CZECH REPUBLIC

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The role of science in environmental adjudication
Questionnaire

Introduction

Science and technology enter environmental adjudication in various forms rating from competing science-based arguments to scientific evidence. These invite highly technical assessment from adjudicators and fundamentally impact the dynamic of the judicial process. Different national jurisdictions adopt divergent approaches to interpret such scientific input and employ different methods for *inter alia* scientific fact-finding, standards of review, as well as the standard and burden of proof. This questionnaire seeks to map and better understand the various judicial tools with which different jurisdictions handle and engage with the techno-scientific aspects of environmental disputes. Our aim is two-fold: to appraise the differences and similarities in the judicial engagement with science of different national jurisdictions, and to evaluate whether such divergences in the treatment of science allow for preserving adequate judicial control over the resolution of scientific disputes on the one hand, and ensure uniform application of EU environmental law on the other hand. Please answer the following questions by briefly illustrating them with specific examples from your practice where you deem appropriate.

Questions

1) Mandate of the court to review techno-scientific matters

a) In what forms do judges gather scientific advice (e.g. party-appointed experts, court-appointed experts, in-house experts, expert judges (legal adjudicators having a formal training in a certain scientific field), and/or expert assessors (scientific experts sitting with judges during the deliberation without the right to vote)? What is the task of these actors?

Most of the environmental cases fall under the jurisdiction of administrative courts. Therefore, the following answers will focus on the rules of the proceedings and the case law of the administrative courts. Similar rules on handling evidence apply to judicial proceedings before the civil courts and also before the Constitutional court. In fact, the civil proceeding rules serve as *lex generalis* for all the courts. Furthermore, to conclusions of the corresponding case law concerning producing and handling evidence are applicable *per analogiam* to the proceedings before the administrative authorities.

In general, the judges can only consider facts that do not require expertise without the assistance of an expert. Otherwise, they are obliged to ask the public authority for a professional opinion. If such a procedure is not sufficient for the complexity of the question under consideration, or if there is a doubt as to the correctness of the expert's opinion, the court shall appoint an expert.

There are no in-house experts or expert judges at the Czech administrative courts, and the scientific experts are not sitting with judges during the deliberation.

During the hearing, the judges and, with the presiding judge's permission, the parties and persons participating in the proceedings may put questions to the parties, or witnesses and experts, or invite them to give their opinions on the matter. The parties may also present opinions of the party-appointed experts. However, these are merely considered as any other relevant documents and not expert opinions in a strict sense since the expert has not been appointed by the court. If there is a discrepancy between multiple expert opinions, the court may appoint an expert and ask for a review report.[1] The expert may provide their opinion exclusively on facts of the case, not legal questions. The need to engage in the examination of expert questions is limited to a certain extent by the concept of administrative justice, which serves to protect subjective public rights, while substantive disputes are *"fundamentally settled in administrative proceedings and using the appropriate administrative process instrumentation."*[2]

If the incorrectness of the administrative findings of the administrative authority is not obvious, it is for the applicant to submit relevant arguments by which to contest those conclusions.[3] The scope of the judicial review in a particular case is therefore determined by the arguments presented by the complaint which also applies to the process of handling the evidence, although the review is not restricted to certain questions of fact or law only.[4] Moreover, the administrative justice is conceived restraint,[5] so that the demands for administrative acts are not overly excessive.[6]

b) What forms of scientific references are acceptable as bases for making persuasive scientific findings (E.g. expert evidence, standards issued by competent international or national organizations, regulatory trends of other states, etc.)?

The form of the evidence is not prescribed and the judges may in principle use proof of any form, provided by the parties or presented during the hearing of the case. The court decides which of the proposed evidence shall be produced; it may also produce other evidence. In this respect, it has to reflect the complaint which contains evidence in support of claims

[1] Regarding expert review reports, the Supreme Administrative Court stated that their drafting is necessary only if there are several different expert opinions or if the party submits the expert's report to the evidence outside the proceedings, the conclusions of which are inconsistent with the expert's conclusions established by the court (cf. judgment of the Supreme Administrative Court of 6 August 2008, no. 3 Ads 20/2008 - 141 or Supreme Court judgment of 25 April 2002, no. 25 Co 583/2001). The purpose of the new (revision) report is therefore to reflect the shortcomings and contradictions of previous revised reports.

[2] Resolution of the extended senate of the Supreme Administrative Court of 16 November 2010, no. 1 Ao 2/2010 – 116.

[3] See, for example, the judgment of the Municipal Court in Prague of 13 February 2019, no. 14 A 210/2018 - 96, according to which *"the claimant's general assertion that the occurrence of the endangered animal in question is very likely in a given locality cannot stand. According to the Court, in order to challenge the findings of the administrative authorities, the claimant would have to produce reasonable evidence; a mere general statement that is not supported by any expert evidence is not sufficient."* Or, in a similar judgment of 25 February 2019, no. 31 A 185/2017 - 130, the Regional Court in Brno concluded that *"it is essential for the present case that the claimants do not refer to any specific case of a particular habitat of a particular protected species that extends to other sections of the R/D52 hoghway project and for which the possible impacts in those other sections have not been taken into account. Similarly, they do not argue that the population of a particular protected species should be reduced, and that the regional authority disregarded the impact on the population of that species."* On the contrary, the first-instance decision shows that in many cases the regional authority took into account the wider context of the whole project and its impact.

[4] See resolution of the extended senate of the Supreme Administrative Court of 12 May 2015, no. 7 As 69/2014 - 50.

[5] See judgement of the Supreme Administrative Court of 3 September 2010, no. 2 Ao 4/2010 – 109.

[6] See judgement of the Constitutional Court of 7 May 2013, no. III. ÚS 1669/11.

which the complainant proposes to produce. As part of producing evidence, the court may repeat or add evidence produced by the administrative authority, unless the scope and manner of producing evidence are provided for by a special law otherwise. The court appraises the evidence produced by the administrative authority individually and aggregately together with evidence produced in the proceedings before the administrative authority and bases its decision on the facts and the legal situation thus ascertained.

The court is bound by decisions of other courts on whether a crime was committed and who committed it as well as by a court decision on personal status. In all other matters, the court forms its own conclusions; if however, there has been a decision on them, the court shall proceed from it, or, where the decision on the matters is up to the court, it may oblige the party to initiate such a decision by the party's own motion.

It is not a rare case that the Czech courts refer to international standards or guidelines of international organisations. For example, the Supreme Administrative Court has referred to Codex Alimentarius and FAO/WHO Food Standards as regards the quality of honey in the judgement of 17 March 2010, no. 4 Ads 66/2009 - 101. In another case,[7] the Supreme Administrative Court reviewed a measure of a general nature issued by the Czech Telecommunication Office which set a condition for using the dedicated frequency band the maximum multiplex signal power (MPX power) at the value of 0 dB. The limit was set at the zero levels as a precautionary measure not to cause any interference with the air navigation services. The court took into account, *inter alia*, several expert opinions, a recommendation adopted by ITU (International Telecommunication Union) ITU-R BS.412-9, which set out planning standards for terrestrial broadcasting in the FM band (*soft law*), and regulatory trends of other states which suggest that the zero limit is respected for example in Germany.

Furthermore, the Supreme Administrative Court has referred to the findings of the Aarhus Convention Compliance Committee.[8] Outside environmental law, it has repeatedly supported the use of soft-law and recommendations adopted by the European Commission (COM /2014/ 604 final) in the assessment of the purpose of marriage.[9] The SAC also follows the recommendations of the Committee on the Rights of the Child (under the Convention on the Rights of the Child.[10]

c) Can a higher court (e.g. appeal court, supreme court) in your jurisdiction investigate scientific questions, and/or review the scientific findings of lower courts? If so, to what extent?

In the civil and criminal proceedings, the appeal court may investigate scientific questions and review the scientific findings of the lower court. However, this does not apply to the Supreme Court, which does not act as the court of the third instance. This means that it relies on the facts as found during the civil proceedings and – in the criminal procedure – in particular, the facts as expressed in the operative part of the conviction and elaborated in its reasoning. The focus on the assessment of evidence is in the proceedings before the court of the first instance and only the court of the second instance in the proceedings on

[7] See judgement of the Supreme Administrative Court of 5 August 2012 no, 2 Ao 5/2011 – 204.
[8] See judgement of the Supreme Administrative Court of 28 February 2017, no. 4 As 220/2016.
[9] See judgments of the Supreme Administrative Court of 9 December 2015, no. 4 Azs 228/2015 - 40, of 7 November 2013, no. 2 As 59/2013 - 33, or of 22 February 2017, no. 2 Azs 355/2016 - 62.
[10] See judgement of the Supreme Administrative Court of 14 December 2017, no. 9 Azs 247/2017 - 64.

the ordinary remedy. The case law of the Constitutional Court introduced a certain exception to this general rule, according to which the appeal reason to the Supreme Court cannot be interpreted in restrictive and formalist manner since it is necessary to always keep in mind the constitutionally guaranteed fundamental rights and freedoms, i.e. the right to a fair trial. Such a defect which calls for extensive interpretation of reasons for appeal is, for example, the omission of evidence by a court to which the accused has pointed out, and to that effect, has made his claim legally relevant.[11]

A similar approach applies to the administrative courts. The judicial reviews of administrative decisions are undertaken only by the regional court at the level of the first degree and the Supreme Administrative Court as the Court of Cassation. The procedure rules establish the jurisdiction of the court to clarify what was the factual basis on which the administrative authority based its decision, and also the power to assess other evidence and evaluate it beyond this framework of administrative decision-making to establish new facts as a basis for the court's decision within the full jurisdiction. In doing so, the court cannot replace the activity of the administrative body. However, the new evidence cannot be simply rejected in the judicial review and must be examined. If not admitted under the principle of free evaluation of the evidence, let it be for whatever reason, this should be duly justified. On the contrary, such procedure is completely excluded in the context of the cassation complaint procedure, which merely examines the factual and legal findings of the contested decision of the Regional Court where the last evidence can be submitted. The Supreme Administrative Court resolutely refuses to become a fact-finding court, except when it acts as the first instance court, and, with reference to the principle of concentration enshrined in Section 109 (5) of the Code of Administrative Procedure, does not allow new factual claims to be submitted in proceedings before it.[12]

The Constitutional Court - given the delimitation of its position *vis-à-vis* general courts - is not fundamentally entitled to intervene before administrative authorities and general courts regarding the evaluation of evidence, even if it could reach a different outcome. Such intervention is only plausible if the administrative bodies and courts apparently and unjustifiably deviated from the statutory standards of taking evidence (Section 50 and 51 of the Code of Administrative Procedure, Section 77 of the Code of Criminal Procedure), or if the assessment of evidence and the factual conclusions adopted are an expression of a manifest factual error or logical excess (internal contradiction), or are based on a completely incomplete (insufficient) evidence.[13]

d) How would you handle evidence derived from geospatial (GIS) technologies (such as satellite images, aerial photography, drones, etc.) (see for instance the use of geospatial intelligence in the Bialowieza case, C-441/17 R)? In what type of cases and in what ways do you utilize them? How can they promote compliance monitoring and a more effective enforcement?

The evidence derived from geospatial technologies would be used as any other means of evidence. There are already several cases in which the administrative courts considered satellite images as valid proof for the dispute. For example, in the judgement of 25 July 2018, no. 2 As 386/2017 - 39, the SAC reviewed a declaration of publicly accessible

[11] See decision of the Supreme Court of 23 May 2015, no. 3 Tdo 403/2015.
[12] See judgement of the Supreme Administrative Court of 28 April 2016, no. 9 Afs 269/2015 – 54.
[13] See decisions of the Constitutional Court in cases no. III. ÚS 84/94, III. ÚS 166/95, ÚS 182/02, II ÚS 539/02, I. ÚS 585/04.

purpose-built communication. It held that the satellite images attached to the cassation complaint suggested that i) the road going through the complainant's land was wider and of better quality than another road nearby, and ii) that some real estate could be achieved only through the road going through the complainant's land. Therefore, the court concluded, it was correctly declared a purpose-built communication.

In its judgement of 16 January 2017, no. 7 As 140/2016 – 99, the Supreme Administrative Court relied on the terrestrial mapping images (*World View*) obtained by the Police from the Eurimage company. The images proved that the solar panels were not placed on one of the plots on which solar plant was to be located; the land was empty. The Court concluded that *„even in the cassation complaint proceedings, the complainant did not substantiate other images that would have taken up the power plant in question in the completed state at the time (and could, therefore, question the outputs of the evidence taken by the regional court).“*

The administrative courts also use generally accessible online maps (such as Google Maps or mapy.cz) as evidence. According to the case law, a general objection of the possible error of the Internet maps does not lead to the conclusion that the administrative decision is unlawful. It is the plaintiff that has to present particular arguments as regards reliability of the map in question: *„Admittedly, the complainant is not obliged to prove the correctness of the Internet maps as he claims in his defence, but his objection to the error rate of maps lacking any specific assertion in relation to the Internet maps of his offence was not of great importance to the decision.“*[14]

2) When do you gather expert advice?

a) How do you distinguish between technical/scientific questions and legal questions in fact-intensive disputes, where science and law are closely interlinked in the underlying legal rules and concepts?

In fact-intensive environmental disputes, judges often deal with complaints which point to procedural or legal errors committed by the administrative authority. The court usually decides between the facts described by the official authority and the facts perceived by the plaintiff – and the technical questions sort of complement the legal side of the case.

The line between the technical questions and legal questions is not always visible, and the judges only rarely describe it in complex cases. There are two exceptions, though: 1) The judge is confronted with an expert opinion which deals with a legal question and has to reject its conclusions as inadmissible, 2) the judge has to request an expert opinion and determine technical questions for this purpose.

Ad 1) For example, under Section 12(2) of Act no. 114/1992 Coll., On Protection of Nature and Landscape, the approval of the nature protection authority is necessary for the placement and authorisation of buildings as well as for other activities that could reduce or change the landscape character. In the judgement of 5 November 2008, no. 1 As 59/2008 – 77, the Supreme Administrative Court concluded that the expert opinion is intended solely to examine factual issues and therefore, the expert cannot assess whether certain construction modifications could reduce or change the landscape character, as this issue is a legal issue. As a consequence, the expert can provide its opinion on the quality and

[14] Judgement of the Supreme Administrative Court of 23 January 2014, no. 9 As 128/2013 – 45, para 20.

characteristics of the particular part of the landscape, or describe the construction in the context of the landscape, but cannot directly answer whether the conditions stipulated in the abovementioned legislation have been met.
Ad 2) The need to engage in the examination of expert questions seems to be eliminated to a certain extent by the concept of administrative justice, which serves to protect subjective public rights, while substantive disputes are *"fundamentally settled in administrative proceedings and using the appropriate administrative process instrumentation."*[15] This means, first and foremost, that restraint is the starting point for administrative justice [16] so that the demands for detail and the extent of dealing with objections must not be excessive.[17] The scope of judicial review in a particular case is determined by an action and the possibility of assessing its merits is decisive for whether and in what direction to adduce evidence, although the court is not bound by an exception or lockout to any of the defendant parties which would limit the scope of the review of the contested decision to certain questions of fact or law only.[18] If the incorrectness of the administrative findings of the administrative authority is not obvious, it is for the applicant to submit relevant arguments by which to contest those conclusions.

According to the case law, the need for an expert opinion is an objective question; technical knowledge is simply needed or not.[19] The Supreme Administrative Court adds that *"if the assessment of the facts is dependent on expertise, it is the duty of the court to assess these circumstances only through an expert, regardless of whether the judge has the necessary expertise."* [20] Above all, the judge should be able to penetrate deeper into the subject matter to be able to recognise when he can assess the matter and when he must invite an expert to help with the complexity of the solution.

Differences between notoriety, simple and complicated assessments of facts are well illustrated by, for example, the conclusions of the Supreme Administrative Court on the elimination of alcohol in the blood: *"The fact that alcohol is broken down in the blood is a notoriousness and the conclusion that only a tiny amount of alcohol has been eliminated in 90 minutes by the complainant, does not give rise to suspicion of arbitrariness or the need to verify it expertly. A completely different situation would occur at diametrically different measurement values; at that time, the expert examination would be appropriate."*[21]

Often, judges assess the obvious facts from the position of the *reasonably intelligent layman*. Instead of a precise conclusion, they aim at recognising whether the contested solution or expert conclusions *"appear absurd, out of line with rationality and the current state of general knowledge"*.[22] This is a standard procedure applied in reviewing administrative decisions that are based on facts that require expertise. As a consequence,

[15] See resolution of the extended senate of the Supreme Administrative Court of 16 November 2010, no. 1 Ao 2/2010 – 116.
[16] See, for example, judgments of of the Supreme Administrative Court of 3 September 2010, no. 2 Ao 4/2010 - 109, of 18 October 2018, no. 7 As 261/2018 - 93. Or judgements of the Constitutional Court of 26 May 2009, no. Pl. ÚS 40/08, of 18 December 2018, no. Pl. ÚS 4/18.
[17] See judgement of the Constitutional Court of 7 May 2013, no. III. ÚS 1669/11.
[18] See resolution of the extended senate of the Supreme Administrative Court of 12 May 2015, no. 7 As 69/2014 – 50.
[19] See judgments of the Supreme Administrative Court of 5 September 2011, no. 8 As 41/2010 - 117, or of 17 October 2018, no. 1 As 136/2018 – 32.
[20] Judgment of the Supreme Administrative Court of 19 April 2013, no. 7 As 71/2012 - 39.
[21] Judgment of the Supreme Administrative Court of 11 May 2016, no. 10 As 173/2015 – 32.
[22] Judgment of the Supreme Administrative Court of 24 September 2015, no. 2 As 114/2015 – 36.

absurd arguments should be dismissed by the administrative courts as irrelevant without taking evidence, because they cannot lead to factual findings relevant to the proceedings.

According to case law, a judge - layman can for example easily compare photographs that result from the measurement of the speed of vehicles on the road[23] or know that tobacco products are found in boxes labelled *tobacco*.[24] However, a judge - layman often goes into more technical considerations, eg when comparing noise descriptors or to a method of measuring the speed of a vehicle to conclude that *"the angle between the measuring radar beam and the axis of travel of the measured vehicle could affect the measurement result , since the sharper the angle is, the closer the actual speed of the vehicle should be measured by the instrument, "or when evaluating that" there is some distortion of the transmitted image and that the distortion may vary according to the type of broadcast signal"*.[25]

Here we are already moving in a wide "grey zone" of expertise in which the courts sometimes make their conclusions without calling an expert. Recent case law of the Constitutional Court provides two remarkable examples of this phenomenon. In late 2018, in its dissenting opinion on the ruling of the Constitutional Court on food banks, judge V. Šimíček criticised the plenary for having decided in a situation where it did not have sufficient relevant information on the question of how big the problem of the disposal of food sales is in practice.[26] In a dissenting opinion on another judgement adopted the same day, which concerned the regulation of noise limits, judge L. David stated that the expert opinions on the issue under consideration *"were merely provided by short references to scientific texts, especially from international sources. The necessity of expert judgment can certainly not in itself exclude the problem or even the whole case from the hearing and decision in the case."*[27]

The situation is remarkably different in the civil judiciary with its lack of the first-step assessment by the official administrative authorities. Here one may witness (extensive) use of experts (i.e. expert witnesses) in judicial proceedings. Indeed, rightly or not, several judicial proceedings in the Czech Republic today might be aptly described as battles of expert opinions.

b) Are there any types of cases and/or questions where gathering scientific evidence is mandatory under domestic law?

Not to our knowledge. The only exception seems to be the civil non-contentious proceedings under the Law No. 292/2013 Coll. On Special Proceedings. In these proceedings, the plaintiff and the defendant do not stand against each other, but the range of parties to the proceedings depends on the type of procedure and may be very diverse (for example inheritance proceedings, custody proceedings, the redemption of the deed, declaration of death). The court does not have the role of a mere arbitrator but must itself be active and act in such a way as to achieve the purpose of the proceedings and to fulfil the public interest.

[23] See judgment of the Supreme Administrative Court of 25 September 2009, no. 2 As 64/2009 - 50.
[24] See judgment of the Regional Court in Pilsen of 15 December 2017, no. 30 Af 35/2016 – 55.
[25] Judgment of the Supreme Administrative Court of 16 May 2013, no. 7 As 148/2012 – 28.
[26] See judgement of the Constitutional Court of 18 December 2018, no. Pl. ÚS 27/16.
[27] See judgement of the Constitutional Court of 18 December 2018, no. Pl. ÚS 4/18.

c) To what extent are judges allowed to investigate the scientific dimensions of cases *ex officio*?

In the administrative judiciary, the judges are not restricted to investigate the scientific dimensions of cases *ex officio.* By providing the evidence, the court can specify what the facts of the case are which served as a basis for the decision of the administrative authority. Over this framework, it can also ascertain new facts of the case as a basis for the court decision-making within full jurisdiction, but in such a scope so as not to substitute the activities of the administrative authority. It bases its activities both on the evidence produced by the administrative authority and on the evidence it has produced itself. It can also produce the evidence, which was not suggested by the parties. The responsibility for acquiring the evidence lies on the court; however, there is a broad obligation of cooperation of the parties and third persons.

3) Rules of expert appointment

a) What are the selection criteria of experts in your jurisdiction (e.g. having requisite training, being impartial, independent from the party, being enrolled on government-issued lists, etc.)?

The experts must be registered on lists established by regional courts. Any governmental body, scientific institution, college or other organisation dealing with the activity for which the expert suggests activity may be proposed to be an expert. However, a future expert may also apply for the appointment himself. The appointment terms are Czech citizenship (may be waived in justified cases), comprehensive knowledge and experience from the field (details are provided for each field of expertise), personal qualities guaranteeing proper performance of expert activities; consent to the appointment. In most cases, the appointment of an expert is in the hands of the relevant President of the Regional Court, in whose district the applicant for judicial expert status is interested.

Currently, the Ministry of Justice runs a national register of more than 10 thousand individual experts. The experts are classified according to their field of expertise and their specialisation, which corresponds to two levels of classification (ex: in the field of transportation, they are listed as air, maritime, rail, road, urban, warehousing, and trans-shipment).

There is a separate register of more than four hundred public or legal persons who are especially entitled to carry out expert missions. However, the judge may appoint an unregistered expert if there is none in the required specialist field or in extremely complex disputes that demand highly specialised skills (i.e. universities, clinics, etc.).

b) Whether and on what basis can a party challenge the appointment of a party-appointed/court-appointed/in-house expert?

The parties have the right to criticise the expert examination as they do any other piece of evidence. They can rely on their own expert examination, which will be considered as another form of written evidence. The judge must decide on the credibility of the expert's opinion and of its value as proof. If necessary, the judge can ask for a counter-examination.

c) To what extent and in what ways do judges in your jurisdiction exercise control over the scientific fact-finding process (e.g. by defining precisely the scope of factual controversy needed to be addressed by experts)?

The judges define precisely the scope of factual controversy needed to be addressed by experts. After adopted, the expert's opinion is an element of proof. The judge assesses the intrinsic value of each piece of evidence and their global value as related to each other. This principle applies fully to expert opinions. The judge is not bound by the expert's findings, but he must give a due reason not to rely on the conclusions or, on the contrary, explain why he believes they are sufficient evidence.

4) Evidentiary issues: standard and burden of proof

a) What is the applicable standard of proof for environmental cases in administrative, civil and criminal law (e.g. preponderance of the evidence, beyond reasonable doubt, etc.)? Is it set in domestic law, or are judges free to adjust the standard as they deem fit?

In criminal law, proof beyond a reasonable doubt is required. Pursuant to Section 2(5) of Act No. 141/1961 Coll, on Criminal Procedure, law enforcement authorities act in accordance with their rights and obligations under this Act and with the assistance of the parties so as to duly establish the facts of the case of which no reasonable doubt exists and to the extent that is necessary for their decisions. According to case law, the principle of the presumption of innocence requires that it be the state that bears the specific burden of proof; if there are any doubts, they cannot be interpreted to the detriment of the accused; the defendant, but they must be interpreted in his favour. The principle of the presumption of innocence implies the rule of *in dubio pro reo*, according to which, unless there is practical certainty about the existence of relevant factual circumstances, that is to say, there are reasonable doubts in relation to the offender or the offender, further evidence, it must be decided in favour of the accused.[28]

Under Section 69(2) of Act No. 250/2016 Coll., on the Responsibility for the Administrative Offences, the principle *in dubio pro reo* also applies to administrative liability (liability for administrative offences). The administrative courts, therefore, have to require proof beyond reasonable doubt when dealing with administrative offences.

In other administrative cases, a high degree of probability corresponding to virtual certainty is sufficient. If the judge is not convinced that a party's allegation of fact is true to the degree of virtual certainty, the fact cannot be considered proven. In this respect, the administrative courts follow or share a similar approach to the standard of proof as to the civil courts, because handling the evidence in the administrative judiciary is based on civil procedure.

Act No. 99/1963 Coll, The Code of Civil Procedure does not expressly stipulate to what degree the judge must be convinced that a certain submission of facts is true. The general provisions of the Code of Civil Procedure, which perceive the purpose of civil court proceedings in the protection of (subjective) rights and consequently emphasise reliable establishment of the facts of the case (Sections 1 and 6 of the Code of Civil Procedure) indicate that the Czech civil procedure is governed by the principle of subjective proof standards. Certain fact can only be considered proven if the judge considers the fact to be

[28] See judgement of the Constitutional Court of 12 January 2009, no. II.ÚS 1975/08.

virtually certain, based on his free personal belief. Both the theory and practice deny that hundred-percent certainty in mathematical or statistical terms would be required since such a degree of certainty is only rarely achievable; more precisely, absolute certainty is not required since that would be beyond human abilities. According to the Supreme Court*, "it is not required that the truth be established with absolute certainty, but rather with a great degree of probability of the relevant facts neighbouring on virtual certainty"*.[29] Only rarely is the standard of proof lower.

Nonetheless, in certain cases, the Code of Civil Procedure does not require full evidence and accepts if the given facts have merely been documented. For example, for ordering a preliminary injunction, it is sufficient if the relevant facts have been documented (Section 75c (1) of the Code of Civil Procedure). Contrary to full evidence which requires the judge to be convinced to the degree of virtual certainty, predominant probability suffices where facts are to be documented.

Furthermore, the Civil Code (Act no. 89/2012 Coll.) requires only probability as regards liability for damage caused by a particularly hazardous operation which might be important in environmental matters (although there are no major cases yet to provide example): *"If circumstances clearly indicate that the operation has significantly increased the risk of damage, although it can be legitimately referred to other possible causes, a court shall order the operator to provide compensation for the damage to the extent that corresponds to the probability of the damage having been caused by the operation."*[30]

In administrative cases, a lower standard of proof applies most notably to asylum matters and the *non-refoulement* principle.[31]

b) What are the rules of allocating the burden of proof in science-intensive cases (maybe give one or two examples to indicate what is meant by science intensive cases)?

The treatment of causation has been particularly inconsistent in environmental cases, both public and civil ones. Before administrative courts, it is predominantly considered as a component of *locus standi*. Meanwhile, civil courts focus on whether the plaintiff has presented sufficient evidence on causation after standing has been established (or presumed). The differences can also be attributed to the specific circumstances of each particular case. It seems that the courts are more willing to recognise a causal link if damage to property is involved than regarding claims for compensation for non-material damage. Furthermore, science may develop over time and provide more effective methods to track (or exclude) the actual cause of the damage in multiple-emitter environmental cases. Because of the nature of the substances generally involved, the harms due to exposure are often not discovered until long after an incident occurred.

Under Czech law, the parties must identify the evidence they rely on in their allegations. The court subsequently decides which of the evidence adduced shall be taken. Nevertheless, the court may (or must, in fact) also take evidence other than adduced by the parties where it is required to ascertain the facts of the case and where they follow from the

[29] Judgement of the Supreme Court of 8 January 2014, no. 28 Cdo 3459/2013.
[30] Section 2925(2) of the Civil Code.
[31] See judgement of the Supreme Administrative Court of 26 March 2008, no. 2 Azs 71/2006 – 82.

contents of the file.[32] Courts generally allow evidence from epidemiological or toxicological studies that establish a likely causal relationship between exposure and harm. These studies, however, must be presented or at least proposed by the plaintiffs with reasons for their relevance. Epidemiological studies, for example, which examine existing populations for an association between a disease or condition and a factor suspected of causing that disease or condition, are increasingly indispensable in tort cases concerning toxicity where specific causation studies are lacking. However, the plaintiff has to invest money in such expertise if there is nothing that would provide useful conclusions tailored to the specific circumstances. Even though it is not required that the truth is established with absolute certainty, a great degree of probability of the relevant facts neighbouring on virtual certainty is nevertheless required.[33]

To provide an example, a number of court decisions have been adopted by the Czech courts with regards to damage to forests. The usual plaintiff, Lesy ČR, a state company responsible for the management of state-owned forests, frequently claimed damages caused by toxic pollutants emitted by nearby industrial operations (heat and power plants). For a long time, the courts considered the causal link sufficiently established.[34] Many cases even reached the Constitutional Court with the same result: All constitutional complaints have been dismissed as manifestly unfounded.[35] The courts based their decision on the argument that the complainant cannot successfully protect itself, pointing out that the discharged emissions were spreading in the area in a direction that the operator could not influence, as well as the fact that the emissions were deposited on the earth's surface. To support its findings,[36] the Constitutional Court even referred to the case law of the CJEU on environmental liability, according to which the EU directive *"...does not preclude national legislation that allows the competent authority acting within the framework of the directive to operate on the presumption, also in cases involving diffuse pollution, that there is a causal link between operators and the pollution found on account of the fact that the operators' installations are located close to the polluted area"*,[37] and the case law of European Court of Human Rights regarding general interest on protection of environment.[38]

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[32] Section 120(2) of the Act No. 99/1963 Coll., the Code of Civil Procedure.

[33] Judgement the Supreme Court of 8 January 2014, No. 28 Cdo 3459/2013.

[34] See judgements of the Supreme Court of 28 August 2003, No. 25 Cdo 325/2002, of 24 April 2013, no. 25 Cdo 4346/2011, or resolutions of 29 November 2010, No. 25 Cdo 2745/2009, of 24 April 2013, No. 25 Cdo 4346/2011.

[35] See resolutions of the Constitutional Court of January 2009 file no. II ÚS 3089/08, of 5 May 2008 file no. IV 509/08, of 24 October 2013 file no. III Ú Ú 3375/12 and of 21. November 2013 file no. III ÚS 1211/13

[36] Resolution of the Constitutional Court of 12 November 2017, No. I. ÚS 1821/16.

[37] Judgment of the Court of Justice of the European Union (Grand Chamber) of 9 March 2010, *ERG and Others* (C-378/08, ECLI:EU:C:2010:126).

[38] Judgements of the European Court of Human Rights of 29 November 1991, *Pine Valley Developments Ltd and others v. Ireland* (Application no. 12742/87), of 29 March 2000, *Depalle v. France* (Application no. 34044/02), decision of 21 March 2006, *Valico S. r. l. v. Italy* (Application no. 70074/01).

However, the above approach seems to have changed recently. To depart from the settled case law, the courts rely on the provisions of the (still rather new) Civil Code and any substantial change in the circumstances on the side of the polluters. They conclude that, due to the massive investment in the greening of incineration processes carried out in the 1990s, operating activities are so marginal compared to other factors affecting forest health that the adequate causal link is pretty much absent.[39] For the owners of the forests, this translates to a sudden deficit of millions of Euros annually.

The compensation for damage to forests is subject to rules set out partially in a specific public law regulation;[40] the principles of civil liability are applicable nonetheless. The conclusions of the case law can, therefore, illustrate how the courts would probably deal with class actions in environmental matters. At the same time, it is hard to imagine individuals who would avail of the funds needed for scientific expertise in the complex issues in disputes concerning minor health issues or minor damage to the property. It is therefore not surprising that, of the few similar cases dealing with damage caused by industrial activity, small claims are rare. The courts have dealt, for example, with damage to crops over 392.5 hectares caused by SO_2 emitted by power plants[41] or accidents at work that resulted in death.[42] In these cases, the causal link had been established.

5) Rules of evaluating expert evidence: standard (intensity) of review
a) How do you choose between two competing or conflicting pieces of expert evidence?

As a general rule, if the two competing or conflicting pieces of expert evidence have the same value and credibility, the judge would appoint the expert. Further on, the judge must decide on the credibility of the expert's opinion and of its value as proof. If necessary, the judge can ask for a counter-examination. If there are two conflicting expert opinions, the judge asks for a review opinion from the third expert.

The principle of free evaluation of evidence applies exclusively to the evaluation of veracity or credibility of the evidence. This includes, for example, expert reports. On the other hand, the principle does not apply to the evaluation of the weight of any piece of evidence in the sense of its relevance for clarifying the facts of the case. Weight evaluation is a matter of legal assessment rather than a free evaluation of evidence in the sense of its veracity. Similarly, free evaluation is not applicable to the evaluation of the legality of the manner in which evidence was obtained.

b) Could you review the scientific assessments and justifications made by a competent domestic authority (by conducting a *de novo* review of the evidence)? Or is your judicial review deferential towards the scientific claims of domestic authorities?

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39 See for example judgment of the District Court of Prague 4 of 17 July 2018, No. 55 C 114/2008-1257.

40 Decree of the Ministry of Agriculture No. 55/199, on the method of calculating the amount of damage or damage caused by forests, and section 21(1) of the Act No. 289/1995 Coll., the Forest Act: *"Legal entities and individuals who, in their activities, use or produce matters damaging the forest, shall be obliged to take measures to avoid or reduce their harmful impact."*

41 Judgment of the Supreme Court of 18 October 2005, No. 25 Cdo 2749/2004.

42 Judgments of the Supreme Court of 10 November 2015, No. 21 Cdo 1161/2014, of 18 February 2015, No. 25 Cdo 1641/2014.

Yes, the administrative judges a free to conduct a *de novo* review of the evidence and are not bound by the assessment conducted by the official authorities (see above).

c) What is the applicable standard of review to scrutinize the scientific assessments of domestic authorities (e.g. scrutinizing 'manifest errors', or the reasonableness/consistency/coherence of their scientific conclusions, or interrogating the scientific validity and factual correctness of the evidence, or reviewing the procedural aspects of the science-based decision-making process at hand)?

The applicable standard of review to scrutinise the scientific assessments of domestic authorities is not provided by law. The review must go as far as to dispel any reasonable doubts regarding the conclusions provided by the domestic authority and at the same time be effective to provide protection to the individual public-law rights under the given circumstances. The judge will only review assessment, which, if incorrect, could have affected the legality of the contested decision.[43]

6) The role of science and technology in the courtroom – an overall assessment
a) To what extent do you consider the difficulties of scientific fact-finding to be a defining challenge in environmental adjudication compared to other difficulties?

The difficulties of scientific fact-finding seem to be a serious challenge for the official authorities in complex environmental cases. The courts are, on the other hand, provided with administrative files elaborated on both levels of administrative decision-making (first instance and appeal). As a result, scientific fact-finding is rarely their primary task. Moreover, in environmental cases, the administrative courts often require an alternative solution to the assessment of the domestic authorities to be presented by the plaintiff and supported by plausible scientific evidence. Otherwise, the challenge is dismissed. Very often, there is no reason for any advanced scientific fact-finding at all. Therefore, it seems that difficulties of scientific fact-finding in environmental matters seem to present a crucial challenge for the plaintiff, not for the court.

For the courts, the cases themselves combined with the complexity of legal regulation and scientific background seem to present the biggest challenge. Some cases are not decided correctly by the courts simply because the judges do not completely understand the *ratio* of the case. Or, they underestimate the EU level of the relevant legislation. Since many cases stretch over long years, the temporal aspects also play an important role in environmental cases.

b) Do you consider the domestic rules of expert involvement to be appropriate to secure judicial control/monopoly over deciding environmental disputes? Or do you think judges should exercise greater control over the scientific fact-finding process?

We consider the domestic rules of expert involvement to be appropriate to secure judicial control over deciding environmental disputes. In practice, the judges only rarely use the experts in environmental matters. However, there does not seem to be a true need for more frequent involvement of experts, aside from several specific cases.

[43] Pursuant to Section 2 of the Code of Administrative Justice (Act No. 150/2002 Coll.), courts in administrative justice provide protection to the individual public-law rights of both natural persons and legal entities. Therefore, protection to the individual public-law rights is the crucial aspect in considerations upon the seriousness of the error.

c) Do you consider the limits of curial supervision of fact-intensive cases are appropriate for providing effective judicial protection and promoting uniform application of EU law?

There are no considerable limits of curial supervision of fact-intensive cases which would threaten or jeopardise effective judicial protection and promoting uniform application of EU law.

d) Do you think it is necessary and if so, in what ways, to improve the scientific engagement of judges (E.g. would you improve the procedural rules of scientific fact-finding, enhance the scientific competence of the judges through training and capacity building, or develop new legal tests to review contradicting scientific evidence, etc.)?

There does not seem to be an evident need to improve the scientific engagement of judges. The judges would, however, benefit from i) sharing know-how with their colleagues from the other Member States, ii) getting more information as regards requirements of the EU law concerning procedural aspects of the judicial proceedings.

7) Case study
How would you delineate applicable questions of law and science in the following cases, what types of expert evidence would be gathered, and how would they be evaluated? Choose one of the following cases, according to your field of expertise:

a) The case brought before you is about a proposed artificial groundwater production plant that might impact a nearby Natura 2000 -site, whose conservation values are contingent on groundwater levels, thus being of concern when authorizing artificial groundwater undertaking outside the protected area. The Natura 2000 site has e.g. the region's largest sinkhole that has wetland at the bottom of it, and is thus connected with the groundwater formations. It also has coniferous forests on glaciofluvial eskers, and the site is generally described as having calcareous fens and springfens (all listed as Natura 2000 habitats). Up until now the plant has gained the required approvals. The groundwater model used in the proposed undertaking's plans modeled the water currents in the ground. As typical of such models, it was more uncertain in the rims of the area than in its centre. Coincidentally, these rims of the area also included especially sensitive and small wetland formation. The administrative authority, in its statement of reasons, discussed the role of the precautionary principle and scientific uncertainty, noting that neither formed as such a reason to not allow the venture. They only obliged the administration to establish such permit conditions that they adequately curbed the harmful impact. However, an environmental NGO brings a claim against the permit arguing that the permit should not have been granted at all. They claim that since the scientific assessments presented before the administrative authority did not remove all justified scientific uncertainty on the undertaking's consequences, and since there are thus relevant risk of detrimental impact to the Natura 2000 –site, the plan should not be allowed to proceed.

Since the NGO claims that the scientific assessments presented before the administrative authority did not remove all justified scientific uncertainty, the court would likely first consider, whether such argument is valid *prima facie*, even without the involvement of experts. If not, then the court would require the NGO to present arguments or evidence

which would support its claim, and basically to raise considerable points against conclusions of the official authority.

At least three different scenarios may turn out:

- The possible risks have been fully recognised by the official authority, which may have caused illegal decision. This would be considered procedural or substantive error and a reason to simply quash the decision of the official authority.

- The possible risks have been recognised and described by the official authority. Nevertheless, based on the valid arguments of the NGO, the uncertainty of the consequences is disputed. In this case, the court would likely appoint an expert and ask him for an opinion.

- The possible risks have been recognised and described by the official authority. The NGO did not raise any valid arguments in this regard or the expert confirmed the conclusions of the official authority. In this scenario, the court will likely only deal with the application of the precautionary principle (legal question) with no additional need to appoint the (another) expert.

b) The case brought before you is a case of illegal trade in birds protected under the EU CITES regulation Annex A (e.g. Red kite, Egyptian Vulture). Trade activities with respect to these birds are prohibited. There is an exception when one can prove that a specimen has been bred and born in captivity.

These birds can obtain a CITES-passport, which makes them marketable. Through forgery of rings and breeder's declarations, the defendants obtained CITES-certificates for "captive-born and bred species", which allowed them to commercialise the birds in spite of the general prohibition to trade EU CITES Regulation Annex A species. A bird protection NGO becomes a party to the criminal proceedings and claims moral damages because of the loss of the birds. Would this be evaluated by an expert? If not, how would the court estimate the amount of the compensation?

First of all, the NGO would probably not be allowed to become a party to the criminal proceedings and claim moral damages for the loss of the birds. The Czech legislation and case law have not come that far as to consider the environmental NGOs to claim the position of the victim to a crime. Within environmental liability regime which covers administrative offences on soil, water and protected species and their habitats, the State would be entitled to claim damage. Nevertheless, environmental liability is not applied in practice. Therefore, neither the official authorities nor the courts have experience with its application. The damage on the protected species is only reflected in the punishment of the perpetrator, usually in the height of the financial sanction imposed in administrative proceedings. In this respect, the courts merely review the proportionality of the sanction and quash the administrative decision provided the sanction is evidently disproportionate.

As a consequence, it is a primary task of the administrative authorities to measure a correct sanction. For this task, they do not have any guidance or implementing legislation which would set the indicative value of the harmed interests. In practice, however, they tend to refer to Slovak legislation, which provides general value (price) of endangered plants and

animals. A typical statement of the Czech Environmental Inspectorate, which is regularly asked to determine the value of the species for the purpose of criminal proceedings, is following: *"There are no relevant regulations on the determination of the value of the species in question in the Czech Republic. The Agency for Nature Conservation and Landscape Protection of the Czech Republic is a responsible expert scientific body to estimate the value of the species. Alternatively, Annex No. 6 of the Decree of the Ministry of the Environment of the Slovak Republic No. 579/2008 Coll., Dated 10 December 2008 may be used, with the values stated in euros are recalculated it according to the Czech National Bank's current exchange rate list."*