be the obvious response to the overload of nitrogen that is present in our ecosystems. However, accepting a so-called '*degrowth-scenario*' merely in function of the much-needed restoration of threatened natural habitats, probably represents a no go-zone for most if not all politicians.

This article sought to address the legal solutions that are capable of better aligning economic developments with a realization of the EU's ambitious recovery targets for its most valuable natural sites.

In a first tier, the analysis has shown that an increasing number of Member States are using threshold values in order to further streamline the habitats assessment-procedures and alleviate the administrative burden for plans and projects whose nitrogen emissions are limited in themselves. A first conclusion is that such approaches might indeed help in objectivizing the application of the habitats assessment in nitrogen-related cases. Still, when applied in a generous manner, the use of thresholds remains debatable in the light of the preventative approach underpinning Article 6(3) of the Habitats Directive. Moreover, exempting ongoing use from a prior assessment does not offer a long-term solution to the environmental issue of nitrogen surpluses in degraded Natura 2000-sites, especially not since Member States also have comply with the autonomous protection and restoration duties set out in Article 6(1) and 6(2) of the Habitats Directive.

A second conclusion is that many of the novel regulatory efforts which aim to further reconcile economic developments with nitrogen mitigation seem to go against the precautionary approach laid down by the EU nature directives. Newly coined concepts such as '*nature inclusive design*', which is grounded on a more lenient interpretation of the concept of '*mitigation*' within the context Article 6(3) of the Habitats Directive, explicitly anticipate on the positive effects of habitat creation and restoration measures. This article sought to demonstrate that that, taking into consideration the outcome of the recent *Briels*-proceedings before the CJEU, a more generous reading of the habitats assessment-rules will be harder to sustain in the coming years. Whereas not all room for leverage has disappeared with the 2014 *Briels*-ruling, the lack of conclusive evidence on the effectiveness of restoration measures for over-burdened natural habitats will probably represent the most formidable obstacle to a more flexible approach to the EU nature directives. At any rate, the CJEU has steadfastly refused to let go its strict interpretation of the precautionary principle in the context of Article 6(3) of the Habitats Directive. At the same time offsetting possible environmental damage with reduction efforts that have been achieved in other permitted operations, while not being ruled out by the *Briels*-ruling, only has limited potential in the context of the habitats assessment-obligation given the additional strict requirements that have to be complied with.

Which bring us to a third and final conclu-

sion. The Dutch programmatic approach (PAN), which entered into force in July 2015, is to be welcomed as a more sensible and long-term solution to the problem of excessive nitrogen deposition for affected Natura 2000-sites. By utilizing comprehensive source-related reductions and site-linked restoration measures as a means to underpin the creation of new room for economic development, it may have struck a right balance between economic development and nature conservation. However, this article has emphasized that, especially taking into account the outcome of the *Briels*-ruling, it will be paramount to safeguard that the room for economic development is not abused to allow further economic expansion in a context where the Natura 2000-sites are facing a continuous decline. Much, if not all, will depend on the soundness of the ecological underpinnings of the PAN. The robust monitoring package, which is included in the PAN, is designed to avert a worst case-scenario. Yet, while the Dutch approach should certainly be credited for having struck a common ground between economic development and nature conservation, its application on the ground will be determinative for its survival in the long run. If monitoring results were to reveal an increase of nitrogen deposition levels, possibly due to a more lenient implementation of the additional source-reduction measures or the limited results of the restoration efforts, the legal underpinnings of the PAN would quickly evaporate. Ultimately, the Dutch PAN-approach could still be criticized for not having implemented the more evident response to excessive nitrogen deposition levels in Natura 2000-sites. Such a solution would consist in maintaining strict permit policies pending the implementation of the reduction and restoration measure. Only if the results on the ground were to indicate a decrease of nitrogen deposition levels and a recovery of the affected habitats, more leniency at permit level should be allowed. Instead the PAN has opted for a more pragmatic approach, by allowing a direct trade-off between future restoration efforts and short-term economic development.

In conclusion, and returning to the paper's title, tinkering with the law might be part of the short-term solution for overcoming economic paralysis due to strict nature protection rules. However, as long as the latter approaches are not backed up by genuine and effective efforts to restore degraded Natura 2000-sites in the first place, they will fail to deliver long-term relief for both the EU's degraded nature and future economic development.

Åtgärdsprogrammens funktion vid länsstyrelsernas prövningar och tillsyn av vattenverksamheter

*Anna Christiernsson**

Abstract

According to the programmes of measures, established in 2009 to implement the requirements of the Water Framework Directive, the Swedish County Administrative Boards (CBAs) were obliged to review and regulate water operations to achieve a good status in Swedish waters. This study however shows that the programmes of measures have had virtually no effect on the decision-making of CBAs. The programmes have for example had no effect on the outcome of permits and other decisions on ditching operations. Moreover, few CBAs have applied for reviews of old water permits or taken other concrete measures to achieve a good status, despite the fact that a large number of water operations have never been tried under the Environmental Code. The lack of efficiency of the programmes in steering decision-making of CBAs can be explained by the legal context in which the programmes are formulated and implemented. To improve the function of the programmes of measures in steering decision-making towards a good status of Swedish waters and to fully implement EU-law, several amendments in the Swedish legislation are therefore necessary.

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1. Inledning

Genom antagandet av Europaparlamentets och rådets direktiv 2000/60/EG av den 23 oktober 2000 om upprättandet av en ram för gemenskapens åtgärder på vattenpolitikens område (nedan ”Ramvattendirektivet”) skapades ett rättsligt ramverk för en avrinningsområdes-baserad förvaltning av vatten inom hela den Europeiska Unionen.[1] Ett av direktivens syften är att uppnå en god ytvattenstatus senast år 2015 i staternas inlandsvatten, övergångsvatten och kustvatten.[2] Detta syfte ska nås genom att medlemsstaterna i cykler om sex år genomför en s.k. adaptiv planering.[3] En viktig del av denna adaptiva planering är fastställandet och genomförandet av åtgärdsprogram.[4]

I Sverige antogs de nu gällande åtgärdsprogrammen år 2009. Av dessa följer att markavvattning och annan vattenverksamhet i stora delar av

[1] För en beskrivning av direktivet, se exempelvis Ekelund Entson och Gipperth (2010). *Mot samma miljömål. Implementeringen av EU:s ramdirektiv för vatten i Skandinavien*, särskilt s. 15–28 samt Olsen Lundh (2014). Four points on point four. Implementing environmental quality standards in Sweden. *Scandinavian Studies in Law*. Volym 59, s. 319–349.

[2] Andra mål gäller grundvatten, skyddade områden och icke-försämring. Det finns ett antal undantag från denna övergripande målsättning, bland annat möjligheterna att förlänga tidpunkten för uppfyllandet.

[3] Se mer om direktivets adaptiva planering i t.ex. Michanek och Christiernsson (2014). “Adaptive Management of EU Marine Ecosystems – About Time to Include Fishery.” *Scandinavian Studies in Law,* 59, s. 206–221.

[4] Åtgärdsprogram ska upprättas för varje avrinningsdistrikt (fem i Sverige) om det krävs för att uppfylla miljökvalitetsnormer.

landet orsakar fysiska förändringar och övergödning som motverkar uppfyllandet av målet om en god ekologisk status i ytvatten. Av denna anledning anger åtgärdsprogrammen att tillståndspliktiga vattenverksamheter som riskerar att påverka vattenmiljön ska ses över och vid behov omprövas, särskilt i områden där en god status inte uppnås, eller riskerar att inte uppnås.[5] Ansvaret för denna åtgärd ligger på länsstyrelserna.

Syftet med denna artikel är att analysera och diskutera vilken roll åtgärdsprogrammen har haft i länsstyrelsernas arbete med vattenverksamheter under perioden 2009–2014. För att uppnå detta syfte har tre olika fallstudier genomförts.

- Den första fallstudien omfattar länsstyrelsernas återrapporteringar mellan 2010 och 2014. Syftet med fallstudien är att undersöka i vilken utsträckning länsstyrelserna själva har rapporterat att de har arbetat med åtgärd 28 i åtgärdsprogrammen, som bl.a. anger att länsstyrelserna ska göra en översyn och vid behov verka för omprövning av befintliga tillståndspliktiga vattenverksamheter (*avsnitt 2.2*).
- I den andra fallstudien undersöks länsstyrelsernas tillsynsplaner. Syftet med fallstudien är att undersöka om åtgärdsprogrammen nämns som ett styrdokument för länsstyrelsernas tillsynsarbete vad gäller vattenverksamheter i tillsynsplanerna (*avsnitt 2.3*).
- I en tredje fallstudie analyseras rättstillämpning i fråga om markavvattning i tre län. Syftet med fallstudien är att undersöka om åtgärdsprogrammen och/eller miljökvalitetsnormer haft någon betydelse för utfallet i tillstånds- och dispensprövningar av markavvattning eller vid tillsynen av dikesrensningar (*avsnitt 3*).

Avslutningsvis diskuteras kortfattat förslaget till de nya åtgärdsprogrammen (*avsnitt 4*) samt behov av rättsliga förändringar för att öka åtgärdsprogrammens effektivitet i att styra mot en god status i svenska vatten (*avsnitt 5*).

2. Åtgärdsrapportering och tillsynsplaner

2.1 Bakgrund

I december 2009 beslutades om de första sexåriga åtgärdsprogrammen.[6] Dessa gäller fram till december 2015. Åtgärdsprogrammen utgör som beskrevs ovan en del av den adaptiva vattenförvaltningen.[7] Åtgärdsprogrammen ska innehålla de åtgärder som behövs för att miljökvalitetsnormer ska följas. Åtgärdsprogrammens funktion med att fördela miljökrav mellan olika påverkansfaktorer är viktig, eftersom miljökvalitetsnormer i sig inte säger något om vem eller hur den önskade miljökvaliteten ska nås.[8]

De nu antagna programmen riktar sig till myndigheter och kommuner och åtgärderna, såväl styrmedel som fysiska åtgärder, har specificerats för kommuner samt olika nationella och regionala myndigheter, däribland länsstyrelserna.[9] Det är med andra ord kommunerna och de

[5] Se åtgärd 28. Denna beskrivs närmare i avsnitt 2.2.

[6] Se Vattenmyndigheten Bottenhavet (2009). *Åtgärdsprogrammet för Bottenhavets vattendistrikt* 2009–2015, Vattenmyndigheten Bottenviken (2009). *Åtgärdsprogram Bottenvikens vattendistrikt* 2009–2015, Vattenmyndigheten Norra Östersjön (2009). *Åtgärdsprogrammet för Norra Östersjöns vattendistrikt* 2009–2015, Vattenmyndigheten Södra Östersjön (2009). *Åtgärdsprogrammet för Södra Östersjöns vattendistrikt* 2009–2015 och Vattenmyndigheten Västerhavet (2009). *Åtgärdsprogrammet för Västerhavet* 2009–2015.

[7] 5 kap. 4 § 1 st. MB och 6 kap. 1 § förordning (2004:660) om förvaltning av kvaliteten på vattenmiljön (nedan ”vattenförvaltningsförordningen”).

[8] För en teoretisk diskussion om rättslig operationalisering av miljökvalitetsnormer, se Gipperth (1999). *Miljökvalitetsnormer – En rättsvetenskaplig studie i regelteknik för operationalisering av miljömål*. Akademisk doktorsavhandling, Uppsala Universitet.

[9] Programmen är med andra ord inte direkt bindande för enskilda och utgör förvaltningsbeslut utan myndighetsutövning mot enskilda (och behöver och kan där-

utpekade myndigheterna som ska genomföra de åtgärder som behövs enligt åtgärdsprogrammen.[10] En av dessa åtgärder är åtgärd 28, som anger att länsstyrelserna ska;

”göra en översyn och vid behov verka för omprövning av befintliga tillståndspliktiga verksamheter, enligt 9 och 11 kap. miljöbalken, vilka kan ha en inverkan på vattenmiljön, särskilt i områden med vattenförekomster som inte uppnår, eller riskerar att inte uppnå, god ekologisk status eller god kemisk status”.[11]

Länsstyrelserna ska med andra ord dels skaffa sig kunskap om vilka befintliga tillståndspliktiga vattenverksamheter som behöver omprövas, dels initiera omprövningar när det finns behov med anledning av kemisk eller ekologisk status. Den enda vägledningen åtgärdsprogrammet ger är att områden med vattenförekomster som inte uppnår eller riskerar att inte uppnå en god ekologisk eller kemisk status ska prioriteras. Ett stort antal vattenförekomster faller in under denna kategori. Åtgärden måste också genomföras inom ramen för de befogenheter länsstyrelserna har enligt gällande rätt.

Att länsstyrelserna har det operativa tillsynsansvaret för vattenverksamheter (såväl tillståndspliktiga som icke-tillståndspliktiga) följer av miljötillsynsförordningen.[12] Tillsynsinstrumentet innebär bland annat att länsstyrelserna på eget initiativ eller efter anmälan ska ”i nödvändig utsträckning kontrollera efterlevnaden av miljöbalken samt föreskrifter, domar och andra beslut som har meddelats med stöd av balken samt vidta de åtgärder som behövs för att åstadkomma rättelse”.[13]

För att uppnå tillsynens syfte kan föreläggande och förbud användas.[14] Det kan t.ex. handla om att förelägga en verksamhetsutövare att omhänderta rensmassor vid dikesrensning på ett sätt så att inte värdefulla biotoper skadas, att minimera läckage av näringsämnen vid grävning eller förbud mot fortsatt verksamhet.[15] Bestämmelsen är omfattande och gäller all verksamhet som omfattas av miljöbalken.[16] Föreläggande eller förbud får dock inte begränsa ett beslut eller en tillståndsdom som har rättskraft enligt 24 kap. 1 § MB.[17] Ett antal domar från mark- och miljööverdomstolen har klarlagt att tillsynsmyndigheten kan förelägga vattenverksamheter som bedrivs med stöd av urminnes hävd eller privilegiebrev att söka tillstånd enligt miljöbalken.[18] Domarna är dock omdiskuterade och frågan har ännu inte prövats av Högsta Domstolen.[19]

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med inte överklagas). Se diskussionerna kring detta i SOU 2005:113, *Åtgärdsprogram för miljökvalitetsnormer*, särskilt, s. 75 och 131–144.

[10] 5 kap. 8 § MB.

[11] Det finns ytterligare åtgärder som riktar sig till länsstyrelserna i programmen (se åtgärd 29–31).

[12] 2 kap. 29 § p. 2 MB.

[13] 26 kap. 1 § 2 st. MB.

[14] 26 kap. 9 § 1 st. MB. Syftet med tillsynen är att säkerställa att miljöbalkens mål nås (26 kap. 1 § 1 st. MB).

[15] Mer ingripande åtgärder än vad som är nödvändigt i enskilda fallet får inte tillgripas. 26 kap. 9 § 2 st. MB.

[16] Se t.ex. M 2893-10 (2011-02-08) (Brickegården) där Mark- och miljööverdomstolen (MÖD) uttryckte att 26 kap. 9 § gäller all verksamhet som regleras i miljöbalken oavsett om den förelagda åtgärden är tillståndspliktig eller inte.

[17] 26 kap. 9 § 3 st. MB. Detta gäller inte om verksamhetsutövaren bedriver verksamhet som inte omfattas av domen eller beslutet. Det finns också möjligheter att förelägga i brådskande fall om det t.ex. finns risk för allvarlig skada eller för säkerhetshöjande åtgärder vid damm, se 26 kap. 9 § 4 st. MB.

[18] MÖD 2012:26, MÖD 2012:27 och MÖD 2012:28. Länsstyrelsen hade förelagt om förbud att bedriva verksamhet, vilket ansågs för ingripande. Domstolen uttryckte att länsstyrelsen istället skulle, med stöd av 26 kap. 9 § MB, förelägga verksamhetsutövaren att ansöka om tillstånd för verksamheten. Urminnes hävd och privilegiebrev kan med andra ord enligt domarna inte likställas med tillstånd enligt miljöbalken.

[19] Ett flertal författare har diskuterat frågan. Se bland annat Strömberg (2014). Urminnes hävd och vattenrätten – några synpunkter. *Nordisk Miljörättslig Tidskrift*, 2014:2, s. 95–99, Olsen Lund (2013). Tvenne gånger tvenne ruttna gärdesgårdar – Om urminnes hävd och vattenkraft. *Nordisk Miljörättslig Tidskrift*, 2013:2, s. 85–108 samt Lindqvist (2013). Privilegiebrev och urminnes hävd – Vilken

I tillsynsansansvaret ingår också att pröva om villkor i tillstånd till vattenverksamheter är tillräckliga eller inte.[20] Myndigheten ska ta upp frågan om att ändra eller upphäva villkor.[21] Förutsättningar för när detta är möjligt finns i 24 kap. 5 §. En av grunderna för att ompröva tillstånd samt ändra eller upphäva villkor är att verksamheten med någon betydelse medverkar till att en miljökvalitetsnorm inte följs.[22] Det räcker i detta fall inte med enbart en *risk* för att en miljökvalitetsnorm inte följs.[23] En omprövning får emellertid inte medföra att verksamheten inte längre kan bedrivas eller avsevärt försvåras.[24] I så fall måste bestämmelserna om återkallelse i 24 kap. 3 § användas, t.ex. när detta krävs för att förpliktelser som följer av Ramvattendirektivet ska kunna efterlevas, om verksamheten upphört (t.ex. övergivna markavvattningsföretag eller vattenkraftverk) eller om underhållet av en vattenanläggning har försummats allvarligt.[25] Länsstyrelsen ska också föra talan i ansökningsmål för att tillvarata miljöintressen och andra allmänna intressen, när så behövs.[26]

2.2 Genomförandet av åtgärd 28

Av myndigheternas återrapportering mellan 2010 och 2013 framgår vad länsstyrelserna själva rapporterat om sitt arbete med genomförandet av åtgärd 28.[27] Sammanfattningsvis kan konstateras att de flesta länsstyrelserna över åren på olika sätt arbetat med den översyn av vattenverksamheter som ska genomföras enligt åtgärd 28, men att den faktiska tillsynen och omprövningarna är begränsade. Rapporteringarna visar på en ökad omfattning av tillsynsarbetet med vattenkraftverk, dammar och regleringar under 2012. Av återrapporteringarna framgår att detta var en konsekvens av ett särskilt regleringsbrev. I praktiken sker dock endast en liten del av tillsynen på eget initiativ.[28] Rapporteringarna visar också att allt fler länsstyrelser börjar tillämpa ett avrinningsperspektiv i tillsynen av vattenverksamheter mot slutet av förvaltningsperioden, bland annat genom ökat samarbete mellan olika länsstyrelser. Även i detta fall fanns ett särskilt regleringsbrev om detta enligt återrapporteringarna. Resursbrist och tidskrävande juridiska processer, utan tydlig praxis och vägledning, tas upp som orsaker till att få konkreta åtgärder har genomförts under tidsperioden. Även otydlighet i ansvaret i vattenförvaltningen anses motverka genomförandet av åtgärd 28.

Det bristande genomförandet av konkreta åtgärder, t.ex. vad gäller omprövningar, som kan utläsas av myndigheternas egna rapporteringar, framgår också av andra studier. I en studie av länsstyrelsen i Värmland från 2012 framgår att endast ca 2,4 % (ca 90 av 3 700) av tillståndsgivna vattenkraftverk och dammar har omprövats

ställning har de enligt miljöbalken? *Nordisk Miljörättslig Tidskrift*, 2013:1, s. 39–50.

[20] 26 kap. 1 § 2 st. och 26 kap. 2 § 2 st. MB. Vad som är tillräckligt ska bedömas med utgångspunkt i miljöbalkens mål och allmänna hänsynsregler, se prop. 2001/02:65, s. 85.

[21] 26 kap. 2 § 2 st. MB.

[22] 24 kap. 5 § p. 2 MB.

[23] Denna samt övriga grunder kan användas innan tio år förflutit. När tio år förflutit behövs ingen av de specifika grunderna vara uppfyllda (se p. 1).

[24] 24 kap. 5 § 5 st. MB. Det finns också en begränsning i hur stor förlust en vattenverksamhetsutövare ska tåla. Som huvudregel ligger denna på 5 procent.

[25] 24 kap. 3 § MB, se punkterna 5, 7 och 8.

[26] 22 kap 6 § MB.

[27] Det finns ingen återrapportering för 2014.

[28] I mailkonversation med handläggare på länsstyrelsen i Kalmar framgår t.ex. att länsstyrelsen i Kalmar i dagsläget inte har någon planerad egeninitierad tillsyn. Se även Sportfiskarna (2013). *Undersökning av tillsyn av vattenverksamheter.* Rapport 2013:01. Studien visar att 11 av 16 länsstyrelser till största del arbetar med inkommande anmälningar och 4 av 16 enbart med inkommande anmälningar.

med hänsyn till fisk- och naturvård.[29] Flest omprövningar skedde under perioden mellan 1996 och 2005, d.v.s. långt innan åtgärdsprogrammen trädde ikraft. I vattenverksamhetsutredningens senaste betänkande anges att Kammarkollegiet utför merparten av de omprövningar som sker (i genomsnitt 4,5 tillstånd per år).[30] Kammarkollegiet har inget utpekat ansvar för omprövningar i åtgärdsprogrammen.

Sammantaget visar återrapporteringen att det finns ett stort behov av tillsyn och omprövningar och att det finns mycket kvar att göra. Återrapporteringarna talar för att översynen av vattenverksamheter är en konsekvens av åtgärdsprogrammen. När det däremot gäller konkreta åtgärder visar återrapporteringen att det är en rad andra faktor som får betydelse för genomförandet, inte minst resurstillgång, instruktioner samt regleringsbrev. Det faktum att Kammarkollegiet, som inte har något utpekat ansvar enligt åtgärdsprogrammen att ompröva vattenverksamheter, är mest aktiv i att initiera omprövningar visar också att andra faktorer än åtgärdsprogrammen i sig (hittills) haft större inverkan på myndigheternas arbete. Slutsatsen om åtgärdsprogrammens begränsade funktion är emellertid inte oväntad givet programmens vaga utformning och bristen på vägledning, i kombination med att länsstyrelserna uppfattar ansvarsfördelningen som otydlig, de juridiska prövningarna som komplexa och resurserna som är alltför knappa.[31]

2.3 Tillsynsplaner

Ytterligare ett sätt analysera åtgärdsprogrammens betydelse för länsstyrelsernas tillsynsarbete är att undersöka i vilken utsträckning åtgärdsprogrammen nämns som viktiga styrdokument i länsstyrelsernas tillsynsplaner för arbetet med vattenverksamheter. Av denna anledning har tillsynsplanerna för Östergötlands län (2014–2016), Västmanlands län (2015–2017), Västra Götalands län (2014–2016) och Jönköpings län (2015–2017) granskats.[32]

Sammanfattningsvis kan konstateras att åtgärdsprogrammen endast utgör ett av många styrande (eller vägledande) dokument som nämns i de granskade tillsynsplanerna. I en av planerna nämns programmen inte alls,[33] i andra fall nämns bara det aktuella åtgärdsprogrammet och/eller de åtgärder för vilka länsstyrelserna ansvar för utan några förtydliganden.[34] Åtgärdsprogrammen nämns oftare och mer utförligt i samband med miljöfarlig verksamhet än i samband med vattenverksamheter.[35]

3. Markavvattning

3.1 Bakgrund

Markavvattning, däribland olika former av dikningar, är en vattenverksamhet som kan påverka vattenkvaliteten negativt. I Sverige har markavvattningen under de senaste 100 åren varit omfattande, vilket har lett till att viktiga ekolo-

[29] Se Länsstyrelsen Värmland (2012), *Omprövning av vattendomar – Möjlig indikator för miljömålet Levande sjöar och vattendrag,* 2012:13. De flesta omprövningarna har genomförts inom Västerhavets vattendistrikt.

[30] Mellan 2007 och 2011 ansökte Kammarkollegiet om omprövning i 22 ärenden. Se SOU 2014:35, *I vått och torrt – förslag till ändrade vattenrättsliga regler*, s. 270.

[31] Se kommissionens kritik av Sveriges åtgärdsprogram i bl.a. Kommissionen (2012). *Rapport från Kommissionen till Europaparlamentet och Rådet om genomförandet av ramdirektivet för vatten (2000/60/EG). Förvaltningsplaner för avrinningsdistrikten.* KOM(2012) 670 final samt Kommissionen (2015). *Meddelande från Kommissionen till Europaparlamentet och Rådet. Ramdirektivet för vatten och översvämningsdirektivet: åtgärder för att nå "god status" för EU:s vatten och minska översvämningsriskerna.* KOM(2015) 120 final.

[32] Urvalet har avgränsats till de tillsynsplaner som har hittats via länsstyrelsernas websidor under hösten 2015.

[33] Detta gäller Östergötlands läns tillsynsplan. Här nämns endast miljökvalitetsnormer i samband med miljöfarlig verksamhet som påverkar normer för vatten som riskerar att inte följas. Tillsyn av utsläpp ska prioriteras enligt planen.

[34] Se t.ex. Västmanlands och Västra Götalands läns tillsynsplaner.

[35] Se t.ex. i Jönköpings läns tillsynsplan.

giska och vattenhushållande funktioner försämrats eller helt försvunnit, inte minst genom att våtmarker minskat kraftigt.[36] Markavvattning, men också, som huvudregel icke tillståndspliktiga dikesrensningar, kan t.ex. leda till en ökad transport av näringsämnen, att olika djur- och växtarters reproduktionsplatser förstörs eller att vandringshinder för fisk- och andra vattenlevande arter uppstår. Effekten kvarstår normalt under mycket lång tid. Markavvattning kan med andra ord leda till och förvärra problem med bland annat övergödning och fysiska förändringar och därmed hindra eller försvåra att olika miljömål och miljökvalitetsnormer nås, däribland normer om en god ekologisk status. Markavvattning är därmed en av de vattenverksamheter som faller in under åtgärd 28 i åtgärdsprogrammen.[37]

3.2 Reglerna om tillstånds- och dispensprövning av markavvattning

Enligt miljöbalken avses med markavvattning en åtgärd med syfte att varaktig öka markens lämplighet för ett visst ändamål.[38] Dikning för att öka produktiviteten inom jord- eller skogsbruket är ett exempel.[39] När en åtgärd är att betrakta som markavvattning i miljöbalkens mening krävs alltid tillstånd.[40] Ansökan om tillstånd till markavvattning prövas av länsstyrelsen,[41] som också har det operativa tillsynsansvaret för markavvattning.[42] Undantagsregeln om att tillstånd inte behövs om det är uppenbart att varken allmänna eller enskilda intressen skadas, gäller inte markavvattning.[43]

Regeringen får även förbjuda tillståndspliktig markavvattning ”i områden där det är särskilt angeläget att våtmarkerna bevaras”.[44] Så har också skett i vissa delar av landet (detta gäller bland annat i södra och mellersta Sverige). I dessa fall måste dispens sökas hos länsstyrelsen, som endast får meddelas om ”särskilda skäl” föreligger.[45] Enligt förarbetena ska dispensen utnyttjas restriktivt och bedömning av vad som utgör särskilda skäl ska ske mot bakgrund av intresset att bevara de återstående våtmarkerna inom det aktuella området.[46] Om länsstyrelsen beviljar dispens, ska tillstånd enligt 11 kap. 9 § miljöbalken sökas.[47] Med anledning av markavvattning-

[36] Se mer om bakgrund, motiv samt miljöpåverkan av markavvattning i t.ex. SOU 2014:35, *I vått och torrt – förslag till ändrade vattenrättsliga regler*, s. 319–321 samt 335–338, Naturvårdsverket (2009), *Markavvattning och rensning. En handbok för tillämpning av bestämmelserna i 11 kapitlet miljöbalken* (Handbok 2009:5), s. 51–52 och Naturvårdsverket (2012), *Steg på vägen – Fördjupad utvärdering av miljömålen 2012*, s. 387.

[37] I åtgärdsprogrammen från 2009 nämns markavvattning och dikning som ett problem när det gäller både övergödning och fysiska förändringar. Se *Åtgärdsprogrammet för Norra Östersjöns vattendistrikt* (s. 15 och 46), *Södra Östersjöns vattendistrikt* (s. 25, 34 och 38–39), *Åtgärdsprogram Bottenvikens vattendistrikt* (s. 22 och 38–39), *Åtgärdsprogrammet för Bottenhavets vattendistrikt* (s. 43) och *Åtgärdsprogrammet för Västerhavets vattendistrikt* (s. 42).

[38] 11 kap. 2 § 4 p. MB. I Naturvårdsverkets handbok (2009) föreslås vilka typer av åtgärder som bör och inte betraktas som markavvattning enligt miljöbalken (s. 12–13).

[39] Enligt SOU 2009:24 *Vattenverksamhet*, är dikningar inom jord- och skogsbruket vanligast (s. 126).

[40] 11 kap. 13 § MB. För täckdikning med dräneringsrör som har en största diameter av 300 millimeter krävs dock endast tillstånd om det är sannolikt att allmänna eller enskilda intressen skadas genom verksamheten enligt 2 st. Tillståndsplikten omfattar inte s.k. skyddsdikningar inom skogsbruket. Samråd kan dock krävas och även dikesrensningar inom skogsmark som kan påverka fiske omfattas av anmälningsplikten i miljöbalken (se nedan).

[41] 11 kap. 9b § MB. Ansökan om tillstånd till markavvattning prövas av länsstyrelsen, om den inte skall prövas av mark- och miljödomstolen enligt 7 kap. 19 eller 20 § lagen (1998:812) med särskilda bestämmelser om vattenverksamhet.

[42] 2 kap. 29 § p. 2 MB (se avsnitt 2). Naturvårdsverket har tillsynsvägledningsansvaret för markavvattning enligt 3 kap. 2 och 5 §§ miljötillsynsförordningen.

[43] 11 kap. 12 § 2 st. MB.

[44] 11 kap. 14 § MB.

[45] 11 kap. 14 § MB.

[46] Prop. 1997/98:45, s. 136.

[47] 11 kap. 14 § 3 st. MB.

ens negativa miljöpåverkan är med andra ord idag markavvattning tillståndspliktig eller som huvudregel förbjuden. Ett stor antal diken har dock aldrig prövats enligt miljöbalkens regler.[48]

Från tillståndsplikten är dock dikesrensningar undantagna, så länge som rensningar sker för att ”bibehålla vattnets djup eller läge eller omedelbart återställa ett vattendrag som har vikit sig från sitt förra läge eller som på något annat sätt har förändrat sitt lopp”,[49] trots att rensning kan få långtgående effekter på miljön.[50] En fråga som uppstår är därför vilket djup och läge som ska utgöra det tillåtliga, utan att tillstånd krävs. I en dom från mark- och miljödomstolen anger domstolen att bedömningen ska utgå från vad som var den senaste *lagliga* nivån.[51] Om ett tillstånd anger ett visst djup och läge men rensning sedan inneburit en laglig fördjupning (som inte krävde tillstånd) är det den senare (djupare) nivån som utgör den till vilken rensning kan ske utan att tillståndsplikten aktualiseras. Om rensningen kan leda till skada på fisket,[52] i diket eller nedströms, ska en anmälan om de planerade arbetena göras till länsstyrelsen innan arbetena påbörjas.[53] Länsstyrelsen kan då förelägga om försiktighetsmått.[54]

Om ett s.k. ”nytt naturtillstånd” inträtt kan tillstånd för rensningen ändock behövas.[55] Ett nytt naturtillstånd kan inträda om lång tid förflutit mellan rensningarna och flora och fauna förändrats i diket eller det område diket avvattnar.[56] Av rättspraxis följer att ett nytt naturtillstånd som huvudregel innebär att det krävs tillstånd för markavvattning när anläggningen *inte* har tillståndsprövats. I sådana fall kan också länsstyrelsen förelägga om förbud mot rensningen för att skydda det nya naturtillståndet. Däremot har rätten att rensa ansetts kvarstå trots att ett nytt naturtillstånd har uppträtt om anläggningen är tillståndsprövad, så länge som rätten inte har återkallats eller kan anses ha förfallit.[57]

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[48] SOU 2014:35, *I vått och torrt – förslag till ändrade vattenrättsliga regler*, s. 321.

[49] 11 kap. 15 § 1 st. MB. Bestämmelsen härstammar från 2 kap. 36 § ÄVL och 4 kap. 3 § VL.

[50] Rensningar kan t.ex. leda till grumling av vatten (även efter rensningen), att hårdbottnar som är viktiga för bottenfauna och fisk grävs bort och att den naturliga variationen av livsmiljöer minskar i diket. Ytterligare negativa effekter kan uppstå om rensningen också innebär att skuggande träd och buskar i strandkanten tas bort. Se t.ex. Naturvårdsverket (2004), *Miljöhänsyn vid dikesrensningar*, s. 1.

[51] Se mark- och miljödomstolens mål M 857-08, 2008-10-06.

[52] Med fiske avses såväl fiske i enskilt som allmänt vatten samt fritidsfiske som yrkesmässigt fiske. Prop. 1997/98:45, del 2, s. 138.

[53] 11 kap. 15 § 3 st. MB. Anmälningsskyldigheten gäller även vid utförandet av de underhållsåtgärder man är skyldig att genomföra. Sep prop. 1981/82:130, s. 432ff.

[54] Se ovan. Länsstyrelsen ger också ut råd för dikesrensningar.

[55] I förarbetena till miljöbalken anges att om en förändring har fått bestående karaktär krävs normalt tillstånd för rensningen, om inte annat följer av 12 §. Se prop. 1997/98:45, del 2, s. 137.

[56] I förarbetena förs en diskussion om hur lång tid som får ha förflutit mellan rensningarna utan att ett tillstånd behöver inhämtas. Se dock not 58.

[57] I MÖD 2007:32 prövades en anmälan av rensning av ett sänkningsföretag som ville utföra underhållsrensning av en å för att förbättra vattenavledningsförmågan hos de närliggande markerna. Sänkningsföretaget hade tillstånd enligt 1879 års lag om dikning och annan avledning av vatten och tillståndet var därmed att jämställa med ett tillstånd enligt miljöbalken (se 5 § miljöbalkens promulgationslag). Länsstyrelsen menade att ett nytt naturtillstånd hade inträtt och att sänkningsföretaget var övergivet (det hade inte skett några rensningar under 80 år) och förbjöd rensningen. Miljödomstolen bedömde i likhet med länsstyrelsen att mot bakgrund av den långa tidsperioden utan rensningsarbeten att ett nytt naturtillstånd hade inträtt och att tillstånd därför krävdes. Miljööverdomstolen uttalade emellertid att den omständigheten att lång tid förflutit utan att rensningsarbeten förekommit *inte ensamt* är avgörande för frågan om företaget ska anses övergivet. Även behovet av rensning måste vägas in liksom hur lång tid som förflutit sedan sådant behov uppstått. Domstolen resonerade också kring rättskraften och uttryckte att 24 kap. 1 § MB (som också omfattar markavvattning) innebär att en dom eller ett beslut som avser tillstånd till en verksamhet och som vunnit laga kraft gäller mot alla,

Även andra regler än 11 kap. miljöbalken kan bli tillämpliga, här ges några exempel. Det krävs t.ex. dispens om det finns fridlysta arter i diket eller i vattendraget (exempelvis tjockskaliga målarmusslor) eller skyddade biotoper.[58] Ett öppet dike utgör vidare en s.k. A-biotop som ska skyddas enligt 7 kap. 11 § 1 st. p. 1 miljöbalken.[59] Länsstyrelsen får meddela dispens om särskilda skäl föreligger.[60] Särskilda regler kan gälla inom skyddade områden och tillstånd kan behövas enligt 7 kap. 28 a § miljöbalken om dikesrensningen på ett betydande sätt, ensamt eller tillsammans med andra verksamheter, kan påverka ett Natura 2000-område. Dessutom kan verksamheten utgöra miljöfarlig verksamhet.[61]

3.3 Rättstillämpningen

3.3.1 Inledning

I det följande sammanfattas resultatet av fallstudierna som har omfattat tillstånds- och dispensprövningar av markavvattning samt anmälningar och samråd om dikesrensningar.[62] Syftet har alltså varit att granska om besluten nämner åtgärdsprogrammen och/eller miljökvalitetsnormer och om dessa i så fall har påverkat beslutsfattandet. Analysen har avgränsats till markavvattning som sker för jordbruksändamål (t.ex. för att omvandla skogsmark till åkermark eller för att höja produktivitet på befintlig jordbruksmark) och till tre län, nämligen Gotland, Östergötland och Norrbotten under tidsperioden 2010 till 2014.[63] Även anmälningar och samråd om rensningar under denna tidsperiod har inkluderats.[64] Innan resultaten beskrivs närmare ges en bakgrundsbeskrivning för respektive län.[65]

3.3.2 Gotlands län

Få vattendrag eller kustvatten uppnår en god ekologisk status. För sjöar är situationen dock bättre.[66] Många av vattendragen är kraftigt modifierade genom utdikningen. Fysiska förändringar i form av rätning och kanalisering av vattendrag samt förändringar i vattenflöden är omfattande. Under senare tid har underhållsarbeten av diken och kanaler ökat kraftigt. Dikning och rensning utgör med andra ord ett omfattande miljöproblem på Gotland, inte minst genom läckage av

"om inte tillståndet inskränkts genom föreskrifter för särskilda skyddsområden eller återkallats eller ändrats efter ansökan hos miljödomstol". Tillståndet till sänkningsföretaget hade inte återkallats eller omprövats. Domstolen menade därför att tillståndsplikt för rensningar endast kunde aktualiseras om tillståndet enligt allmänna rättsgrundsatser kan anses ha förfallit på grund av att sänkningsföretaget sedan länge är övergivet och att detta är en förutsättning för att länsstyrelserna ska kunna förbjuda rensningen. Då miljödomstolen inte hade prövat frågan om sänkningsföretaget skulle betraktas som övergivet återförvisades målet till miljödomstolen.

[58] Se 7 kap. 11 § och 8 kap. MB samt artskyddsförordning (2007:845).

[59] Se förordning (1998:1252) om områdesskydd enligt miljöbalken m.m., 5 § samt bilaga 1, p. 5. Det är med andra ord frågan om ett generellt skydd som inte kräver något utpekande i det särskilda fallet.

[60] 7 kap. 11 § 2 st.

[61] Grävning kan leda till utsläpp och förorening som omfattas av 9 kap. 1 § MB. Därutöver finns vissa regler kring markavvattning i lag (19998:812) med särskilda bestämmelser om vattenverksamhet. Se t.ex. om hantering av rensningsmassor i 2 kap. 6 §.

[62] Se även Sjödahl (2012). *Hur miljökvalitetsnormer och åtgärdsprogram tillämpas i handläggningen av markavvattningsärenden.* Examensarbete vid Juridiska Fakulteten, Uppsala Universitet. Uppsatsen visar att miljökvalitetsnormer och åtgärdsprogram inte haft någon betydelse i prövningar av markavvattning i de granskade länen.

[63] I de fall det inte framgår av beslutet om åtgärderna sker för jordbruksändamål har ärendena inkluderats.

[64] Ärendena har tagits fram, kopierats och skickats av arkivarierna på respektive länsstyrelse.

[65] Informationen är hämtat från Naturvårdsverkets miljömålsportal om inte annat anges. Se http://www.miljomal.se/sv/Miljomalen/Regionala/?eqo=7&t=Lan (2015-09-27).

[66] För en detaljerad information om olika vattenförekomsters status och miljöproblem, se VISS (vatteninformationssystem Sverige), http://www.viss.lansstyrelsen.se/.

näringsämnen och fysiska förändringar. Gotland är också ett län med stor åkerareal och det enda länet i Sverige där åkerarealen ökat efter 1990.

Inom hela Gotland råder markavvattningsförbud.[67] Detta innebär att såväl dispens som tillstånd krävs för nya markavvattningar. Dispensen ska som beskrivits tidigare utnyttjas restriktivt och bedömning ske mot bakgrund av intresset att bevara de återstående våtmarkerna inom det aktuella området.[68] Trots det har alla granskade ansökningar om dispenser och tillstånd beviljats förutom i ett fall då begärda kompletteringar inte inkommit (ärendet avskrevs).[69]

Inget av de granskade besluten nämner vattenförvaltningens åtgärdsprogram eller miljökvalitetsnormer. Det finns inget i besluten som tyder på att åtgärdsprogrammen har haft någon inverkan på besluten. Det finns inte heller något som tyder på att miljökvalitetsnormer tas i beaktande. Besluten nämner inte ens om och hur olika vattenförekomster och miljökvalitetsnormer kan komma att beröras av markavvattningarna och inte heller vilken status eventuella närliggande vattenförekomsten har. I endast ett av de granskade besluten anges att åtgärden inte kommer ”att leda till några förändringar i vattensituationen upp- eller nedströms”. I ett beslut gällande breddning av ett dike för att återställa markens lämplighet för jordbruksändamål,[70] ställdes villkor om försiktighetsåtgärder med syfte att minska transporten av näringsämnen och minska erosion, d.v.s. att minska den negativa påverkan på vattenmiljön.[71] Miljökvalitetsnormer och åtgärdsprogram nämns dock inte heller i detta beslut.

Besluten berör oftast enbart frågan om ”högre naturvärden” på området eller runt omkring.[72] Naturreservat nämns exempelvis och villkor ställs upp i vissa beslut för att inte skada värden i närliggande naturreservat. Villkoren handlar framför allt om djup, bredd och längd, hur grävningsmassor ska hanteras och att arbetet ska avbrytas om fornlämning påträffas.[73]

3.3.3 Östergötlands län

En majoritet (90 procent) av länets vattenförekomster uppnår inte en god ekologiskt status. De största miljöproblemen är fysisk påverkan, miljögifter och övergödning. I länet har en kartläggning av 80 mil vattendrag visat att över 40 mil är kraftigt påverkade genom omgrävning eller rensning. Många våtmarker har försvunnit under senare århundraden till följd av omfattande markavvattning.

Inom hela Östergötland råder markavvattningsförbud.[74] Även här krävs därför såväl dispens som tillstånd för nya markavvattningar och att dispensen ska nyttjas restriktivt. De granskade besluten avser dikesrensningar (anmälningar, samråd, tillsyn),[75] vilka så länge de inte går längre

[67] 4 § förordning (1998:1388) om vattenverksamhet m.m.

[68] Markavvattningen ska som sagt i princip sakna betydelse från naturskyddssynpunkt. Prop. 1997/98:45, s. 136.

[69] I det fall som avskrevs hade komplettering avseende information krävts om bl.a. djup och bredd på ansökta dikena samt uppgifter om befintliga diken och deras djup och bredd. Vilka ärenden som har granskats framgår av referenslistan.

[70] Åtgärden bedömdes dock inte utgöra markavvattning eftersom syftet varit att *återställa*.

[71] Enligt föreläggandet skulle breddningen ske genom ett s.k. tvåstegsdike. Grävningen skulle också ske när vattenflödet är lågt för att minska transporten av sediment. Diket fick dock inte fördjupas (eftersom detta bedömdes påverka naturvärden i ett naturreservat uppströms negativt).

[72] Se om höga naturvärden i Naturvårdsverket (2009), s. 39.

[73] Med tanke på att en stor del av markavvattningsbesluten som har granskats avser markavvattning nära kusten och en stor del av Gotlands kustvatten inte uppnår en god ekologisk status kan man i alla fall ställa sig frågan om en bedömning av markavvattningens påverkan på kustvattnet inte borde ingå i besluten.

[74] 4 § förordning (1998:1388) om vattenverksamhet m.m.

[75] Vilka ärenden som har granskats framgår av referenslistan.

än ursprungligt djup och läge som huvudregel inte kräver tillstånd enligt 11 kap. 13 § miljöbalken.[76]

De granskade besluten innehåller avsnitt som berör naturmiljön. Här tas t.ex. förekomsten av våtmarker, betade strandängar, häckande fåglar, förekomsten av fisk och fridlysta arter (t.ex. musslor) upp. Olika områdesskydd, t.ex. naturreservat, Natura 2000-områden och biotopskyddsområden, nämns också. Många olika naturvärden beaktas därmed i ärendena.

Däremot nämns aldrig åtgärdsprogram eller miljökvalitetsnormer, trots att vissa av besluten gäller markavvattning som sker vid eller nära vattenförekomster där statusen har klassificerats som otillfredsställande eller måttlig. I flera fall tas emellertid grumling upp som ett problem till följd av dikesrensning och upplysningar eller föreläggande om försiktighetsmått anger ofta att rensning ska inriktas till en period med låga vattenflöden och att rensning ska påbörjas uppströms. Andra upplysningar gäller bland annat försiktighet med slänter och hantering av massorna. I ett beslut angavs också att grävningen ska stoppas vid kraftig nederbörd som ökar vattenmängden i bäcken väsentligt, eftersom detta riskerar att öka transporten av slam.

3.3.4 Norrbottens län

I Norrbotten har cirka 60 procent av vattenförekomsterna minst god ekologisk status, vilket är en relativt hög andel ur ett nationellt perspektiv. Fysiska förändringar utgör dock ett stort problem i länet. Sådana orsakas av bland annat dikningar, brist på skyddande kantzoner och vandringshinder. Dikningar och dikesrensning men också gamla övergivna diken orsakar även läckage av näringsämnen och skador på våtmarker.

I Norrbotten råder inte markavvattningsförbud generellt inom hela länet, däremot inom vissa områden.[77] De granskade besluten gäller prövningar av tillstånd till markavvattning.[78] I ett av besluten beviljades inte tillstånd, eftersom påverkan på ett vattendrag där miljökvalitetsnormen god ekologisk status inte var uppfylld (bland annat p.g.a. morfologiska förändringar), bedömdes bli för stor med de skyddsåtgärder verksamhetsutövaren föreslagit.[79] Efter ny ansökan med ytterligare förslag angående försiktighetsåtgärder mot grumling och sedimenttransport beviljas tillståndet. I ett annat ärende beviljas tillstånd, bland annat efter en bedömning av länsstyrelsen att verksamheten inte medverkar till att en miljökvalitetsnorm överträds. Däremot nämns inte åtgärdsprogrammen i något av besluten.

3.3.5 Sammanfattande kommentarer

Trots att en stor andel av de granskade länens vattenförekomster inte uppnår en god status och problemen med övergödning och fysiska förändringar, inte minst på grund av dikning, är omfattande, har majoriteten av de granskade markavvattningsbesluten beviljats. Inget av de granskade besluten i de tre länen nämner heller åtgärdsprogrammen. I Norrbotten beaktas emellertid miljökvalitetsnormer, vilket inte gäller de två övriga länen (eller det framgår i vart fall inte av besluten).

Däremot finns i en stor del av besluten upplysningar och/eller villkor som avser grumling och läckage av näringsämnen. Sådana upplys-

[76] Se också ovan om vad som gäller om nytt naturtillstånd inträtt.

[77] Se 4 c § p. 5 förordningen om vattenverksamhet m.m.

[78] Vilka ärenden som har granskats framgår av referenslistan.

[79] Av beslutet framgår att markavvattningen kommer att ytterligare påverka morfologiska kvalitetsfaktorer i det aktuella vattendraget. De skyddsåtgärder som föreslås ansågs inte vara tillräckliga för att fånga upp finkornigt sediment. Även risk för försurning till följd av friläggandet av sulfidhaltiga sediment togs upp.

ningar och villkor kopplas dock aldrig till aktuell vattenstatus och miljökvalitetsnormer, inte ens i de fall det tydligt framgår att t.ex. utlopp av ett visst dike sker i en vattenförekomst med måttlig eller otillfredsställande ekologisk status, t.ex. p.g.a. för höga näringsämnen. Det är alltså oklart om villkoren syftar till att minimera negativa effekter på vattenkvaliteten i sig eller om syftet snarare är att minska negativ påverkan på de arter (t.ex. fisk och musslor) som lever i vattendraget.

Det kan naturligtvis vara så att länsstyrelserna i de andra två länen har bedömt att inga miljökvalitetsnormer kan komma att påverkas av markavvattningen i de granskade besluten och att detta ingår i bedömningen av ”naturvärden” eller i ”miljöpåverkan”. Att varken miljökvalitetsnormer eller åtgärdsprogram nämns, att en majoritet av besluten inte ens anger om det finns några risker för negativ påverkan på vattenförekomster uppströms eller nedströms eller hur statusen i närliggande vattenförekomster ser ut, tyder dock snarare på att de inte har betydelse för beslutsfattandet. Besluten anger inte ens att någon miljökvalitetsnorm *inte* berörs.

Studien visar vidare att få anmälningar om dikesrensningar och ansökningar om samråd har gjorts samt att det finns få tillsynsärenden under den granskade tidsperioden i två av länen (Gotland och Norrbotten).[80] Samtidigt sker förmodligen omfattande dikesrensningar inom bland annat jordbruks- och skogsbrukslandskap även i dessa län som kan ha negativ påverkan på vattenkvaliteten (och andra naturvärden).[81]

Ändamålsenligheten i att dikesrensningar är undantagna från tillståndsplikten kan därför diskuteras. Bland annat innebär detta undantag att viktig information inte inkommer till länsstyrelserna men också en risk för att villkoren för undantagen överträds, något som kan vara svårt att visa i efterhand (inte minst eftersom ett stort antal markavvattningar saknar tillstånd där tillåtet djup och bredd har dokumenterats).[82] Undantaget innebär med andra ord en risk att nödvändiga försiktighetsmått i många fall inte kommer att föreskrivas samt att ansökningar om tillstånd och ev. dispens uteblir trots att åtgärden är att betrakta som markavvattning som kräver tillstånd och ev. dispens.[83] En anmälningsplikt gällande all dikesrensning skulle åtminstone innebära en ökad kunskap hos länsstyrelserna om de dikesrensningar som faktiskt sker och därmed en betydligt större möjlighet att meddela nödvändiga föreläggande om försiktighetsmått. En anmälningsplikt för rensning föreslås också i vattenverksamhetsutredningen.[84]

Ett annat alternativ för att minska miljöbelastningen av såväl markavvattning som dikesrensningar är att utfärda generella föreskrifter. Att införa generella föreskrifter för rensningar

[80] I Norrbotten fanns inga anmälningar av dikesrensningar överhuvudtaget. Däremot fanns tillsynsärenden om att lägga igen olagliga diken. Uppgifter från arkivarie Anna Lindblom vid länsstyrelsen i Norrbotten den 19 september 2014 och den 9 oktober 2015.

[81] Det har uppskattats att ca 6 000 km diken bara i jordbruksmark rensas varje år i Sverige. Se Naturvårdsverket (2004).

[82] I en studie från länsstyrelsen i Skåne hade 92 procent av alla kontrollerade dikesrensningar (37 dikesföretag) överträtt vad som var tillåtet vad gäller djup och läge på diket. En sammanfattning av studien av Länsstyrelsen kan hittas här: http://www.lansstyrelsen.se/skane/SiteCollectionDocuments/Sv/miljo-och-klimat/verksamheter-med-miljopaverkan/verksamheter/Sammanfattning%20tillsyn%20dikningsf%C3%B6retag%202013-03-16.pdf (2014-05-26). Studier visar också att kunskapen om dikesrensningars miljöeffekter är mycket bristfällig.

[83] Därutöver kan diskuteras hur skyldigheten att underhålla vattenanläggningar så att allmänna eller enskilda intressen inte skadas skulle kunna utformas när det gäller grävda diken. En sådan skyldighet kan innebära att rensningar sker rutinmässigt och inte enbart när så verkligen behövs och därmed orsaka större skador på miljön än nödvändigt.

[84] Se SOU 2014:35, *I vått och torrt – förslag till ändrade vattenrättsliga regler*, s. 431–437. Därutöver föreslås också en definition av rensning.

föreslås även i vattenverksamhetsutredningen.[85] Motivet till förslaget är att omprövningar utifrån dagens miljökrav på det stora antalet markavvattningar och antal markägare som berörs skulle innebära en oerhört stor arbetsbörda.[86] Enligt utredningen skulle generella föreskrifter kunna gälla utsläppskrav, t.ex. vad gäller kväve och fosfor, krav på dokumentation av ursprungligt djup och läge samt åtgärder som ska vidtas för att minska den negativa effekten på miljön. Utredningen gör dock inte någon närmare analys utan föreslår att Naturvårdsverket, i samråd med Havs- och vattenmyndigheten, Jordbruksverket och Skogsstyrelsen, ska bedöma om det är möjligt att fastställa generellt tillämpbara föreskrifter om försiktighetsmått vid rensning och om så, utarbeta förslag till föreskrifter.[87]

Denna studie bekräftar att en utredning och förändrade regler behövs, särskilt vad gäller hur genomförandet av åtgärdsprogrammen och miljökvalitetsnormer ska säkerställas vid dikesrensningar men också vid prövningar av tillståndspliktiga markavvattningar. I detta arbete bör även en översyn och uppdatering av Naturvårdsverkets handbok om markavvattning och dikesrensningar ingå.

Givet att markavvattning är en verksamhet som, bland annat enligt åtgärdsprogrammen, påverkar vattenförekomster negativt, och tillkomsten av nydikningar samt rensningar utan tillräckliga villkor kan komma att förvärra den redan otillfredsställande ekologiska statusen i länen, är det anmärkningsvärt att åtgärdsprogram inte alls nämns och att miljökvalitetsnormer endast nämns och beaktas i ett av länen. Om de beviljade besluten om markavvattning innebär att den ekologiska statusen försämras gör sig Sverige skyldig till fördragsbrott genom att meddela tillstånd utan tillräckliga villkor för att förhindra försämringen om så är möjligt. Enligt domstolen utgör artikel 4(1)(a)(i och ii) rättsligt bindande skyldigheter för medlemsstaterna att dels skydda, förbättra och återställa alla ytvattenförekomster (om inte något av undantagen är tillämpliga) dels förebygga varje försämring och att skyldigheterna måste iakttas i samband med godkännandet av enskilda projekt.[88] Detta följer av såväl en bokstavstolkning av artikel 4(1)(a) som av en ändamålsenlig tolkning. Domstolen anger vidare att skyldigheten att förebygga försämring gäller varje kvalitetsfaktor (i direktivets bilaga V), även om denna försämring inte leder till en försämring av klassificeringen av ytvattenförekomsten som helhet.[89] Om en vattenverksamhet innebär att miljökvalitetsnormen god status inte uppnås ska med andra ord inte tillstånd meddelas.[90] Om vattnet är i lägsta klass räcker det med att en parameter försämras.[91]

[85] Se SOU 2009:42, *Vattenverksamhet*, s. 250–251 samt SOU 2014:35, *I vått och torrt – förslag till ändrade vattenrättsliga regler*, s. 440–442.

[86] Se SOU 2009:42, *Vattenverksamhet*, s. 250–251.

[87] Se SOU 2009:42, *Vattenverksamhet*, s. 250–251 samt SOU 2014:35, *I vått och torrt – förslag till ändrade vattenrättsliga regler*, s. 440–442.

[88] C-461/13, *Bund für Umwelt und Naturschutz Deutschland eV mot Bundesrespublik Deutschland* (förhandsavgörande), p. 31 och 33.

[89] C-461/13, p. 65. Domstolen argumenterar med andra ord mot den s.k. ”statusklassteorin”, vilken innebär att försämring av statusen inträder först om ytvattenförekomstens status hamnar i en lägre klass och för ”status quo-teorin” som innebär att varje försämring även inom en klass är en försämring rättsligt sett. För en utförlig analys av domen, se Michanek (2015). Tillstånd får inte ges om aktuell ytvattenstatus försämras eller om uppnåendet av god ytvattenstatus äventyras. Analys av EU-domstolens förhandsavgörande C-461/13. *JP miljönet* (artikel i tryck).

[90] Se domstolens uttalande i målet ovan om att strukturen hos de kategorier av undantag som föreskrivits i Ramvattendirektivet talar för att de inte enbart innehåller principiella skyldigheter utan också omfattar enskilda projekt (se p. 47).

[91] Se ovan nämnda dom samt analys av denna i Michanek (2015).

4. Förslag till nya åtgärdsprogram

Nyligen har förslag till nya åtgärdsprogram lagts fram av vattenmyndigheterna.[92] De nya programmen utgör emellertid fortfarande fem i stort sett identiska dokument utan något tydligt avrinningsperspektiv i åtgärderna. Åtgärd 28 har överförts utan någon större förändring (se åtgärd 1 för länsstyrelserna i förslaget till nya program).[93] En skillnad är att åtgärden delats in i två delar (a och b) med syfte att underlätta uppföljningen. De kommer med andra ord, om programmen antas, att ge lika lite vägledning som de nu gällande programmen i detta avseende.

Den viktigaste skillnaden mellan de nu gällande och förslaget till de nya programmen finns enligt min mening i bilagorna till programmen. I dessa bilagor har områdesspecifika åtgärder för ett stort antal åtgärdsområden föreslagits. Åtgärdsområdena är många och kan omfatta såväl flera kommuner som län. I stor utsträckning sammanfaller de med Sveriges huvudavrinningsområden, men detta är inte alltid fallet.[94] Förslagen om åtgärdsområdesspecifika åtgärder innebär att graden av precision är betydligt högre än tidigare. I vissa åtgärdsområden pekas till exempel åtgärder för att komma tillrätta med problem avseende markavvattning och dikesrensningar ut, medan det i andra områden är fokus på vandringshinder till följd av vattenkraft. Förslag på åtgärder kan t.ex. vara biotopvård av uträtade och rensade diken.

Även om myndigheter och kommuner har möjlighet att vidta andra åtgärder än de som har specificerats i åtgärdsområdesbilagorna, om det finns uppgifter som visar att andra åtgärder är mer kostnadseffektiva, ger den ökade precisionen en betydligt större vägledning än de nu gällande programmen. Detta främjar genomförandet men också uppföljningen av åtgärdernas mål- och kostnadseffektivitet. Dock kvarstår problematiken med bristande resurser och komplexa juridiska prövningar (åtminstone till dess att vattenverksamhetsutredningens förslag genomförs). Dessutom finns inte någon överprövningsmyndighet som vid passivitet kan tvinga länsstyrelser (eller andra myndigheter och kommuner) att genomföra de åtgärder som har formulerats i programmen. Det saknas också krav på att fysiska planer, t.ex. detaljplaner, som strider mot åtgärdsprogram ska överprövas. Förutom själva utformningen av åtgärdsprogrammen är det därför som nämnts tidigare viktigt att genomföra ett flertal förändringar i regelverket kring vattenverksamheter.

5. Diskussion

För att genomföra Ramvattendirektivets syfte att uppnå en god vattenstatus ska medlemsstaterna utforma och genomföra åtgärdsprogram. De första åtgärdsprogrammen i Sverige trädde ikraft 2009. Trots detta uppnås inte en god status i en majoritet av landets vattenförekomster. En förklaring till detta kan vara ett bristande genomförande av de åtgärder som har fastställts i programmen.

Den här studien har visat att det konkreta genomförandet under den första förvaltningsperioden av åtgärd 28 är bristfälligt. Få omprövningar av vattenverksamheter har exempelvis

[92] Programmen har dock överlämnats av Vattenmyndigheterna för överprövning av regeringen i enlighet med 6 kap. 4 § vattenförvaltningsförordningen. I skrivandes stund har inget beslut angående programmen tagits av regeringen.

[93] Se Vattenmyndigheten Bottenhavet (2015). *Förslag på åtgärdsprogrammet för Bottenhavets vattendistrikt* 2015–2021, Vattenmyndigheten Bottenviken (2015). *Förslag på åtgärdsprogrammet för Bottenvikens vattendistrikt* 2015–2021, Vattenmyndigheten Norra Östersjön (2015). *Förslag på åtgärdsprogrammet för Norra Östersjöns vattendistrikt* 2015–2021, Vattenmyndigheten Södra Östersjön (2015). *Förslag på åtgärdsprogrammet för Södra Östersjöns vattendistrikt* 2015–2021 och Vattenmyndigheten Västerhavet (2015). *Förslag på åtgärdsprogrammet för Västerhavets vattendistrikt* 2015–2021.

[94] Det framgår inte av programmen på vilka grunder åtgärdsområden har bestämts.

genomförts och den egeninitierade operativa tillsynen utgör endast en liten del av myndighetens tillsynsarbete med vattenverksamheter. Av de tillsynsplaner som har granskats framgår att åtgärdsprogrammen endast utgör ett av många styrande dokument och att det ofta endast sker en upprepning av vad som redan framgår av åtgärdsprogrammen utan någon konkretisering utifrån regionala förhållanden. Fallstudien om markavvattningsbeslut visar också att åtgärdsprogrammen inte haft någon styrande effekt på länsstyrelsernas arbete med markavvattning, trots att markavvattning och dikesrensningar kan påverka vattenkvaliteten negativt på flera olika sätt och också har identifierats som ett omfattande problem i åtgärdsprogrammen. I de fall vattenförvaltningen nämns i besluten om markavvattning i ett av länen handlar det om miljökvalitetsnormer och inte åtgärdsprogrammen i sig.

Resultaten är emellertid inte förvånande. Åtgärdsprogrammen är för det första vagt utformade. Åtgärd 28 anger i stort sett endast vad som redan omfattas av länsstyrelsernas ansvarsområde, utan någon närmare vägledning om hur länsstyrelserna ska prioritera i sitt arbete med undantag att vattenförekomster som inte uppnår en god status ska prioriteras. Eftersom ett stort antal vattenförekomster inte uppnår en god status ger detta dock lite vägledning. Inte ens på avrinningsområdesnivå finns någon vägledning då åtgärden är densamma i alla fem program, trots att syftet med att utforma ett åtgärdsprogram för varje avrinningsdistrikt är att skapa en grund för avrinningsområdes-baserad vattenförvaltning. Vagt formulerade åtgärder innebär en risk att genomförandet blir beroende av subjektiva faktorer, såsom länsstyrelsernas finansiella resurser, omfattningen av andra ansvarsuppgifter eller enskilda handläggares drivkrafter.

När det gäller markavvattning saknas också annan tydlig nationell styrning och vägledning (både i förarbeten, praxis och i handböcker) som säkerställer att hänsyn till miljökvalitetsnormer och åtgärdsprogram tas vid olika beslut om markavvattning och dikesrensningar. Detta syns också tydligt i besluten där normalt sett endast ”högre naturvärden” nämns. Traditionella skyddsinstrument som områdesskydd och artskydd tas ofta upp, men sällan miljökvalitetsnormer och aldrig åtgärdsprogrammen i sig. En länsstyrelse uttryckte till och med explicit att höga naturvärden, men *inte miljökvalitetsnormer*, prioriteras i arbetet med genomförandet av åtgärd 28, trots att syftet med åtgärdsprogram är just att genomföra miljökvalitetsnormer.

Åtgärdsprogrammen har också antagits i en befintlig rättslig kontext som på flera olika sätt motverkar ett effektivt genomförande av åtgärderna. Dels handlar det om den nivå åtgärdsprogrammen antas på och det otraditionella angreppssättet att en regional myndighet styr nationella eller andra regionala myndigheter. Dels handlar det om att vattenförvaltningen har införts i en redan befintlig rättslig kontext som inte har anpassats tillräckligt efter de nya miljökraven. Detta gäller inte minst reglerna om att ansöka och bedriva omprövningsmål av vattenverksamheter som saknar moderna tillstånd, men också t.ex. undantaget från tillståndsplikten för dikesrensningar. Undantagen innebär en risk att dikesrensningar sker utan att länsstyrelsen får kunskap om detta, något som försvårar tillsynen och möjligheten att förelägga verksamhetsutövare om nödvändiga försiktighetsmått eller förbud. Det bör därför, såsom också föreslagits i vattenverksamhetsutredningen, övervägas om anmälningsplikt bör införas för dikesrensningar. Därutöver bör övervägas om rensningar men också andra delar av åtgärdsprogrammen istället bör regleras med generellt tillämpliga föreskrifter.

Mot ett effektivt genomförande av åtgärder och uppnående av en god status verkar också dagens formulering av 2 kap. 7 §. Eftersom mer

långtgående krav än vad som är rimligt (enligt 2 kap. 7 § 1 st.) inte kan ställas för andra normer än s.k. gränsvärdesnormer (p. 1-normer) (enligt 2 kap. 7 § 2 st.) kan med andra ord verksamheter tillåtas även om verksamheten medverkar till att en god ekologisk status inte uppnås. Kraven ska vara rimliga enligt 1 st. Av EU-domstolens dom C-467/13 följer dock att detta inte är en korrekt implementering av Ramvattendirektivet. Enligt EU-domstolen utgör som sagt artikel 4 i Ramvattendirektivet en rättsligt bindande skyldighet som måste iakttas även i samband med godkännandet av enskilda projekt, såsom vid tillståndsprövning av markavvattning. Bedömningen av om en försämring har skett kräver vidare inte enligt domstolen att ytvattenförekomstens status sänks. Det räcker nämligen med att en kvalitetsfaktor, eller en paramter om vattnet är i lägsta klass, påverkas negativt för att skyldigheten att förhindra försämringen ska uppstå. För att EU-rätten ska efterlevas krävs därför en ändring av de svenska reglerna. Domen bör dock få betydelse för den svenska rättstillämpningen även innan en sådan lagändring träder ikraft, antingen genom direkt effekt eller en direktivkonform tolkning.[95]

Därutöver kan ändamålsenligheten i formuleringen i 2 kap. 7 § 3 st. p. 1, givet åtgärdsprogrammens utformning diskuteras. Tillstånd eller dispens kan t.ex. meddelas även om verksamheten eller åtgärden på ett inte obetydligt sätt medverkar till att en miljökvalitetsnorm (p. 1 norm) inte följs, om verksamheten eller åtgärden ”är förenlig med ett åtgärdsprogram som har fastställts för att följa normen”. En verksamhet kan således tillåtas även om den medför en icke obetydlig försämring för miljön och trots de begränsningar som finns att i efterhand ändra tillståndsvillkor eller återkalla rättskraftiga tillstånd.[96] Givet detta samt programmens vaga utformning och bristen på rättsliga funktioner som säkerställer att åtgärderna i programmen faktiskt genomförs bör denna regel antingen tas bort, ändras eller tolkas restriktivt. Annars finns risk att miljökvalitetsnormer förlorar sin funktion och att EU-rätten inte efterlevs.

Såsom har diskuterats tidigare i både utredningar och i den juridiska doktrinen bör även övervägas om åtgärdsprogrammen, eller vissa delar av dessa, bör utformas som (överklagbara) förvaltningsbeslut som är direkt bindande för enskilda.[97] Program som är direkt bindande för enskilda skulle kunna minska den långa och tidskrävande implementeringskedjan. När programmen är direkt bindande för enskilda kan också mer konkreta åtgärder formuleras, vilket i sin tur kan bidra till att åtgärderna blir lättare att följa upp. Att kunna följa upp åtgärder är nödvändigt om vattenförvaltningen på lång sikt ska bli mål- och kostnadseffektiv. De nya förslagna programmen utgör ett viktigt steg i denna riktning. Inte heller de nya åtgärdsprogrammen är dock bindande för enskilda.

Sist kan också nämnas att en tydligare ansvarsfördelning mellan myndigheter är önskvärd. En tydlig ansvarsfördelning minskar risken för att en åtgärd hamnar ”mellan stolarna”. Det bör också införas tydliga kopplingar mellan miljöbalken och relevanta sektorslagstiftningar som innebär att beslut också enligt annan lagstiftning (t.ex. plan- och bygglagen eller skogsvårdslagen) är förenliga med åtgärdsprogrammen. Därutöver bör också ett överprövningsansvar införas. Ett sådant ansvar skulle exempelvis

[95] Detta diskuteras mer utförligt i Michanek (2015), avsnitt 6. Michanek menar att försämringsförbudet, efter preciseringen av dess innebörd genom domen, är ovillkorlig och tillräckligt tydlig och precis för att ha direkt effekt. Om så inte är fallet bör domen ändå få genomslag i svensk rätt genom fördragsenlig tolkning.

[96] För en mer utförlig beskrivning samt kritik av regeln, se Michanek och Zetterberg (2012), s. 166–167.

[97] Se t.ex. SOU 2005:113, *Åtgärdsprogram för miljökvalitetsnormer*.

kunna innebära att myndigheten kontinuerligt är skyldig att granska och överpröva beslutens förenlighet med åtgärdsprogrammen, men också en möjlighet att tvinga passiva myndigheter eller kommuner att vidta de åtgärder som har formulerats i programmen.[98]

Sammantaget visar denna studie att det finns ett antal brister i den nationella lagstiftningen som orsakar ett genomförandeunderskott. Dessa brister måste åtgärdas om en god status ska uppnås och Sveriges förpliktelser enligt EU:s Ramvattendirektiv efterlevas.

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Länsstyrelsebeslut

Gotlands län

531-2894-11 (2011-11-17) Dispens
531-2894-11 (2011-11-17) Tillstånd
531-2128-11 (2011-12-15) Dispens och tillstånd
531-785-12 (2012-04-19) Anmälan
531-2287-12 (2012-09-12) Dispens och tillstånd
531-3204-12 (2012-11-26) Dispens
531-3204-12 (2012-11-26) Tillstånd
531-1925-12 (2013-03-20) Dispens
531-1925-12 (2013-03-20) Tillstånd
531-1538-13 (2013-07-08) Dispens biotopskydd och tillstånd
535-3317-13 (2014-07-08) Yttrande

Norrbottens län

531-6229-12 (2011-10-09) Tillstånd
531-8574-11 (2011-12-01) Tillstånd
531-8978-12 (2012-09-25) Tillstånd
531-7284-13 (2013-10-29) Tillstånd
531-13152-13 (2013-11-28) Tillstånd

Östergötlands län

525-8948-11 (2012-01-13) Samråd
535-4773-10 (2012-04-03) Tillsyn
525-1648-12 (2012-05-08) Anmälan
525-9814-11 (2012-01-19) Samråd
525-2867-13 (2013-03-28) Anmälan
525- 5944-13 (2013-08-14) Samråd
535-7924-14 (2014-07-31) Anmälan

The Impact of the Water Framework Directive on Diffuse Pollution Control: the Case of Ditch Network Maintenance in Finnish Forests

*Minna Pappila & Lea Halonen**

Abstract

The Water Framework Directive sets the aim to achieve and maintain the good status of surface and ground water by 2015. In general the water quality has improved in Finland during the last centuries but especially diffuse pollution is still a problem. Ditch network maintenance is a typical example of a source of diffuse pollution where cumulative effects of several projects are the main cause of water pollution. This article examines Finnish regulation concerning ditch network maintenance and evaluates how well it meets the aim of achieving and maintaining the good quality of surface waters. The article highlights that while Finnish legislation seems to work relatively well for individual projects, there are flaws in the law and in practice that do not enable authorities to take cumulative effects properly into account. The results suggest that the Water Framework Directive has not yet been quite comprehensively implemented into Finnish legislation.

1. Introduction

1.1 The aim and the method

Finland is one of the swampiest countries in the world and extensive ditching has considerably changed our water systems during the last fifty years. In this article we will scrutinize Finnish regulation on ditching from the viewpoint of the Water Framework Directive[1] (hereinafter WFD) and diffuse pollution control.

The WFD principally determines the water policy in the EU nowadays. The directive adopts a holistic approach to water protection and puts ecosystem stability at the centre of water policies.[2] The WFD represents a radical shift in water management within the EU by governing waters on a river basin basis. The WFD establishes environmental objectives of which the most important is the aim to *achieve* and *maintain* the good status of surface and ground water by 2015 (article 4). 'Good status' includes both 'good ecological status' and 'good chemical status'. The objective of preventing further deterioration of the status of a body of surface water is binding on authorities and must be applied while considering the permissibility of a single project: an authority shall not grant a permit if the project could lead to the deterioration of the status of the water.[3]

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[1] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for community action in the field of water policy.

[2] Jans & Vedder (2012): European Environmental Law: After Lisbon, 4th edition, Europa Law Publishing, p. 392, Lee, M. (2009): Law and Governance of Water Protection Policy. In Scott, J. (ed): *Environmental Protection, European Law and Governance*, Vol. XVII/3, 27–55, Oxford University Press, p. 29.

[3] Court of Justice of the European Union states in the Weser dredging case (C-461/13) that Member States are required — unless a derogation is granted — to refuse authorisation for an individual project where it may cause a deterioration of the status of a body of surface water or where it jeopardises the attainment of good sur-

The holistic environmental objectives and the requirement to prevent deterioration also apply to diffuse pollution.[4] In Finland, ditch network maintenance is a typical example of a source of diffuse pollution: pollutants flow from a relatively large area as a result of several DNM and other projects. Diffuse pollution is typically governed by a variety of means – often by also using instruments other than binding rules or permits.[5] In Finland the governance of ditching consists of both statutes and soft law instruments, thus combining the typical point-source pollution approach (legally binding regulations such as permits) and the diffuse pollution approach (mainly soft law). However, the WFD and its obligations concern activities that require a permit and others that do not.

The aim of this article is to scrutinise the instrument mix of Finnish water protection regulation of forest ditching. We analyse the instrument mix from the viewpoint of one of the main objectives of the WFD: to achieve and maintain the good status of surface water.[6] We will therefore ask the question: does the current regulation of ditch network maintenance *enable* and *obligate* authorities to ensure good status of surface waters? Even if the meaning of 'good status' is complex and vague, we consider that it is possible to use it as a criterion for evaluating legislation, as we are only scrutinising the fulfilment of the aim on a general level, i.e. the permitting and other regulatory instruments.

Our article is part regulatory research and part evaluation research: we will first and foremost look at regulation[7] from the viewpoint of potential effectiveness.[8] Our starting point for this study is that the design of regulation and its implementation by public authorities are central to ensuring the effectiveness of regulation.[9] Thus, evaluating potential effectiveness means exploring the regulation for its potential to ensure the

face water status or good ecological potential and good surface water chemical status by the date laid down by the directive.

[4] Diffuse pollution means pollution which is caused by the release of pollutants from a range of activities on land that individually may have little effect on the water environment, but cumulatively can have a significant impact across a (river) catchment.' SEPA (Scottish Environment Protection Agency) (2014): The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended), A Practical Guide, Version 7.1, 2014, p. 9.

[5] Usually it is burdensome to control the impacts of diffuse pollutants by command and control instruments. See Gunningham, N. & Sinclair, D.: Policy Instrument Choice and Diffuse Source Pollution. Journal of International Law, 2005, vol. 17, no. 1, 51–81, p. 52–54. See also Howart, W. (2011): Diffuse Water Pollution and Diffuse Environmental Laws Tackling Diffuse Water Pollution in England, Report by the Comptroller and Auditor General, HC 186, Session 2010-2011, 6 July 2010. JEL 23:1, 129–141, p. 130.

[6] WFD art. 4(1)(a). We also take into consideration the obligation to prevent the deterioration of surface water bodies (art. 1).

[7] We understand the concept of regulation broadly in the sense of the ''sustained and focused attempt to alter the behavior of others according to defined standards or purposes.'' See Black, J.: Critical reflections on regulation. Australian Journal of Legal Philosophy. 27/2002, 1–35, p. 20. The concept of regulation thus contains not only the activities of state intervention but also private regulations, i.e. self-regulation.

[8] There are multiple meanings of effectiveness and it is defined in various ways for different purposes. Effectiveness is typically understood as the extent to which the policy goals associated with the body of legislation are achieved. McGrath C. (2010), Does Environmental Law Work? How to Evaluate the Effectiveness of an Environmental Legal System (Lambert Academic Publishing, Saarbrücken, p. 45–46.) In terms of the main lines of regulatory research in Finland, see Kokko, K. T.: Methods of Environmental Law in Finland. Scandinavian Studies in Law 59 (2014), 285–319, p. 300.

[9] We do not intend to deprecate the potential impact of self-regulation, such as voluntary forest certification systems on water quality. However, when there is need to ensure that sufficient water protection methods are in use in a DNM project, an authority must have the opportunity to forbid a project or to require more efficient water protection methods. A voluntary forest certification standard is of no help in such cases. In addition, the most widely used forest certification system in Finland, PEFC, does not add anything new to water protection requirements regarding DNM projects.

set targets. We look at the whole water protection instrument mix of DNM projects.[10] This article will contribute to the discourse on the regulation of diffuse pollution and cumulative effects. Our conclusions will also bring some of the flaws in Finnish legislation related to the implementation of the WFD to the discussion.

As research material we have used legislation and other regulation, research literature, river basin management plans (RBMPs) and programmes of measures (POMs), and a sample of drainage notifications from three regional environmental authorities. We also sent an enquiry by e-mail to all Centres for Economic Development, Transport and the Environment (hereinafter ELY Centres)[11] supervising DNM projects.[12]

In part two we shall first introduce the Finnish legislation and soft law concerning DNM. In part three, relevant water protection instruments will be analysed from the perspective of their potential effectiveness in ensuring the good status of surface waters. The relevance of river basin management plans (RBMP) and programmes of measures will be scrutinised in particular. Part four is for discussion and conclusions. However, we shall first describe the research topic from a social and environmental viewpoint.

1.2 Finnish forest drainage in a nutshell

Ditching has a long history in Finland as almost one-third of Finland's land area consists of peatlands. Forest ditching started in Finland in the early 20th century.[13] Due to mechanisation, active state policy and subsidies, ditching intensified in the 1960s and reached its peak in 1969.[14] Now over half of Finland's peatland, about 4.7 million hectares, has been drained for forestry.[15] As a whole the drainage has considerably increased the amount of productive forest land and the growing stock.[16] However, while the water quality in general has improved significantly in Finland during the last decades, the quality of small water bodies has not improved due to the impact of agriculture and forestry.[17] Also, many small-scale water habitats have become endan-

[10] By also scrutinising non-state regulation we employ a polycentric view of law. The Finnish regulation of DNM is clearly polycentric and pluralistic. See Halonen, L. (2013): Ojitusilmoitusvelvollisuus metsäojitusten vesiensuojelun hallinnan keinona (The Duty to Notify on Forest Ditching as an Administrative Control Mechanism of Water Protection). *Ympäristöjuridiikka* 2/2013, 30–61 and Halonen, L. (2015): Metsätalouden vesiensuojelusuositukset metsäojitusten sääntelykeinona (Silvicultural Water Protection Guidelines as a Regulatory Instrument). *Oikeus* 2/2015, 177–201.

[11] ELY Centres (*Elinkeino-, liikenne- ja ympäristökeskus* in Finnish) also act as supervisory authorities for water and environmental protection permits. Read more about ELY Centres here: http://www.ely-keskus.fi/en/web/ely-en/environment.

[12] Inquiry/ELY Centres 2015. An inquiry concerning e.g. notifications, cumulative effects and utilised databases was sent to the officials of ELY Centres responsible for ditching notifications. Ten responses from different ELY Centres were received in April–May 2015.

[13] Peatlands are also used for agriculture and peat is harvested for different purposes. METLA (Metsäntutkimuslaitos /The Finnish Forest Research Institute): Finland – the Peatland Capital of the World. [http://www.metla.fi/tutkimus/suotutkimus/tausta-en.htm]

[14] Pajula, H. (2010): Maankuivatustoiminta ja sen kehittämistarpeet. (Drainage operations and the need to develop them) *Suomen ympäristökeskuksen raportteja* 15/2010. [https://helda.helsinki.fi/bitstream/handle/10138/39778/SYKEra_15_2010.pdf?sequence=1], p. 8.

[15] METLA (n 13).

[16] METLA (Metsäntutkimuslaitos/Finnish Forest Research Institute): State of Finland's Forests 2012. Based on the Criteria and Indicators of Sustainable Forest Management. [http://www.metla.fi/metinfo/sustainability/].

[17] HE 120/2004 vp. Hallituksen esitys Eduskunnalle laiksi vesienhoidon järjestämisestä, laiksi ympäristönsuojelulain muuttamisesta ja laiksi vesilain muuttamisesta sekä maasta toiseen ulottuvien vesistöjen sekä kansainvälisten järvien suojelusta ja käytöstä tehdyn vuoden 1992 yleissopimuksen vesivaroja ja terveyttä koskevan pöytäkirjan hyväksymisestä ja laiksi sen lainsäädännön alaan kuuluvien määräysten voimaansaattamisesta (Government Bill (draft law) on the Act on Water Resources Management), p. 8.

gered in Finland, largely due to forestry and forest ditching.[18]

Forest ditching has been a significant part of the state's forest policy and the stable wood supply in Finland. Currently, the state provides subsidies for private forest owners to increase the willingness to conduct ditch network maintenance.[19] The maintenance operations are needed to sustain the drainage capacity. Ditch network maintenance is normally done every 20–40 years.[20] Typically, ditch network maintenance is conducted annually on about 50–60 000 hectares.[21]

Ditch network maintenance may cause harm to the ecological but also the chemical status of water bodies. DNM is a typical example of diffuse pollution: the effects of a single project will not usually deteriorate the waters. However, the cumulative effects from forestry and DNM can be considerable and especially vital on otherwise clean headwaters such as streams, springs, ponds and small lakes.[22] Strain on the water system is the main side effect; the load of suspended solids, increase in nutrition levels (the concentrations of Mn, Ca, Mg) and acidity in stream waters may occur due to ditching.[23] The load of suspended solids (sediment) in the water and the bottom of lakes, rivers and smaller waterways is the most harmful environmental effect of ditch network maintenance.[24] Suspended solids may make water turbid or cause silting of the bottom, which has negative impacts on species composition.[25] The release of nutrients is usually highest during the first one to three years after ditch network maintenance operations, but on the whole, negative effects may continue for over twenty years.[26] In Finland the environmental effects of DNM creates a risk with regard to the aim of achieving and maintaining the good quality of surface waters.[27]

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[18] Raunio, A., Schulman, A. & Kontula, T. (2008): Suomen luontotyyppien uhanalaisuus – Osa 1: Tulokset ja arvioinnin perusteet (Assessment of threatened habitat types in Finland – Part 1: Results and basis for assessment). *Suomen ympäristö* 8/2008. https://helda.helsinki.fi/handle/10138/37930, p. 64–66. In Southern Finland 67.6 % of the habitat types of inland waters and shores are threatened. Id., p. 258–259.

[19] The state financial support for new ditches ended in the 1990s. Since then pristine peatlands have hardly been drained for forestry purposes.

[20] Äijälä O., Koistinen A., Sved J., Vanhatalo K. & Väisänen p. (toim.) (2014): Hyvän metsänhoidon suositukset – Metsänhoito (Best practice guidelines – Forest management). Publications of Metsätalouden kehittämiskeskus Tapio, p. 175.

[21] In 2012 ditch network maintenance was conducted on 52,000 hectares. See METLA (Metsäntutkimuslaitos/Finnish Forest Research Institute) (2013): Metsätilastollinen vuosikirja 2013 (*Finnish Statistical Yearbook of Forestry* 2013). http://www.metla.fi/julkaisut/metsatilastollinen-vsk/tilastovsk-sisalto.htm, p. 104, Nieminen, M., Ahti, E., Koivusalo, H., Mattsson, T., Sarkkola, S. & Laurén, A. (2010): Export of suspended solids and dissolved elements from peatland areas after ditch network maintenance in south-central Finland. *Silva Fennica* 44(1): 39–49. http://www.metla.fi/silvafennica/full/sf44/sf441039.pdf, p. 40.

[22] Hiltunen, T., Jämsén, J., Joensuu, S., Heikkinen, K. & Vuollekoski, M. (2014): Opas metsätalouden vesiensuojelun suunnitteluun valuma-aluetasolla (A guide for river basin-level planning of water protection in forestry). Jyväskylä 2014, p. 8.

[23] Åström, M., Aaltonen, E.–K. & Koivusaari, J. (2002): Impact of forest ditching on nutrient loadings of a small stream—a paired catchment study in Kronoby, W. Finland. *Science of The Total Environment*, Volume 297, Issues 1–3, 127–140, p. 128.

[24] Nieminen and others (n 21), p. 48.

[25] Past drainage has permanently changed a number of streams and deteriorated spawning places of fish. Sutela T., Olin, M., Vehanen, T. & Rask, M. (2007): Hajakuormituksen vaikutukset järvien ja jokien kalastoon ja ekologiseen tilaan (The effect of diffuse pollution on the fish stock and ecological state of lakes and rivers). *Kala- ja riistaraportteja* nro 411. Finnish Game and Fisheries Research Institute. Helsinki. [http://www.rktl.fi/www/uploads/pdf/raportti411.pdf].

[26] Joensuu J. & Rissanen K. (2002): Vanhojen uudisojitusten aiheuttamat vesistövaikutukset. Selvitys Metsähallituksen vuosina 1979–1980 ja 1989–1990 toteuttamista uudisojituksista (The effects of old drainage projects on waters. Report on the first-time ditching by Metsähallitus in 1979–1980 and 1989–1990). *Metsähallituksen metsätalouden julkaisuja* 44, p. 69.

[27] Various water protection methods have been developed to decrease the harmful effects of DNM. See Joensuu & Rissanen (n 26), p. 65. There are no statistics on

2. Regulation of water protection in DNM projects

2.1 Permits, notifications and subsidies

The Water Act (587/2011) regulates various construction projects in water bodies but also water as a natural resource. It includes general rules of ditching, and it also regulates ditching projects in the case of pollution in water areas (generally the Environmental Protection Act (527/2014) regulates water pollution control). The Act on Water Resources Management (1299/2004) in turn is the main Act regulating the plans, programmes and procedures required by the WFD (see figure 1).

The Water Act applies to ditching and the use and maintenance of ditches (Water Act 5:1). A ditching project is called into question if the project includes either digging new ditches or making old ditches deeper or wider than they were originally.[28] The maintenance of ditches only refers to projects including measures that aim at restoring the status after original ditching.[29]

According to chapter 5 of the Water Act, either a permit or prior notification is required for ditch drainage projects. For 'minor ditch drainage', neither is necessary.[30] Ditching, or the use and maintenance of ditches, are subject to a permit if it may cause environmental pollution in a water area (Water Act 5:3).[31] Basically, changes caused by the project should always be considered environmental pollution, if the changes would result in the deterioration of a water body as defined in the WFD.[32] Permits are issued by Regional Administrative Agencies.[33] The permissibility of the project is typically assessed by using the 'weighing of interests' method: section 4, chapter 3 of the Water Act prohibits allowing a

the realisation of concrete water protection measures. See Ympäristöministeriö (Ministry of the Environment) (2013): Vesienhoidon toimenpiteiden suunnittelu vuosille 2016–2021. Metsätalous (Planning of water management measures for 2016–2021. Forestry.). 10.6.2013. Metsätalous- ja turvetuotantotiimi. http://www.ymparisto.fi/vesienhoito/opas, p. 12. It seems that at least some water protection measures are carried out on most of the ditch maintenance areas. See Metsäkeskus (Finnish Forest Centre) (2014): Talousmetsien luonnonhoidon laadunseuranta – raportti. (Quality control of nature management in commercial forests – a report). http://www.metsakeskus.fi/sites/default/files/luontolaatu_2013.pdf, p. 6.

[28] In addition, if draining is otherwise made more effective than it was originally when the ditches were first made, or ditches have evolved into natural-like state. Halonen 2013 (n 10), p. 42.

[29] As a judicial concept, ''the maintenance of ditches'' only includes activities which do not exceed the rights obtained for original ditching activities (otherwise the activity in juridical sense should be considered as ditch drainage). As a silvicultural concept, ''the maintenance of ditches'' includes all activities needed to restore the hydrological status suitable for timber growth (i.e. digging new ditches or making old ditches deeper or wider). The silvicultural meaning of ditch network maintenance is thus broader than its judicial meaning. In this article the abbreviation of DNM (ditch network maintenance) refers to the silvicultural meaning.

[30] There are no clear rules what ''minor ditch drainage'' is. The government bill concerning the Water Act refers to a small surface area of drainage, be it drainage of a field plot or a smallish forest patch. HE 277/2009 vp. Hallituksen esitys Eduskunnalle vesilainsäädännön uudistamiseksi (Government bill for revising the water legislation), p. 93. Halonen, however, notes that within the framework of the Water Act, the need for a permit must be evaluated according to the *effects* of a project. A smallish ditch network area, of course, indicates but is not a guarantee of minor environmental effects. Halonen 2013 (n 10), p. 41.

[31] A permit is also needed in the case of structural changes in a water body; e.g. lowering the water level or affecting the water stream.

[32] The Weser dredging case (C–461/13) states that unless a derogation is granted, deterioration is relevant if the status of at least one of the quality elements falls by one class, even if it does not result in a drop in classification of the body of surface water as a whole. For a more detailed discussion of the case see, Jääskinen, N. (2014): Advocate General's Opinion 23 October 2014, Case C-461/13, Bund für Umwelt und Naturschutz Deutschland e. V. v Germany. http://eur-lex.europa.eu/legal-content/FI/TXT/HTML/?uri=CELEX:62013CC0461&rid=4.

[33] The State Regional Administrative Agency (*Aluehallintovirasto* in Finnish) makes decisions on permits pursuant to the Environmental Protection Act and the Water Act. Environmental protection authorities of municipalities issue environmental permits for smaller projects.

permit for a project causing more harm than benefit.[34] In practice, a single DNM project hardly ever exceeds the permit threshold.[35] Therefore, in reality DNM projects are not actively governed directly by permits.[36]

A duty to make a prior *notification* to a supervisory authority[37] applies to all but minor ditch drainage projects (Water Act 5:6).[38] Notifications must be sent to ELY Centres[39] no later than 60 days prior to undertaking a ditch drainage project.[40] The notification must include a description of the project and its environmental impacts.[41] An ELY Centre has to advise the project leader to apply for a permit if need be. Ditching notifications do not result in an administrative decision. In practice, if deficits are noticed, the supervisory authority contacts the project leader with a written statement and urges them either to improve the water protection measures or to apply for a permit. If a permit is needed, all necessary water protection measures are defined in permit conditions.[42] Even if permits are in fact hardly ever required, the potential need for a permit (Water Act 3:2) is in practice being used as a way to impose water protection measures in every DNM project.[43]

Finnish water legislation does not include specific standards on best available practices or techniques that would set the necessary water protection measures for ditching. The Water Act only includes a general obligation to minimise

[34] Weighing of interests means that before allowing the permit, the benefits and harms of a single project are identified, valued and weighed. This means that when conducting weighing of interests, the environmental effects of a project may result in prohibiting the permit if they are weighed more substantial than the benefits (e.g. monetary value). See Soininen, Niko: Ympäristöoikeudellisen intressivertailun systematisointia (Systematisation of Environmental Comparison of Interests). Lakimies 1/2012, 102–124, p. 105–109. About the legal status of RBMPs in weighing of interests within the decision-making of the State Regional Administrative Agency see also Kauppila, J. (2014): Vesienhoitosuunnitelma ja lupaharkinta – Osa II: Lupakäytäntöä neljältä toimintasektorilta (River Basin Management Plan and Permit Consideration – Part II: Practice With Regard to Four Sectors of Activity). *Ympäristöjuridiikka* 3–4/2014, 69–116, p. 95–96.

[35] No permits on drainage projects were issued by State Regional Administrative Agencies between 2011 and 2014. In recent decades there have been a few cases where ditch drainage projects have been licensed. This is mostly due to the fact that ditch maintenance projects are deliberately conducted not to exceed the permit threshold.

[36] This also means that currently the public has no opportunities to take part in decision-making concerning single DNM projects because permits are rarely required and therefore the opportunities to participate included in a permission procedure do not come about. Ympäristöministeriö (n 27), p. 4.

[37] Notifications are also being increasingly used in the field of environmental protection regulated by the Environmental Protection Act. For example, a growing field of activities that previously required an environmental permit is now being supervised by means of notifications (i.e. registration).

[38] According to the report of the Ministry of the Environment, it was not considered sensible to extend compulsory notification to all ditch network maintenance cases. See Ympäristöministeriö (Ministry of the Environment) (2012): Uudistunut vesilaki 2011. Keskeinen sisältö ja tärkeimmät muutokset. (The new Water Act. The core of the Act and the most relevant reforms). *Ympäristöministeriön raportteja* 1/2012 [http://www.ym.fi/download/noname/%7BD53693D8-3926-4EB6-8897-C323928D5E21%7D/32131], p. 46. Therefore the obligation to send a ditch notification does not apply to ditch *maintenance* projects (in the judicial sense). According to the notifications that we scrutinised, about half of all DNM projects include digging new ditches. In almost all projects, ditches are made deeper and/or wider and more effective than they were originally. Therefore, ditching notification is compulsory in most cases. See also subnote 30.

[39] ELY Centres (*Elinkeino-, liikenne- ja ympäristökeskus* in Finnish) act as supervisory authorities for the Water and Environmental Protection Act. Read more about ELY Centres here: http://www.ely-keskus.fi/en/web/ely-en/environment.

[40] After receiving the notification, an ELY Centre has 60 days to investigate the notification. If an ELY Centre does not react in 60 days, the ditching project may be initiated.

[41] Environmental impacts refer at minimum to the impacts supervised by the Water Act (i.e. pollution of water bodies or structural chances of water systems). In practice this concept is interpreted in a broader sense to refer also to impacts on biodiversity in general. See Halonen 2013 (n 10), p. 48–49.

[42] The Water Act 3:10.

[43] Inquiry/ELY Centres 2015.

the negative effects of projects affecting water areas if it does not incur unreasonable costs (Water Act 2:7).[44] This provision sets a general duty to minimise harmful effects and to use all reasonable water protection measures.[45] The wording of the aforementioned general duty is, however, open to various interpretations.[46] While legislation offers flexible phrasing, soft law instruments provide more concrete guidance for water protection in case of ditch network maintenance projects.

Soft law includes, among other things, forest certification schemes[47] and the best practice guidelines developed by Forestry Development Centre Tapio (Tapio hereinafter).[48] Tapio's best practice guidelines for water protection include more specific instructions on water protection measures and techniques.[49] While the Water Act does not include any standards on best available techniques or practices of water protection, the guidelines also provide concrete guidance (soft law) for authorities applying the law.[50] Legally non-binding guidelines possess a rather strong foundation as a regulatory instrument of silvicultural water protection.[51]

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[44] This provision also applies to projects that do not require a permit, yet the provision is not suited for utilising administrative compulsion and therefore its role in *preventing* water pollution is more guiding than imperative. Halonen 2013 (n 10), p. 46–47.

[45] Most of the water protection measures (e.g. silt pits and sedimentation pools) generally used in DNM are very cheap and thus expenses should not become unreasonable in typical DNM cases.

[46] Vihervuori points out that in order to become binding this stipulation should be concretised in a permit process by permit conditions. Vihervuori, P.: Vesitaloushankkeet. (Water management projects) In Kuusiniemi (ed.): *Ympäristöoikeus (Environmental law)*. Juva 2001, 785–915, p. 832.

[47] The predominant voluntary forest certification system in the country, the Finnish PEFC, requires water protection measures to be taken as part of ditch network management work. The PEFC requires that a protection plan must be drawn up and sent to regional environmental authorities (i.e. the ELY Centre). The Finnish FSC – another forest certification system – has somewhat more stringent requirements for water protection, but the FSC does not cover large areas in Finland and its influence in terms of practical DNM is therefore limited. Metsähallitus has its own guidelines for water protection in state-owned forests (Metsähallitus is a state-owned enterprise that operates in the administrative sector of the Ministry of Agriculture and Forestry. It governs both nature protection areas and state-owned forests. See more at: http://www.metsa.fi/web/en/managementandadministrationsystem). All the above-mentioned instruments have in general somewhat higher standards than legislation, but PEFC does not have any special criteria concerning water protection of DNM projects (see criterion 18). See Finnish PEFC group certification standard PEFC FI 1002:2009. Ryhmäsertifioinnin kriteerit metsäkeskuksen tai metsänhoitoyhdistyksen toimialueen tasolla. [http://www.pefc.fi/media/Standardit%202008_09/PEFC%20FI%201002_2009%20Ryhmasertifioinnin%20kriteerit%2009112009.pdf]. The role of forest certification is not analysed in more detail, because they are not relevant from the viewpoint of this article which scrutinises the possibilities and duties of *authorities* to ensure the good status of surface waters.

[48] The best practice guidelines of Tapio strongly define the concept of sustainable forest management in Finland. Developing and updating the guidelines has continued for decades. In 1994, environmental aspects were introduced to the guidelines for the first time. These national guidelines are made in close cooperation with research institutes and other stakeholders such as forest owners, the forest industry and NGOs. Äijälä and others (n 20) p. 8.

[49] Joensuu S., Kauppila M., Lindén M. & Tenhola T. (eds.) (2013): Hyvän metsänhoidon suositukset – Vesiensuojelu (Best practice guidelines for forestry – Water protection). Publications of Metsätalouden kehittämiskeskus Tapio. Guidelines disseminate information of best available techniques and measures of water protection and are chiefly aimed at forest professionals who plan ditch network maintenance projects for forest owners. Along with guidelines introducing the best practices and measures of water protection, there are also guidelines introducing the practices of planning the silvicultural activities in a river basin area. Hiltunen and others (n 22).

[50] *Määttä* has conducted a detailed analysis of the status of soft law documents in Finland. See Määttä, T. (2005): Soft law kansallisen oikeuden oikeuslähteenä. Tutkimus oikeudellisen ratkaisun normipremissin muodostamisen perusteista ympäristöoikeudessa (Soft Law as a Source of Law in National Legal Decision-making: A Study in Formulating the Norm Premise in Environmental Legal Decision-Making). *Oikeustiede – Jurisprudentia* XXXVIII, 337–459.

[51] Hujala, T., Pykälä, J. & Tikkanen, J. (2007): Decision-making among Finnish non-industrial private forest

In addition to binding regulations, there are also economic incentives (state subsidies) within the regulatory instrument mix of silviculture.[52] State-based incentives chiefly encourage forest owners to undertake certain silvicultural activities, such as ditching and forest road construction.[53] State subsidies are targeted at private forest owners.[54] Subsidised activities are considered important for the Finnish economy, as they aim to secure a stable wood supply for the Finnish forest industry.

Financial support can be granted if the project meets the requirements set in the Temporary Act on the Financing of Sustainable Forestry (34/2015, also Temporary Act). The Act stipulates that the *best available and affordable water protection methods and constructions* must be used in financed DNM projects. However, it seems that this stipulation does not exceed the conditions set in the Water Act (art. 2:7), but it clarifies and concretises article 2:7 of the Water Act as it concerns ditch network maintenance. The Temporary Act also requires that the work should be done according to the best professional practices, which means, according to the preparatory materials of the Act, Tapio's best practice guidelines, for example.[55] The Finnish Forest Centre (the Forest Centre hereinafter) grants the subsidies and supervises the subsidised projects via the notifications of completed, subsidised forest work. As a result, legislation on state subsidies at least strengthens the role of soft law in forest governance, and in this case, also in water governance. The legislation of state subsidies also strengthens the supervision of DNM projects, but appears not to bring about higher standards for water protection of DNM projects. The Forest Act does not include any stipulations on water protection of ditching projects.[56]

owners: the role of professional opinion and desire to learn. *Scandinavian Journal of Forest Research*, vol. 22, issue 5, 454–463. Until the 1990s the environmental recommendations of Tapio were largely neglected, but their status is nowadays relatively high among forest professionals. Attitudes have changed mostly because of changes in Finnish forest legislation, education and the general opinion towards more biodiversity-friendly forestry, which were in turn partly due to international and local NGO campaigns, raising awareness of declining biodiversity, and joining the EU. Keto-Tokoi, p. (2006): Varhaiset luonnonhoitosuositukset eivät toteutuneet käytännön metsätaloudessa (The early recommendations for nature management have not be fulfilled in forest practices). In Jalonen R. et al. (eds.): *Uusi metsäkirja (New Book on Forests)*, Gaudeamus, Helsinki, 102–106, p. 102, 106. See also Halonen 2015 (n 10), p. 197–198.

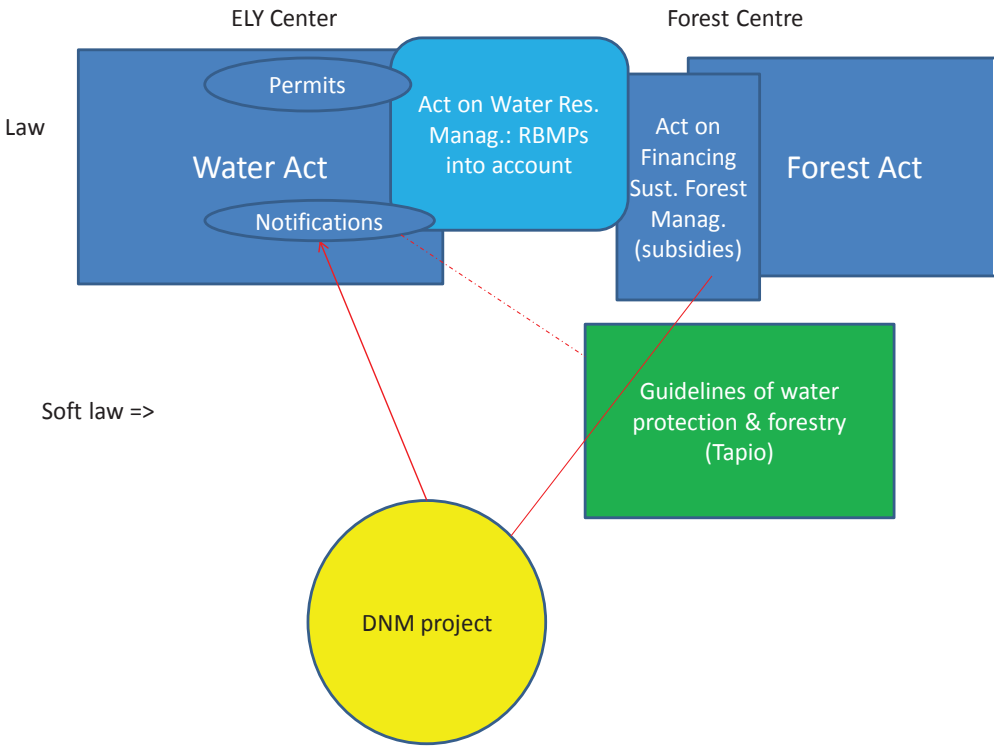
[52] In 2014, EUR 59 million was used for measures safeguarding wood production (such as DNM, building or maintaining forest roads) in private forests. See [http://stat.luke.fi/mets%C3%A4nhoito-ja-mets%C3%A4nparannusty%C3%B6t-kustannukset-2014_fi].

[53] Subsidies may be considered problematic from the point of view of the 'polluter pays' principle. However, the Finnish system of subsidies has been established according to the European Union Guidelines for state aid in the agricultural and forestry sectors and in rural areas 2014 to 2020 (2014/C 204/01). Subsidies guarantee that project leaders (i.e. private forest owners, usually) use professional planners. This is likely to lead to a more environmentally friendly result. Most of the subsidies go towards planning costs. See [http://www.metsakeskus.fi/tuki-kunnostusojitukseen#.VRveYGOGd3s].

[54] State owns 24 %, firms 8 %, municipalities 2 % and parishes 1 % of forests. The remaining 65 % of Finnish forests are owned by private individuals. See [http://www.metla.fi/tiedotteet/metsatilastotiedotteet/2013/metsamaan_omistus2011.htm]

[55] HE 138/2014 vp. Hallituksen esitys eduskunnalle kestävän metsätalouden määräaikaiseksi rahoituslaiksi sekä laeiksi kestävän metsätalouden rahoituksesta annetun lain ja kiinteistön yhteisomistajien osallistumisesta metsätalouden rahoituslainsäädännössä tarkoitettuun toimenpiteeseen annetun lain kumoamisesta sekä kestävän metsätalouden rahoituslain kumoamisesta (Government Bill on the Temporary Act on the Financing of Sustainable Forestry), p. 31.

[56] The main objective of the Forest Act is to regulate forest logging. Apart from key forest habitat stipulations, forest legislation does not require any water or other environmental protection measures. The Forest Act also includes a regulation on timberline forests in Lapland and a disused provision on delineating protection zones in erosion-prone areas.



2.2 The role of RBMPs and POMs

The WFD sets the objectives for water quality but it also includes a river basin planning system, as regional river basin management plans (RBMPs) and programmes of measures (POMs) are an integral part of the WFD.[57] The fundamental idea behind the WFD is to look at the whole river basin area in terms of water management planning (including cumulative effects); therefore, it could also be a potential instrument to govern diffuse pollution. The WFD does not directly regulate ditch drainage, but RBMPs and POMs include desirable measures for drainage and DNM.

The WFD requires the establishment of certain regulatory instruments as mandatory and calls them '*basic measures*'.[58] In Finland the basic measures set in POMs are those required by Finnish legislation.[59] In the case of ditch drainage, the basic measures of water protection include measures and techniques put into practice at the level of single projects.

The WFD also enables the use of *supplementary measures*. Article 11 states that supplementary measures must be included in the programmes if the basic measures are not sufficient in order to meet the established environmental objectives. The use of supplementary measures is only optional to the extent that the environmental objectives are likely to be met by the basic measures.[60] The supplementary measures for water protection in ditch network maintenance include water protection structures on a river basin scale (e.g. overflow wetland areas).[61] The

[57] Lee (n 2), p. 29–30. See also Grimeaud, D. (2004): The EC Water Framework Directive – An Instrument for Integrating Water Policy. *RECIEL* 13 (1), 27–39, and Futter M. N. and others (2011): Forests, Forestry and the Water Framework Directive in Sweden: A Trans-Disciplinary Commentary. *Forests* 2, 261–282, p. 262.

[58] Article 11(2).

[59] The POMs provide an overview of the specific measures to be taken, in order to contribute to the achievement of the environmental objectives (art. 11).

[60] Article 13(2) and (4). See also Howart (n 5), p. 132–133.

[61] In current RBMPs and POMs, basic water protection measures regarding DNM projects are confusingly listed

planning of silvicultural activities on river basin scale, which aims at recognising sensitive areas and planning measures needed to limit the loading of harmful substances from the catchment[62], is also listed as a supplementary measure. Planning on the river basin scale may improve water protection measures in vulnerable areas and it helps to take cumulative effects of various forest management projects into account. River basin-scale planning is currently governed by soft law and it is an entirely voluntary activity and still relatively rare. The plans are usually drawn up by the Forest Centre.[63] These plans are not binding and the authorities do not have the power to implement river basin planning without the consent of land owners.[64]

A closer look at the RBMPs and POMs in Finland shows that they include many desirable measures and activities concerning DNM.[65] The measures mainly consist of actions such as further developing guidelines and forest certification standards, increasing advice and education, enhancing water protection planning of various projects, and improving the implementation of existing standards such as PEFC. In addition, there are concrete regional targets for various water protection measures: e.g. 300 water protection structures, intensified water protection planning on 28,000 hectares, and advising 4 200 forest owners annually. In RBMPs there are also desirable numbers of water protection measures for different waterways.[66]

From a legal perspective, RBMPs and POMs do not oblige any measures to be taken *per se*.[67] They only introduce potential instruments for governance on catchment areas. The legal status (i.e. legal force) of RBMPs and POMs in Finland is regulated generally in the Act on Water Resources Management. It stipulates that state and municipal authorities shall give *due consideration* in their operations to the water resources management plans approved by the government, *as appropriate*.[68] Sectoral legislation includes more accurate provisions of the legal relevance of RBMPs. Both the Water Act and the Environmental Protection Act require that a permitting authority must *take RBMPs into account* in the permit consideration process. As POMs are treated as a part of the RBMPs in Finland, their legal status is consistent

under the title ''supplementary measures''. This is, however, due to terminological confusion as in the first Finnish RBMPs and POMs, terminologies were not consistent with the WFD. In the proposals for new POMs, basic water protection measures of DNM projects are already labelled as basic measures, including slit pits, sedimentation pools and small scale overland-flow, for example. See e.g. Ehdotus Isojoen- Teuvanjoen alueen vesienhoidon toimenpideohjelmaksi vuoteen 2021 (A proposal for a POM in the Isojoki-Teuvanjoki region), 72; Luonnos Kyrönjoen vesistöalueen vesienhoidon toimenpideohjelmaksi vuoteen 2021 (A draft of a POM for Kyrönjoki water basin), 98; at [http://www.ymparisto.fi/fi-FI/Vesi/Vesiensuojelu/Vesienhoidon_suunnittelu_ja_yhteistyo/Vesienhoito_ELYkeskuksissa/EtelaPohjanmaa_Pohjanmaa_ja_KeskiPohjanmaa/Toimenpideohjelmat/Toimenpideohjelmat_ja_toimenpiteiden_tot%2812815%29].

[62] Hiltunen and others (n 22), p. 4

[63] Hiltunen and others (n 22).

[64] Nevertheless, as mentioned, the status of authority-based soft law – such as the best practice forest management guidelines of Tapio – is strong.

[65] The measures for achieving good water status are similar to the RBMPs of different river basins. Plans are available here: [http://www.ymparisto.fi/fi-FI/Vesi/Vesiensuojelu/Vesienhoidon_suunnittelu_ja_yhteistyo/Vesienhoitoalueet].

[66] See e.g. Kymijoen-Suomenlahden vesienhoitoalueen vesienhoitosuunnitelma vuoteen 2015 (the RBMP of the Kymijoki-Suomenlahti region). *Ibid*.

[67] , HE 120/2004 vp (n 17), p. 50.

[68] Section 28 of the Act on Water Resources Management. For more on the legal status of the RBMPs and POMs in Scandinavian countries, see *Baaner* (Baaner, L.: Programmes of Measures under the Water Framework Directive - A Comparative Case Study, 2011:1, 31–52, p. 35) and *Ekelund-Entson* & *Gipperth* (Ekelund-Entson, M. & Gipperth, L. (2010): Mot samma mål? – Implementeringen av EU:s ramdirektiv för vatten i Skandinavien. Juridiska institutionens skriftserie Handelshögskolan vid Göteborgs universitet, Skrift 6. http://www.vattenmyndigheterna.se/Sv/nyheter/2011/Pages/mot-samma-mal.aspx).

with the legal status of RBMPs.[69] The legal relevance of RBMPs has, however, been growing in the national legal praxis lately.[70]

3. Evaluation of water protection instruments

As for water protection, the effects of a single ditch network maintenance project are rarely so severe that the status of water quality in a surface water body would deteriorate. Nevertheless, as mentioned in the introduction, the cumulative effects of several DNM projects in the same area may lead to the deterioration of water quality, especially the status of a small water body or area, such as a spring, rivulet, pond or lake. There are, however, legislative flaws that make the evaluation of cumulative effects vague or ineffective.[71]

The permit threshold and conditions of the Water Act always concerns a single project. It is not possible to obligate several projects to apply for a permit together.[72] The other projects or the effects of other projects can only be taken into consideration through the condition of the receiving water body or area. This means that only the project that is expected to exceed the threshold limit of pollution can be required to apply for a permit. While the exceeding of the permit threshold is estimated through the condition of the receiving water body, it is possible to take the cumulative effects into account in the permit consideration process of a single project. However, in practice it is hard to show and legally prove which project exceeds the threshold limit if there are several projects planned or going on in the same river basin area.[73] This may result in cumulative effects not being taken into consideration in the permit consideration process.

The declarative nature of ditching notifications means that notifications are not suitable for supervising the cumulative effects, either. Notification enables the supervisory authority to get information about single DNM projects for further supervision[74] but it does not lead to an administrative decision.[75] This means that the supervisory authority does not have the powers to prohibit someone's project or to oblige someone to apply for a permit on the basis of other notifications in the same river basin area.[76] Moreover, notifications do not include a binding time limit for carrying out the notified DNM work.[77] The flexible time limit hinders the supervision of the effects of single projects, as well as the cumulative effects of various projects in particular. ELY Centres may only try to negotiate and persuade the project leaders to carry out their projects in a way that negative cumulative effects will be minimised.[78]

The sectoral environmental legislation with the separate supervisory responsibilities also makes the assessment of cumulative effects problematic. For instance, ELY Centres do not get information on forest loggings as they are not the supervisory authorities of forest management, and the Forest Centre does not have the competence to consider water protection measures

[69] Section 12 of the Act on Water Resources Management.

[70] See e.g. KHO 2014:176 (A decision of the Supreme Administrative Court) and KHO 20.8.2010/1869. The Weser dredging case (C–461/13) will increasingly raise the legal status of RBMPs.

[71] The need for considering cumulative effects has also been recognised in the government bill on the Water Act. According to the preparatory materials, appropriate evaluation (of the negative effects of DNM) would require the evaluation of the effects of drainage together with other projects within the same river basin. HE 277/2009 vp (n 30), p. 93.

[72] *Ibid.*

[73] Halonen (n 10) 2013, p. 55–56.

[74] HE 277/2009 vp (n 30), p. 55–56.

[75] Due to their declarative nature, authorities have no powers to set direct obligations.

[76] Halonen (n 10) 2013, p. 54.

[77] Usually it is written in a notification that the work will be completed within two years, e.g. 2016–2017.

[78] HE 277/2009 vp (n 30), p. 57.

while overseeing forest loggings because forest legislation does not include stipulations on water protection.[79]

The granting of state subsidies for forestry and DNM projects does not take the problem of several concurrent or consecutive projects into consideration, either. The granting of state subsidies has a single project point of view and the Temporary Act on the Financing of Sustainable Forestry only emphasises the *best water protection methods instead of water quality*.[80] As a result, it is not the task of the Forest Centre to supervise water quality; its responsibility is only the quality of proposed water protection measures of a single DNM project.

Along with the legislative flaws, the technical systems for identifying the problematic cumulative effects are still inadequate and not in use in all ELY Centres.[81] Currently there is no comprehensive database (geographical information system, GIS) that would enable the ELY Centres to efficiently evaluate the effects of two or more DNM projects *and* other projects such as extraction of peat.[82] Some ELY Centres use the VESTY water project database (*vesistötyötietojärjestelmä*), but it only includes certain kinds of information concerning changing water environment (ditching, building dams, etc.) – it does not incorporate other polluting projects. It would also require further development in order to properly serve the surveillance of cumulative effects.[83] There have been plans to facilitate the situation by creating a new geographic information system and also by using the existing systems more efficiently.[84] Currently there is no comprehensive GIS that could be used nationwide for mapping and controlling water polluting projects.

It seems clear that Finnish water legislation does not sufficiently enable authorities to take *cumulative effects* into account while aiming at maintaining the good water status. This justifies the question whether Finnish legislation is consistent with the obligations of the WFD. It can be concluded that the Water Act succeeds in setting a broad framework for water protection regulations of ditching projects. The prior notification is a sensible instrument for supervising *single* DNM projects, but the Water Act fails in setting concrete norms or detailed rules of water protection for DNM projects while they are typically not governed by permits.[85] This is a typical challenge of regulating diffuse pollution by command and control instruments.[86] Economic instruments and soft law do not help the authorities to take the cumulative effects into account either. The WFD and the RBMPs, and especially POMs, which include concrete measures for water protection, could improve the water protec-

[79] According to a Swedish estimate, clear cuts should not exceed 30 % of the total forest land so as not to cause negative effects of nitrogen leakage to water courses. Ring, E., Löfgren, S., Sandin, L., Högbom, L. & Goedkoop, W. (2008): Skogsbruk och vatten. En kunskapsöversikt. Skogforsk, redogörelse nr 3, 2008. http://www.skogforsk.se/PageFiles/73616/Redog%C3%B6relse%203-2008-low.pdf, p. 40.

[80] The system of state subsidies neither includes incentives for taking the effects of several projects into account nor encourages river-basin level planning, for example. The only rule is that the minimum area that can be awarded the maximum amount of compensation (75 % of costs) is five hectares. This is the only stipulation that could be considered an incentive towards slightly larger ditching units and may lead to the planning of larger areas at a time, thus enhancing the planning of the most cost-effective water protection measures.

[81] Inquiry/ELY Centres 2015.

[82] As supervisory authorities of environmental permits of peat extraction, ELY Centres do know about peat production areas, but without a GIS, information may be scattered.

[83] Inquiry/ELY Centres 2015.

[84] Ympäristöministeriö (n 27), p. 15–16.

[85] While there is no prevalent practice of permitting ditching projects, (judicial) challenges may come along to specify and concretise the rate of environmental protection (i.e. water pollution) necessary in a concrete case.

[86] E.g. Gunningham and Sinclair (n 5), Gunningham, N. & Grabosky, P.: Smart Regulation. Designing Environmental Policy. Oxford University Press 2004.

tion of diffuse pollution. But it seems that there are certain flaws that make it difficult to take the obligations of RBMPs (and POMs) into consideration if DNM projects are considered.

According to Finnish law, the obligation to take RBMPs (and POMs) into consideration only concerns administrative activities. The actual obligations of a single project must be based on legal norms of e.g. the Water Act or the Environmental Protection Act.[87] The aims and measures mentioned in RBMPs (and POMs) are thus not directly binding on authorities. They are partly guidelines and they partly – as with water qualifications – serve as evidence of water quality. All in all, the practice of taking RBMPs into account has not yet become established. This might partly be due to the somewhat unclear implementation of article 4 of the WFD into Finnish legislation.[88]

The question arises as to what the range of activities of authorities concerning DNM projects falling within the term 'shall give due consideration in their operations to the RBMPs' or within the legal relevance of RBMPs laid down in sectoral legislation is.[89] The Water Act stipulates that the permitting authority must *take RBMPs into account* in the permit consideration process, but as we have already mentioned, ditching projects are rarely governed by permits.[90] The obligation to take RBMPs into consideration is also 'binding' in the ruling of state subsidies according to the Temporary Act on the Financing of Sustainable Forestry[91], while the Act on Water Resources Management stipulates that state authorities shall give *due consideration* in their operations to the RBMPs approved by the government, *as appropriate*. All in all, the vague formulations "due consideration" and "into account" are questionable in the light of the WFD.

Based on the requirements of the Temporary Act, the Forest Centre should always call for the water protection measures, which are considered basic measures in WFD.[92] But could the Forest Centre also require supplementary measures of POMs, if there is a risk of deterioration of the status class of a surface water body? The legislation of state subsidies does not include special provisions when taking the RBMPs and POMs into account in the ruling of state subsidies. The decision-making of an authority must be based on the Temporary Act, whereas POMs should merely be 'taken into account'. The Forest Centre always considers a single project at a time. As a result, there is a great risk that the Forest Centre does not and cannot require supplementary measures defined in POMs when ruling on a subsidy of a single project.[93] In addition the Forest Centre

[87] HE 120/2004 vp. (n 17), p. 50.

[88] Nevertheless, the Finnish authorities are obliged to prevent the deterioration of water bodies and the national provisions of the Environmental Protection Act and the Water Act should be interpreted in the light of the WFD.

[89] As Baaner (n 69, p. 36) points out, 'the question seems not only to be the degree to which the programmes as such are binding for the authorities, in the way that non-compliance with its measures can be legally reviewed and sanctioned. It seems just as relevant to consider what kinds of activities or decisions can be bound by or guided within the established national legal frameworks.'

[90] Nevertheless, the water quality objectives should impact the consideration of the permit threshold. When an ELY Centre receives a ditching notification, it considers whether a permit is needed or not. The potential problem is, as described earlier, that the ELY Centre does not have the powers to estimate the cumulative effects when supervising the DNM projects.

[91] According to law, the state subsidy can be granted if the preconditions of water protection set in the Temporary Act on the Financing of Sustainable forestry are met.

[92] According to the Temporary Act (article 15), the *best available and affordable water protection methods and constructions* must be used in financed DNM projects. The financed projects have to be in accordance with other regulations such as the stipulations in the Water Act (article 6).

[93] It seems that the Forest Centre does not have powers to require supplementary measures, e.g. creating new wetlands or intensified planning unless the criteria of best available practice are met, which are single project-based water protection measures.

does not supervise water quality – it only monitors the sufficiency of proposed water protection measures of a single DNM project according to the stipulations of the Temporary Act.[94]

In Finland, it is possible to receive state financing for water protection measures, e.g. for wetlands serving water protection in the river basin.[95] However, it is apparent that Finnish forest authorities do not have the legal authority to call for supplementary water protection measures defined in POMs, even in cases where a risk of deterioration in the status class of surface waters occurs,[96] if the costs of a supplementary measure would not be "affordable" for a single DNM project.

It should also be taken into account that in Finland the classification of water bodies according to the requirements of the WFD currently includes only larger water bodies.[97] The European Commission points out that Finland has 'set relatively high size thresholds for the delineation of water bodies, excluding a large number of water bodies. Finnish authorities have clarified that areal coverage of water bodies is 86 % for all Finnish lakes and about 90 % for rivers and 100 % for coastal waters.' In addition, the Commission notes that 'it is not clear how the current size thresholds have been set to ensure the fulfilment of the WFD, i.e. if the excluded water bodies are effectively protected and how.'[98] The intention is to widen the scrutiny at a later date to smaller lakes and rivers in future plans, but due to the huge number of headwaters and small forest streams, it will probably never be possible to include all headwaters into RBMPs and POMs. The effects of forest management typically arise in headwaters and smaller water bodies.

If a water body does not have a status class and an objective in a RBMP – as is often the case with small water bodies affected by DNM – the relevance of RBMP may be, in practice, smaller as there is no defined status or objective which should be taken into account. Even in these cases the obligation of the WFD to prevent further de-

[94] This includes overseeing that the notification has been sent to the ELY Centre, which in turn takes water quality into account. HE 138/2014 vp (n 68), p. 31.

[95] The state subsidies can be granted for establishing water protection structures for DNM which serve a river basin area (article 21 of Temporary Act on the Financing of Sustainable Forestry). However, the state subsidy system of the Temporary Act does not cover the costs of intensified ditch network planning. The planning costs may be covered by Metsähallitus. Hiltunen and others (n 22), p. 9

[96] The supplementary water protection measures cannot be required by the Water Act either, if the costs would be unreasonable for a single DNM project. If a single project requires a permit, it is possible to forbid the project altogether.

[97] See e.g. Toimenpideohjelma/Häme, Etelä-Savon pintavesien hoidon toimenpideohjelma 2010–2015. According to the guidance document of the European Commission, 'Member States have flexibility to decide whether the purposes of the Directive, which apply to all surface waters, can be achieved without the identification of every minor but discrete and significant element of surface water as a water body.' (European Commission (2003): Common Implementation Strategy for the Water Framework Directive. Guidance Document No. 2, Identification of Water Bodies. Produced by Working Group on Water Bodies. Directorate General Environment of the European Commission, Brussels. https://circabc.europa.eu/sd/a/655e3e31-3b5d-4053-be19-15bd22b15ba9/Guidance%20No%202%20-%20Identification%20of%20water%20bodies.pdf, p. 12.) According to the Commission, recognising even small headwaters as surface water bodies in RBMPs and POMs could cause too much of an administrative burden. Still, if a 'small element' of surface water is significant for achieving the aims of the WFD, it must be taken into consideration. According to Lassaletta and others (Lasseletta L., García-Gómez H., Gimeno B.S. & Rovira, J.V. (2010): Headwater streams: neglected ecosystems in the EU Water Framework Directive. Implications for nitrogen pollution control. *Environmental Science and Policy* 13 (2010) 423–433, p. 431), due to this discretion of Member States, too little attention is currently paid to headwater streams.

[98] European Commission (2012): Report from the Commission to the European Parliament and the Council on the Implementation of the Water Framework Directive (2000/60/EC) River Basin Management Plans. Member State: Finland. Brussels 14.11.2012, SWD (2012) 379 final. http://ec.europa.eu/environment/water/water-framework/pdf/CWD-2012-379_EN-Vol3_FI.pdf, p. 9.

terioration remains.[99] This obligation, however, is not considered as binding and restricting as a determined water quality status in an RBMP in practice.[100] This practice should be reconsidered, particularly following the decision of the Court of Justice stating that 'the obligation to prevent deterioration of the status of bodies of surface water remains binding at each stage of implementation of Directive 2000/60 and is applicable to every surface water body type and status for which a management plan has or should have been adopted.'[101] Thus the lack of quality status should not result in neglecting the obligation to prevent deterioration in the status of waters.

4. Conclusions

DNM projects are *prima facie* regulated as a point-source project; either a permit or a ditching notification to environmental authorities is required. However, a significant part of the Finnish water protection regulation of DNM is a mix of various non-binding instruments, as was shown above. This is typical for the regulation of diffuse pollution. The most relevant *substantial* regulations of DNM consist of voluntary guidelines and state subsidies. However, the effectiveness of these soft law and financial instruments require that legislation sets out a clear framework for supervising (notifications) and steering (the potential need of a permit and the obligation to minimise negative effects) DNM projects.

Based on the analysis of legislation and other sources, it seems that the environmental and forest authorities run into challenges when taking the effects of several concurrent or consecutive projects on water quality into account. Based on the scrutinising of existing regulation and examined notifications, it seems that current legislation *does enable* and oblige authorities to require water protection measures of a single project to some extent.

In general, Finnish legislation seems to work relatively well for individual DNM projects in areas where other diffuse pollution is not high or where the receiving water body is not especially sensitive. As a rule, a single project will adhere to Tapio's guidelines and its environmental effects will normally not be excessive. Nevertheless, flaws in the law (e.g. the difficulty to take the cumulative effects into account in the permit consideration process, the vague status of notifications, the weak legal status of RBMPs and POMs) and in practice (e.g. the lack of a comprehensive GIS) *do not enable* authorities to take cumulative effects properly into account. Legislation does not adequately enable the authorities to protect water quality if there are a) several DNM projects, b) a DNM project and other forestry projects (logging, ploughing, fertilising) or c) a DNM project and other kinds of water polluting activities such as peat production within the river basin area. Therefore, we return to the typical problem of diffuse pollution: accumulation. The consequences in the light of the obligations and objectives of WPD might be undesirable, especially if several DNM projects are carried out in the same river basin within the space of a few years.

It seems that in Finland the implementation of the obligation to prevent deterioration and the aim to maintain good water status (article 4 of the WFD) has been executed via legislation (e.g. conditions for permit consideration) and RMDPs and POMs, yet the functionality of both means is questionable in the case of cumulative effects

[99] At the moment the obligation is not implemented in Finnish legislation, per se. But the permit threshold of Water Act (article 5:3) has to be interpreted according to the WFD and the obligations of the article 4.

[100] Kauppila 2014 (n 34), p. 69. Kauppila has scrutinised the role of RBMPs in granting environmental permits. According to this research on permit-granting in different sectors, the status class and the objective are more binding.

[101] The Weser dredging case (C-461/13). See also subnotes 3 and 33.

of several DNM projects. Supplementary measures of POMs are practically optional in the case of DNM, but there could be a need for the obligation to carry out these measures in order to prevent the deterioration of surface waters in vulnerable areas, for example. As a result, the implementation of WFD has not yet helped to incorporate a truly holistic view that would enable and demand the consideration of the cumulative effects of diffuse pollution. The WFD has the greatest impact in cases where the water quality standards have been set in a RBMP. When a water body has not been classified, the effect of the WFD is much smaller.[102]

Relatively light-touch monitoring of DNM projects are unavoidable, as every ELY Centre receives hundreds of ditching notifications every year. However, there should be a requirement and a possibility to take cumulative effects into account even in cases where a single DNM project would not harm the environment. One possible solution to emphasising the river basin approach could be to strengthen the role of the Temporary Act on the Financing of Sustainable Forestry. The state subsidies on forestry could be targeted at river basin planning instead of emphasising the numerous economic aims of the Temporary Act, for example.[103] A more detailed local river basin plan could specify the requirement of a POM.

Part of the above-mentioned governance problems could be eased by developing a comprehensive nationwide geographical information system where all water polluting projects would be marked.[104] Other remedies are needed, too. The number of employees in the ELY Centres has been cut in recent years and currently all ELY Centres have insufficient staff to mark the notifications into a GIS and to go through notifications thoroughly.[105] An electronic ditching notification could help with the checking of notifications, and possibly more coordinated collaboration between the ELY Centres and the Forest Centre could be beneficial as both authorities check the same DNM projects, even though they do it from different viewpoints.

It is evident that the consideration of the effects of several concurrent projects on water quality is not addressed well enough in current national legislation, even if the problem has been acknowledged. This may lead to the deterioration of the quality of especially small water bodies and accelerate the decline of endangered water habitats and species.

5. Acknowledgements

The authors are grateful to the Academy of Finland for financial support. This research has been conducted as a part of the research project Impacts of Terrestrial Organic Matter Loading on Lake Food Webs and Human Health – Challenges for Environmental Regulation (TERLA) (no. 263350). The authors would also like to thank the anonymous referee for valuable comments, Niko Soininen for his comments and discussions, and Sinikka Kangasmaa and Tiina Paloniitty for sharing their valuable thoughts on the topic.

[102] Kauppila 2014 (n 34), p. 69.

[103] The Temporary Act could be amended to require the river basin-based water protection measures when they are deemed necessary in a POM.

[104] The more detailed information of diffuse pollutants could help the permit consideration process.

[105] Enquiry/ELY Centres 2015.

God miljöstatus och fiske – Hur effektiva är miljökvalitetsnormer?

*Anna Christiernsson**

Abstract

This study analyses the Swedish implementation of the Marine Strategy Framework Directive (MSFD) in relation to fisheries. The study shows a lack of integration between fisheries and environmental legislation with several loopholes and deficits impeding the achievement of a good status of marine ecosystems. There are e.g. no obligations for responsible authorities to secure that fisheries measures according to the Fisheries Act are coherent with environmental quality standards. There are moreover few situations when fisheries are tried under the Environmental Code, limits in the binding force of environmental quality standards and few proposed fisheries measures, where none of them are to be applied outside the coastal trawling prohibited areas, despite the delegated competence to, under certain conditions, take measures in the whole exclusive economic zone according to the Common Fisheries Policy (CFP). There are thus several deficits in the Swedish legislation and the implementation of the MSFD when it comes to hindering the negative effects of fisheries on marine ecosystems.

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1. Inledning

Överfiske är idag ett allvarligt hot mot de marina ekosystemen.[1] Ett alltför omfattande fiske kan nämligen innebära att inte bara fiskebestånd minskar eller helt försvinner, utan också att andra djur- och växtarter i den marina näringsväven påverkas negativt.[2] Ett alltför omfattande fiske kan till och med leda till att vattenkvaliteten *per se* försämras (exempelvis genom att påverka ekosystemets närsalter).[3] Därutöver kan vissa fiskeredskap ge upphov till bifångster, fysiskt skada bottenfauna och frigöra miljögifter i vattnet.[4] Fiske kan med andra ord på flera olika sätt försvåra uppnående av olika miljömål, däribland målet om en god miljöstatus, ett mål som följer

[1] Enligt en rapport av IUCN (2015) är 90 procent av Europas fiskarter utrotningshotade och enligt FAO är 75 procent av världens fiskbestånd utfiskade, överfiskade eller fiskade till biologisk maxgräns. IUCN (2015). *European Red List of Marine Fishes.*

[2] S.k. *trofiska kaskader* kan t.ex. uppstå när omfattande fiske sker på fiskarter med en strukturerande roll i ekosystemen (vanligen rovdjursfiskar). Se t.ex. Eriksson et al. (2011). Effects of altered offshore food webs on coastal ecosystems emphasizes the need for cross-ecosystem management. *Ambio*, 40, s. 786–797 och Casini et al. (2009). Trophic cascades promote threshold-like shifts in pelagic marine ecosystems. *Proceedings of the National Academy of Sciences of the USA*, 106, s. 196–202. Se även om detta i SOU 2008:48, *En utvecklad havsförvaltning*, s. 73.

[3] Se t.ex. Eriksson et al. (2009). Declines in predatory fish promote bloom-forming macroalgae. In *Ecological Applications* 19(8), s. 1975–1988.

[4] Se t.ex. Tjensvoll (2014). *Sediment resuspension. Impacts and extent of human disturbances*. Akademisk doktorsavhandling. Stockholms Universitet.

av det s.k. Havsmiljödirektivet,[5] som implementerats i svensk rätt genom havsmiljöförordningen (2010:1341) samt tillhörande föreskrifter.[6]

För att hantera sådana ekosystemsamband och uppnå det övergripande målet om en god miljöstatus ska medlemsstater enligt direktivet förvalta haven med en ekosystembaserad och adaptiv förvaltningsmetod, där också fiskebestånd och fiskets påverkan på havsmiljön ingår.[7] I detta ingår bland annat att fastställa miljömål liksom att fastställa och genomföra åtgärder mot fiske för att säkerställa att normerna följs. Samtidigt finns (både på EU-nivå och i den svenska rättsordningen) särskilda regelverk för fiske, något som riskerar att motverka en integrerad och ekosystembaserad havsmiljöförvaltning och därmed att uppsatta mål inte nås.

Det övergripande syftet med denna artikel är därför att diskutera möjligheter och hinder att genomföra en ekosystembaserad förvaltning där också fiske ingår. Diskussionen avgränsas framför allt till frågan om i vilken utsträckning miljökvalitetsnormer för en god miljöstatus kan genomföras mot yrkesmässigt fiske i svenska vatten. I detta ingår också att analysera vilken rättsverkan miljökvalitetsnormerna bör ha enligt direktivet samt hur krav mot fiske i svenska vatten kan genomföras givet parallella regelverk samt EU:s exklusiva kompetens inom den gemensamma fiskeripolitiken. Inledningsvis ges en bakgrundsbeskrivning av direktivet och den svenska implementeringen.

2. Havsmiljöförvaltning

2.1 Kort om Havsmiljödirektivet

Genom antagandet av Havsmiljödirektivet fick den Europeiska Unionens havspolitik en miljöpelare med det övergripande syftet att uppnå eller upprätthålla en god miljöstatus i Unionens marina vatten senast år 2020.[8] Denna målsättning innebär att de marina ekosystemens strukturer, funktioner, processer och återhämtningsförmåga (s.k. *resiliens*) ska bevaras och skyddas, att förlust av biologisk mångfald ska förhindras samt att mänsklig användning av de marina ekosystemen ska vara långsiktigt hållbar.[9]

Målsättningen ska nås genom att varje medlemsstat utarbetar och genomför s.k. ”marina strategier”.[10] Detta innebär att medlemsstaterna ska, i cykler om sex år;[11]

a) Genomföra en inledande bedömning
b) Fastställa en god miljöstatus
c) Fastställa miljömål med indikatorer
d) Anta övervakningsprogram
e) Anta åtgärdsprogram

I de marina strategierna ska en ekosystembaserad metod tillämpas, vilket bland annat innebär att det samlade trycket av mänskliga aktiviteter hålls inom nivåer som är förenliga med en god miljöstatus.[12]

Direktivet ställer vidare upp 11 s.k. *deskriptorer* som medlemsstaterna ska utgå ifrån vid fastställandet av en god miljöstatus (bilaga 1).[13] Dessa utgör övergripande kvalitativa beskrivningar av en god miljöstatus. Av särskild relevans för fiske är deskriptorerna om ”biologisk

[5] *Europaparlamentets och Rådets direktiv 2008/56/EG av den 17 juni 2008 om upprättande av en ram för gemenskapens åtgärder på havsmiljöpolitikens område* (Ramdirektiv om en marin strategi), nedan ”Havsmiljödirektivet”.
[6] Se *Havs- och vattenmyndighetens föreskrifter om vad som kännetecknar god miljöstatus samt miljökvalitetsnormer med indikatorer för Nordsjön och Östersjön* (HVMFS 2012:18).
[7] Artikel 1.3. Se mer om detta i avsnitt 2.
[8] Artikel 1. För en närmare beskrivning se Michanek och Christiernsson (2014). “Adaptive Management of EU Marine Ecosystems – About Time to Include Fishery.” *Scandinavian Studies in Law.* Volume 59, p. 228–234.
[9] Artikel 3.5(a-b).
[10] Artikel 1.2.
[11] Artiklarna 5 samt 8–13.
[12] Artikel 1.3.
[13] Artikel 9.1 samt bilaga I.

mångfald",[14] "kommersiellt nyttjade fiskar och skaldjur",[15] "marina näringsvävar"[16] och "havsbottnens integritet".[17]

Ytterligare vägledning för fastställande av vad som kännetecknar en god miljöstatus finns i bilaga III till direktivet.[18] Av denna följer bland annat att fastställandet ska ske både utifrån biologiska förhållanden (t.ex. fiskebeståndens ålders- och storleksstruktur)[19] och för belastning och påverkan (t.ex. selektivt uttag av arter, bland annat oavsiktliga bifångster, eller påverkan på havsbottnen genom fiske).[20] När det gäller fastställandet av miljömål ska hänsyn tas till de faktorer som har med påverkan och belastning att göras.[21] Målen ska vara förenliga med andra relevanta kvalitetskrav för havet som fastställts på nationell nivå, gemenskapsnivå eller internationell nivå.[22] Med syfte att öka samstämmigheten och samordningen mellan medlemsstaterna har Kommissionen också tagit fram ett dokument med gemensamma kriterier och metodstandarder.[23]

2.2 Det nationella genomförandet

Direktivets målsättning samt bestämmelser om den ekosystembaserade och adaptiva förvaltningsmetoden har implementerats i stort sett ordagrant i den svenska rättsordningen.[24] Hänvisningar till direktivets bilagor samt Kommissionens beslut om kriterier och metodstandarder med krav på att hänsyn ska tas till dessa i de olika förvaltningsstegen har införts. De yttre ramarna för havsmiljöförvaltningen framgår därmed tydligt av de svenska reglerna.[25]

För varje deskriptor har vidare nationella beskrivningar av en god miljöstatus med indikatorer formulerats.[26] Dessa anger övergripande kvalitativa målsättningar för såväl miljökvaliteten som mänsklig påverkan på havsmiljön.[27] När det t.ex. gäller "Kommersiellt nyttjade fiskar och skaldjur" föreligger en god miljöstatus enligt de nationella föreskrifterna när;

- Fiskeverksamheten ligger under en nivå som garanterar ett maximalt hållbart uttag (F_{MSY}) av alla kommersiella fiskarter.[28]

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[14] "Biologisk mångfald bevaras. Livsmiljöernas kvalitet och förekomst samt arternas fördelning och abundans överensstämmer med rådande geomorfologiska och klimatiska villkor." Deskriptor 1.

[15] "Populationerna av alla kommersiellt nyttjade fiskar och skaldjur håller sig inom säkra biologiska gränser och uppvisar en ålders- och storleksfördelning som vittnar om ett friskt bestånden." Deskriptor 3.

[16] "Alla delar av de marina näringsvävarna, i den mån de är kända, förekommer i normal omfattning och mångfald på nivåer som är tillräckliga för att arternas långsiktiga bestånd ska kunna säkerställas och deras fulla reproduktiva kapacitet behållas." Deskriptor 4.

[17] "Havbottnens integritet håller sig på en nivå som innebär att ekosystemens struktur och funktioner kan tryggas och att i synnerhet de bentiska ekosystemen inte påverkas negativt." Deskriptor 6.

[18] Artikel 9.2–3.

[19] Tabell 1 i bilaga III.

[20] Tabell 2 i bilaga III.

[21] Tabell 2 i bilaga III. Se artikel 10.1.

[22] Artikel 10.2.

[23] Kommissionens beslut av den 1 september 2010om kriterier och metodstandarder för god miljöstatus i marina vatten (2010/477/EU) samt artikel 9.3. Det finns också krav på att medlemsstater ska samarbeta i de olika delarna av förvaltningen (artikel 8.3, 10.1 2 st. och 11.3).

[24] Enligt havsmiljöförordningen (2010:1341) är det övergripande målet att upprätthålla eller nå en god miljöstatus i Sveriges havsområden Nordsjön och Östersjön, 1 och 6 §§.

[25] För en mer utförlig beskrivning av implementeringen av Havsmiljödirektivet, se förslag till genomförandet av Europaparlamentets och rådets direktiv 2008/56/EG av den 17 juni 2008 om upprättandet av en ram för gemenskapens åtgärder på havsmiljöpolitikens område", miljödepartementets promemoria om ramdirektivet om en marin strategi (2010-07-09).

[26] Havsmiljöförordningen (2010:1341), 18 § samt HVMFS 2012:18, 4 § samt bilaga 2. Se även Havs- och vattenmyndigheten (2012b). *God Havsmiljö 2020 Marin strategi för Nordsjön och Östersjön. Del 2: God miljöstatus och miljökvalitetsnormer.* Havs- och vattenmyndighetens rapport 2012:20, Göteborg.

[27] God miljöstatus är en norm enligt 5 kap. 2 § 1 st. p. 4 MB. Havsmiljöförordningen (2010:1341), 17 § 2 st.

[28] HVMFS 2012:18, bilaga 2, del A, 3.1. Med F_{MSY} avses "den nivå på fiskeridödlighet som möjliggör ett maximalt hållbart uttag (MSY)" enligt HVMFS 2012:18, 3 §.

- Fiskenivån inte har en negativ påverkan på ekosystemets strukturer och funktion.[29]
- Reproduktionskapacitet och ålders- och storleksstruktur i fiskebestånden garanterar långsiktig produktivitet.[30]

Därutöver har ett antal miljökvalitetsnormer med indikatorer fastställts med syfte att genomföra en god status och bidra, i den utsträckning det är möjligt, ”till att betydande och negativa gränsöverskridande effekter kan hindras”.[31] Normerna gäller i hela det svenska havsterritoriet.[32] Samtliga normer utom en är normer enligt 5 kap. 2 § 1 st. p. 4 MB, d.v.s. de övriga krav på miljökvaliteten som följer av EU.[33] Miljökvalitetsnormer som följer av Sveriges medlemskap i EU får enligt miljöbalken, efter bemyndigande av regeringen, föreskrivas av myndighet.[34] När det gäller miljökvalitetsnormer som går längre än vad som följer av EU-rätten krävs dock att dessa antas av regeringen. Detta följer av ordalydelsen i 5 kap. 1 § 2 st. som anger att bemyndigandet gäller normer ”som följer av” Sveriges medlemskap i Europeiska unionen.[35]

Ett exempel på en miljökvalitetsnorm som kan påverkas av fiskeverksamhet (t.ex. genom att selektivt avlägsna biomassa och stora individer) är normen C.3. Denna anger att;[36]

> ”Populationerna av alla naturligt förekommande fiskarter och skaldjur som påverkas av fiske har en ålders- och storleksstruktur samt beståndsstorlek som garanterar deras långsiktiga hållbarhet.”

Normen anger därmed i kvalitativa termer den miljökvalitet som ska uppnås för alla naturligt förekommande fiskbestånd[37] (d.v.s. inte enbart kommersiella arter).[38] Förutom populationernas storlek omfattas beståndens ålders- och storleksstruktur. En annan miljökvalitetsnorm som kan påverkas av fiske (t.ex. genom trofiska kaskader)[39] är normen C.4 som anger att;

> ”Förekomst, artsammansättning och storleksfördelning hos fisksamhället ska möjliggöra att viktiga funktioner i näringsväven upprätthålls.”[40]

För att möjliggöra den praktiska bedömningen har (i den mån kunskapen har bedömts tillräcklig) *indikatorer* med rikt- och gränsvärden[41] fastställts för såväl påverkansfaktorer (t.ex. fiskeridödlighet)[42] som miljökvalitet (t.ex. lekbiomassa).[43] God status för fiskeridödlighet (F)

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[29] HVMFS 2012:18, bilaga 2, del A, 3.2.

[30] HVMFS 2012:18, bilaga 2, del A, 3.3.

[31] Havsmiljöförordningen (2010:1341), 9 § 3 p. och 19 § samt HVMFS 2012:18, bilaga 3.

[32] Genom fastställandet av indikatorer och bedömningsområden kan dock bedömningarna avgränsas geografiskt. Indelningen av svenska vatten i havsbassänger samt kust- och utsjövatten följer av HVMFS 2012:18, bilaga 1.

[33] Endast miljökvalitetsnormen B.1 är en s.k. gränsvärdesnorm, HVMFS 2012:18, 6 §.

[34] 5 kap. 1 § 2 st. MB. Ett sådant bemyndigande till Havs- och vattenmyndigheten finns i havsmiljöförordningen (2010:1341), 20 § 1 st.

[35] Se även prop. 1997/98:45, Miljöbalk, del 1, s. 251ff och del 2, s. 41ff.

[36] Inledningsvis fastställdes inga miljökvalitetsnormer för fisk trots att fiske hade bedömts utgöra ett av de huvudsakliga hoten mot de marina ekosystemen. Efter kritik antogs normer för fisk. Havs- och vattenmyndigheten (2012c). *Samråd om förslag till ändring av Havs- och vattenmyndighetsens föreskrifter (HVMFS 2012:18) angående införandet av miljökvalitetsnormer för fisk m.m.* Dnr 783-12 (2012-09-04).

[37] Med fisk avses i det följande även skaldjur. Se även definitionen 4 § Fiskelag (1993:787) som anger att begreppet fisk också omfattar vattenlevande blötdjur och vattenlevande kräftdjur.

[38] Jämför formuleringen av förhållanden för god status i HVMFS 2012:18, bilaga 2, del A, 3.1–3-3 samt deskriptor 3, Havsmiljödirektivet, bilaga 1.

[39] Se avsnitt 1, not 2.

[40] Därutöver har miljökvalitetsnormer för *havsbottnens integritet* (D.1 och D.2) formulerats. Se HVMFS 2012:18, bilaga 3, D.1. och D.2.

[41] Se mer om detta i avsnitt 3.

[42] Se definition av fiskeridödlighet (F) i HVMFS 2012:18, 3 §.

[43] Se definition av lekbiomassa (SSB) och $B_{MSY\text{-}trigger}$ i HVMFS 2012:18, 3 §. Denna är en bedömningsgrund för

uppnås exempelvis när denna är lägre än den nivå som ger upphov till maximal hållbar avkastning (MSY), d.v.s. när $F < F_{MSY}$.[44] God status för lekbiomassa (SSB) uppnås när lekbiomassan är större än den nivå då ytterligare förvaltningsåtgärder krävs för att säkerställa ett hållbart nyttjande, d.v.s. när $SSB > B_{MSY\text{-}trigger}$.[45] Bedömningsskalan är med andra ord tvågradig, d.v.s. utfallet kan vara antingen ”god status” eller ”ej god status” för respektive indikator.[46]

I det sista förvaltningssteget har ett förslag till åtgärdsprogram lagts fram.[47] Åtgärdsprogram ska upprättas om det behövs för att följa en miljökvalitetsnorm.[48] Detta förslag innehåller ett fåtal åtgärder som riktar sig mot fiske. Endast tre konkreta åtgärder om utfärdandet av fiskebestämmelser föreslås.[49] Dessa regler föreslås gälla endast innanför trålgränsen.

att bedöma om beståndens reproduktiva kapacitet är förenlig med en god status.

[44] HVMFS 2012:18, bilaga 4, 3.1A. Indikatorn omfattar de bestånd för vilka det finns en analytisk bedömning och en F_{MSY}-nivå i enlighet med ICES bedömning.

[45] HVMFS 2012:18, bilaga 4, 3.2A. ICES aktuella rådgivning ska gälla.

[46] För övriga fastställda indikatorer och värden för god status, se HVMFS 2012:18 bilaga 2 (del B), 3 och 4.

[47] Havsmiljöförordningen (2010:1341), 24 §. Se förslag till åtgärdsprogram i Havs- och vattenmyndigheten (2015). *God Havsmiljö 2020 Marin strategi för Nordsjön och Östersjön. Del 4: Åtgärdsprogram för havsmiljön.* Havs- och vattenmyndighetens remissversion 2015-02-01, Göteborg. Beslut om åtgärdsprogrammet ska ta senast den 31 december 2015.

[48] 5 kap. 4 § 1 st. MB. För en beskrivning av statusbedömningar i svenska havsområden, se Havs- och vattenmyndigheten (2015) samt Havs- och vattenmyndigheten (2012a). *God Havsmiljö 2020 Marin strategi för Nordsjön och Östersjön. Del 1: Inledande bedömning av miljötillstånd och socioekonomisk analys.* Rapport 2012:19, Göteborg.

[49] Två av åtgärderna är av utredningskaraktär och en annan handlar om anpassning fiskeflottans kapacitet i förhållande till tillgängliga fiskemöjligheter i vissa flottsegment.

3. Diskussion

3.1 Inledning

Som beskrivningen ovan visar har nationella målsättningar och miljökvalitetsnormer för en god miljöstatus i svenska havsområden fastställts i enlighet med den adaptiva planeringen som direktivet föreskriver. Dock kvarstår en hel del arbete med implementeringen, bland annat vad gäller fastställandet av bedömningsområden samt rikt- eller gränsvärden för god status.[50] Huruvida en god status och direktivets resultat kan nås eller inte beror emellertid inte enbart på hur mål och normer för god status formuleras. Normer och åtgärder måste också kunna genomföras, även mot fiske. I de följande avsnitten diskuteras därför normernas rättsverkan samt möjligheter och eventuella hinder som finns att genomdriva krav mot fiskeverksamhetsutövare givet de parallella regelverken samt EU:s exklusiva kompetens inom fiskeripolitiken.

3.2 Är miljökvalitetsnormer för en god miljöstatus rättsligt bindande?

I Sverige har som ovan beskrivits miljökvalitetsnormer formulerats för att genomföra direktivets krav om att uppnå eller upprätthålla en god status. Dessa miljökvalitetsnormer är som sagt s.k. ”övriga normer” (punkt 4-normer).[51] Av lagtexten i denna regel framgår med andra ord inte normtypen eller dess rättsverkan. Av Havs- och vattenmyndighetens föreskrifter framgår emellertid att det är möjligt att fastställa såväl rikt- som *gräns*värden för god status för respektive indikator. Detta i kombination med formuleringen i 7 § i föreskrifterna talar för att normer

[50] För de indikatorer där ICES rådgivning ska följas gäller ICES bedömningsområden.

[51] För en analys av punkt-4-normers rättsliga status och det svenska genomförandet av en god ekologisk status, se Olsen Lundh (2014). Four points on point four. Implementing environmental quality standards in Sweden. *Scandinavian Studies in Law*, 59, s. 319–349.

med bindande rättsverkan ska kunna fastställas. Bestämmelsen anger att;

> ”Miljökvalitetsnormer enligt 6 § *följs* då god miljöstatus för respektive indikator är uppfylld inom angivet bedömningsområde… (författarens kursiveringar).”[52]

Att varje indikator ska vara uppfylld för att en norm ska följas kan också tolkas som att sammanvägda bedömningar inte heller är möjliga när gränsvärden har slagits fast. Miljökvalitetsnormen C.3 skulle därmed inte följas om t.ex. gränsvärdet för fiskeridödlighet överskrids, oavsett hur förhållanden (t.ex. reproduktionskapacitet) ser ut i övrigt.[53] En bindande rättsverkan bör då innebära att fiske som påverkar den relevanta fiskeridödligheten inte kan tillåtas (förutsatt att något undantag inte är gällande).

Samtidigt framgår motsatsvis av 2 kap. 7 § 2 st. att de mer långtgående kraven som kan ställas på enskilda med stöd av 2 kapitlet miljöbalken inte gäller.[54] Detta kan med andra ord innebära att tillstånd till en verksamhet kan ges även om den innebär att normerna inte följs om kraven annars blir orimliga för den enskilde verksamhetsutövaren enligt skälighetsavvägningen. Av EU-domstolens praxis följer dock att även normer för en god ekologisk status kan utgöra gränsvärdesnormer enligt Ramvattendirektivet.[55] Domstolen uttrycker nämligen att medlemsstaters skyldigheter att dels förebygga försämring, dels skydda, förbättra och återställa alla ytvattenförekomster för att uppnå en god ytvattenstatus innebär en rättsligt bindande skyldighet som måste iakttas i samband med godkännandet av enskilda projekt.[56] Artikel 4 i Ramvattendirektivet anger därmed en skyldighet för medlemsstater att inte meddela tillstånd till enskilda projekt om projektet t.ex. innebär att uppnåendet av en god ytvattenstatus äventyras (om inte något undantag är uppfyllt). Därutöver uttrycker EU-domstolen att varje försämring av en enskild kvalitetsfaktor (som anges i Ramvattendirektivets bilaga V) är en försämring rättsligt sett som är förbjuden, även om ytvattenförekomstens status inte hamnar i en lägre klass.[57] För att EU-rätten ska efterlevas krävs därför en ändring av de svenska reglerna. Domen bör dock få betydelse för den svenska rättstillämpningen även innan en sådan lagändring träder ikraft, antingen genom direkt

[52] HVMFS 2012:18, 7 §.

[53] Annorlunda uttryckt räcker det då med att en av de fastställda indikatorerna inte når en god status för att normen inte ska följas. De har därmed lika vikt (angreppssättet brukar benämnas ”sämst-styr”, ”one-out-all-out aggregation rule” eller “assessment by worst case”). Se om olika sammanvägda bedömningar i Moksnes et al. (2012).

[54] De mer långtgående kraven kan endast ställas för att genomföra s.k. *gränsvärdesnormer*, d.v.s. p. 1-normer. 2 kap. 7 § 2 st. MB. Se även prop. 2009/10:184, *Åtgärdsprogram och tillämpningen av miljökvalitetsnormer*, s. 45–48, MÖD 2013:12 samt Mark- och miljööverdomstolens dom 2012-09-13 i mål nr M 10108-11. Mark- och miljödomstolen uttalade att vid en individuell tillståndsprövning ska miljökvalitetsnormer som inte är gränsvärdsnormer beaktas genom tillämpning av de grundläggande hänsynsreglerna i 2 kap. miljöbalken. Endast 2 kap. 7 § 1 st. men inte 2 och 3 st. ska tillämpas när det är fråga om en vattenförekomsts ekologiska status.

[55] *Europaparlamentets och rådets direktiv 2000/60/EG av den 23 oktober 2000 om upprättande av en ram för gemenskapens åtgärder på vattenpolitikens område* (”Ramvattendirektivet”).

[56] C-461/13, *Bund für Umwelt und Naturschutz Deutschland eV mot Bundesrespublik Deutschland* (förhandsavgörande), p. 31 och 33. Detta följer enligt domstolen av såväl en bokstavstolkning av artikel 4(1)(a) som av en ändamålsenlig tolkning.

[57] C-461/13, p. 65. Domstolen argumenterar med andra ord mot den s.k. ”statusklassteorin”, vilken innebär att försämring av statusen inträder först om ytvattenförekomstens status hamnar i en lägre klass och för ”status quo-teorin” som innebär att varje försämring även inom en klass är en försämring rättsligt sett. Om vattnet är i lägsta klass räcker det med att en parameter försämras. För en utförlig analys av domen, se Michanek (2015). Tillstånd får inte ges om aktuell ytvattenstatus försämras eller om uppnåendet av god ytvattenstatus äventyras. Analys av EU-domstolens förhandsavgörande C-461/13. *JP miljönet* (artikel i tryck).

effekt eller en direktivkonform tolkning.[58] En fråga som uppstår är därför om även Havsmiljödirektivet föreskriver en sådan tvingande skyldighet som också ska beaktas i enskilda ärenden. Detta diskuteras i nästa avsnitt.

3.3 Kräver direktivet att rättsligt bindande normer för en god miljöstatus fastställs?

Inledningsvis kan konstateras att direktiv, enligt fördraget, ska implementeras så att direktivets resultat nås men att medlemsstater själva får bestämma form och tillvägagångssätt.[59] Detta utrymme har dock begränsats genom EU-domstolens praxis. Av rättspraxis följer bland annat att medlemsstater ska vidta alla nödvändiga åtgärder som krävs för att säkerställa direktivets fulla rättsverkan och att rättsläget ska vara klart och precist.[60] Direktivbestämmelsernas art och utformning avgör närmare vad som är en tillräcklig implementering.[61] När det är frågan om ett minimidirektiv kan dessutom som nämndes tidigare medlemsstater vidta mer långtgående åtgärder än vad direktivet kräver så länge detta är förenligt med EU-rätten i övrigt (t.ex. den gemensamma fiskeripolitiken).[62]

Havsmiljödirektivet kan knappast, givet dess utformning med betydande skönsmässigt utrymme för medlemsstater att fastställa detaljerna, anses syfta till någon total harmonisering av medlemsstaternas lagstiftningar om förvaltningen av marina vatten.[63] Direktivet överlämnar med andra ord i hög grad till medlemsstater att bestämma *vilka* åtgärder som ska vidtas.[64] Samtidigt ska direktivets resultat nås. Målsättningen om en god status ska uppnås eller upprätthållas och medlemsstater ska vidta alla de åtgärder som behövs för detta syfte.[65] För detta syfte ska medlemsstaterna fastställa nationella förhållanden för en god status samt miljömål.[66] Genom Kommissionens beslut om kriterier och metodstandarder, med syfte att främja en enhetlig och jämförbar bedömning av en god status mellan medlemsstater, anges i betydligt högre detaljgrad vilka kriterier som ska ligga till grund för bedömningen av en god status. Kriterier som anges i beslutet kan emellertid utelämnas nationellt, men detta måste motiveras och rapporteras till Kommissionen.[67] Däremot anger varken direktivet eller Kommissionens beslut vilken rättsverkan fastställda miljömål ska ges och inte heller om målen ska vara kvantitativa eller kvalitativa.

Av domstolens praxis framgår bland annat att innebörden av direktivbestämmelser ska fast-

[58] För en analys av hur domen påverkar den svenska rättstillämpningen, se Michanek (2015). Michanek menar att försämringsförbudet, efter preciseringen av dess innebörd genom domen, är ovillkorlig och tillräckligt tydlig och precis för att ha direkt effekt. Om så inte är fallet bör domen ändå få genomslag i svensk rätt genom fördragsenlig tolkning (se avsnitt 6).

[59] Artikel 288 3 st. Fördraget om Europeiska Unionens Funktionssätt (FEUF).

[60] Se t.ex. *Kommissionen mot Frankrike*, p. 77 och C-159/99, *Kommissionen mot Italien*, p. 1, C-32/05, *Kommissionen mot Luxemburg*, p. 34, mål 29/84, *Kommissionen mot Tyskland*, p. 22 och 23 och C-217/97, *Kommissionen mot Tyskland*, p. 31 och 32. Det följer även av lojalitetsförpliktelsen att medlemsstater ska vidta alla nödvändiga åtgärder för att fullgöra de förpliktelser som följer av fördragen och de åtgärder som vidtas av EU:s institutioner.

[61] Se t.ex. C-32/05, *Kommissionen mot Luxemburg*, p. 37–40 samt där angivna rättsfall samt C-461/13, p. 34.

[62] Direktivet har antagits med stöd i artikel 191 FEUF.

[63] För en analys av direktivet se Michanek och Christiernsson (2014).

[64] Jämför EU-domstolens uttalande om ”Ramvattendirektivet” och dess genomförande. Domstolen har konstaterat att detta direktiv, trots att det är betydligt mer detaljerat än Havsmiljödirektivet, inte syftar till en total harmonisering av medlemsstaternas lagstiftningar om vatten. Se C-32/05, p. 41–42.

[65] Artikel 1. Att direktivets mål är bindande följer också av det faktum att direktivet anger strikta kriterier för undantag.

[66] Artikel 9 och 10.

[67] *Alla* kriterier med tillhörande indikatorer ska dock övervägas. Artikel 1, preambel, p. 1 och 3, i Kommissionens beslut samt artikel 9.3 i direktivet.

ställas med beaktande av deras ordalydelse.[68] Av ordalydelsen i artikel 10 följer att medlemsstater ska fastställa miljömål med indikatorer, och att syftet med miljömålen är att utgöra ”*vägledning* för de framsteg som ska uppnås beträffande en god miljöstatus i den marina miljön” (författarens kursivering). Med miljömål avses ett kvalitativt eller ett kvantitativt påstående ”om det eftersträvade tillståndet för olika delar av, och belastningar och påverkan på, marina vatten för varje marin region eller delregion.”[69] Detta talar för att miljömål inte alltid måste fastställas med gränsvärden med bindande rättsverkan. En riktlinje är dock att fastställandet av mål ska inkludera ”*mätbara* mål och tillhörande indikatorer som möjliggör övervakning och bedömning” (författarens kursivering).[70] Till skillnad från artikel 4 i Ramvattendirektivet anger inte artikel 10 i sig någon målsättning (den anger med andra ord inte *vad* som uppnås) och den kopplar inte heller till *alla* delar av direktivets genomförande.[71] Den tvingande skyldighet som följer av ordalydelsen i artikel 10 bör därmed vara begränsad till själva fastställandet av miljömålen med syfte att nå den övergripande målsättningen om en god miljöstatus.[72]

Av domstolens praxis framgår emellertid att innebörden av direktivbestämmelser även ska fastställas med beaktande av de mål som bestämmelsen och ytterst direktivet avser uppnå.[73] Syftet med fastställandet av miljömål (artikel 10) är att uppnå det övergripande miljömålet om en god status. Detta är ett mål som *ska* nås. Av artikel 1 följer att medlemsstater ska vidta de åtgärder ”som behövs” för att direktivets övergripande målsättning om en god miljöstatus i EU:s marina regioner ska uppnås eller upprätthållas senast år 2020. Möjligheterna till undantag är restriktiva.[74]

Fastställandet och genomförandet av miljömål är en viktig del i detta genomförande. Att fastställa miljömål med bindande rättsverkan kan vara en sådan åtgärd ”som behövs” för att direktivets mål ska nås. Det kan t.ex. handla om att med lagstiftning säkerställa att myndigheter beaktar miljömålen vid olika beslut och enskilda prövningar så att verksamheter som äventyrar uppnåendet av miljömålen därmed inte tillåts (om inte något undantag är uppfyllt).

Flera bestämmelser i direktivet talar för att miljömål, när de väl har fastställts, ska nås. Inte minst bestämmelsen som anger att medlemsstater under särskilda situationer får identifiera fall där ”miljömålen eller god miljöstatus” inte kan nås, men också kravet på att åtgärdsprogrammen ska ange hur åtgärderna bidrar till att miljömålen nås.[75] Åtgärds- samt övervakningsprogram ska också utformas ”med hänvisning till” miljömålen.[76] Att det finns ett stort utrymme i fastställandet av miljömålen men ett mer be-

[68] Se t.ex. C-461/13, p. 30. Se även C-317/12, p. 19, C-187/12, p. 24 samt C-114/13, p. 31.

[69] Artikel 3.7.

[70] Havsmiljödirektivets *vägledande* förteckning för fastställandet av miljömål, bilaga IV, p. 3.b. Även operativa mål för konkreta genomförandeåtgärder som kan bidra till att miljömålen uppnås föreslås. Se Bilaga IV, p. 3.c.

[71] Artikel 4(1)(a) i Ramvattendirektivet anger att medlemsstaterna skall genomföra alla åtgärder som är nödvändiga för att förebygga en försämring av statusen i alla ytvattenförekomster (i) och skydda, förbättra och återställa alla ytvattenförekomster i syfte att uppnå en god ytvattenstatus (ii).

[72] Jämför EU-domstolen uttalande om artikel 4 i Ramvattendirektivet. Domstolen anger att denna bestämmelse har karaktären av en tvingande skyldighet som medlemsstater är skyldiga att beakta i alla delar av direktivets genomförande, även vid enskilda tillståndsprövningar. Se C-461/13, se särskilt p. 31 och 43.

[73] Se t.ex. C-461/13, p. 30. Se även C-317/12, p. 19, C-187/12, p. 24 samt C-114/13, p. 31.

[74] Undantag från detta krav gäller t.ex. för förändringar till följd av åtgärder ”vidtagna på grund av ett tvingande allmänintresse som uppväger den negativa miljöpåverkan, inbegripet allt gränsöverskridande inverkan”. Dock ska åtgärder vidtas för att förhindra fortsatt försämring. Se artikel 14.

[75] Artikel 13.1 p. 7.

[76] Artikel 13.1 2 st. samt artikel 11.1.

gränsat utrymme att sedan göra undantag från de fastställda målen är rimligt givet att medlemsstaterna genom sitt fastställande av miljömålen klargjort att dessa förhållanden utgör väsentliga delar i uppnåendet eller upprätthållandet av en god miljöstatus.[77]

Utifrån ett sådant synsätt bör inte heller sammanvägningar (eller avvägningar) vara möjliga när god status för indikatorer har fastställts med gränsvärden. Genom att fastställa gränsvärden för enskilda indikatorer har medlemsstater visat att det finns nivåer som inte får överskridas om målet om en god status ska kunna nås. Givet att miljömålen ska nås, skulle med andra ord Sverige vara skyldig att exempelvis inte tillåta fiske som innebär att gränsvärdet för fiskeridödlighet för det eller de aktuella bestånden överskrids. Detta skulle alltså gälla oavsett hur statusen för lekbiomassan ser ut. Sammanvägda bedömningar bör dock vara möjliga när riktvärden för god status har föreskrivits.

Som nämnts ovan ger EU-domstolens uttalanden om hur målet om en ekologisk status ska tolkas enligt Ramvattendirektivet stöd för att också ekologiska normer för vattenkvalitet kan betraktas som gränsvärden med bindande rättsverkan mot enskilda enligt EU-rätten. Domstolen anger också att skyldigheten att förebygga försämring gäller varje kvalitetsfaktor, även om denna försämring inte leder till en försämring av klassificeringen av ytvattenförekomsten som helhet.[78] Om en verksamhet innebär att statusen försämras, eller att en god ytvattenstatus äventyras, ska med andra ord tillstånd inte meddelas.[79] Liksom artikel 4 i Ramvattendirektivet anger artikel 10 i Havsmiljödirektivet en tvingande skyldighet, medlemsstater *ska* fastställa miljömål. Bestämmelsen är dock som nämndes ovan inte enligt dess ordalydelse kopplad till alla delar av genomförandet av direktivet.[80] Havsmiljödirektivet ger vidare som nämndes ovan betydligt större utrymme för medlemsstaterna att fastställa detaljerna kring genomförandet samtidigt som artikel 10 inte i sig föreskriver vilket mål som ska nås. Detta talar för att bestämmelsen inte, liksom artikel 4 i Ramvattendirektivet, kan anses utgöra en tvingande skyldighet som också kan styra beslut i enskilda fall. Däremot anser jag att en ändamålsenlig tolkning av bestämmelsen ger stöd för att normer som har fastställts som gränsvärden nationellt ska betraktas som bindande även i enskilda prövningar när så är nödvändigt för att direktivets övergripande mål ska nås.

Sammanfattningsvis kan konstateras att direktivet inte explicit kräver att kvantitativa miljömål med bindande rättsverkan ska fastställas. Direktivets mål ska dock nås. Hur miljömålen bör utformas och vilken rättsverkan de bör ha måste därför bedömas med utgångspunkt i detta. Att fastställa rättsligt bindande gränsvärden (utan möjligheter till avvägningar) är därmed

[77] Jämför t.ex. EU-domstolens uttalande om skillnader i medlemstataters handlingsutrymme före och efter skyddade områden enligt *Europaparlamentets och rådets direktiv 2009/147/EG av den 30 november 2009 om bevarande av vilda fåglar* (nedan ”Fågeldirektivet”) pekats ut. Domstolen uttalar att medlemsstater har ett mer begränsat utrymme att göra inskränkningar i ett redan utpekat särskilt skyddsområde i jämförelse med det utrymme som finns att avgöra vilka områden som ska skyddas. Domstolen menade att medlemsstaterna hade klargjort att området var det mest lämpade för att skydda fågelarterna och undantag kunde därmed bara godkännas på exceptionella grunder som hälsa och säkerhet. Ekonomiska intressen ansågs inte vara en acceptabel anledning till inskränkning av skyddet. Se C-57/89, *Kommissionen mot Tyskland*.

[78] C-461/13, p. 65.

[79] Se domstolens uttalande i målet ovan om att strukturen hos de kategorier av undantag som föreskrivits i Ramvattendirektivet talar för att de inte enbart innehåller principiella skyldigheter utan också omfattar *enskilda projekt* (se p. 47).

[80] Jämför EU-domstolen uttalande om artikel 4 i Ramvattendirektivet. Domstolen anger att denna bestämmelse har karaktären av en tvingande skyldighet som medlemsstater är skyldiga att beakta i alla delar av direktivets genomförande, även vid enskilda tillståndsprövningar. Se C-461/13, se särskilt p. 31 och 43.

inte oförenligt med direktivet, utan kan tvärtom i vissa situationer förmodas vara nödvändigt (t.ex. för att säkerställa att fiskebestånd eller andra marina arter inte utrotas). En ändamålsenlig tolkning av artikel 10 talar också för att miljömål, när de väl har fastställs, ska följas. Dessutom utgör försiktighetsprincipen en av de grundläggande principer som EU-rättens miljöpolitik vilar på.[81] Att direktivet utgör ett minimidirektiv innebär vidare att medlemsstater kan gå längre än vad direktivet kräver, så länge detta är förenligt med EU-rätten i övrigt, t.ex. den gemensamma fiskeripolitiken.[82] Som nämndes tidigare krävs dock enligt den svenska regleringen att sådana mer långtgående normer fastställs av regeringen.[83]

3.4 Kan normerna genomföras mot fiskeverksamhetsutövare?

Miljökvalitetsnormerna gäller för alla verksamheter eller åtgärder som kan påverka normerna, däribland fiske. Fiske kan som beskrevs inledningsvis, påverka havsmiljön på flera olika sätt. Det framgår också av underlagsmaterialet till fastställandet att miljökvalitetsnormerna C.3 och C.4 har formulerats just med utgångpunkt i fiskets påverkan, men också andra normer (däribland normer om havsbottnars integritet) kan påverkas av fiske.[84] Därutöver kan normerna påverkas av annan verksamhet än fiske, t.ex. vattenkraft, muddring, utsläpp av näringsämnen och miljögifter eller exploatering av strandområden m.m.[85]

När en verksamhet omfattas av miljöbalken kan myndigheter driva igenom olika skydds- och försiktighetskrav med stöd av de allmänna hänsynsreglerna för att säkerställa att normerna följs.[86] Detta kan t.ex. ske vid en tillståndsprövning eller vid tillsyn enligt miljöbalken. Detta innebär bland annat att verksamhetsutövaren är skyldig att visa att val av metod, plats m.m. inte innebär att miljökvalitetsnormer riskerar att äventyras.[87] Kraven som kan ställas på verksamhetsutövaren får dock inte vara orimliga enligt skälighetsavvägningen i 2 kapitlet miljöbalken.[88] Möjligheten att ställa strängare krav för att säkerställa att normer följs gäller som sagt endast gränsvärdesnormer (p. 1-normer).[89] Som en följd av att rättsläget klargjorts genom EU-domstolens dom C-461/13 om medlemsstaternas skyldigheter att uppnå de mål som föreskrivs i artikel 4.1 i Ramvattendirektivet, bör dock normer för god ekologisk status betraktas som gränsvärdesnormer som inte får överträdas. Bestämmelsen bör därmed i första hand ändras, men domen bör också få betydelse även innan en lagändring genomförs.[90] För de miljömål där gränsvärden för god miljöstatus fastställts, bör en sådan ändring av 2 kap. 7 § miljöbalken även omfatta dessa miljökvalitetsnormer (se ovan, avsnitt 3.3).

När det gäller miljökvalitetsnormer och fiske finns vidare ett antal genomförandeproblem. Även om miljöbalken är tillämplig på yrkesmässigt fiske i marina vatten och gäller parallellt med miljöbalken, regleras fiske framför allt med stöd

[81] Se artikel 192 FEUF.
[82] Artikel 191 FEUF.
[83] Se avsnitt 2.2.
[84] Havs- och vattenmyndigheten (2012c), s. 3. Se normerna D.1 och D.2, HVMFS 2012:18, bilaga 3.
[85] Att miljökvalitetsnormerna som formulerats med utgångspunkt i fiskets påverkan kan påverkas och därmed även måste gälla mot andra påverkansfaktorer uttrycks också i samrådsunderlaget från Havs- och vattenmyndigheten, se Havs- och vattenmyndigheten (2012c), s. 5.
[86] Ansvaret för att normerna följs ligger på myndigheter och kommuner, t.ex. vid prövningar och tillsyn enligt miljöbalken (5 kap. 3 § MB). För en mer utförlig beskrivning av miljökvalitetsnormer samt exempel se Michanek och Zetterberg (2012). *Den svenska miljörätten*. Tredje upplagan, s. 156–184.
[87] Se 2 kap. 1 § MB.
[88] 2 kap. 7 § 1 st. MB.
[89] Se avsnitt 3.2, vid not 53.
[90] Se Michanek (2015), not 56.

av fiskelagen.[91] Det finns inga särskilda prövningsregler för fiske i miljöbalken. Tillståndsplikt för fiske gäller endast inom vissa geografiska områden (t.ex. när fiske kan påverka ett Natura 2000-område eller om så är föreskrivet inom t.ex. ett naturreservat).[92] Fiske omfattas endast i ett begränsat antal fall av reglerna om ”miljöfarlig verksamhet” (t.ex. när bottentrålning leder till att gifter i sedimentet frigörs och sprids i den fria vattenmassan).[93] Om fisket kan förändra naturmiljön väsentligt gäller också samrådskrav enligt miljöbalken.

I dessa situationer finns ett utpekat operationellt tillsynsansvar. Detta omfattar även fiske. Det innebär t.ex. att länsstyrelsen som har det operationella tillsynsansvaret för skyddade områden också kan förelägga fiskeverksamhetsutövare att vidta skydds- och försiktighetsmått för att förhindra skador på skyddade områden eller att söka tillstånd enligt 7 kap. 28 a § MB.[94] Ett annat exempel är när fiske kan anses utgöra miljöfarlig verksamhet. Då har kommunerna det operativa tillsynsansvaret.[95] Miljötillsynsansvaret omfattar också att säkerställa att miljökvalitetsnormer efterlevs genom att meddela föreläggande och förbud.[96]

När det saknas ett utpekat operationellt tillsynsansvar ligger detta på den tillsynsvägledande myndigheten.[97] När det gäller miljökvalitetsnormer och fiske ligger det operationella tillsynsansvaret därmed på Havs- och vattenmyndigheten (så länge ingen annan myndighet har pekats ut).[98] Myndigheten kan därmed förelägga fiskeverksamhetsutövare att vidta sådana försiktighets- och skyddsåtgärder som krävs för att en miljökvalitetsnorm ska följas.[99] Eftersom myndigheten har tillsynsvägledningsansvaret, och därmed det operationella ansvaret, för miljökvalitetsnormer ”inom sitt ansvarsområde” bör myndigheten också vara skyldig att säkerställa normernas efterlevnad vid beslutsfattande enligt fiskelagstiftning trots att detta inte är särskilt föreskrivet i fiskelagen.[100]

3.5 Kan åtgärder mot fiske genomföras in hela det svenska havsområdet?

För att normerna och ytterst direktivets målsättning om en god status ska kunna nås krävs att åtgärder kan genomdrivas mot fiske. Givet att miljökvalitetsnormer gäller och fiske bedrivs inom hela den svenska ekonomiska zonen måste åtgärder kunna genomföras inom hela detta område, även mot andra medlemsstaters fiskefartyg. Det är också ett krav enligt direktivet och de nationella reglerna att åtgärdsprogram för havsmiljön ska innehålla alla de åtgärder som behövs för att fastställda miljökvalitetsnormerna ska följas och målet om en god miljöstatus uppnås eller

[91] Att miljöbalken gäller för fiske parallellt med miljöbalken följer av 1 kap. 1 och 3 §§ MB.

[92] För en analys av 7 kap. 28 a § MB, se Christiernsson et al. (2015). “Marine Natura 2000 and Fishery – The Case of Sweden.” *Journal for European Environmental and Planning Law*, 12(1), s. 22–49 samt Christiernsson et al. (2014). *Fiske och Natura 2000. 7 kap. 28 a § miljöbalken I EU-rättslig belysning.* Havs- och vattenmyndighetens rapport 2014:7.

[93] Se definitionen av miljöfarlig verksamhet i 9 kap. 1 § MB.

[94] Miljötillsynsförordningen 2 kap. 8 § och 26 kap. 9 § MB. Även när det gäller samråd ligger tillsynsansvaret på länsstyrelserna. Miljötillsynsförordningen 2 kap. 8 § p. 9.

[95] 26 kap. 3 § 2 st. MB.

[96] Det finns ett generellt ansvar för myndigheterna och kommuner att säkerställa att miljökvalitetsnormer följs enligt 5 kap. 3 § MB. I de situationer en fiskeverksamhet skulle ha ett tillstånd enligt miljöbalkens 9 kap. kan en myndighet även initiera en omprövning om en verksamhet ”med någon betydelse medverkar till att en miljökvalitetsnorm överträds”. 24 kap. 5 § 1 st. p. 2 MB.

[97] Miljötillsynsförordningen 2 kap. 3 §.

[98] Miljötillsynsförordningen 3 kap. 5 §.

[99] 26 kap. 9 § MB.

[100] Det kan också tilläggas att de allmänna hänsynsreglerna gäller parallellt med kravet att uppnå miljökvalitetsnormer. Krav mot fiske med stöd av de allmänna hänsynsreglerna kan därför bli aktuella även om inte en norm överskrids.

upprätthållas.[101] I förslagen till åtgärdsprogram har dock fiskeåtgärder begränsats till områden innanför trålgränsen, d.v.s. till havsområdet innanför 3 respektive 4 nautiska mil.[102]

I och med den nya fiskeriförordningen (som trädde ikraft 2014) har förtydligats att medlemsstaterna har kompetens att genomföra åtgärder mot fiske för att genomföra vissa krav som följer av Art- och habitatdirektivet,[103] Fågeldirektivet och Havsmiljödirektivet i hela den ekonomiska zonen.[104] Av artikel 11 följer att medlemsstater bland annat har kompetens att vidta åtgärder mot fiske för att genomföra de förpliktelser som följer av artikel 13.4 i Havsmiljödirektivet.[105] När andra staters fiskefartyg berörs ska särskilda förfaranden tillämpas.[106]

En fråga som uppstår då är vilka åtgärder som omfattas av artikel 13.4. Grundförordningen för fiske hänvisar inte till hela artikel 13 (om åtgärdsprogram) utan endast till den bestämmelse som handlar om geografiska skyddsåtgärder för att skapa sammanhängande och representativa nätverk med marina skyddsområden. Om medlemsstaters kompetens att vidta åtgärder endast skulle omfatta själva inrättandet av skyddade områden men inte genomförandet av skydds- och förvaltningsåtgärder för att förhindra skador till följd av fiske skulle dock inte syftet med skyddet kunna nås. Dessutom skulle artikel 11 vara inkonsekvent då genomförandet av åtgärder för att bevara särskilda skydds- och bevarandeområden enligt Fågeldirektivet samt Art- och habitatdirektivet omfattas av medlemsstaternas kompetens.

När det gäller åtgärder för den marina miljön innanför 12-milsgränsen kan även andra former av bevarande- och förvaltningsåtgärder (även sådana som inte följer av EU-rätten) för att bibehålla eller förbättra bevarandestatusen för de marina ekosystemen genomföras mot fiske utan att stå i konflikt med den exklusiva kompetensen inom EU:s gemensamma fiskeripolitik, givet att vissa förutsättningar är uppfyllda.[107]

4. Avslutande kommentarer

Fiske kan få långtgående konsekvenser för fiskbestånden men även för andra djur- och växtarter och därmed påverka möjligheterna att uppnå miljökvalitetsnormer och ytterst det övergripande målet om en god miljöstatus. Av denna anledning ska de marina ekosystemen förvaltas med en adaptiv och ekosystembaserad metod där också fisk och fiske ingår. Detta innebär bland annat att miljökvalitetsnormer och åtgärder för en god miljöstatus måste kunna genomföras mot fiske. I Sverige, och på EU-nivå, regleras dock fiskeverksamheter framför allt genom sektorslagstiftning, vilket kan försvåra ett

[101] Se havsmiljöförordningen (2010:1341), 24 § och Havsmiljödirektivet, artikel 13.1. Krav på programmens innehåll finns också i 5 kap. 6 § 2 st. MB.

[102] När det gäller andra verksamheter än fiske inom den ekonomiska zonen och på kontinentalsockeln ligger dock i många fall rätten att tillståndspröva och föreskriva villkor hos regeringen.

[103] *Rådets direktiv 92/43/EEG av den 21 maj 1992 om bevarande av livsmiljöer samt vilda djur och växter* (nedan ”Art- och habitatdirektivet”).

[104] Artikel 11 i *Europaparlamentets och rådets förordning (EU) nr 1380/2013 av den 11 december 2013 om den gemensamma fiskeripolitiken* (nedan ”grundförordningen för fiske”). Se Christiernsson et al. (2015) för en beskrivning av rättsreglerna samt analys av förhållandet mellan den gemensamma fiskeripolitiken och Art- och habitatdirektivet efter antagandet av den nya Grundförordningen för fiske 2014.

[105] Artikel 11 ger även kompetens till medlemsstater att vidta åtgärder för att genomföra förpliktelser som följer av artikel 4 i Fågeldirektivet och artikel 6 i Art- och habitatdirektivet.

[106] Olika förfaranden gäller innanför och utanför 12-milsgränsen enligt artikel 11 och 20 i Grundförordningen för fiske.

[107] Se artikel 20 i Grundförordningen för fiske. När andra medlemsstaters fartyg berörs (i detta område endast grannländer som har särskilda avtal) ska dock särskilda förfaranden tillämpas. Det framgår inte av programmet om några processer för att genomföra åtgärder med stöd av artikel 11 eller artikel 20 har påbörjats eller planerats.

sådant genomförande. Denna artikel har därför diskuterat miljökvalitetsnormers rättsverkan och genomförande mot fiske givet parallella regelverk samt EU:s exklusiva kompetens inom den gemensamma fiskeripolitiken.

Sammanfattningsvis visar analysen att miljökvalitetsnormer med bindande rättsverkan, också mot fiske, kan föreskrivas och att detta till och med kan vara ett krav enligt EU-rätten, om bindande rättsverkan krävs för att direktivets mål ska nås. Detta innebär att gränser för miljökvaliteteten och fiskets bedrivande kan behöva fastställas och genomdrivas. Att allmänt formulerade miljödirektivmål, som preciseras av medlemsstaterna med utgångspunkt i gemensamma bedömningsgrunder enligt ett särskilt förfarande, kan ge upphov till tvingande skyldigheter för medlemsstaterna, som också ska prövas i enskilda ärenden, framgår också av EU-domstolens praxis. Eftersom Havsmiljödirektivet utgör ett minimidirektiv kan Sverige också gå längre än vad som krävs av direktivet så länge det är förenligt med EU-rätten i övrigt.

Den gemensamma fiskeripolitiken ger i och med antagandet av den nya grundförordning kompetens att under vissa förutsättningar genomföra skydds- och bevarandeåtgärder för marina skyddsområden inom hela den ekonomiska zonen. Därutöver finns handlingsutrymme att under särskilda förutsättningar vidta åtgärder innanför 12-milsgränsen för att förbättra eller bibehålla de marina ekosystemens bevarandestatus. I båda fallen omfattar som sagt kompetensen även andra staters fiske.

Förslaget till åtgärdsprogram för att genomföra normer för en god miljöstatus innehåller emellertid ett fåtal konkreta fiskeåtgärder, som dessutom föreslås gälla endast innanför trålningsgränsen, trots att åtgärdsprogram ska innehålla alla de åtgärder som är nödvändiga för att normer och det övergripande målet om en god status ska nås eller upprätthållas. Samtidigt är genomförandet av normerna och ytterst direktivets mål i stor utsträckning beroende av att konkreta åtgärder för fisket föreslås och genomförs (t.ex. genom utfärdandet av fiskeföreskrifter) via åtgärdsprogram. Normernas rättsverkan mot fiske är nämligen begränsad. För det första prövas normalt inte fiske enligt miljöbalken. För det andra saknas tydliga regler om det operationella tillsynsansvaret för miljöbalkens och miljökvalitetsnormernas efterlevnad vid fiske. För det tredje saknas krav på att beslut enligt fiskelagstiftningen ska vara förenliga med miljöbalkens allmänna hänsynsregler och miljökvalitetsnormer. För det fjärde säkerställer inte den svenska lagstiftningen att tillräckligt långtgående krav kan ställas på enskilda för att uppnå normer för en god miljöstatus, trots att detta kan vara nödvändigt för att EU-rätten ska efterlevas. Sammantaget innebär detta en risk för att fiske i svenska vatten även i fortsättningen kommer att hindra uppfyllandet av målet om en god miljöstatus i Sveriges havsområden.

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Investigator Self-Interest in the Environmental Process

My Pettersson and Lena Wahlberg***

Abstract

The Swedish Environmental Code states that certain potentially harmful activities must not be pursued without a permit. When applying for a permit, the applicant shall submit an environmental impact assessment, which describes the effects that the activity might have on the environment. This article discusses the risk that investigator self-interest decreases the adequacy of environmental impact assessments. The article also presents a newly made empirical study of whether and how arguments about investigator self-interest are considered and taken on board by Swedish environmental courts.

Keywords: environmental impact assessment, law and science, conflict of interest, environmental process.

1. Introduction

The Swedish Environmental Code states that certain potentially harmful activities, such as mining, paper production, and fish farming, must not be pursued without a permit.[1] When applying for a permit, the applicant shall submit an environmental impact assessment, EIA, which describes the effects that the activity might have on the environment.[2] This requirement specifies the code's general demand that a person who pursues an activity must demonstrate that he possesses sufficient knowledge to protect the environment from detrimental impact.[3] The impact assessment is meant to establish and describe the planned activity's direct and indirect effects on people, animals, plants, land, water, air, the climate, the landscape, and the cultural environment, on the management of land, water and the physical environment in general and on other managements of materials, raw materials and energy.[4] It goes without saying that it often takes comprehensive scientific expertise and inquiry to make an assessment of this kind. Occasionally, relevant expertise can be found within the organization that applies for the permit, but quite often the applicant will need to appoint external scientific expertise.

The fact that an expert is appointed by one of the parties is commonly regarded as a threat to the expert's impartiality. It is often pointed out that there is a risk that the party has hired an expert whose opinion is "available to the highest bidder", or at least deliberately picked an expert whose views support her cause. Even if the party has not exercised any direct control over the expert's testimony, the payer-provider relationship constitutes a secondary interest which risks influencing the expert's judgment.[5] Clearly, the

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[1] Swedish Environmental Code (SEC) chapters 9, 11 and 12, förordning (1998:899) om miljöfarlig verksamhet och hälsoskydd, and miljöprövningsförordning (2013:251).

[2] SEC, chapter 6, section 1.

[3] SEC, chapter 2, sections 1–2.

[4] SEC chapter 6 Section 3.

[5] See, for example, Ekelöf, P-O, Edelstam, H., and Heuman, L., *Rättegång IV*, Stockholm 2009, p. 298, Pattersson, M.R., "Conflicts of Interest in Scientific Expert Testimony", *William and Mary Law Review*, 40.4, 1998–1999, p. 1313–1394 and SOU 1926:33, III p. 179.

risk that secondary interests influence judgment is at least as great if the investigator herself is a party to the process. It can be noted that many institutions restrict or exclude the participation of advisors with conflicts of interest in the matter at hand.[6] The fact that Swedish environmental law (like many other legal rules) entrusts the applicant and/or her experts with providing a significant share of the decision basis, suggests that the legislator has assumed either that these conflicts of interest are unproblematic, or that they can be satisfactorily handled within the permit process. This article discusses the adequacy of these assumptions. In section two, we discuss the risk that investigator self-interest leads to deficiencies in environmental impact assessments. In section three, we discuss whether the legal system provides instruments to manage investigator self-interest, and whether the legal process can be expected to detect the deficiencies that such interests might lead to. In section four, we present a newly made empirical study of whether and how arguments about investigator self-interest are considered and taken on board by the Swedish environmental courts. In section five we make some concluding remarks and suggest paths for further research.

2. Conflicts of interest and the risk for deficiencies in the expert's assessment

Although problems associated with conflicts of interest are discussed in many contexts, there is no generally accepted definition of the notion. According to Dennis Thompson's often-cited definition, a conflict of interest is

> "a set of conditions in which professional judgment concerning a primary interest (such as a patient's welfare or the validity of research) tends to be unduly influenced by a secondary interest (such as financial gain)."[7]

It is important to note that Thompson's definition – like many others – does not require that secondary interests have an *actual* influence on the investigator's judgment; it is sufficient that secondary interests create a *risk* for such influence, given the current state of knowledge of how secondary interests operate. This suggests that the risk itself is regarded as a reason for concern, which is a plausible approach, considering that concrete influence on an investigator's judgment can be hard to detect in a particular case.

In permit processes, the primary interest can be defined as the interest of obtaining an adequate assessment of the activity's impact on the environment. Essentially, the secondary interest could be any other interest that the investigator might have, and which tends to unduly influence her assessment. Below, we will use the term "self-interest" to refer to the investigator's secondary interests. To adjust Thompson's definition to the subject matter of this article, we will also replace "undue influence" by "unduly increases the risk for deficiencies in the investigator's assessment of the activity's environmental impact".[8] This gives us the following definition:

An investigator has a ***conflict of interest*** *if the investigator has a self-interest, which unduly increas-*

[6] See e.g. guidelines developed by WHO; "Guidelines for Declaration of Interests (WHO Experts)" http://intranetapps.euro.who.int/intranet/documents/HAN/Contracts__Declaration_of_interests.htm (visited 150925), and the guidelines developed by seven Swedish authorities, presented in "Addressing Conflicts of Interest in Appointing External Experts" http://www.socialstyrelsen.se/SiteCollectionDocuments/eng-bilaga.pdf (visited 151209).

[7] Thompson, D.F., "Understanding Financial Conflicts of Interest", *New England Journal of Medicine*, 329(8), 1993, p. 573–576.

[8] The term "undue" is non-redundant since some legitimate secondary interests, such as the interest of not spending more time on an investigation than paid for, can likewise increase the risk for deficiencies in the assessment.

es the risk for deficiencies in the investigator's assessment of the activity's environmental impact.

Common sense tells us that a person's self-interests tend to influence her behavior, and that investigator self-interest is a potential problem. Several scientific studies on medical research and practice support the assumption that self-interest indeed risks leading to deficiencies in the expert's assessment. For example, it has been demonstrated that gifts and economic support from industry influence medical practitioners' treatment decisions. Similarly, contacts with industry have been seen to influence the methodological choices that scientists make, as well as the conclusions they eventually draw. Hence, researchers funded by pharmaceutical companies typically find the drugs they study to be more efficient and less associated with detrimental side-effects, than research without such funding.[9] Moreover, people tend to underestimate the influence that conflicts of interest have on them.[10] It is documented that physicians erroneously tend to believe that contacts with industry do not influence their behavior,[11] and it has been argued that self-interests, unlike professional responsibilities, are processed unconsciously and therefore difficult to eliminate or correct for.[12] More research is needed on how different kinds of self-interest work and how powerful they are. However, recalling that the environmental impact assessment is a means to promote a sustainable development and prevent damage to human health and the environment, and that this area of law is normally governed by the precautionary principle, it seems wise to be very attentive of investigator self-interest and the risks that such interests create in the environmental process.

3. Investigator Self-Interest in the Environmental Permit Process

As we have seen, Swedish environmental law requires the applicant to submit an environmental impact assessment. If the applicant has produced the investigation without the assistance of external experts, the risk that the investigation is influenced by the applicant's self-interest seems obvious. However, the problem with investigator self-interest does not disappear just because the applicant hires an external investigator (consultant) to conduct the investigation. Environmental impact assessments are often very costly[13] and are hence important assignments for the consultants that are hired to conduct them. Normally, therefore, the consultant wants to make the applicant – the client – content. Moreover, and as will be illustrated below, the relationship between the consultant and the applicant is often long-lasting and frequently includes other, larger assignments too.[14] The ensuing risk that

[9] See, for example, Barnes, M. and Florenico, P.S., "Financial Conflicts of Interest in Human Subjects Research: the Problem of Institutional Conflicts", *Journal of law, medicine and ethics*, 2002, 390–402, Bekelman, J., Li, Y. and Gross, C., "Scope and Impact of Financial Conflicts of Interest in Biomedical Research, a Review", *Journal of the American Medical Association*. 2003, 4,454–465; Lo, B. och Field, M., (Eds.) *Conflict of Interest in Medical Research, Education and Practice*, Washington, National Academies Press, 2009; Appelbaum, P.S. and Gold, A., "Psychiatrists' Relationships with Industry: the Principal-Agent Problem", *Harvard Review of Psychiatry*, 2010, 18, 255–265, Dahlman, C. and Wahlberg, L., "Appeal to Expert Testimony: a Bayesian Approach" in C. Dahlman and T. Bustamente (eds.) *Argument Types and Fallacies in Legal Argumentation*, Springer 2015.

[10] Moore, D. A., Tanlu, L. and Bazerman M. H., "Conflict of Interest and the Intrusion of Bias", *Judgement and Decisionmaking*, 2010, 5, 37–53.

[11] Gold, A. and Appelbaum, P.S., "Unconscious Conflict of Interest: a Jewish Perspective", *Journal of Medical Ethics*, 2011, 37, 402–405.

[12] Moore, D. A. and Loewenstein, G., "Self-Interest, Automaticity and the Psychology of Conflict of Interest", *Social Justice Research*, 17, 2004, 189–202.

[13] http://www.svensktnaringsliv.se/fragor/regelkrangel/tillstand-for-gruva-tog-sju-ar_553811.html (visited 151210).

[14] Hedlund, A. and Kjellander, C., *MKB: Introduktion till miljökonsekvensbeskrivning*, Lund, Studentlitteraur, 2007,

hired consultants produce unreliable environmental impact assessments is not just theoretical – there are many accounts of consultants who have felt pressured to present an assessment that gives a favourable impression of the applicant's project.[15]

The risk that investigator self-interest impacts the environmental impact assessment brings with it the risk that court decisions are based on incomplete or erroneous facts and assessments, which – in turn – risk damaging not only the environment but also the public's confidence in the process. In law, conflicts of interest are often managed *ex ante*, by rules that disqualify a person with secondary interests from participating in a decision. Thus, according to Swedish administrative law, factors such as family relations, interests in the decision's outcome and other similar circumstances that undermine the confidence in an administrator, are treated as reasons for disqualification.[16] Similar rules apply to judges, court appointed experts and other administrators that are involved in a decision, but they do *not* apply to experts that are appointed by the parties, or to the parties. Rules for disqualification can hence not be adduced to disqualify neither an applicant, nor a consultant who has been hired by the applicant, from conducting the investigation.

The fact that rules for disqualification do not hinder parties or party-appointed experts to conduct the investigation raises the question whether investigator self-interest can instead be satisfactorily managed *ex post*, i.e. whether the environmental process has the capacity to detect deficiencies in the investigation that result from such interests. The environmental process has an open character and is designed to include participation by stakeholders and relevant experts. While preparing the environmental impact assessment, the applicant must consult with public authorities and private parties.[17] Before the legal trial begins, the public is invited to comment on the application and the impact assessment.[18] During the trial, public authorities, such as the National Environmental Agency and the Fishery Agency, and private parties that are likely to be affected by the planned activity, such as neighbours, have a right of action. Moreover environmental courts consist not only of legally qualified judges but also include expert members with scientific training and experience. Hereby, the process allows for review from various perspectives, including review of other experts. An important question is therefore whether the environmental process's capacity to detect deficiencies in the consultant's assessment makes redundant *ex ante* approaches to investigator self-interest.

Some deficiencies, such as erroneous calculation, choice of inappropriate statistical method, omission of relevant alternatives or absence of appropriate investigations, are relatively easy to detect. Others, such as excluded results, biased measurements and fabricated data, are much more difficult for an external reviewer to identify, even if she too is an expert within the particular domain. It is a well-known fact within the scientific community that peer review processes are unlikely to detect flaws in scientific research.[19] An empirical study found that peer reviewers succeed in detecting less than one third of major errors.[20] In this light, and considering the fact

p. 128 f.

[15] Morgan, R.K. *Environmental Impact Assessment, a Methodological Perspective*, Dordrecht, Kluwer, 1998, p. 262.

[16] Administrative Act (1986:223), sections 11–12.

[17] SEC chapter 6, section 4.

[18] SEC chaper 6, section 8.

[19] See e.g., Hardwig, J., "The Role of Trust in Knowledge", *The Journal of Philosophy*, 1991, 88, 693–708.

[20] Schroter, S., Black, N., Evans. S., Godlee, F., Osorio, L. and Smith, R., "What Errors do Peer Reviewers Detect, and Does Training Improve their Ability to Detect them?", *Journal of the Royal Society of Medicine*, 2008, 101, 507–514.

that expert members of the environmental courts often lack relevant specialization, it appears too optimistic to expect the legal process to detect all serious deficiencies that investigator self-interest might cause in an impact assessment. We therefore conclude that the open character of the environmental process does *not* make *ex ante* management of investigator self-interest redundant.

Now, rules for disqualification do not exhaust the means for *ex ante* management of investigator self-interest. According to the principle of free evaluation of evidence, Swedish courts are free to evaluate the evidence presented to them. Hence, environmental courts may take evidence of investigator self-interest into account when they evaluate the investigator's assessment. However, so far, little is known of whether and how environmental courts do this in practice. In the next section, we will therefore present a newly made empirical study of how arguments about investigator self-interest are considered and taken aboard by Swedish environmental courts.

4. Arguments about Investigator Self-Interest in the Environmental Process

The discussion so far has shown that investigator self-interest risks influencing the investigator's assessment of an activity's environmental impact. We have also seen that the legal process cannot be expected to detect all deficiencies that investigator self-interest might cause in an impact assessment. Hence, there is a risk that investigator self-interest – if ignored – leads to permit decisions on false premises. This raises the question in what ways courts take arguments about investigator self-interests into account when they evaluate the investigation presented by the applicant. To get an idea of what the answer to this question might be, we set out to investigate whether and how arguments about investigator self-interest are considered and taken aboard by Swedish environmental courts.

We used Karnov database to search for cases in which a private party (other than the applicant) argued that an investigator involved in the environmental impact assessment had a self-interest. The database allowed us to search among cases that were decided by the environmental courts[21] since 1999, provided that the Supreme Environmental Court[22] has reviewed them. Because our study is concerned with issues of fact, we included only verdicts from the environmental courts.[23] To find relevant arguments, we searched the material using a total of 12 keywords relating to investigator self-interest.[24]

A search of this kind is unable to find arguments that the parties put forward during the process but that the courts do not include in their written judgments; finding such arguments would have required a different methodological approach.[25] Nor could our search detect arguments that do not make use of any of our keywords. Consequently, another set of keywords might have detected other or more relevant arguments. However, it should be noted that one of our keywords, *opartisk* [impartial], was present in almost every relevant case that we found, (including most of the arguments identified by the other 11 keywords).[26] This suggests that the keyword *opartisk* is very effective, and that add-

[21] Mark- och miljödomstolarna.
[22] Mark- och miljööverdomstolen. The final search was made 150416.
[23] We did not find anything in the Supreme Environmental Court's reviews indicating that the environmental courts' treatments of investigator self-interest were relevant for the leaves to appeal. Therefore, we think that our way of selection is adequate and acceptable for the purpose of this study. However, and as stressed below, we recognize the need for more comprehensive studies.
[24] The following Swedish keywords were used: opartisk, partisk, egenintresse, intressekonflikt, oberoende utredning, oberoende expert, oberoende part, oberoende konsult, oberoende granskning, oberoende bedömning, oberoende mätning and oberoende miljögranskare.
[25] See section 5 below.
[26] See the next note.

ing more keywords would not have given many more relevant hits.

Our search resulted in hits in more than 200 cases. Many of the hits were unrelated to the research question. However, we found 21 cases with arguments of the kind searched for.[27] Some of these arguments are mere demands for an "impartial investigation". Many of the arguments we found, however, are more explicit. Indeed, some arguments seem meant to convince the courts about the general risk that investigator self-interest influence the assessment:

> "An impact assessment conducted by the wind power company is not objective. Results can be distorted, numbers manipulated and data omitted. We simply don't trust the information."[28]

Other arguments draw attention to specific circumstances that are claimed to undercut the investigator's credibility in the particular case. For example, several arguments point out that there is a more substantial business relation at hand between the hired investigator and the applicant, than that which normally holds between an applicant and her consultant:

> "For more than two decades now, the Mining company [the applicant] has contracted NK [the external investigator hired to make the impact assessment] to measure vibrations and make inspections. What NK does and says is to be regarded as a plea by the Mining Company."[29]

> "The reliability of HydroGIS [the external investigator hired by the applicant] can be called in question, since HydroGIS does not only represent the applicant, but was also previously engaged by the Municipality of Orust to investigate the seabeds."[30]

> "The investigations have been conducted by NCC [a company contracted to carry out the construction works if the application was granted]. They should have been made by an impartial investigator."[31]

Other arguments try to demonstrate that secondary interests have had an effect on the investigator's behavior in the case at hand. This is the case in our next example, where it is argued that the absurdity of the investigator's statement reveals that the investigator's reasoning is affected by self-interests:

> "We are deeply critical of the author of the report, and regard its statement that dumping of mud will lead to an amelioration of the site as a sign of partiality."[32]

In a typical legal doctrinal study, the question of whether and how arguments like these are taken into account by the courts is answered by turning to the courts' own explicit reasoning. We did this, and found that in *none* of the 21 cases included

[27] I.e. arguments in which a private party (not the applicant) complained that the investigator was biased. The keyword *opartisk* was present in 18 cases: M 6300-11 Nacka tingsrätt, M 1044-11 Växjö tingsrätt, M 4315-10 Växjö tingsrätt, M 2190-07 Nacka tingsrätt, M 2090-06 Umeå tingsrätt, M 2474-06 Umeå tingsrätt, M 80-03 Stockholms tingsrätt, M 208-06 Umeå tingsrätt, M 417-06 Vänersborgs tingsrätt, M 141-03 Vänersborgs tingsrätt, M 39-03 Stockholms tingsrätt, M 318-01 Vänersborgs tingsrätt, M 4-00 Vänersborgs tingsrätt, M 6-01 Växjö tingsrätt, M 306-99 Stockholms tingsrätt, M 29-99 Växjö tingsrätt, M 49-99 Växjö tingsrätt, M 515-99 Vänersborgs tingsrätt. Three additional cases were found using the keywords *oberoende mätning*, *oberoende expert* and *oberoende miljögranskare*; M 4034-13 Vänersborgs tingsrätt, M 13-99 Växjö tingsrätt, M 41-01 Vänersborgs tingsrätt.

[28] M 4034-13, Vänersborgs tingsrätt, p. 12. The arguments quoted in this section are originally in Swedish and have been translated into English by us.

[29] M 2090-06, Umeå tingsrätt, p. 56.

[30] M 417-06, Vänersborgs tingsrätt, p. 11.

[31] M 318-01, Vänersborgs tingsrätt, p. 5.

[32] M 2190-07, Nacka tingsrätt p. 135.

in our study, were these arguments explicitly addressed – or even mentioned – in the courts' opinions. However, the fact that the courts have not explicitly addressed the arguments about investigator bias does not necessarily mean that courts are uninfluenced by these arguments when they assess the EIA. Although Swedish courts are supposed to state the reasons that underlie their evidence assessments explicitly,[33] it is a notorious fact that courts' reasoning in this respect is often quite opaque. Moreover, it may be the case that arguments about investigator self-interest affect courts' reliance on experts in a subconscious manner. This suggests that it is difficult to assess how much relevance – if any – courts attach to investigator self-interest by just looking at the courts' explicit reasoning. To complement our reading of the courts' opinions, we therefore conducted a quantitative analysis of the outcomes in the 21 cases.

Quantitative analysis can be used to detect aspects of legal decision-making that cannot be found through a traditional doctrinal analysis. Doctrinal studies of legal decisions have a qualitative character and make in-depth analyses of courts' explicit reasoning.[34] A quantitative analysis, in contrast, can look for correlations among variables in a large number of legal decisions, and can detect patterns and identify factors that have influenced the legal decision-making but that have not been accounted for by the court.[35] Over time, quantitative method has gained a wider acceptance as a tool for legal research and has become recognized as a powerful but underutilized instrument for analysing the legal system and its effects.[36] Several previous studies have used such methods to analyse Swedish court decisions and court decisions on environmental matters.[37] However, we are not aware of any study using quantitative methods to investigate the legal effects of arguments about investigator self-interest in the environmental process.

The aim of the quantitative study was to measure whether there is a correlation between arguments about investigator self-interest and courts' reliance on the impact assessment. Hence, we wanted to compare courts' reliance on impact assessments in cases where these arguments occur, with their reliance on impact assessments in cases where these arguments do not occur. A fundamental problem in a quantitative analysis like this, is how to empirically measure the quantity of interest[38] – in this case the courts' reliance on the impact assessments. Initially, we consid-

[33] SOU 1938:44, Processlagberedningens förslag till rättegångsbalk, p. 378.

[34] Dobinson, I. and Johns, F., "Qualitative Legal Research" in M McConville and W.H. Chui, *Research Methods for Law*, Edinburgh, Edinburgh University Press, 2007. p. 40.

[35] For an accessible introduction to quantitative legal research, see W.H. Chui, "Quantitative Legal Research" in M McConville and W.H. Chui, *Research Methods for Law*, Edinburgh, Edinburgh University Press, 2007.

[36] Dobinson and Johns, note 34; Heise, M., "The Past, Present, and Future of Empirical Legal Scholarship: Judicial Decision Making and the New Empiricism", *University of Illinois Law Review*, 2002.4 (2002): 819–850, p. 849. Posner, R. A., "The State of Legal Scholarship Today: A Comment on Schlag", *Georgetown Law Journal* 97.3 (2008–2009): 845–856, p. 852. Since 2004 there is also a law journal focusing on empirical legal studies, *Journal of Empirical Legal Studies.* Rachlinski, J., "Evidence-Based Law", 96 *Cornell Law Review* 2010-2011, s. 901–924.

[37] See e.g. Czarnezki, J. J., "An Empirical Investigation of Judicial Decisionmaking, Statutuory Interpretation, and the Chevron Doctrine in Environmental Law", *University of Colorado Law Review* 79.3 (2008): 767–824. For some recent quantitative analyses of Swedish court decisons, see Stendahl, S.. "Sakkunniga och värdet av materiellt riktiga domar" in *Festskrift till Lotta Vahlne Westerhäll* Stockholm 2011: 337–356; Pettersson, M., Dahlman, C., Sarwar, F: "Att bedöma personer med kriminell belastning", SvJT 2016/1 (forthcoming); and Wahlberg, L., Dahlman, C., Sarwar, F., Sikström, S and Åkerman, S., "Rättslig prövning av skälen för sluten psykiatrisk tvångsvård: bör domstolarna lita på den medicinska expertisen?" Förvaltningsrättslig tidskrift 4 (2015): 629–646.

[38] Sverke, M., "Quantitative Methods: The Art of Measuring What You Want Measured" in B. Gustavsson (Ed.), *The Principles of Knowledge Creation: Research Meth-*

ered using the strength of the provisions that the courts decide on when they grant a permit (control programs, probations etc.) as a measurable reflection of courts' reliance. We hypothesized that strong provisions would be correlated with low reliance and vice versa.[39] However, we soon realised that it would be extremely difficult – and create serious risks for interpretation errors – to try to identify a group of relevantly similar cases (without arguments about investigator self interest), which could be used as control group. Therefore, we chose to measure rejection rates instead. Because the application shall be rejected if the investigation is poor, rejection rates reflect courts' reliance on the investigation. Admittedly, the reflection is far from perfect. Acceptance rate is a very rough measure: an application can be rejected for reasons other than a poor investigation, and an investigation can be poor for reasons other than investigator self-interests (reasons, however, that a quantitative study can even out). Keeping this in mind, the fact that rejection rate is an unambiguous and easily measurable quantity makes it a suitable object of comparison.

To our knowledge, there is no official statistics available on the environmental courts' rejection rate. Therefore, we also needed to conduct a study of the rejection rate in other cases from the same period that were searchable in the same database and hence could serve as our control group. All such cases from the randomly chosen years 1999, 2003, 2006 and 2013 were included in the control group. The rejection rate in the control group (i.e. cases *without* arguments about investigator self-interest) was approximately 11 %.[40] Among the 21 cases in the test group (i.e. *with* arguments about investigator self-interest) the rejection rate was approximately 17 % (4 rejections). Hence, the rejection rate in the test group is slightly higher than in the control group, but too low to demonstrate a correlation between arguments about investigator self-interest and rejection.

Of course, it should not come as a surprise if courts are unimpressed by arguments about investigator self-interest. Many of these arguments merely restate what is already known and accepted by the legal system: the applicant is responsible for the investigation. Not even the claim that a hired external investigator has an unusually strong secondary interest (such as "NK's" business relation with the applicant in the second quote above) constitutes compelling reasons to question the assessment – the law does not contain any absolute requirement to appoint external expertise to conduct the investigation in the first place. However, some of the arguments about investigator self-interest that we found stated reasons for taking this interest seriously that add to the already known fact that the applicant is responsible for the investigation. More precisely, there are arguments that draw attention to something in the investigator's behavior, which allegedly is an observable effect of the investigator's self interest. We will refer to arguments of this kind as *arguments about behavioral impact*. A typical example is the argument "We are deeply critical of the author of the report, and regard its statement that dumping of mud will lead to an amelioration of the site as a sign of partiality",[41] in the fifth quote above. Arguments about behavioral impact try to show that the conflict of interest is "active", and that the investigation therefore cannot be relied on. These arguments clearly add something to the picture

ods in the Social Sciences, Cheltenham, Edward Elgar, 2007: 46–65.

[39] Let alone that the correlation would not be perfect, since other factors too affect the strength of the provisions.

[40] More precisely, 9 out of 85 (10,58 %) applications were rejected.

[41] M 2190-07, Nacka tingsrätt, p. 135.

since they imply not only that there is a conflict of interest which *risks* influencing the investigation, but also that this conflict *has* influenced the investigation in the particular case. Consequently, these arguments could be expected to have a greater effect on courts' reliance on the investigation than other arguments about investigator self-interest.

A necessary condition for qualifying as an argument about behavioral impact on our definition is thus that the argument draws attention to aspects of the investigator's behavior, that are claimed to result from investigator self-interest. In addition to the argument mentioned above, we found the following two arguments about behavioral impact:

> "The photomontages in the impact assessment show the most favorable conditions from the developer's point of view – the turbines are barely visible. […] The pictures in the photomontage have been taken from a favorable perspective, or with a favorable view at a favorable time. Sometimes, the camera is angled to avoid a "benchmark" in the landscape. The impact assessment is a plea, in which the developer's choice of words and considerations want to present the project as favorably as possible. It is therefore not truthful for us."[42]

> "The investigator's conclusions do not accord with the local and regional limnological competence that we have been in contact with. On the contrary, the investigator appears to present arguments that make a power station appear more beneficial than a demolition. To succeed with this, the value of salmon is belittled, while perch and pike are presented as valuable for angling. We interpret this as loyalty with the investigator's client, i.e. the applicant. It does not give a truthful picture of the conditions. […] To summarize, we inform the investigator, as well as the court, that we cannot accept the contents of the environmental impact assessment and the fishing-investigation, because it includes errors, leaves out important questions, ignore visions for Oreälven's future and does not present impartial facts."[43]

After having identified the cases with arguments about behavioral impact, we complemented the quantitative study with a study of the rejection rate in this particular subgroup. Interestingly, we found that applications were rejected in two of the three cases in which arguments about behavioral impact occurred. This means that the rejection rate in this group was 67 % – hence 6 times higher than in the control group. Of course, correlation does not imply causation. Hence, the correlation between arguments and rejections does not *per se* imply that the arguments have influenced the courts' decisions – alternative explanations are conceivable. Moreover, three cases make a very small sample, and the study needs to be complemented by more comprehensive investigations to establish whether the effect is real. However, it should be noted that – despite the small number of cases – the chance is less than 4 % of getting two rejections in three cases randomly picked from a population with a rejection rate of 11 % (like the control group). More precisely, we can reject the "null hypothesis" (i.e. the hypothesis that the rejection rate in cases where arguments about behavioral impact occur too is 11 %) with a significance of 0.033638.[44]

[42] M 208-06, Umeå tingsrätt, p. 31.

[43] M 80-03, Stockholms tingsrätt, p. 10 f.

[44] See Appendix, where n is the number of cases with arguments about behavioral impact, x is the number of rejections among these cases, and 0.11 is the result of the study of the rejection rate in cases from the same period (see note 40 above). We thank Dragi Anevski at the

The result of the study of cases is summarized in the table below:

	Cases without arguments about investigator self-interest	Cases with arguments about investigator self-interest but without arguments about behavioral impact	Cases with arguments about behavioral impact
No of cases	85	18	3
No of cases in which the courts address the argument	NA	0	0
No of rejections	9	2	2
Rejection rate in %	11 %	11 %	67 %

5. Concluding Remarks

This article has discussed the risk that investigator self-interest decreases the adequacy of environmental impact assessments. We have seen that -in the cases that were included in our study- the courts did not explicitly address arguments about investigator self-interest in their judgments. This is remarkable, since investigator self-interest is known to influence judgment, and because courts and other external assessors who are invited to comment on the impact assessment cannot be expected to detect all serious deficiencies that such interests might lead to. Moreover, the fact that arguments of this kind do occur shows that people worry about the risk that investigator self-interest leads to biased investigations in environmental permit processes. The lack of trust that is manifested in these arguments could therefore by itself be a reason for the courts to address the argument, if only to explain to the public that this kind of conflict is built into – and accepted – by the legal system. Our study did not find any noteworthy difference between the rejection rate in cases with arguments about investigator self-interest and other cases. However, we found en elevated rejection rate in the small group of cases with arguments about so-called behavioral impact (arguments about investigator self-interest that draw attention to aspects of the investigator's behavior, that are claimed to result from investigator self-interest), but the courts did not address these arguments either.

More research is needed on how the risk associated with investigator self-interest is managed in the environmental process. To begin with, more studies are needed to establish whether the effect in cases with arguments about behavioral impact is real, and to clarify what, more precisely, goes on behind the courts' explicit reasoning in cases where arguments about investigator self-interest occur. Recently, some databases have begun to publish all cases decided by the environmental courts. The study presented here could hence be followed up by more comprehensive quantitative studies, which could include decisions that have not been subjected to review by the Supreme Environmental Court.[45] It would also be interesting to know to what extent, and when, arguments about investigator self-interest occur without being included in the court's written judgments. Information of this kind could probably be attained through presence at oral proceedings, or through studies

Centre for Mathematical Sciences, Lund University, for helping us with these calculations.

[45] Although conditions for granting leave to appeal do not suggest that investigator self-interest is treated differently in decisions reviewed by the Supreme Environmental Court than in others, more comprehensive studies are needed to establish whether the results from our study are in fact representative for all decisions by environmental courts.

of other kinds of written material. Furthermore, it is relevant to know what the parties, the courts, the public and the experts themselves think of the risks associated with investigator self-interest. For example: How do courts conceive of the risk that an investigator's self-interest influences the assessment, and what do courts think of their own ability to detect deficiencies that result from such interests? How do experts in cases like these conceive of the risk that secondary interests might influence their own judgment? To what extent is the public concerned about these risks, and is the public's confidence in the environmental process affected by them?

Underlying the discussion in this article lays a more fundamental question jostling for attention: Perhaps it is not such a good idea to entrust the applicant with the investigation? Not only does the fact that the applicant is responsible for the investigation make rules for disqualification inapplicable. In addition, the fact that the applicant is responsible for the investigation implies that the system is obliged to accept the typical risks associated with investigator self-interest.

At the outset of this article, we said that systems like the Swedish therefore seem to assume either that experts' secondary interests do not affect the experts' judgments, or that secondary interests and their effects can be satisfactorily handled within the process. The discussion in this article suggests that both these assumptions are mistaken and that payer-provider relations as well as other secondary interests can decrease the adequacy of the consultant's assessment in ways that cannot be detected during the process. A system with court-appointed experts could potentially decrease the problem with investigator self-interest of either kind. It goes beyond the scope of this article to discuss the feasibility of such a system, but one very general remark can be made here. As mentioned, the requirement that the applicant produces an impact assessment specifies the code's generally formulated demand that a person who pursues an activity must demonstrate that he possesses sufficient knowledge to protect the environment from detrimental impact. Hence, it is the developer's responsibility to see to that an impact assessment is produced, and it is the developer's responsibility to pay for the assessment. These starting-points should not be compromised. However, there is nothing in these premises that implies that the applicant must appoint the consultant: the distribution of responsibility would be maintained if the court appointed and paid the consultant and was compensated for this by the applicant. This alternative system would tend to align the consultant's interests with those of the courts, and allow disqualification of biased experts, when conflicts of interest nevertheless occur. In addition to promoting the adequacy of the impact assessments, a system like this would probably also increase the public's confidence in the process. Clearly, the management of investigator self-interest in the Swedish environmental process deserves more attention in policy-making and scholarly debate than it has hitherto been given.

Appendix to the article "Investigator Self-Interest in the Environmental Process": An exact test for testing the proportion of rejection

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1 Model and test

Let p be the probability of rejection by a courtroom (i.e. the proportion of cases rejected). The model assumptions are that each case is rejected or not with the same probability p, independent of the outcome in other cases. Let n be the number of cases that are presented in the courtroom. Let X be the number of cases among those n that are in fact rejected. Then X is a random variable which is Binomially distributed with parameter n and p. That means that the probability that exactly k of the cases are rejected can be calculated with the formula

$$P(X = k) = \binom{n}{k} p^k (1-p)^{n-k},$$

for $k = 0, 1, \ldots, n$.

Now assume that $n = 3$ and we have observed $x = 2$. The courtroom claims that there is nothing particular about the outcome $x = 2$ and that this is consistent with the normal rejection rate of no more than $p = 0.11$. We want to test the hypothesis

$$\begin{aligned} H_0 : &\quad p \leq 0.11 \text{ The rejection rate is the normal} \\ H_1 : &\quad p > 0.11 \text{ The rejection rate is higher than the normal} \end{aligned}$$

We make a test by calculating the error probability of rejecting the null hypothesis H_0 if the null hypothesis is true, on the basis of the outcome. That means that we calculate the probability of claiming that "the rate is higher than normal" when in fact "the rate is only normal".

This is done as follows: If H_0 is true $p = 0.11$. Then the probability of $X \geq 2$ is

$$\begin{aligned} P(X = 2) + P(X = 3) &= \binom{3}{2} 0.11^2 (1 - 0.11)^{3-2} + \binom{3}{3} 0.11^k (1 - 0.11)^{3-3} \\ &= 0.033638. \end{aligned}$$

This is a small error probability. Therefore we can reject the null hypothesis of "a normal rejection rate" with a significance of 0.033638.

The Helsinki Water Convention: Implementation and Compliance in Asia

*Simon Marsden**

Abstract

In 2013 the Convention on the Protection and Use of Transboundary Watercourses and Lakes ('the Helsinki Convention') became a global treaty, and is now open to all states, including in Asia. This article reviews the application of the Helsinki Convention in Asia, with a particular focus on implementation and compliance. This focus follows an outline of the main institutions and procedural provisions, and experience derived from the first and second assessments of transboundary waters. The development of a regime within the Helsinki Convention is needed because of the absence of formal reporting and compliance mechanisms, which are considered to be essential to modern multilateral environmental agreements.

I. Introduction

There are 41 Parties to the United Nations Economic Commission for Europe (UNECE) Convention on the Protection and Use of Transboundary Watercourses and Lakes ('the Helsinki Convention') which came into force on 6 October 1996 after adoption in Helsinki on 17 March 1992.[1] Since 2013 it has been a global treaty,[2] and in focusing on transboundary water cooperation, is applicable to Asian as well as other states.[3] This is significant for the following reasons: first, Asia contains the largest number of transboundary watercourses and lakes; second, there is a need to ensure environmental protection, and equitable and reasonable use of them; third, the potential for conflict based on state sovereignty[4] is high, and cooperation is therefore essential; fourth, the Helsinki Convention is the only international water treaty with detailed substantive environmental provisions, and with a primary focus on environmental protection[5]; and fifth, Asia has grow-

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[1] Convention on the Protection and Use of Transboundary Watercourses and Lakes (Helsinki, 17 March 1992), 31 ILM (1992) 1312, in force 6 October 1996. See Attila Tanzi, 'Regional Integration and the Protection of the Environment: The UNECE Process on Water Law as a Model for the Global Dimension', in Tullio Scovazzi (ed) *The Protection of the Environment in a Context of Regional Economic Integration* (Università degli studi di Milano-Bicocca, 2001).

[2] United Nations Economic Commission for Europe, Convention on the Protection and Use of Transboundary Watercourses and Lakes, *The Global Opening of the 1992 UNECE Water Convention* (UNECE, 2013).

[3] Ruby Moynihan and Bjørn-Oliver Magsig, 'The Rising Role of Regional Approaches in International Water Law: Lessons from the UNECE Water Regime and Himalayan Asia for Strengthening Transboundary Water Cooperation' (2014) 23 *Review of European, Comparative and International Environmental Law* 43.

[4] See Julie Gjørtz Howden, 'Aspects of Sovereignty and the Evolving Regimes of Transboundary Water Management' (2015) 1 *Nordic Environmental Law Journal* 47, who, while making no mention of the Helsinki Water Convention, comments: '…conflict and competition over quantity and quality of water use will often occur between domestic groups or between transnational groups…'

[5] For a comparison of the regimes with reference to China, see Patricia Wouters and Huiping Chen, 'China's 'Soft Path' to Transboundary Water Cooperation Examined in the Light of Two UN Global Water Conventions – Exploring the 'Chinese Way'' (2014) 22 *Water Law* 229.

ing experience with both this treaty and other agreements for transboundary cooperation,[6] with potential for increased membership. Scholarly interest to date has, despite this, focused on the 1997 United Nations Convention on International Watercourses ('the New York Convention'), which has recently entered into force and has 36 Parties.[7] This article, with a focus on the Helsinki Convention, is a modest contribution to address the imbalance.

The current Asian Parties to the Helsinki Convention are Azerbaijan, Kazakhstan, Russia, Turkmenistan and Uzbekistan. It is expected that other states will also join, including Georgia.[8] Iran has furthermore expressed an interest,[9] as has Iraq,[10] and most recently, Lebanon,[11] Jordan,[12] and Mongolia.[13] There is hence a likely future overlap between the Parties to both the Helsinki and New York Conventions.[14] As the potential for conflict, environmental harm and industrial accidents involving watercourses is high, the Helsinki Convention has the added advantage of inter-related linkages with the other UNECE treaties that address some of these issues.[15] Asia has growing experience with both this treaty and these other agreements for transboundary cooperation, and there is clear potential for membership to increase further to avoid and resolve disagreements, pollution and accidents.[16]

The objective of this article is to review the application of the Helsinki Convention in Asia, with a particular focus on implementation and compliance. This focus is appropriate because implementation and compliance is acknowledged to be the weakest link in international en-

[6] See for example Agreement on Cooperation for the Sustainable Development of the Mekong River Basin (Chiang Rai, 5 April 1995), unreported, in force 5 April 1995.

[7] Convention on the Law of Non-Navigable Uses of International Watercourses (New York, 21 May 1997, by UNGA Res. 51/229), 36 ILM (1997) 700, in force 17 August 2014. There are eight Asian Parties to the New York Convention: Jordan, Lebanon, Palestine, Syria, Iraq, Qatar, Uzbekistan and Vietnam. The provisions of the Helsinki Convention are more specific, with the exception of the principle of equitable and reasonable utilization in the New York Convention. For differences between these regimes, see 'The Global Opening', above n 2, 9–10; UNECE, 'How the Two Global Water Conventions Support Transboundary Water Cooperation' – http://programme.worldwaterweek.org/event/how-the-two-3637; and United Nations Economic Commission for Europe / Attila Tanzi, *The Economic Commission for Europe Water Convention and the United Nations Watercourses Convention: An analysis of their harmonized contribution to international water law* (United Nations, 2015).

[8] See United Nations Economic Commission for Europe / OSCE Environment and Security Initiative, *Draft Report of the National Working Group Meeting for Identification of the Legal and Institutional Needs for Accession and Implementation of the UNECE Water Convention by Georgia*, Tbilisi, 26 June 2009.

[9] UNECE, 'Iran discusses the benefits of the UNECE Water Convention', press release, 23 January 2013.

[10] UNECE, 'Iraq and Tunisia express interest in joining UNECE Water Convention', press release, 16 October 2013.

[11] UNECE, 'Lebanon to consider joining UNECE Water Convention following Beirut workshop', press release, 10 February 2015.

[12] UNECE, 'Jordan initiates study of the UNECE Water Convention', press release, 17 March 2015.

[13] UNECE, 'New countries from outside the UNECE region express interest in the Water Convention', tenth meeting of the Working Group on Integrated Water Resources Management, Geneva, 24 and 25 June 2015.

[14] Uzbekistan is however currently the only Party to both, with the Asian Parties to the Helsinki Convention primarily in central Asia and those to the New York Convention in western Asia.

[15] Simon Marsden and Elizabeth Brandon, *Transboundary Environmental Governance in Asia: Practice and Prospects with the UNECE Environmental Agreements* (Edward Elgar, 2015).

[16] In relation to China see for example, Patricia Wouters, 'The Yin and Yang of International Water Law: China's Transboundary Water Practice and the Changing Contours of State Sovereignty' (2014) 23 *Review of European, Comparative and International Environmental Law* 67.

vironmental law,[17] and this is true also of Asia.[18] This article will firstly outline the main institutions and explain the procedural provisions of the Helsinki Convention;[19] it will secondly review current implementation in Asia based on information received as part of the assessment of transboundary watercourses, and growing capacity building efforts; it will thirdly, and most significantly, consider the work of the Legal Board in the establishment of the Implementation Committee to deal with compliance and compliance issues; finally, some conclusions follow at the end.

II. Institutions and procedures

The main institutions are the Meeting of the Parties (MOP), Bureau, Legal Board and Implementation Committee, the latter which as a non-compliance procedure (NCP) is intended to avoid rather than settle disputes.[20] The MOP is the main decision making body comprising all Parties, the Bureau develops the workplan, and the Legal Board has focused on the development of authoritative guidance[21] together with the formal compliance procedure administered by the Implementation Committee. There are also working groups on Integrated Water Resources Management and Monitoring and Assessment, task forces on Water and Climate and Water-Food-Energy-Ecosystems Nexus, and a Joint ad-hoc Expert Group on Water and Industrial Accidents.

While the Helsinki Convention establishes a general institutional structure to assist with implementation, compliance and further development, realisation of these matters depends on bilateral and multilateral agreements being concluded between riparian states that share the resource and the establishment of joint bodies to administer them.[22] An absence of specific reporting and compliance mechanisms in the treaty has, as will be seen below, led to the work of the Legal Board, Implementation Committee and others, in developing such mechanisms. Part I duties of the Helsinki Convention are the more general and apply to all Parties; Part II duties are more specific and must be implemented via further agreements between the Riparian Parties; Part III provisions also apply to all Parties.

In relation to Part I, Article 2 contains obligations to 'take all appropriate measures to prevent,

[17] See Carl Bruch and Elizabeth Mrema, *Manual on Compliance with and Enforcement of Multilateral Environmental Agreements* (UNEP, 2006).

[18] Note for example the role of the Association of South East Asian Nations (ASEAN), and the inability to resolve the haze pollution issue despite an international agreement on the matter; see Koh, KL and Karim, MS, 'South East Asian Environmental Legal Governance' in Alam, S, Bhuigan, MJH, Choudhury and Techera, EJ, *Routledge Handbook of International Environmental Law* (Routledge, 2013) 463.

[19] The Convention also has two protocols, the Protocol on Water and Health, and the Protocol on Civil Liability, neither of which is discussed here due to space constraints. The latter is shared with the UNECE Convention on the Transboundary Effects of Industrial Accidents (Helsinki, 17 March 1992) UNTS 2105 (1992) 457, in force 19 April 2000.

[20] See Tullio Treves, Attila Tanzi, Cesare Pitea, Chiara Ragni, and Laura Pineschi (eds) *Non Compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements* (TMC Asser Press, 2009); Karen Scott, 'Non-compliance Procedures and the Resolution of Disputes under International Environmental Agreements', in Duncan French and Nigel White (eds) *International Law and Dispute Settlement: New Problems and Techniques* (Hart Publishing, 2010) 225.

[21] United Nations Economic Commission for Europe, Convention on the Protection and Use of Transboundary Watercourses and Lakes, *Guide to Implementing the Water Convention* (United Nations, 2013) (*Implementation Guide*).

[22] There are some similarities with other joint bodies operating in other regions of the Asia Pacific. See for example the role of the International Joint Commission in resolving issues of transboundary water and air pollution in North America; Jason Buhi and Lin Feng, 'Honoring the International Joint Commision's Role in the United States-Canada Transboundary Air Pollution Control Regime: A Century of Experience to Guide the Future' (2009) 11 *Vermont Journal of Environmental Law* 107.

control and reduce any transboundary impact',[23] including pollution 'with the aim of ecologically sound and rational water management, conservation of water resources and environmental protection.' Article 4 requires the establishment of monitoring programmes for transboundary waters, primarily to collect baseline data rather than to evaluate the outcomes of approved development proposals. Article 5 obliges cooperation in research efforts by the Parties to develop effective techniques to prevent, control and reduce transboundary impact. Article 6 provides for the 'widest exchange of information, as early as possible' in relation to issues of concern.

In relation to Part II, Article 9, supplementing Article 2(6) on cooperation in general, requires the preparation of bilateral and multilateral agreements between them.[24] Agreements are intended to include matters covered by the Helsinki Convention and other issues the Riparian Parties wish to include for the catchment area they specify within. Article 9(2) for example provides for the establishment of joint bodies between the Riparian Parties under the Helsinki Convention, one of the purposes of which (j) is 'to participate in the implementation of environmental impact assessments relating to transboundary waters, in accordance with appropriate international regulations'.[25] Because it is mandatory for such agreements to be prepared, this distinguishes 'the Water Convention from other international instruments in the field and is considered to be the main added value of the Convention.'[26]

Other significant provisions in Part II include the Article 11 obligation which enables the collection of baseline data to evaluate practice, including 'the effectiveness of measures taken for the prevention, control and reduction of transboundary impact' (Article 11(3)). The Working Group on Monitoring and Assessment has an important role in preparing periodic assessments of the status of transboundary waters, promoting the exchange of data on environmental conditions, encouraging Parties to inform each other about critical situations with transboundary impact and verifying compliance with water-quality objectives and permit conditions. These assessments, while a means of considering implementation of Parties obligations under the Helsinki Convention, are not however the same as more formal reporting obligations required under other environmental treaties. They are a means of collecting baseline data rather than a way of demonstrating clear adherence to treaty obligations.

III. Implementation in Asia

Russia, Asia's largest state, is an example of a Riparian Party to have implemented the obligation to enter into agreements with under states under the Convention. Russia shares transboundary waters with both Asian Parties (Azerbaijan and Kazakhstan) and Asian non-Parties

[23] This is the codification of the 'no harm' customary international law rule and is a due diligence obligation focused on what is appropriate and proportional to the degree of risk and harm; see *Implementation Guide*, above n 21, 19–21. This was a key part of the decision by the ICJ in *Pulp Mills;* see Timo Koivurova, 'Transboundary Environmental Impact Assessment in International Law', in Simon Marsden and Timo Koivurova (eds) *Transboundary Environmental Impact Assessment in the European Union: The Espoo Convention and its Kiev Protocol on Strategic Environmental Assessment* (Routledge, 2011) 15, 23–25.

[24] These can be located in the document: Economic Commission for Europe Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *Second Assessment of Transboundary Rivers, Lakes and Groundwaters* (United Nations, 2011) (*Second Assessment*).

[25] This includes the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 25 February 1991), 30 ILM (1991) 802, in force 27 June 1997.

[26] Other requirements to establish joint bodies and for institutional cooperation are also emphasized. See *Implementation Guide*, above n 21, 63–64.

(China, North Korea, Georgia and Mongolia). In the 1990s it entered into bilateral agreements with Kazakhstan (1992, replaced by an agreement in 2010), Mongolia (1995), China (2008) and Azerbaijan (2010). There is however no bilateral agreement between Russia and Georgia.

As three of the five current Parties are in central Asia (Kazakhstan, Turkmenistan and Uzbekistan) and another is in Caucasia (Azerbaijan) capacity building efforts to improve implementation of the Convention and compliance with it in, and related to, these sub-regions are particularly significant.[27] The UNECE notes that Phase II of the UNECE Programme, 'Regional Dialogue and Cooperation on Water Resources Management in Central Asia', aims to improve the capacity of the International Fund for Saving the Aral Sea (IFAS), including its organizations and institutions and to strengthen their legal basis.[28]

IFAS was established by all five central Asian States to implement in a coordinated way the practical measures and programmes to overcome the impacts of the Aral crises and to improve environmental and socioeconomic conditions in the Aral Sea Basin. The Interstate Commission on Sustainable Development is a body of the IFAS which is in charge of coordinating regional cooperation on environment and sustainable development in central Asia. The UNECE also notes that the project is a component of the 'Transboundary Water Management in Central Asia' programme, which is carried out on behalf of the German Federal Foreign Office.[29] The protection of the Aral Sea is a priority issue for the UNECE, as noted at a recent conference.[30]

Vulnerable ecosystems are also a key area of Afghan-Tajik cooperation on environment and hydrology in the upper Amu Darya Basin, which the Convention supports, where steps have been taken to establish data exchange and assess the status of ecosystems.[31] In the Chu and Talas River Basins, a project supported by the Global Environmental Facility and UNECE will expand the cooperation of Kazakhstan and Kyrgyzstan to water quality and biodiversity.[32] In another example, this time in Caucasia, deterioration of water quality and degradation of ecosystems has brought Georgia and Azerbaijan together to develop a bilateral agreement on the shared water resources of the Kura River Basin as part of a joint UNECE-Organization for Security and Cooperation in Europe project under the Environment and Security Initiative.[33]

In eastern Asia as part of the preliminary assessment exercise,[34] formal evaluations were completed by the Working Group on Monitor-

[27] See Chapter 8, 'Practice and Capacity Building in Central Asia' in Marsden and Brandon, above n 15.

[28] UNECE, 'UNECE cooperates with Interstate Commission on Sustainable Development to strengthen implementation of Rio+20 outcomes in Central Asia,' press release, 31 May 2013.

[29] Ibid.

[30] UNECE, 'UNECE Executive Secretary participates in conference on sustainable development in the Aral Sea Basin' press release, 29 October 2014.

[31] UNECE, 'UNECE supports Afghan-Tajik cooperation on environment and hydrology in the Amu Darya Basin,' press release, 28 March 2013.

[32] See UNECE, 'UNECE fosters cooperation between Kazakhstan and Kyrgyzstan to address water issues', press release, 2 June 2015; and Bo Libert, 'The UNECE Water Convention and the Development of Transboundary Cooperation in the Chu-Talas, Kura, Drin and Dniester River Basins' (2015) 40 *Water International* 168.

[33] UNECE, 'Water and Biodiversity: UNECE Water Convention puts ecosystems at the heart of water management', press release, 22 May 2013.

[34] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Working Group on Monitoring and Assessment, Eight meeting, Helsinki, 25–27 June 2007, Preliminary assessment of transboundary rivers discharging to Pacific Ocean and their major transboundary tributaries. ECE/MP.WAT/WG.2/2007/14. (*Preliminary Assessment*).

ing and Assessment for the Amur River Basin,[35] which is shared between China, Mongolia and Russia; and the Tumen River Basin, shared between China, North Korea and Russia.[36] In relation to the latter, regulation of which overlaps to an extent with the Tumen Agreements (which include South Korea as a Party also),[37] the assessment comments: 'The drawing up of a multilateral agreement between China, the Democratic People's Republic of Korea and the Russian Federation is of utmost importance. It should provide for joint measures on monitoring and assessment … in order to decrease the overall human impact on the waters in the Tumen River basin.'[38]

The Second Assessment of Transboundary Rivers, Lakes and Groundwaters, was completed in 2011.[39] Contributions were received from numerous states, not only Parties to the Convention, but also UNECE members who are not Parties, and experts from countries outside the UNECE region who share waters with UNECE states: Afghanistan, China, Iran and Mongolia. Part III contains the major findings, with the Caucasus the subject of chapter 4 and central Asia chapter 5; drainage basins of the Aral Sea and other transboundary waters in central Asia are considered in part IV, chapter 3. In part IV, the drainage basins of the White, Barents and Kara Seas are however examined in detail in chapter 1; the Sea of Othotsk and the Sea of Japan in chapter 2;[40] and the Caspian Sea in chapter 4.[41]

As an example of some of the findings, part of the relevance of part IV chapter 1 is the Yenisey River, which flows entirely within Russian territory, although the upper part of the basin is transboundary, as it includes parts of the Selenga River, shared with Mongolia.[42] This also consists of the Selenga River, Lake Baikal and the Angara River, where heavy metals and petroleum products have impacted water quality, which in the Selenga is concluded to be 'heavily polluted'.[43]

[35] See Ariel Dinar, Shlomi Dinar, Stephen McCaffrey, and Daene McKinney, 'Case Study 4: The Aral Sea Basin' in *Understanding Transboundary Water Conflict, Negotiation and Cooperation* (World Scientific, 2013, second edition) 339–362.

[36] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Working Group on Integrated Water Resources Management, Sixth meeting Geneva, 4–5 May 2011; Working Group on Monitoring and Assessment, Twelfth meeting, Geneva, 2–4 May 2011.

[37] 1995 Agreement on the Establishment of the Tumen River Area Development Coordination Committee, signed in New York, 6 December 1995, unreported; 1995 Agreement on the Establishment of the Consultative Commission for the Development of the Tumen River Economic Development Area and Northeast Asia, signed in New York, 6 December 1995, unreported. See Simon Marsden, 'Developing Approaches to Transboundary Environmental Impact Assessment in China: Cooperation through the Greater Tumen Initiative and in the Pearl River Delta Region' (2010) 9 *Chinese Journal of International Law* 393.

[38] *Preliminary Assessment*, above n 34, para 25, 7–8.

[39] *Second Assessment*, above n 24.

[40] This includes the shared basins of the Amur River (shared by China, Russia, and in small part, Mongolia); the Argun/Hailaer River (shared by the same states); the Ussuri/Wusuli River (shared by China and Russia); the Khanka/Xingkai Lake (China and Russia); the Sujfun/Razdolnaya River (China and Russia); the Tumen/Tumannaya River (China, Russia, North Korea). *Second Assessment*, above n 24, 99–106.

[41] For a summary of the numerous transboundary watercourses and international lakes in this sub-region which cross nine riparian states, see *Second Assessment*, above n 24, 131.

[42] Other shared basins include the Ob River (shared by China, Kazakhstan, Mongolia and Russia); the Irtysh/Ertis (shared by Russia, Kazakhstan, and, with a very small part shared by China and Mongolia); the Tobol and Ishim/Esil sub-basins (shared between Russia and Kazakhstan). See *Second Assessment*, above n 24, 91–98.

[43] *Second Assessment*, above n 24, 90. While it also concludes that Lake Baikal serves as a natural barrier for the transboundary flow of pollutants, preventing their impact on the downstream part of the watercourse, it is however significantly impacted by mining activity and as such is being considered for inscription on the List of World Heritage in Danger under the World Heritage Convention. See: *Convention Concerning the Protection of the World Cultural and Natural Heritage*, opened for

The Russian-Mongolian Joint Commission on the Protection and Use of Transboundary Waters is however in existence, which operates on the basis of the intergovernmental 1995 Agreement on the protection and use of transboundary waters, meets regularly.[44] To address current pressures, there are 19 surface water monitoring stations observing daily in the Selenga Basin in Mongolia. In the framework of the 'Strengthening Integrated Water Resources Management in Mongolia' project, 17 groundwater-monitoring wells are proposed to be established within the Selenga River Basin area.[45]

IV. Establishment of the Implementation Committee and compliance in Asia

A NCP was recently established, known as the Implementation Committee. While not required under the original Convention text, it was initiated by the Legal Board at its seventh meeting based on experiences with the other UNECE treaties.[46] The Chair of the Legal Board recommended the body be of an 'advisory, consultative and facilitative nature and as such would serve as a dispute prevention mechanism'.[47] Participants from central Asia added that reporting could also serve as a benchmark for implementation.[48] It was accepted that non-state actors, especially the public, should have a role in bringing issues to the Implementation Committee.[49]

Together with Meetings of the Parties and other arrangements, NCPs are an example of an 'autonomous institutional arrangement'; they are however, no longer a 'little-noticed phenomenon'.[50] There is also an increasing trend towards the judicialisation of such procedures,[51] with a developing quasi-jurisprudence sometimes referred to as 'case law'.[52] This is especially so in connection with public communications heard by the Aarhus Convention[53] Compliance Committee (ACCC), which frequently considers the link between environmental and human rights. The ACCC is the most advanced of these bodies in providing public access, with numerous communications to date from individuals and NGOs. It is therefore perhaps not surprisingly heralded as a precedent for other comparable bodies, with recent consideration given to transplanting some aspects of the ACCC into a more complex global context. [54]

At the eighth meeting of the Legal Board, discussions of the drafting group (established

signature 16 November 1972, 11 ILM 1358 (entered into force 17 December 1975).

[44] The provisions of the Agreement include an exchange of information on transboundary waters.

[45] *Second Assessment*, above n 24, 90, and note the other governance mechanisms in place.

[46] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Legal Board, Seventh meeting Geneva, 15 and 16 April 2010; Report of the Legal Board on its Seventh Meeting, ECE/MP.WA/AC.4/2010/2, para II, 'Mechanism to facilitate and support implementation and compliance'.

[47] Legal Board, above n 46, para II.9.

[48] Legal Board, above n 46, para II.15.

[49] Legal Board, above n 46, para II.25.

[50] Robin Churchill and Geir Ulfstein, 'Autonomous Institutional Arrangements in Multilateral Environmental Agreements: a Little-Noticed Phenomenon in International Law' (2000) 94 *American Journal of International Law* 623.

[51] Neil Craik and Timo Koivurova, 'Subsidiary Decision Making under the Espoo Convention: Legal Status and Legitimacy' (2011) 20 *Review of European Community and International Environmental Law* 258.

[52] A Andrusevych, T Alge and C Konrad (eds) *Case Law of the Aarhus Convention Compliance Committee (2004–2011)*, 2nd editon (RACSE, 2011).

[53] Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus, 25 June 1998) 2161 UNTS 447, in force on 30 October 2001.

[54] Antonio Cardesa-Salzmann, 'Constitutionalising Secondary Rules in Global Environmental Regimes: Non-Compliance Procedures and the Enforcement of Multilateral Environmental Agreements' (2012) 24 *Journal of Environmental Law* 103.

to prepare the compliance procedure) were considered.[55] A distinctive feature was an advisory procedure, emphasising assistance where there was a lack of deliberate non-compliance. A Party or Parties could therefore request advice from the Committee about efforts to attempt to secure compliance.[56] It was not however proposed that the public directly make submissions, unlike under the ACCC. In relation to follow-up measures these were confirmed to be facilitative rather than punitative, and ranging from assistance to requests for action plans and progress reports. More serious measures could only follow MOP decisions, such as statements of concern, declarations of non-compliance, cautions or suspension of rights and privileges.[57]

The ninth meeting of the Legal Board endorsed most of the previous recommendations, although referrals by the secretariat were considered unnecessary.[58] The need for a formal reporting mechanism was also discussed and the need to separate this from the compliance procedure.[59] Such reporting mechanisms typically are based on the completion of questionnaires by the Parties which enable follow up by treaty bodies as appropriate; other information means, such as involvement of the public, often supplement such procedures. The tenth meeting approved the text of such a procedure and determined that the MOP would examine it further in November 2012,[60] when a draft decision was prepared for adoption.[61] This was duly done, and the Implementation Committee commenced its work soon thereafter.[62]

The Implementation Committee has since held five meetings, with members serving in a personal capacity rather than as state representatives. The first was in June 2013,[63] and the agenda included discussion of lessons learnt from other implementation and compliance mechanisms. In addition to procedures under various multilateral agreements these also included those es-

[55] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Legal Board, Eighth meeting Geneva, 24 and 25 February 2011. ECE/MP.WAT/AC.4/2011/2, para II.

[56] Legal Board, above n 55, para II.13.

[57] Legal Board, above n 55, para II.17. Note that performance reviews of individual states are another means by which the UNECE evaluates treaty compliance, or according to the UNECE is 'an assessment of the progress a country has made in reconciling its environmental and economic targets and in meeting its international environmental commitments'; most of the central Asian and Caucasian states have been through two cycles of performance reviews; see http://www.unece.org/env/epr.html

[58] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Legal Board, Ninth meeting Geneva, 1 and 2 September 2011. ECE/MP.WAT/AC.4/2011/5, para II.10.

[59] Legal Board, above n 58, para II.14.

[60] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Legal Board, Tenth meeting Geneva, 31 January and 1 February 2012. ECE/MP.WAT/AC.4/2012/2, para II.9. Annex I contains the text of the 'Mechanism to support implementation and compliance', and Annex II the 'Core rules of procedure of the Implementation Committee'.

[61] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Sixth session, Rome, 28–30 November 2012, Item 4(a) of the provisional agenda, Draft decision on support to implementation and compliance. ECE/MP.WAT/2012/L.4.

[62] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Sixth session, Rome, 28–30 November 2012, Report of the Meeting of the Parties on its sixth session. ECE/MP.WAT/37, Ad.2, 23 July 2013.

[63] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Implementation Committee, First meeting Geneva 5 June 2013. ECE/MP.WAT/IC/2013/2, para II.7.

tablished under the Aarhus and Espoo Conventions (and SEA Protocol[64]), and the Convention Water and Health Protocol.[65] The relationship between compliance procedures and domestic remedies, periodic reporting and compliance procedures, the non-adversarial nature of the procedures, and the role of the secretariat, together with other issues, received particular attention.[66]

The first meeting discussed at length the need for a formal reporting mechanism.[67] The work programme adopted at the 2012 MOP included 'Consideration of the need for reporting under the Convention', to be led by the Convention Bureau as supported by the Secretariat. The Working Group on Integrated Water Resources Management in consultation with the Committee was tasked to analyse the need for a reporting mechanism.[68] Concentrating on policy issues rather than data, such a reporting mechanism would therefore distinguish itself from related reporting procedures,[69] which had caused concern among certain Parties, and threatened the prospect of the establishment for other Parties, in particular those outside the European Union, such as in Asia.

The second meeting of the Committee in December 2013 began by examining issues raised by an environmental NGO in relation to Kazakhstan, where concern was expressed regarding difficulties in transboundary water cooperation in the Irtysh River Basin, shared by Russia, Kazakhstan, China and Mongolia, and the situation in the Ili River Basin, shared by China and Kazakhstan. Among other matters, it also exchanged views on the possibility of detailing general criteria or factors to guide the determination of when a Committee initiative might be started, and how best to publicise the availability of the new compliance procedure.[70]

The third meeting of the Committee took place in May 2014, and discussed further the matter in relation to Kazakhstan, as well as discussion about reporting requirements under the Helsinki Convention, and raising awareness of the NCP mechanism to facilitate and support implementation and compliance.[71] In relation to reporting, the Committee noted that it 'should be on the implementation of Parties' cooperation obligations', it 'should be thematic (issue-based)', and that it 'should take into account other international or regional reporting obligations with a view to avoiding duplication of effort'.[72]

The fourth meeting was held in December 2014 and the Committee noted that Kazakhstan and Russia had yet to respond substantively to the questions posed by it in connection with the

[64] Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (Kiev, 21 May 2003), unreported, in force 11 July 2010.

[65] Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and Lakes (London, 17 June 1999), UNTS 2331, 202, in force 4 August 2005.

[66] Implementation Committee, above n 63, para II.8

[67] Implementation Committee, above n 63, para II.13

[68] Implementation Committee, above n 63, para II.13.

[69] Implementation Committee, above n 63, para II.15.

[70] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Implementation Committee, Second meeting Geneva 12 December 2013. ECE/MP.WAT/IC/2013/4, 13 January 2014, paras II and IV.

[71] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Implementation Committee, Third meeting Bologna 15 May 2014. ECE/MP.WAT/IC/2014/2, 18 June 2014, paras III, IV and V.

[72] Implementation Committee, above n 71, para IV.12–14. See Economic Commission for Europe / Environment, Informal Network of the Chairs of compliance / implementation bodies under the Multilateral Environmental Agreements, Third Meeting, Geneva, 29 June 2015, 'Note prepared by the Chair of the Aarhus Convention Compliance Committee with the assistance of the secretariat'.

implementation of the principles of reasonable and equitable use and the 'no harm' rule. While it was grateful for the general information provided by them, it observed that 'cooperation per se was not the overall objective of the Convention.'[73] There was therefore a need for them to provide more comprehensive information on the Irtysh River Basin in relation to the development activity in the upstream part of the basin.

The fifth meeting was held in May 2015, and further discussed the situation in the Irtysh River Basin, deciding to gather information from other sources than the Parties.[74] The Committee also decided to approach Kazakhstan and Russia again for the information requested in earlier correspondence, and to explain to them that a Committee initiative may well be considered necessary to advance the process.[75] Among the usual business of considering any requests of advice, submissions, Committee initiatives and information gathering, Committee members were invited to share information about future possibilities to promote the mechanism to facilitate and support implementation and compliance, including an international water law event for the benefit of central Asian states in May 2016.[76] Two members of the Committee also reported on results of the meetings held by the Core Group on Reporting held between December 2014 and March 2015, which was mandated to prepare a proposal for a reporting mechanism under the Convention; this was supported by the Committee.[77]

It should be emphasised that the lack of an explicit legal basis for the NCP in the Convention text is not uncommon, and is consistent with the dispute avoidance objective of NCPs generally; a legal basis for such a provision would be difficult to support for many states. As suggested, the strongest NCP found in any of the UNECE treaties is the ACCC. In accordance with Article 15 of the Aarhus Convention,[78] the MOP is therefore required to establish 'optional arrangements of a non-confrontational, non-judicial and consultative nature for reviewing compliance with the provisions of the Convention'. At its first session in October 2002, the Aarhus MOP adopted decision I/7 on review of compliance,[79] and elected the first Committee which has since been highly effective in its work.[80] Whether the Helsinki Convention Committee is able to operate as effectively, given the high political sensitivity surrounding transboundary water issues, remains to be seen. What is important is that any NCP is supported by a formal reporting procedure; while reporting was not originally foreseen in the Convention's text, current discussion on the possible introduction of a reporting mechanism shows that the Convention is evolving to meet emerging needs.

[73] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Implementation Committee, Fourth meeting London 4 December 2014. ECE/MP.WAT/IC/2014/4, 20 January 2015, para III, 7.

[74] United Nations Economic and Social Council, Economic Commission for Europe, Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Implementation Committee, Fifth meeting Vienna, 5–6 May 2015. ECE/MP.WAT/IC/2015/2, 27 May 2015, Report of the Implementation Committee on its fifth meeting, para III.6.

[75] Implementation Committee, above n 74, paras III. 7 and 8.

[76] Implementation Committee, above n 74, para IV.10.

[77] Implementation Committee, above n 74, paras IV.11 and 12.

[78] See Aarhus Convention, above n 53. This is largely because of the possibility of public submissions. Note the Compliance Committee under the Protocol on Water and Health. The Compliance Committee noted at its meeting held in Geneva on 25 November 2014, that the first communication it had received was from a member of the public. See Implementation Committee, above n 73, para V.13.

[79] http://www.unece.org/fileadmin/DAM/env/pp/documents/mop1/ece.mp.pp.2.add.8.e.pdf

[80] See Cardesa-Salzmann, above n 54.

V. Conclusions

The Helsinki Convention is well established in the UNECE region, and is now playing a major role in bringing states in the Caucasus, central, northern and eastern Asia together to resolve potential disagreements over water resources; other Asian states have also expressed an interest in joining. The global opening of the Convention has enhanced interest generally, and will assist further in capacity building efforts to develop implementation and compliance efforts in Asia; these are likely to extend to southern and western Asia as experience grows. The provisions of the Convention are advanced in providing both a framework and requiring further detailed agreement between Parties; significantly also, in mandating the establishment of joint bodies to, among other things, evaluate proposals with potential to impact detrimentally on transboundary watercourses. The Convention is furthermore aided by the broader transboundary environmental governance of the UNECE and its related treaties on environmental impact assessment, public participation and industrial accidents, which add value to its operation.

In relation to implementation and compliance, the Implementation Committee is leading this challenging task as the Committee work develops. This has already targeted instances where there is the potential for non-compliance by individual Parties, and it has contributed significantly to capacity building efforts more broadly. The relationship between compliance and reporting is also receiving increased attention, and benefits from the clustering of the environmental agreements that the UNECE has produced. Experiences learned in relation to the other treaties and protocols are therefore freely shared, and the fact that states are typically Party to one or more of these agreements means that they are familiar with the procedures that are contained within them. Ensuring domestic implementation and adherence to these procedural obligations is ultimately the responsibility of treaty bodies, Parties, the public and others in tandem. Yet assisting states to comply with these obligations, where there is either a deliberate failure or lack of capacity, is a very important role of the Implementation Committee. In Asia, where states have frequently avoided confrontation or legal challenge,[81] it is all the more important.

[81] See Simon Chesterman, 'The International Court of Justice in Asia: Interpreting the *Temple of Preah Vihear* Case' (2015) 5 *Asian Journal of International Law* 1, who finds that, where Asian states do pursue international litigation, they have a clear preference for bilateral settlement of disputes.