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The role of science in environmental adjudication

Belgian Report

Preliminary remark: the questions have been answered by a judge of the Belgian Constitutional court, by criminal judges and by administrative judges.

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?

- Constitutional Court: Although the Special Act on the Constitutional Court makes it possible to appoint experts, that possibility has never been used till now (in any matter). If the Court feels it's necessary in its review of constitutionality of acts of the parliaments to have insight in relevant scientific or technical data, and these are not available in the preparatory documents from the parliament (including opinions from advisory bodies), nor in the submissions of the parties, it will raise precise questions to the parties and invite them to answer them and submit their answers to review by the other parties.

- Criminal courts: There are no expert judges, in-house experts or expert assessors in Belgian criminal courts.

There is, of course, a possibility for the court to appoint itself, either *ex officio* or at the request of one of the parties, a scientific expert (also called judicial expert) to advise the court on a technical matter. However, in practice this hardly ever happens.

In the thousands of environmental cases I handled in the court of Ghent during the past 30 years, the court or the investigating judge have appointed experts in no more than 5 cases (i.e. in noise, soil pollution, odor cases and a bird expert and DNA expert in a CITES bird case). In some cases, parties bring in reports of their own experts. Sometimes the environmental inspection department or noise experts of the provincial environmental authority are asked by the court (via the public prosecutor) to meet the technical arguments of the parties and their experts.

The main source of scientific advice to the court in my files are the official reports of the environmental inspection department. This department has technical experts in various fields (water, air, soil, waste...). Every official report has a scientific part, which explains the impact of the infringement on man and nature. Unfortunately, the environmental inspection department only supervises class 1 companies. The municipal supervisors / environment officials are competent for the other classified establishments. They have significantly less scientific knowledge. In addition, whether or not they act in a case, varies according to the region (e.g. in large cities such as Antwerp or Ghent, they draw up many official reports, while in rural areas they tend to act much less).

Finally, there are the police officers. They prepare the most official reports and have minimal scientific knowledge.

- Environmental administrative courts [1]:

Between 2009 and 2015, the Environmental Enforcement College had expert judges.

In 2015 the regulations (appointment conditions) were revised in such a way that such technical judges are no longer possible.

The Flemish environmental administrative courts currently do not have "internal" experts.

The court may, at its own initiative or at the request of a party, appoint an (external) expert to advise the court on a (technical) matter. In practice this does not (yet) happen.

If a court finds the public authority has not sufficiently investigated a certain relevant aspect, the decision will usually be annulled and the public authority must ensure that

[1] The Flemish Region has 2 specialised environmental administrative courts: The Council for Permit Disputes ("Raad voor Vergunningsbetwistingen") and the Enforcement College ("Handhavingscollege"). There are 9 judges working for the Council for Permit Disputes and the Enforcement College.

The Council for Permit Disputes was established by the Flemish parliament in September 2009 as an administrative court for permits in the area of town and country planning and, recently, for the "integrated environmental permits" (former town planning permit and environmental permit combined). The Council for Permit Disputes has taken over the competences of the Council of State with regard to permits in the Flemish Region, because the Council of State had a backlog of several years. The Council of State now acts as an appeal (cassation) body against judgments of the Council for Permit Disputes.

The Environmental Enforcement College was established in 2009 and was renamed Enforcement College since the "integrated environmental permit" came into force. Infringements of environmental law are often sanctioned through administrative fines. These administrative fines can be challenged before the Enforcement College. The appeal has a suspensive effect.

The Enforcement College can annul and substitute a decision of the government agency. The Council of State acts as an appeal (cassation) body against judgments of the Enforcement College.

this aspect is adequately investigated and assessed when taking a new decision. The court may order as an injunction (order) that this investigation must be carried out (e.g. granting of a permit in the vicinity of a special protection zone without appropriate assessment: injunction to make a new decision based on results of an appropriate assessment the applicant must prepare).

The court can also annul the decision and refuse the permit application due to incompleteness (in the absence of the required investigation) so that the application must be resubmitted (with the required documents, e.g. an appropriate assessment, an EIA, an air quality investigation, etc.).

The most important source of "expert advice" in the files of the Council for Permit Disputes (town planning permits / environmental permits) can be found in the administrative file. The administrative file contains the EIA Report (if required), other documents that have to be annexed to the permit application (e.g. mobility report; memorandum on environmental effects prepared by acknowledged experts) and the mandatory advice of certain bodies (e.g. Agency for Nature and Forest, Cultural Heritage, Flemish Environmental Agency (VMM)...). The opinions of the advisory bodies are expected to be prepared by technical experts in various areas (nature, heritage, water, etc.).

The most important source of "expert advice" in the Enforcement College files can be found in the administrative file. This mainly concerns the official reports of the environmental inspection / enforcement department. Experts' opinions are sometimes added to the file (e.g. scent expert report).

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.)?

- Constitutional Court: we can find references to standards of international organizations (e.g. WHO, International Commission on Non-Ionizing Radiation), expert witnesses during parliamentary hearings or opinions given by advisory bodies (e.g. High Council for Health).

- Criminal court: In my decisions, I regularly refer to scientific reports to illustrate the impact of acts and/or to motivate a punishment, e.g. a report of the university regarding noise, the IUCN red list regarding certain protected species...

- Environmental administrative courts:

Enforcement College: Regulatory trends in another country became acceptable as a reference point, without being decisive, e.g. what a BAT is for a given sector.

There are no rules on this, but in practice it is assumed that a finding by an acknowledged expert (acknowledgement by the Flemish government - Department of Environment) can be accepted as expert evidence.

Legislation / standards that apply in other countries are not accepted as sufficient to challenge an administrative decision that complies with national legislation / standards.

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?

- Constitutional court: /

- Criminal court (first instance): see the answers provided under a). The Court of Appeal has the same competences as the court of first instance.

- Environmental administrative courts:

The Council of State is a cassation judge and may not duplicate the factual assessment of the environmental administrative courts but only check whether the contested judgment has been taken in accordance with the law. According to Article 14, § 2, of the Council of State Act, the Council of State "does not enter into the assessment of the cases themselves".

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?

- Constitutional court: /

- Criminal court: Town planning officials make regular use of aerial photographs and Google Earth images in their files, to show the situation before and after the facts.

This is also the case in files of the nature inspection e.g. regarding small landscape elements.

- Environmental administrative courts:

The files often contain this kind of evidence, such as Google Earth images based on GIS technologies, for example with regard to illegal destruction of small landscape elements.

Both the parties and the court (often) use this kind of evidence. In the Flemish region, most of this information is bundled on a website http://www.geopunt.be/ (Geopunt Vlaanderen), with information on, for example, spatial planning, land use, roads,

water, nature, heritage, land register, historical maps, aerial photographs, ... This information is used to test and situate the data in the files. On the basis of its own investigation, the court may decide that there is ground for annulment of a contested decision (e.g. location of the permit application according to water test maps), although in practice this is not often necessary.

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?

- Constitutional Court: Constitutional review includes the review of the pertinence of legal measures in the light of the objective pursued and the proportionality of those measures. In some cases this might include the review of the technical-scientific foundation of a measure. In cases in which there is scientific debate or uncertainty, there is a more marginal review by the Court, leaving more discretion to the legislator.

- Criminal court: If during a criminal trial a technical-scientific discussion should arise that I cannot resolve, I would have no choice but to appoint an expert. This is of course only possible for technical-scientific discussions and not for legal issues. These are the work of the court. Please see 1, a).

- Environmental administrative courts:

The legislation leaves certain discretion to the government. The court checks whether the decision of the government agency is not manifestly unreasonable.

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

Not to our knowledge.

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

- Constitutional Court: as far as this is necessary in the light of the constitutionality review explained under 2, a).

- Criminal court:

If a judge decides that this is necessary to reveal the truth.

- Environmental administrative courts:

The court is free to have this investigated further (by an external court-appointed expert) or to ask questions to the parties, to the extent the court deems it necessary.

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.)?

- Constitutional Court: no specific rules.

- Civil and criminal courts:
Until 1 December 2016, a judge was free to appoint any expert. The expert did not have to prove a diploma or special skill. In practice, judges used unofficial lists of experts.
Since 1 December 2016, judicial experts in civil and criminal matters must be acknowledged in advance by the Minister of Justice and must be listed in a national register of judicial experts. Experts must be able to prove that they have the necessary professional qualifications (diplomas) and that they have at least 5 years of relevant experience in the field. They must also prove legal knowledge by following a law course. They must declare in writing that they will follow continuing training and endorse a code of ethics that includes the principles of independence and impartiality. Even after being acknowledged, they must continue to meet the quality requirements through a kind of continuous evaluation by the magistrates. If they repeatedly perform insufficiently, they may be deleted from the national register.

- Administrative courts:
No specific rules.
There is, however, a list of experts (including EIA experts) the court can use to look for an expert in a specific area.

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

- Constitutional Court and ordinary courts:
Court-appointed experts can be challenged for the same reasons as the judges (art. 966-971 Civil Procedure Code). Art. 828 Civil Procedure Code provides for a list of reasons to challenge a judge, e.g. for legal suspicion, conflict of interests, if the judge "or his spouse" has a personal interest in the dispute or in case of family ties to the parties.

- Administrative courts:
Not regulated.

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)? Constitutional Court: see 1, a).

The judge can determine the scope of the assignment when appointing an expert.

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?

Beyond reasonable doubt (art. 6.2 European Convention on Human Rights). Everyone charged with a criminal offence shall be presumed innocent until proved guilty according to law.

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)?

No specific rules.

5) Rules of evaluating expert evidence: standard (intensity) of review

a) How do you choose between two competing or conflicting pieces of expert evidence?

- Constitutional Court: not pertinent.

- Criminal court: I have never experienced this before, but if this is the case then perhaps a college of experts could be appointed.

- Environmental administrative courts:
The legislation leaves certain discretion to the government. The court checks whether the decision of the government agency is not manifestly unreasonable.

If a party relies on expert advice that is contrary to the advice on which the government relied when taking the decision, the court will check whether the government agency has taken its decision carefully and whether the decision is not manifestly unreasonable.
Example:
a dispute over boundaries between two town planning areas (boundary between residential area and nature reserve). The government relies on its internal experts (town planning officials), the applicant relies on its expert surveyor. The court examines whether the government authority has carefully assessed and explained why it does not follow the position of the expert surveyor.
In such cases, the court can appoint yet another expert, but the question is whether that makes sense, or whether that can lead to a "more correct" advice?

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?

Reasonableness/consistency/coherence of scientific conclusions

"Marginal review" by the court: only if it appears that manifest errors have been made (e.g. expert advice is based on wrong facts) or cases have not been investigated at all.

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)?

Please see under 5, b)

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?

- Constitutional court: no difference with other matters.
- Criminal court: Please see 1, a).

The official reports (procès-verbal) of the specialized inspections usually are clear enough. In most cases, the official reports have evidential value until proof to the contrary. This evidential value is limited to the sensory findings of the official, i.e. what he / she could see, smell, hear...

- Administrative courts: I haven't appointed experts so far.

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 current rules seem appropriate.

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?

- Constitutional Court: not pertinent, only questions of law are adjudicated.
- Criminal court and administrative courts: appropriate.

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.)?

- Constitutional Court: does not seem necessary.

- Criminal court: It would be a good idea to oblige judges dealing with environmental matters to take a basic course in "environmental sciences". In this way, these judges could better assess the impact of the crimes on people and the environment (and therefore how severely the crimes should be punished).

- Administrative courts: not necessary within the current system. It's important for administrative courts that the relevant expert research is conducted at the level of the government / administration.

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.

- Environmental administrative courts:

On the basis of the nature decree, the permit can only be granted if there is certainty that the project cannot cause significant damage to the Special Area of Conservation.
Article 36ter, § 4: "The government that must decide on a permit application, a plan or program may only grant the permit or approve the plan or program if the plan or program or the implementation of the activity does not cause significant damage to the natural characteristics of the concerned special area of conservation. "
If the NGO can demonstrate that the EIA project / appropriate assessment shows that there is no certainty within the meaning of art. 36ter, §4, the permit will be annulled. In this case there is no need for the appointment of an "expert", because the

appropriate assessment, prepared by an expert, is sufficient (and is already part of the administrative file that is delivered to the court).
If, however, the appropriate assessment shows that there is 'no significant damage' and the Nature and Forests Agency agrees with that conclusion (favorable opinion of the Nature and Forests Agency), the NGO will have to demonstrate that the appropriate assessment (and the opinion) is unlawful (e.g. based on incorrect data, incomplete, etc.). In that case, the NGO can, for example, try to prove this with a report from its own expert or a reference to other expert reports. If there is "reasonable doubt" that the appropriate assessment on which the government has relied is unlawful, the permit will be annulled and a new appropriate assessment must be made (and a new opinion of the Nature and Forests Agency must be obtained).

With regard to compliance with the Habitats Directive / Nature Decree, there is strict case law of Council for Permit Disputes, in line with the case law of the Council of State and the Court of Justice of the EU.
In fact, the Council for Permit Disputes always follows the case law of the higher courts, i.e. of the Council of State, the Constitutional Court and the Court of Justice of the EU.

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?

- Criminal court:

It depends on which documents this NGO is putting forward. If, in my opinion, these are sufficient to estimate the compensation "ex aequo et bono" / "in fairness", I will not appoint an expert. If these are not sufficient to estimate the compensation, an expert could be appointed, but only if the NGO asks so. However, this is rarely requested in Belgian criminal cases.

For your information: EUFJE, ENPE, IMPEL, KU Leuven and Birdlife have recently started a project "BioVal" to establish a price list for protected species that can be used in court. In a first stage, the project will focus on existing price lists for birds in Spain, Finland and Hungary.