

EUFJE Conference 2019

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The role of science in environmental adjudication

Questionnaire

Introduction

Science and technology enter environmental adjudication in various forms ranging 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.

[Greece response to the questionnaire](#)

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? [In Greece scientific advice is gathered first of all by the parties. The parties are paying experts who are editing a report which is brought before the court. In addition the expert can be heard by the court in order to give explanations about his report, mainly about the scientific or technical aspects of his report. Finally, the court is entitled to designate experts by an official list which is compiled by the court every year. This expert is considered to be a helper of the court and a public servant. His opinion is of great importance as he is considered to be impartial. The court is competent to control the justification of this expert's report and deviate if another justification fits better to it but this case is rare.](#)

- 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.)? There are no standards of references. Each expert is justifying his position as he thinks better.
- 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? The inferior trial courts (of first and second instance) have full competence to design experts to investigate scientific questions. More specifically the second instance court is free to designate new experts (one to three, depending on the importance of the case) if the reports that have been already edited by the designated experts of the first instance court are not sufficiently justified.
- 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? All kind of expertise is given to the court in the type of reports. The reports are supposed to give enough explanation to the non-experts judges. The same happens with the GIS technologies. Such kind of technology is rarely used, mainly in land litigation.

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? This issue is doubtlessly an exclusive competence of the court and in any case of the Supreme Court. As legal events are considered all events that are of production, modification or abolishment of a particular legal relationship. All the others are considered to be substantive issues. It is a difficult task...
- b) Are there any types of cases and/or questions where gathering scientific evidence is mandatory under domestic law? When technical or scientific issues who need special knowledge are raised and one of the parties is asking the designation of an expert, the court is obliged to design the expert.
- c) To what extent are judges allowed to investigate the scientific dimensions of cases *ex officio*? The judge is completely free to decide upon the case as long as he is justifying his opinion. If there is an expertise he is deciding upon the soundness of the justification of it. If there is not, scientific or technical issues which are the subject of common knowledge can be decided directly, without an expertise.

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.)? As mentioned above (1.a) the court is entitled to designate experts by an official list which is compiled by the court every year. These experts are considered to be helpers of the court and public servants. Their opinion is of great importance as they are considered to be

- impartial. The experts are included in this directory at their request or in their capacity as chamber members.
- b) Whether and on what basis can a party challenge the appointment of a party-appointed/court-appointed/in-house expert? Experts appointed by parties are not challenged. What can be challenged is their conclusion or methodology in their report. In the contrary experts designed by the court can be challenged as partial. In this case the expert's designation can be challenged for the replacement of the expert.
 - 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)? This is a difficult task. The court should be very cautious to address a very specific query to the experts, in order to have a proper answer.
- 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? As a general rule in criminal cases the standard of proof is "complete proof" that is to say the judge must be entirely convinced about the culpability. In criminal and administrative cases we use the interrogation system (the court is gathering evidence under its own responsibility). In civil cases there is a system of preponderance of the evidence. The burden of proof is to the detriment of the applicant.
 - 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)? See above answer. There is no discrimination between "common" cases and "science" cases.
- 5) Rules of evaluating expert evidence: standard (intensity) of review**
- a) How do you choose between two competing or conflicting pieces of expert evidence? This is a common issue. If the one expert is designated by the court and the other by a litigant, the expertise of the former is preferable. In any case what is checked by the court is the justification, even the scientific foundation and bibliographic support of the expertise.
 - 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? This is a common issue in administrative cases, when an administrative act is challenged. Anyway the court is free to investigate the case in any way it judges preferable, even if a conclusion made by a public authority has increased probative value.
 - 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 science-based decision-making process at hand)? All of this can matter.
- 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? *It is a common issue.*
- 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? *The system is quiet fair.*
- 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? *As it concerns the penal cases, the court is absolutely free to decide upon its estimation of the facts. In civil cases the preponderance of the evidence system is not always promising the finding of the truth. As it refers to administrative cases, to my knowledge, the problem is that in many cases to court is unable to restore the illegality of the administrative act.*
- 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.)? *It is sure that improvement of procedural rules would be helpful. The weakness of the system lies on the fact that experts usually act separately, with the result that there are differences in their findings, which raise concerns to the court. Their commitment to cooperate, as is the case in the Australian system, would be preferable. In any case training of judges would be helpful.*

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.

- 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?

After the loading of the lawsuit an investigating officer will take over the case. He might be a police officer or a customs' officer, designated by the prosecutor. If this issue is not of his knowledge, as it is the case in such occasions, the officer is entitled to design an expert. The expertise can be challenged before the court but in practise it is admitted by the court. By the new code of criminal procedure the criminal court is not competent to award compensation. The NGO will just appear in criminal proceedings in support of the charge. A compensation can be awarded after a lawsuit before the civil court. There is no a system to estimate the amount. To my knowledge there is not such a case brought before the civil courts, even if there are such criminal cases. My estimation is that the amount of compensation will be very low, calculated somewhat arbitrarily based on the value of the specimen captured. I am afraid that there is not enough sensibility in our society about environmental issues.