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2018-11-27

Understanding the Nuts and Bolts –

Scientific and Technical Knowledge in Environmental Litigation: National solutions, EU requirements and current challenges

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1. Introduction

As the reader is well aware, environmental decision-making under EU law is often based on complex scientific assessments made by administrative authorities. Those assessments may be challenged in court by different actors who oppose environmentally hazardous activities and non-sustainable use of natural resources, contesting the legality of the decisions at stake. Against this backdrop, the ability for the national courts to independently evaluate scientific and technical information is of the utmost importance for the effectiveness of EU obligations in this field of law.

It is evident that when analysing how different legal systems within the Union use scientific evidence in environmental cases, we must deal with an(other) encounter between the *procedural autonomy* of Member States and the EU law requirement for *effective justice*. In this article I shall discuss what this encounter means when environmental decision-making is challenged in court in some of the legal systems of the EU. I shall start with a few remarks on the *characteristics of environmental law* and the use of legal-technical standards in this sphere of law. This is followed by a couple of conclusions that can be drawn from the case-law of the CJEU concerning *what requirements EU law set up* for how national courts should take scientific and technical information into account on environmental litigation. Thereafter, I will discuss a couple of key issues concerning the use of scientific and technical evidence in environmental litigation in the national courts. To begin with, *who are the providers* of scientific evidence in environmental cases and *what obstacles* litigants may meet in different legal systems, for example; concerning costs and the availability of independent experts. The next key issue concerns the possibilities different legal systems provide for the *national courts to make their own evaluation of scientific and technical information*. Here, I shall discuss issues concerning both the *competence* of the reviewing court itself, and the potential for them *to ask for advice* from independent experts and expert panels outside the administration. To a certain degree, this question is related to how deeply the national courts will examine the administrative decision-making, the so-called *intensity of review* in environmental litigation. In this respect, the legal systems of the Member States show significant varieties which can be partly explained by different traditional legal philosophies concerning the relationship between policy-makers and judiciary. The article is closed with a couple of conclusions about the main challenges concerning scientific and technical evidence in environmental litigation.

2. Characteristics of environmental law

The answer to, "What are the main characteristics of environmental law?" will depend upon whom one asks. Nevertheless, most will probably point to some of these key aspects:

- It is an area of law that deals with *sustainable development*, the needs of future generations and the use of nature resources…
- Environmental law is heavily influenced by – or even almost entirely rests upon – *international law and EU law obligations*…

- It also deals with *strong economic interests*, where conflict between operators and the public is often intense. Testimony on this is evident in all Member States – for example, concerning nuclear power, permits for water operations, species protection, etc...
- The requirements established by the legislation in this area of law, are commonly an expression of *public interests of conflicting nature*. Typically, it has an environmental aim such as the protection of water, air and soil or nature conservation or a sustainable use of natural resources, but these are also balanced against other interests of societal importance such as economic development, social and cultural requirements and regional and local interests. Sometimes, even the environmental interests expressed in the legislation are conflicting among themselves, for example, between the promoting of renewable energy and species protection…
- Basically, we are dealing here with *mandatory law* with little room for derogations or agreements between parties. In many legal systems the courts are obliged to undertake investigation of cases of their own accord by way of the ex officio (inquisitorial) principle. Consequently, the court is not only required to arrive at the correct interpretation of applicable law, but also to a certain extent the facts in the case…
- And those facts contain *significant features of nature science and/or technical assessments*…

Thus, environmental law deals with different activities and their factual or more or less foreseeable impacts on today's and tomorrow's environment, and – to a certain extent – human health. In order to evaluate such impacts and risk assessments, environmental law makes wide use of "legal-technical" standards and "proxies". Such standards are; for example, "significant impact on the environment" (EIA Directive[1]), "good ecological status" (WFD[2]) or "likely to have a significant effect on the conservation objectives" (Habitats Directive[3]). In addition, "soft" guidelines or "proxies" are used to operationalize the requirements in law. BREFs and BAT Conclusions under the IED[4] cannot be described as guidelines, as they are outwardly strict, but commonly leave room for a different understanding in the national application of permit requirements for large installations. Examples of "soft" guidelines with substantial effect on the understanding of EU law are the Common Implementation Strategies (CIS) under the WFD, negotiated outcomes from meetings of the "water directors" from the Member States.[5] Further, different guidelines and positions from the Commission apparently have a great impact on the understanding of EU law – either they are official documents or positions in cases before the CJEU. The

[1] Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, OJ L 26.
[2] 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.
[3] Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora.
[4] Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control), OJ L 334.
[5] It is noteworthy that these directors commonly do not have any mandate or assignment from the Member State, a fact that has been criticized; see Josefsson, H: *Ecological Status as a Legal Construct—Determining Its Legal and Ecological Meaning.* 27 Journal of Environmental Law 23 (2015).

different guidance documents under the Habitats Directive – most importantly the ones on the managing of Natura 2000 sites and the strict protection of animal species of Community interest – can be used as illustrative examples of the former.[6] Examples of the latter can be found in infringement cases brought by the Commission or interventions in other cases in the CJEU. There are also other kinds of documents, which may have been described as "best practices" by the Commission, but their legal values are less clear. In addition to this, the use of "proxies" is widespread among the different areas of environmental law. Those are indicators of the status of key elements of the environmental, such as IUCN's Red List of threatened species. Another example is, the use of "key habitats" and "indicator species" in nature conservation law.

One of the problems related to the use of legal-technical standards is that they may seem quite clear and concise, yet are quite dubious in relation to their application. One such example is, "Favourable Conservation Status ("FCS") for species, the definition given in Article 1(i) of the Habitats Directive. According to this provision, the conservation status of a species means the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations within the European territory. The conservation status is favourable when the population dynamics data indicate that the species is maintaining itself on a long-term basis as a viable component of its natural habitats, the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and there is, and continues to be, a sufficiently large habitat to maintain its populations on a long-term basis. For a lawyer, this is a clear-cut definition based on ecological criteria. However, from the ecological point of view, definitions such as "viable component of its natural habitats", "maintain itself" or "long-term basis" are legal definitions which require additional information. This can be illustrated by the wolf debate.[7] What does long-term mean for such a species; are we talking about 100 or 1,000 years? And what about "maintain itself"? Does that include human intervention, such as the translocation of wolves from one area to another, the placing out into the wild of puppies from zoological gardens or creating corridors through the reindeer herding areas? In addition to this, even if we manage to clarify those issues, the application of the FCS concept is very complex in many situations, including assessments of the importance of populations at the outer range of their distribution areas, national responsibility for the protection of certain species and the "continued ecological functionality" of habitats, and so on. In summary, while the use of legal-technical standards is an essential tool in environmental decision-making, it does require close cooperation between law and the science of different disciplines.

[6] *Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC* (European Commission, 2000) and *Guidance document on the strict protection of animal species of Community interest under the Habitats directive 91/43/EEC* (European Commission, 2007).

[7] See Epstein/López-Bao/Chapron: *What is 'favourable conservation status' for species? Researchers clear up misinterpretations.* Science for Environment Policy: 457 (3 June 2016).

3. EU environmental law and scientific assessments

3.1 Review of both procedural and substantive requirements

A reasonable starting-point for the discussion about scientific evidence in environmental litigation in the Member States is that EU environmental law requires that the legal systems of Member States offer the public concerned the possibility of obtaining a legality control of administrative decisions and omissions on *both procedural and substantive requirements* of that law. In some pieces of legislation this is expressly prescribed, whereas in others it follows from the principle of useful effect (*effet utile*). An obvious example of such an express provision is Article 11.1 of the EIA Directive, which states that the public concerned shall have access to a review procedure before a court of law or another independent and impartial body to challenge the substantive or procedural legality of decisions, acts or omissions under that directive.

However, it is not always an easy task to distinguish these two aspects from each other. Normally, when we discuss procedural legality we deal with formal requirements for permit applications or notifications, such as time limits, transparency, consultation of different authorities, as well as open hearings and communications with the public and other stakeholders. Procedures under the EIA Directive and the Habitats Directive give many examples of such procedural requirements, and this can perhaps also be said – at least superficially – about the content of EIAs and Appropriate Impact Assessments (AIA). According to the case-law of the CJEU, the public must be able to *invoke any procedural defect* in support of an action challenging the legality of decisions covered by the EIA Directive. It is permissible for national courts to dismiss arguments concerning minor errors in procedural matters with little or no impact on the outcome of the case, but it is up to the administration to show such insignificance in the case.[8]

3.2 Case-law and legal doctrine

In going further on the issue of how intensively the national courts are obliged to review substantive issues according to EU environmental law, things become more complex. This question about "the scope of review" has not been discussed much in the legal scholarship of environmental law, but mostly in other areas of law, commonly taking stock from how the CJEU has dealt with the matter. The general conclusion seems to be that it suffices if the national systems offer a judicial review enabling a control whether the administration has committed any "manifest errors" in the decision-making under EU law along the lines expressed already in the *Upjohn* case from 1999.[9] Although a complete review is thus not required, the national courts should as a minimum be able to establish whether the evidence relied on by the administration is accurate, reliable and consistent. The information must also be so complete and of such a quality that it is possible to evaluate if the conclusions drawn by the administration can be substantiated from it.[10] This is also the point of departure for Mariolina Eliantonio in a recent article, where the

[8] C-72/12 *Altrip* (2012), pp. 48-54.
[9] C-120/97 *Upjohn* (1999), C-92/00 *Krankenhaustechnik* (2002), C-55/06 *Arcor* (2008), C-71/14 (2015), C-12/03 *Tetra Laval* (2010), see Jans; J & Widdershoven, R & de Lange, R & Prechal, S: *Europeanisation of Public Law*. Europa Publishing 2007, XX.
[10] C-12/03 *Tetra Laval* 2005) p. 39.

reasoning is expanded to environmental litigation, making reference to C-293/97 *Standley* (1999), C-72/12 *Altrip* (2012) and C-137/14 *Commission v. Germany* (2015).[11] She concludes that there is no case-law which clearly sets a minimum standard of review for national courts in environmental litigation and that the standard of review performed at the European level has never officially departed from the 'manifest error' threshold. But even so, she emphasises that the CJEU has made clear that this entails checking the reliability and accuracy of the evidence presented before them. She then argues that this threshold should equally be applicable before national courts, requiring them to have adequate procedural means to access the scientific knowledge necessary to review the technical choices of the public authorities.

To a certain extent, the scope of review in environmental proceedings is also touched upon in the 2017 Commission's Notice on access to justice.[12] The Notice mainly refers to the case-law of the CJEU, but also draws some cautious conclusions from that jurisprudence.[13] Here reference is made to C-71/14 *East Sussex* (2015), which dealt with the requirements for access to environmental information according to Directive 2003/4 (EID[14]). In this case, the CJEU made clear that judicial procedures in the Member States must enable the national court *to effectively apply the relevant principles and rules of EU law* when reviewing the lawfulness of an administrative decision to deny such access. [15]

3.3 Starting-point for the discussion about the intensity of review in environmental cases

For my own part, I think that a sensible starting-point is that each field of EU law must be understood by way of its own characteristics. Therefore, one must be cautious when drawing conclusions from other fields of EU law and especially from the CJEUs own attitude to "the scope of review" in cases before it. After all, there is a difference between that Court's scrutiny of the Commission's doings or the national implementation of EU law requirements, compared with the national courts' review of the administrative decision-making under EU law. This is all the more important as the CJEU has, in recent years, clearly emphasised the responsibility for the national courts to act as protectors of the rule of EU law. In truth, very little has been expressly said by the CJEU about what is required from the national courts when they are scrutinizing administrative decisions under EU environmental law. But when one looks closer into the CJEU's jurisprudence in this field of law, some conclusions can be drawn on the reasoning on the specifics of some cases. In this way, at least a minimum standard may be created.

To begin with, in C-263/08 *Djurgården*, the Court made clear that the access to justice requirements in the EIA Directive included the possibility to challenge the outcome of

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[11] Eliantonio, M: *The Impact of EU Law on Access to Scientific Knowledge and the Standard of Review in National Environmental Litigation*: *A Story of Moving Targets and Vague Guidance*, European Energy and Environmental Law Review (2018), pp. 115–124.

[12] Commission Notice on Access to Justice in Environmental Matters. Communication from the Commission (Brussels, 28.4.2017 C (2017) 2616 final), Official Journal 18/8-17; 2017/C 275/01.

[13] See Darpö, J: *On the Bright Side (of the EU's Janus Face). The EU Commission's Notice on Access to Justice in Environmental Matters.* Journal of European Environmental and Planning Law (JEEPL) 2017, p. 373.

[14] Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC.

[15] C-71/14 *East Sussex* (2015), p. 58.

those proceedings; that is, the decision to authorize the project.[16] Later on, more guidance from the Court was given in a couple of cases concerning the implementation of the EIA Directive in Germany, most importantly C-115/09 *Trianel* (2011) and C-137/14 *Commission v. Germany* (2015). In *Trianel*, the CJEU said that the access to justice provision in the EIA Directive made clear that decisions, acts or omissions by the administration must be reviewable in court as regards their substantive or procedural legality, "*without in any way limiting the pleas that could be put forward in support of such an action*".[17] As the reader is well aware, this was the case where the CJEU clarified that environmental non-governmental organisations (ENGOs) by definition have rights and interests to protect the environment and that the national procedures therefore must enable them to challenge both national legislation implementing EU law requirements, as well as provisions in EU law having direct effect.[18] Thus, as the ENGOs have "rights" that may be infringed upon if the administration does not correctly apply such rules, they must be able to obtain a review in the national court on both the procedural and substantive aspects of the decision in its entirety.[19] Yet another important step was taken in late 2017 by the CJEU in C-664/15 *Protect*. In this case, the Court first made the often repeated statement from the *Slovak Brown Bear* case about Article 9(3) of Aarhus not having direct effect in EU law.[20] But then it added that Article in conjunction with Article 47 of the Charter and the substantive provision at stake – that is Article 14(1) of the Water Framework Directive (WFD[21]) – shall be interpreted as meaning that a duly constituted environmental organization must be able to contest before a court a decision granting a permit for a project that may be contrary to the obligation to prevent the deterioration of the status of bodies of water as set out in Article 4 of the WFD. If the procedural rules in the Member State do not allow for this under the doctrine of compliant interpretation, it would then be for the national court to disapply those provisions.[22] In my view, this judgement is a step forward compared with the *Slovak Brown Bear*, as the CJEU emphasizes that the principle of judicial protection applies generally as regards unconditional and sufficiently precise provisions of environmental directives. In her opinion, Advocate general Kokott empathized that this is not giving Article 9(3) direct effect in EU law "by the back door" so to say, but rather the logical consequence of the *effet utile* of Article 4 of the WFD, applied in the light of the principle of judicial protection.[23] I can hardly contest her conclusion, but only point to the fact that the legal protection of the provisions at stake equals a situation when Article 9(3) of Aarhus do have direct effect into EU law.

[16] C-263/08 *Djurgården*, p. 42.
[17] C-115/09 Trianel, p. 37, reiterated in C-72/12 *Altrip* (2012), p. 36 and 47, also C-137/14 *Commission v. Germany* (2015), p. 47.
[18] C-115/09 *Trianel*, pp. 45 and 48.
[19] C-137/14 *Commission v. Germany* (2015), pp 61 and 80.
[20] C-664/15 *Protect*, p 45. A summary of the case can be found on the website of the Task Force on Access to Justice under the Aarhus Convention; https://www.unece.org/env/pp/tfaj/jurisprudenceplatform.html
[21] 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.
[22] C-664/15 *Protect*, pp 55-58.
[23] AG Kokott's opinion in C-664/15, para 91.

3.4 Conclusions about the intensity of review in environmental matters

Thus, I contend that when comparing what is said as a starting-point for the discussion with the specific requirements for a permit, for example, the "second Waddenzee criterion" – where it is said that a project that may have a significant effect on a protected site under Natura 2000 can only be authorized if the administration has ascertained that "no reasonable scientific" doubt remains as to the absence of adverse effects to the integrity of site[24] – this seems to leave very little room for administrative discretion. I find it hard to understand how a judicial review only controlling whether the administration has committed a manifest error in the permitting of a such project is compatible with this criterion, which clearly is formulated by the CJEU for the Member States' courts to apply. If the national court neglects to make an evaluation of its own on this issue, how would it be able to control whether there remained any reasonable scientific doubt concerning such effects? Similar arguments may be raised concerning other technical or nature scientific formulas in environmental law, such as the evaluation of the non-deterioration criterion in Article 4(1) WFD when permitting activities with negative impact on water bodies or risk assessments for chemicals.

Does this mean that the national courts are obliged to undertake investigations of their own accord on the technical or nature scientific matters in environmental cases? The Commission's Notice on access to justice answers this to the negative.[25] In my understanding, this conclusion is based upon the *Kraaijeveld* case, where CJEU said that the ex officio principle only shall be applied when it is required by national law.[26] Mariolina Eliantonio criticizes the conclusion in the Commission's Notice as contradicting requirements expressed in other judgements from the CJEU, where it is made clear that national courts must be able to establish not only that the evidence before them is accurate, reliable and consistent, but also whether it contains all the information necessary. Although I tend to agree with Eliantonio, perhaps there is no contradiction between the two viewpoints depending on what is meant by "own accord". The judicial review in these situations may be done by way of the court's scrutinizing the material in the case. Generally, as illustrated in Article 6(3) of the Habitats Directive, permit requirements in EU environmental law is based upon the precautionary principle. If the court in applying this principle finds that the information does not substantiate the findings of the administration, it can either quash the decision, or – at least in many legal systems – ask the applicant or the administration to supplement the information. Thus, even when the court is not required to investigate the case "of its own accord", such a request would in most cases be equally effective. And even if the national system is restricted when it comes to these opportunities for the court to investigate, it is still required by EU law that the review is rather intense.

[24] C-127/02 *Waddenzee* (2004), p. 59.
[25] Commission Notice on Access to Justice in Environmental Matters, para 139.
[26] C-72/95 *Kraaijeveld* (1996), p. 57, see the Commission's Notice para 149.

4. Actors in environmental cases

4.1 The public concerned; individuals, groups and organisations

Another important factor when we discuss the implementation of technical and nature science evidence in environmental decision-making concerns *the supplier of that information*. Main producers of such knowledge are, of course, the administration and the industry concerned, and normally the facts in the case are presented in EIAs or investigation material from specialized authorities or in-house expertise within the administration. In some areas of law, one may actually claim that industry is "self-regulating" since the administration cannot match the level of scientific knowledge of those who are the objects of the regulation. One such example is the nuclear industry, where the legislator tries to make up for this imbalance by conditioning the permits with very high contributions to be paid by the operators to help fund research on the area.[27]

However, many court cases are brought by ENGOs having in-house expertise on technical and nature science issues, for example, on the ecology of species or air pollution. In these situations, the standpoints of the administration are challenged with advanced technical and scientific knowledge and the argumentation is performed at an advanced level. Examples of such ENGOs are the Vogelbescherming Vlaanderen in Belgium, Lesoochranárske Zoskupenie VLK in Slovakia, the Royal Society for the Protection of Birds (RSPB) and the Friends of the Earth in the UK, the German Bund für Umwelt und Naturschutz (BUND) and Naturschutzbund Deutschland (NABU), organisations which have all successfully brought environmental cases in national courts.[28]

Cases brought by individuals can be more problematic, especially in those legal systems where they are allowed to invoke general environmental issues once they have been let through the gates into court. The reason for this is that individuals often lack the required expertise to evaluate the facts that the administrative decision is based upon – for example, on issues concerning pollution of water courses, the impact on species and the risks involving the use of chemicals. But of course, there are exemptions to this rule. One such renowned case is *Ron Hart v. Anglian Water*, which resulted in the highest fines ever in the history of environmental crimes in the UK.[29] In a private prosecution – using a guidance document from the Anglers' Association, investigations of his own and a technical consultant – Mr Hart succeeded in getting the Anglian Water company convicted of polluting the River Crouch with sewage water and fined £200,000. In addition, the company was found liable for Mr Hart's investigation costs in the case. There are similar examples from many of the legal systems within the EU. In Sweden, individuals with standing in environmental cases are allowed to invoke any issue to advance their cause. As a result, it is not that unusual to have planning decisions quashed by the courts, not because of matters that lie close to the heart of the complainant, but for flaws in the investigation on the development's impact on the environment, such as protected species. This is not

[27] Ref XX

[28] For an overview, see the case-law database of the Task Force on Access to Justice, today covering more than 100 cases from a variety of countries (see footnote 20XX). Most of these cases have been brought by ENGOs.

[29] *Ron Hart v. Anglian Water* (Court of Appeal 21 July 2003), [2004] Env. L.R. 10; see also ENDS (326) March 2002, s. 54 and BBC News; http://news.bbc.co.uk/2/hi/uk_news/england/1875563.stm

an unusual situation concerning wind farms and their impact on birds and bats.[30] Other cases have involved housing developments clashing with the interests of the great crested newt (Triturus cristatus)[31] or the European green toad (Bufo viridis).[32] Also, a well-known phenomenon in several countries is that a small number of individuals with special competence can set up an ad hoc organisation for mainly litigation purposes. Perhaps the most famous of these are Surfers against Sewage, who successfully brought action in the English courts against a permit by the local authority to discharge sewage in the waters of North Cornwall.[33] The Danish animal welfare organization DØR[34] is another example, as well as Latvijas Ezeri[35] for the protection of lakes in Latvia. Furthermore, in cases concerning large scale activities or very controversial projects, the public at large may also be an important provider of evidence on a wide range of issues, not only concerning societal factors, but even on technical and nature science knowledge that the court might include in the review. The frequent environmental litigation under civil suits provisions in the USA provides us with manifold examples, such as *Citizens to Preserve Overton Park v. Volpe* in Tennessee [36] and *Children's Trust* in Washington.[37] In this issue, both Goda Perlaviciute, Lorenzo Squintani & Hendrik Shoukens and Alexandra Aragão in their contributions discuss problems concerning public participation in other large scale projects.

4.2 Experts in environmental litigation

The role of the experts is another key issue when discussing providers of technical and nature science evidence in environmental litigation. In some cases, there are numerous experts in the field who are assigned, not only by the administration and industry, but also by the public concerned and ENGOs. However, the cost of expert advice is usually borne by the parties and can be considerable; for example, for obtaining frequently necessary factual evidence such as aerial photographs, noise measurements or laboratory analyses. These costs are widely reported as being beyond the budgets of some ENGOs.[38] Sometimes costs for expert advice can be reimbursed from the losing party; but even so, it can be problematic raising the necessary funds at the beginning of the proceedings. Another problem is that in some areas the experts are few and heavily dependent upon industry for their outcome. They may therefore be reluctant to accept assignments from

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[30] XX
[31] RÅ 2005 ref. 44 *Kullavik* and RÅ 2006 ref. 88 *Boberg*.
[32] MÖD 2014:4 *Vellinge ängar*.
[33] *R vs Carrick District Council ex p Shelley*, [1996] Env LR 273), se Jones, B & Parpworth, N: *Environmental liabilities*. Shaw & Sons 2004, p. 454ff.
[34] Det Økologiske Råd (The Ecological Council), see www.ecocouncil.dk
[35] See https://company.lursoft.lv/latvijas-ezeri/40003576810
[36] *Citizens to Preserve Overton Park v. Volpe* (Supreme Court; 401 U.S. 402 (1971).
[37] *Foster v. Washington Department of Ecology* (Wash. Ct. App. 2017-09-05, No 75374-6-1). For those readers who are interested in US-American statistics on environmental litigation, see Salzman, J & Ruhl, JB: *Who's number one?* The Environmental Forum (Washington DC) 2009, p. 36.
[38] See Darpö, J: *Effective Justice? Synthesis report of the study on the Implementation of Articles 9.3 and 9.4 of the Aarhus Convention in the Member States of the European Union*. European Commission 2013-10-11. European Commission 2013-10-11 (http://ec.europa.eu/environment/aarhus/access_studies.htm)/Scandinavian Studies of Law Volume 59: Environmental Law, p. 351, section 2.4.

other actors in environmental cases, something which has been reported from German ENGOs as being a problem concerning noise experts.[39]

This issue touches upon the more general question about the independence of experts. This is an ongoing discussion and efforts have been made, for example, in the latest amendments to the EIA Directive to ensure the quality of the underlying investigations in this respect.[40] In some countries, the EIA procedure is managed by a specially assigned administrative body and concluded with a separate statement in order to guarantee the quality of the investigation. In Finland, this task is fulfilled by regional centres for economic development, transport and the environment (NTM-centraler).[41] Although not binding, these statements are normally decisive when the permit cases are brought to the environmental courts. Similarly, in the Netherlands, the Commission for environmental assessment (Commissie voor de milieueffectrapportage, CMER) prepares mandatory and voluntary advisory reports for the competent authorities on the scope and quality of EIAs.[42] In other countries, it is for the permit body to decide on the quality of the EIA. In my experience, this solution is prone to a more narrow-minded perspective, as requests for investigations about cumulative effects and suchlike are often regarded as "unnecessary" in the light of the on-going case.[43] In any event and whatever solution the national system offers, the competence of the court or reviewing body is decisive, including the responsibility for examining the facts in the cases in question of their own accord. I shall return to that topic later.

5. Procedural autonomy of Member States

5.1 Different legal systems and traditions

Judicial review of the administration's decision-making under EU environmental law is (still) applied in 28 different legal systems under the concept of procedural autonomy of the Member States. Three of these – UK, Ireland and Malta – are usually described as "common law systems" and the rest belong more or less to the civil law system. There are also other ways of distinguishing the legal systems in the EU, but I would not overemphasize the differences as we are basically dealing with administrative black-letter law, implementing EU directives on environmental matters. Having said that, the traditions in each system do have an impact on how legality control is performed by the national courts, especially concerning the role of the parties in the particular case and the

[39] Interview 2011-05-21 with Peter Rossner & Dirk Tessmer, Bund Naturschutz in Frankfurt.
[40] Article 5.3 in EIA Directive (2011/92).
[41] http://www.ym.fi/en-US/International_cooperation/Environmental_impact_assessment
[42] https://www.commissiemer.nl/advisering/watbiedtdecommissie
[43] In a recent comparative study from the Universiteit Utrecht on the permitting of wind farms and protection of species, the English reporters (Fiona Mathews & Donald McGillivray) say that cumulative effects pose a "huge challenge, especially regarding offshore wind farms in areas like the North Sea, where a kind of 'gold rush' has occurred, with smaller farms coming in first and making effective decision-making (e.g. a lower number of bigger farms) difficult", see Backes, C & Akerboom, S: *Renewable energy projects and species protection. A comparison into the application of the EU species protection regulation with respect to renewable energy projects in the Netherlands, United Kingdom, Belgium, Denmark and Germany.* Utrecht Centre for water, oceans and sustainability law. Report commissioned by the ministries of Economic Affairs and Climate and Agriculture, Nature and Food Quality, Amsterdam 2018-05-28, UK section 7, page 148.

"intensity of review". I would further assert that the general "trust" between the administration and the courts plays a certain role in this respect. In some countries, it is quite clear that the starting-point for any judicial review of decision-making is that the administration has the competence and knowledge to draw proper conclusions from the facts in each situation and that those who challenge this position must prove them wrong or show procedural flaws of importance to the case. In others, the court is much more willing to delve into the matters of the case in order to reach a position of its own.

5.2 The intensity of review

Be that as it may, it is clear that there are substantial differences concerning the depth of judicial review of administrative decisions in the various countries within the Union. On the one hand, we have reformatory systems where the court decides the case on its merits. Commonly, this also means that the court substitutes the administrative decision with a new one of its own. This is the basic position of judicial review in both Sweden[44] and Finland.[45] This is similarly true when permits for IED installations are challenged by way of *recours contentieux* according to the French Environmental Code (and tradition).[46] Substitution also exists in certain cases in the Netherlands ("zelf in de zaak voorzien").[47] On the other hand, we have systems where legality control is very formal and where the court mostly focuses on procedural aspects of the environmental decision, allowing the administration almost full discretion on the substance of law. This is how I perceive the judicial review in Portugal[48] and Spain,[49] but also under different regimes based on *actio popularis* or citizen suits in other Member States. Although most legal systems lie somewhere in between these two outer positions, judicial review is commonly cassatory, meaning that the court will either accept the administrative decision or quash it.

To a certain extent, the differences in attitudes about the depth of the judicial review seems to relate to whether an administrative procedure or civil procedure is applied in court. In the civil procedure, the basic presumption is that it is up to the parties to the pro-

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[44] Darpö, J: *Access to Justice in Environmental Decision-making in Sweden. Standing for the public concerned, the scope of review on appeal and costs*. Study 2015 for the German research institute Ufu on behalf of the Ministry of the Environment. In *The legal debate on access to justice for environmental NGOs*. Umweltbundesamt 99/2017, Chapter 6 (pp. 125-150), also published on www.jandarpo.se /In English.

[45] Hollo, E & Kuusiniemi, K & Vihervouri, P: *Environmental Law and Administrative Courts in Finland.* Journal of Court Innovation 2010, p. 51 (https://www.nycourts.gov/court-innovation/Winter-2010/JCI_Winter10a.pdf) and Waris, E: *Study on the Implementation of Article 9.3 and 9.4 of the Aarhus Convention in 11 of the Member States of the European Union - Finland*. Country report under the European Commission 2012/13 Access to justice studies; http://ec.europa.eu/environment/aarhus/access_studies.htm

[46] Prieur, M: XX

[47] See de Graaf, KJ & Marseille, AT: *Final dispute resolution by the Dutch administrative courts: Slippery slope or efficient remedy?* In On judicial and quasi-judicial independence (eds. S Comtois & KJ de Graaf), Governance & Recht (Eleven International Publishing, Den Haag), No 7, p. 205

[48] In the Portuguese contribution to the 2013 report to the Commission on the implementation of Article 9(3) of Aarhus in the member States of the Union, Alexandra Aragão claimed that the courts in her country have an "obsession with formal requirements", mainly due to an overwhelming workload and lack of training in environmental matters, see http://ec.europa.eu/environment/aarhus/access_studies.htm; Portugal, p. 30.

[49] See Angel-Manuel Moreno Molina's country report in the above-mentioned Commission study; http://ec.europa.eu/environment/aarhus/access_studies.htm; Spain, p. 11

ceedings to make their case, without too much intervention from the court. In addition, the procedure is commonly based on oral evidence before the court, the hearing of witnesses, and so on. In contrast, the administrative procedure is mostly based on written evidence and often the court has to investigate all arguments in the case of its own accord in line with the *ex officio* (or *inquisitorial*) principle. Accordingly, elements such as site visits are much more usual in these systems, compared with those that apply civil procedural principles in environmental cases.[50] As mentioned, one would expect that courts operating according to the inquisitorial principle also have reformatory powers, but this is not always the case. For example, the Belgian Council of State has, up to a point, certain reformatory powers, but cannot substitute an administrative decision by itself. On the other hand, when a court operates according to an intense review procedure, usually the decision to remit the case back to the authority will be issued along with clear instructions about what to do next. Under such circumstances, the administrative discretion will be limited as the authority will have to respect the court's reasons for quashing the decision.

This kind of supervision from the judiciary is even more direct under the *bestuurlijke lus* (administrative loop) which has been introduced in the Netherlands,[51] and to a more limited extent in the Flemish region in Belgium.[52] The legislator's aim with this instrument is to avoid lengthy proceedings and increase legal certainty for all parties. The Dutch version of the administrative loop allows the court – at any stage of the proceedings when it finds unlawful elements in a contested decision – to issue an interim judgement, while informing that it will annul the decision if it is not corrected in certain aspects. While doing this, the court also gives guidance to the authority, granting the possibility to repair the irregularities in the decision by way of supplementing the material, giving better explanations to the findings or to undertake any other measure suitable for the purpose, including the issuing of a new decision. When this is done, a final judgement will be made by the court on the thus amended or restored decision. In this way, the judgement has "retroactive effects" in that respect that the original decision will be annulled and replaced by a new one.

5.3 The competence of the court

Equally important is the competence of the court which deals with judicial review in environmental cases. It is worth noting that the national legal systems also vary greatly. At one end, we have countries where judicial review in environmental cases is performed by

[50] This is of course a generalization. The Vermont Environmental Court – alone in its kind in the USA – applies civil procedural rules in environmental cases, but the process is still reformatory and site visits are commonly performed, see Merideth Wright's contribution in this issue, chapter 5.

[51] Jansen, S: *The Dutch administrative loop under scrutiny: How the Dutch (do not) deal with fundamental procedural rights.* Maastricht Faculty of Law Working Paper 2017-3.

[52] The original Flemish version of the loop was more restricted, as it only applied to formal irregularities in the decision at stake and the authority was not invited to undertake any changes in the substance of the decision, see Bortels, H: *The Belgian Constitutional Court and the administrative loop: A difficult understanding.* IUS PUBLICUM Network Review No 2/2016 (2016-06-15). That version of the legislation has however been annulled by the Constitutional Court with its judgment N° 74/2014 (http://www.const-court.be/public/n/2014/2014-074n.pdf). A new version of that legislation, much closer to the Dutch example, has subsequently been found to conform with the Constitution by the Constitutional Court in its judgment N° 153/2006 (http://www.const-court.be/public/n/2016/2016-153n.pdf).

general courts with limited experience and no specific knowledge in these matters. Administrative courts exist in many Member States and one would expect such courts to have better knowledge in environmental issues as part of administrative law, at least on a general level. Then there are countries where the courts are organised in "environmental benches" – that is, general or administrative courts with law-trained judges specializing in environmental and planning law. When we get closer to the other end of the spectrum, we have courts equipped with in-house expertise in technical and nature science matters, as well as environmental courts with technical judges deciding cases on the same footing as law-trained judges.[53] Some of these bodies are not named "courts" but tribunals, examples being the Nature and Environmental Appeals Board in Denmark (Natur- og Miljøklagenævnet), the Planning Appeals Board (An Bord Pleanála) in Ireland, the Environmental and Development Planning Tribunal in Malta and – before 2015 – the Austrian Independent Environmental Senate (Umweltsenat).[54] Some of these tribunals are regarded as independent and impartial bodies meeting the requirements of both Article 6 European Convention on Human Rights (ECHR) and Article 267 TFEU.

However, the competence of the court cannot exclusively be evaluated from its members. In many countries, courts in environmental proceedings are required – or at least have the possibility open to them – of remitting questions to highly specialized bodies of expertise on different environmental issues.[55] Commonly, these functions are performed by institutions within the ordinary administration, such as national agencies or institutions within the scientific community. In some countries, however, a further step has been taken by the creation of boards of independent experts, created for the sole purpose of helping the administration and courts on scientific issues. In the Netherlands, alongside the above-mentioned Commissie voor de milieueffectrapportage (CMER), there is the Foundation for advising the administrative judiciary (Stichting Advisering Bestuursrechtspraak, StAB), which is mostly used in environmental and planning law cases.[56] With some 40 independent and highly qualified "advisors", this body provides the Raad van State (Supreme Administrative Court) and the districts courts with answers on specified questions on certain technical aspects in environmental and planning cases.[57] In my view, both the CMER and the StAB may serve as models for how to handle technical and scientific evidence in environmental litigation.

5.4 The costs of the proceedings

Still another key factor when discussing technical and nature science evidence in environmental litigation concerns costs. On a general level, costs in environmental proceedings include administrative appeal fees, court fees and other court costs, lawyers' fees,

[53] See Mikael Schultz' contribution in this issue, chapter 6.
[54] The above-mentioned (footnote 43XX) Journal of Court Innovation 2010 (https://www.nycourts.gov/court-innovation/Winter-2010/JCI_Winter10a.pdf) contains an interesting article about the Umweltsenat by Verena Madner, former president of the senate and today professor of public law, environmental law and public and urban governance at Wirtshafts Universität Wien.
[55] This feature is also becoming more frequent as a requirement under EU law, see for example XX on compulsory remits to the European Food Safety Authority (EFSA).
[56] http://www.stab.nl/Pages/start.aspx
[57] See Backes, C: *Organizing Technical Knowledge in Environmental and Planning Law Disputes in the Netherlands – the Foundation of Independent Court Experts in Environmental and Planning Law*, European Energy and Environmental Law Review (2018), pp. 143–150.

expert and witness fees and bonds for obtaining injunctive relief (also called securities or cross-undertakings in damages).[58] Most relevant here are the costs for specialized lawyers and expert advice. The principle for cost allocation is important, and most systems apply the "Loser Pays Principle" (LPP). Representation by lawyer is also the general rule in almost all systems, at least in the highest court levels. As already mentioned, expert advice can in some instances be very expensive. For France, the average figure mentioned for environmental cases some years ago was €15,000 for such advice. Concerning the larger ENGOs, they are quite often highly specialized and can contribute with advanced knowledge on technical and nature science issues in environmental cases. They are also well aware of the legal matters and are often represented by in-house lawyers. Not least, cases brought at European level by established organisations such as Greenpeace and ClientEarth are examples of this. But this is often not the situation for individuals, small ENGOs and ad hoc groups. They may be wholly depending upon the existence of legal aid to bring their cases, something which is not always available for environmental cases and rarely covers expert costs. On the contrary, the legal systems of the Member States to the EU sometimes show appalling examples of lack of "equality of arms", a school book example being the *MacLibel case* from the UK.[59] On the other hand, one must also remember that costs for expert advice are dependent upon the competence of the reviewing court. If the court concerned has in-house expertise and applies the *ex officio* principle or makes wide use of remits to specialized bodies, this brings down the costs for litigants. But even so, the cost for expert advice is, in many cases, the main barrier to bringing action in environmental cases for the public concerned.

6. Conclusions and predictions

In this article, I have tried to analyse some key aspects concerning the implementation of technical and nature scientific evidence in environmental litigation. Some conclusions are drawn from the case-law of the CJEU about the requirements for a judicial review on a national basis covering both procedural and substantive legality of decision-making under EU law. This was followed by sections concerning the providers of scientific evidence in environmental cases and what obstacles litigants may meet in different legal systems. The next part covered issues within different legal systems to provide for the national courts to make their own evaluation of scientific and technical information. Under that heading, I discussed the so-called intensity of review in environmental litigation, the competence of the courts and their potential to ask for advice from independent experts and expert panels outside the administration, as well as the costs for experts in environmental litigation.

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[58] See *Effective Justice* (footnote 36XX), section 2.4.

[59] *McDonald's Corporation, McDonald's Restaurants Limited v Helen Marie Steel and David Morris* [1997 EWHC QB 366]. In this renowned "SLAPP" case, two activists were found guilty of libel against McDonalds for the handing out of leaflets outside hamburger restaurants in London and were ordered to pay £40,000 in damages. However, for McDonalds the victory was Pyrrhic due to the public attention paid to the case and for the UK it was a loss of face, as the country at the end of the day was found in breach with both Article 6 and Article 10 ECHR (*Steel and Morris v. United Kingdom*, ECtHR 2005-02-15). For more on this case, see Hughes, D & Jewell, T & Lowther, J & Parpworth, N & de Prez, P: *Environmental law*. Butterworths, 4th ed. 2002, p. 173. The expression SLAPP – Strategic Lawsuits against Public Participation – was minted by professor George "Rock" W Pring at Sturm College of Law, University of Denver. His publication list on the subject is impressive, see http://www.law.du.edu/index.php/profile/george-pring.

However, as the careful reader may have already noticed, there are a number of key issues on this subject which I have not touched upon in this text. *Access to environmental information* is vital for the public concerned, to increase their chances of obtaining an enlightened opinion on technical and nature scientific issues required for the administrative decisions at stake. Neither have I discussed *how courts deal with conflicting scientific viewpoints* on a certain issue, such as whether eutrophication of our aquatic ecosystems caused by anthropogenic inputs of nutrients is mainly due to increased levels of nitrogen (production of fertilizers and increases in fossil fuel emissions) or phosphorus (fertilizer use, municipal and industrial wastewater). Also, questions concerning the adaptivity of the legal systems in order to meet with *developing knowledge on scientific matters* are notable by their absence in the text. Such uncertainties are related to most technical and nature scientific evaluation of a project's or a product's impact on the environment, for example, on surface water and the groundwater table, soil quality, ambient air, livestock, fish and game animals. Not least the evaluation over time can be extremely complicated, not to say close to guesswork. Although those lacunas might be regarded as major shortcomings in the text, I can only defend myself by saying that somewhere you have to draw the line. And if we reverse the issue, the lacuna can be seen as an invitation to others to take over and develop the analysis further into the procedural depths of European and Member States' environmental law.

Even so, I want to conclude with a couple of predictions for the future on this area of law. I think that specialization of courts is unavoidable in this field of law, as with any other advanced field of administrative law. Whether this can be achieved by having environmental courts or environmental divisions within administrative or general courts ("environmental benches"), in-house expertise or the possibility of remitting questions to specialized authorities and other expert bodies, or by any other procedural means, remains an open question.[60] Moreover, I think that the case-law of the CJEU will develop towards stronger requirements for the intensification of judicial review, requiring the national courts to develop an understanding of their own about the administrations decision-making in these matters. In my view, we may also expect stricter requirements for the opening up of the procedure, as well as on liability for experts' costs in environmental litigation. But then again, these speculations can be regarded as wishful thinking on my part, which calls for the closing of this text.

[60] The coming yearly conference of the EU Forum for Judges for the Environment (EUFJE) will focus on the specialization of courts on environmental matters, see XX…