

Normstelling en expertise : waarborgen voor technische deskundigheid in het bijzonder bij vergunningverlening in het milieurecht

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Summary

The *First Part* of this study has an introductory character. To that end the occasion for undertaking this study is sketched and furthermore the most important elements are (at this point sometimes rather summarily) described.

The most important matter in chapter one is the statement of the problem to be treated in the study: which legal guarantees should be observed when technical-scientific expertise is sought with respect to the granting of environmental licences? This question not only concerns a study of environmental law; the chosen approach purports to allow conclusions to be drawn for administrative law in a general sense. As far as environmental law is concerned the granting of licences pursuant to the Environment Act¹ will have a central position.

On the basis of this statement of the problem it is not the intention to embark on a quest for ways of increasing the contribution made by technical-scientific expertise in the decision-making process - at least, not without more. The starting-point is rather concerned with qualitative issues: what role should the expertise have in the decision-making process? In this regard there are two assumptions of primary importance. First, the lack of objectivity and the (fundamentally) uncertain character of technical-scientific expertise. Furthermore the undesirability that the administration and the judiciary assert a claim to a 'super-expertise', according to which the appearance is created of an objective and sound basis to the decisions taken.

The implicit proposition is, in this connection, that if these two assumptions prove correct, this must have consequences for the specific legal safeguards concerned with the obtaining of expertise. In order to avoid overlooking one single safeguard, a broad approach to the research is preferable: the idea of rational decision-making. The first assumption can be tested against this idea, in particular with theories on scientific rationality. Moreover theories on rational decision-making can perhaps indicate which tack to take in dealing with scientific uncertainty.

It is a primary concern that this study should result in pronouncements of practical relevance to at least four matters: pronouncements concerning responsibility for the obtaining of expertise, concerning the necessity to obtain expert advice, concerning procedural guarantees, and concerning the taking account of technical-scientific uncertainties.

1. Hereafter referred too as EA.

In the second chapter the provisions of environmental law, which are central to this study, are more specifically indicated. First it is the intention to demonstrate the great extent to which the environmental question - as the empirical site of action for environmental law - confronts society with technical-scientific problems. Two very important characteristics emerge from the sketch: the ecological and the technical-dynamic character of the environmental question. In respect of both characteristics the environmental question is, to a considerable extent, becoming increasing subject to scientific influence. If we link this fact to the fear of extensive and irreversible harm to (parts of) the inhabited environment, then the interest in a good environment comprises, in terms of decision-making, a complex interest.

In the wake of this finding the provisions of positive environmental law are studied more closely. In the light of the technical complexity of the environmental question, it must first and foremost - following Waismann - be pointed out that it is impossible to give complete and definitive descriptions of empirical reality: only incomplete and provisional, so-called 'open' descriptions can be given. This position is entirely in accordance with the given characterisation of environmental law as well as with the deployment of open provisions in environmental law.

A number of these provisions will subsequently be described. First, a number of open public law environmental provisions, including basic rights, licences, duties of care and environmental crimes. Subsequently also the open private law provision of liability in tort - which is also of importance for environmental law - requires attention. By way of contrast it is remarkable that there is a tendency, in certain cases, to use specifically closed provisions, which include the so-called 'general provisions'.

The conclusion of the second chapter is that in environmental law the prevailing question is of a continuous progression in the setting of norms. The risk, on the one hand, of extensive and irreversible environmental damage and, on the other hand, the ecological and technological-dynamic characteristics, make certain that such is the case. The necessity for open and continuous setting of norms is the paradigm of environmental law. As a complement to this paradigm, the role of environmental law revealed in case law will remain of vital importance.

In the third chapter it is investigated what points of departure are afforded for a legal analysis and evaluation of the contribution of expertise in case of open (environmental law) provisions. Openness of provisions necessitates, according to the starting-point of this chapter, the amassment of knowledge. Two forms of openness should be distinguished: openness in terms of the conditions under which a power may be applied and openness in terms of the choice whether, and if so, how, a power will be used. The associated terms, margin of appreciation and discretion are described. Subsequently the role of exper-

tise in evaluation and in the weighing up of interests is investigated. In both cases it is necessary to establish the facts and that is just the occasion upon which the obtaining of expertise can be desirable.

In evaluation the administrative duty to establish the facts flows from the legality principle (are the conditions of application satisfied?). The establishment of the facts is enmeshed into a process of interpretation and characterisation. Art. 3:2 Administrative Law Code² provides a valuable gauge for the obtaining of expertise. The administration's special responsibility for the establishment of the facts furthermore stems from the duty to weigh up various interests. The recognition and evaluation of interests plays a large part in this process. An important part of this work concerns the comparison of alternative decision-making options. Art. 3:2 ALC provides, also in this sphere of operation, an important measure for the collecting of information. Additionally Art. 3:4 ALC in particular plays a primary role.

In evaluation and in the weighing up of interests the authority charged with establishing the facts is confronted with uncertainty as to the facts. Two forms of uncertainty can be distinguished: uncertainty of principle and practical uncertainty. Uncertainty of principle is unavoidably present in all our perceptions: we can never say with certainty whether we, in our theories, have explained the empirical reality in an adequate and accurate way. Practical uncertainty places a more concrete pressure upon decision-making: sometimes the theories considered necessary are lacking and there is (accordingly) said to be a lack of information.

Against this background the evaluation and weighing up of interests in the grant of EA-licences will be analysed. In this analysis it will become apparent at which points it is necessary for the administration to obtain information in order to establish the relevant facts.

In the *second part* of this study points of departure for rational decision-making will be sought. This will be done in the fourth chapter, in which, following Snellen four sorts of rationality are distinguished: political, legal, economic and scientific.

Scientific rationality receives central attention, since the assumptions concerning scientific rationality form the basis of the present study. The investigation of scientific rationality includes further an analysis of the uncertainty of principle discussed in chapter three. Practical uncertainty is subsequently considered under the heading of economic rationality. Finally, under the heading of legal rationality, some consequences emerging from the findings

2. The administrative Law Code will hereafter be referred too as ALC. The Code consists of three parts. The first two parts should be implemented on 1 January 1994. The third part is still in the draft stage.

will be set down in the form of a number of rules of thumb for rational decision-making.

The assumptions made in the first chapter in respect of scientific rationality are confirmed. We have to accept that, as a result of under-determination, our theories will always be fundamentally uncertain. In the light of this fact values are of great importance for the choice of theories in carrying out scientific work. Accordingly the appearance is created of scientific rationality as a contingent social consensus. Also a more positive vision is possible. Scientific work leads, as the product of a successful group, to an ever increasing capacity for resolving puzzles. In that sense there can indeed be said to be scientific progress. In so doing non-scientific values, measurement- and calculation errors can be eliminated in the scientific practice. Agreement can perhaps be reached in respect of the application of particular values and in that sense can even be spoken of 'objectivity'. Above all, the exercise of criticism in an open debate between concerned parties is essential to the practice of science.

Economic rationality is linked in this chapter with practical uncertainty. This type of uncertainty obstructs a rational-synoptic manner of decision-making. As an alternative the applicability of the satisfactory solution theory (Simon) to the laying down of legal norms is investigated. This leads to a 'theory' of legally satisfactory decision-making in three steps (select, investigate and examine). It is implicit in this 'theory' that the requirements of care and reasonableness have a relative sphere of application - referring to 'alternatives which should reasonably be considered', 'reasonable certainty' with respect to the facts and the 'not unproportional' character of decisions. The endeavour to reduce uncertainty is also accommodated within this theory.

It is essential, for legal rationality, to secure confidence in the law. For the legitimation of legal norms it is desirable that they are the product of an (insofar as possible) open debate. This does not only apply to legislation enacted by parliament but also to administrative decision-making to implement parliamentary statutes. In addition to procedural justification legitimation of the contents is desirable. Opinions about democracy and human rights can have an important role to play in that connection.

Subsequently, five rules of thumb can be formulated to achieve legal rational decision-making in cases in which uncertainty is present. These are, respectively: administrative responsibility, the satisfying decision, the openness of decision-making, current opinions and criticism and working with values. These five rules will be used as points of reference thereafter in this study.

Finally there are a number of practical points of importance: when should expert advice be sought, the unequivocality of available knowledge, apparent certainties, the expert, the independence of experts and the different kinds of advice. Following upon this, for a number of normative choices with regard

to the establishment of the facts it will be investigated what approach should be expected of the administration. In this context the importance of administrative responsibility for all aspects of the establishment of the facts must be emphasised anew. As a result of the discussion of practical questions, some other rules of thumb also require refinement.

The *third part* of this study contains an investigation into the legal guarantees in respect of the seeking of expertise in the non-contentious procedure. Primary in this investigation is a pyramidal approach: first it will be considered whether the requirement of rational decision-making can be considered to be a guiding requirement in public law, then more specific guarantees to be found in the general part of administrative law will be investigated, and finally there is an analysis of some guarantees, specific to environmental law, in respect of the approach to expert advice. Where possible, findings will be compared with the rules of thumb discussed in the second part of the study.

Chapter five revolves - in the sketched plan - around the question whether rational decision-making can be viewed as a requirement of lawful administration. The first approach is to investigate what administrative law actually can offer. To this end a link is made to Van der Hoeven's 'three dimensions of administrative law': legitimacy of the governing power, instrumentation and the imposition of normative limits. Because this study is primarily concerned with guarantees, the most attention is given to judicial review of administrative action (in the broad sense). First of all reference will be made to the opinion of Van der Hoeven that 'micro-administration' requires an independent judicial supervision. In passing it will furthermore be pointed out that the idea of democracy, because of the stress placed upon the public forming of opinion, can contribute to rational decision-making - if constitutional guarantees are observed.

A more penetrating analysis follows, based upon Van Male's 'rationality postulate' and Nicolai's 'evident rationality'. Although the vision which those authors give of the emergence of unwritten guarantees as carriers of a relativist idea of rationality is enlightening, in their analyses precisely the limits of the requirement of rational decision-making are insufficiently emphasised. In this study the tension between the promotion of the general interest and the individual liberty of citizens is taken as a starting-point. In this context the political will to exercise power, as long as it enjoys legitimacy through democracy, is identified as an indispensable driving-force in the governmental administration. Judicial restrictions upon this will, in order to protect individual liberties, are necessary, but at such level that room remains for the driving-force to remain effective. This leads to the proposition that the prohibition against arbitrariness fulfills the role of setting the tone. Prohibition of arbitrariness (in the broad sense) is described, following upon the above, as

the paradigm of administrative law; an unwritten generic principle which sets the outer boundaries of the exercise of political power. This prohibition upon arbitrariness both upholds and limits the requirement of rational decision-making. More specifically this implies that the relativism in the modern idea of rationality can be expressed in the requirements of open decision-making and in the prohibition against irrational actions. In respect of the contribution of expertise two important aspects are pointed out: the correcting of inaccuracies (including also the criticism and making available for criticism of (draft-) decisions), and the requirement of a legally satisfying decision.

In the sixth chapter specific guarantees in the general part of administrative law are sought. The starting-point is that the legal guarantees connected to the non-contentious procedure, linked to democratic legitimacy, should contribute to a 'public law legitimacy' of administrative decisions. This opinion is a logical sequel to the proposition that also micro-administration requires its own legitimation and an independent control. Simultaneously this underlines the independent and 'substantive' importance of the non-contentious procedure.

The observance of unwritten principles of law provides the foundations of public law legitimacy. In particular the prohibition against arbitrariness in the broad sense (as generic principle) is - again - mentioned, and in the light of the expertise problem, also three species-principles are mentioned: the prohibition against arbitrariness (in the narrow sense), the duty of care and the duty to give reasons.

The ALC procedures constitute important (positive) results or effects of (aspects of) the principles mentioned. Accordingly the general standard procedure, the (extended) public preparatory procedure and the notice of objection procedure under the ALC are discussed. One of the conclusions flowing therefrom is the rejection of the idea of an (almost) generally-required notice of objection in the form of extended decision-making. This choice fails to recognise the importance of non-contentious decision-making as a form of open consultation, preceding the taking of an - in principle at least - final decision. The proposal is made to always use two steps in the non-contentious decision-making: first an intention or request stage and then a draft stage. From this follows the possibility of (contentious) appeal in two (factual) instances. Another conclusion is that the care for the expertise of the citizen appears to be rather limited. Although in the non-contentious procedure (in principle) a heavy burden of proof must not be placed upon the individual, it seems wise nevertheless, in certain cases, to provide for expert support.

Subsequently the specific rules on the giving of advice are more closely studied. As far as specific advice is concerned this takes place in three stages: obtaining expert advice, rendering expert advice available for criticism

(prevention and control) and the authoritativeness of expert advisors. In the conclusion in this part the rules of thumb mentioned in the fourth chapter again appear. First of all the administrative responsibility for the advice; the administration must establish limiting conditions and carry out a marginal review (reasonableness and carefulness). Secondly, the advice (if the basis for the preparatory research) must deal with all essential elements, albeit within the limits of a satisfactory decision. Thirdly, the great importance of the ability to check and review the advice, particularly by way of the right to participation, is considered. In this context the point about supporting the expertise of ordinary citizens is reiterated. Fourthly, the question is considered whether an expert advice must always represent the (most) prevailing scientific vision. Also, bearing in mind the risk of contradictory advice, the desirability of a fixed, independent advisor and a 'worst-case scenario' is discussed. Fifthly and lastly the importance of independence of an advisor is considered.

The so-called guidelines are essential when one is concerned with general advice. After a short description of the reasons for laying down guidelines, about those who develop guidelines and the legal authority of guidelines (when may they be departed from?), there comes an evaluation. In the evaluation the primary consideration is that the persuasiveness of guidelines must, in every case, be critically examined. It is necessary to have separate regard to each element - scientific basis, interpretation of vague terms and policy choices. With respect to policy choices in guidelines a court must take account of the freedom to form policy which is entrusted to administrative organs. In the light of the policy choices a court should, at the same time, to be watchful for the independence of the maker of the guidelines. In respect of the technical-scientific aspect of the guideline, a comparison with the expert advice can be made. In particular it should be considered whether the guideline is supported by a technical basis of (proved and tested) quality and whether account should be taken of new insights or special circumstances in the particular case. The administration should always specifically make it possible (via participation) for contradictory expertise to be introduced.

In the conclusion to chapter six again the importance of openness in decision-making is stressed. Also the demerits of the obligatory notice-of-objection procedure and the lack of attention for the expertise of interested citizens will be considered. Furthermore, emphasis will be placed, with a view to the giving of advice, upon the administration's own responsibility, the requirement to make a satisfactory decision, the independence of the advisor, the distinctiveness and degree of insight offered by expert advice, and the necessity for a critical attitude (and, connected thereto, the possible role of permanent advisors). The chapter closes with a number of points requiring further attention subsequently in the study.

In chapter seven the search for legal guarantees in the obtaining of expert evidence is focussed upon environmental law. This concerns, in particular, four subjects: the Environmental Impact Assessment³, making provision for the expertise of citizens, the input of permanent experts and a number of leads to reducing uncertainty.

The EIA is discussed at some length, exactly because it is pretended to be a 'rational decision-making procedure' in which the input of technical-expertise plays an important role. In discussing the EIA-procedure and the sphere of operation of the EIA, the evaluation by the EA-Evaluation Committee⁴ plays an important role. Also the government's report evaluating the EIA will be considered. In conclusion three points are considered.

First the separation of responsibility. The attitude of the government that the EIA-committee should confine itself to the giving of advice - even if the competent authority is also the initiative-taker - deserves support. The openness of decision-making should be able to guarantee that the administration takes adequate account of the advice of the EIA-committee. The separation of responsibility should, besides, imply that if an Environmental Impact Statement⁵ is accepted by the competent authority, any later adjustments to the EIS which become necessary should be the primary responsibility of the administration. Accordingly, following the proposal of the ECW, a reversal of the third and fourth steps in the EIA-procedure (evaluation of the acceptability of the EIS -consultation and examining EIS) should be brought into effect. First the EIA-committee should give its advice, and thereafter the administration should decide the question of acceptability of the EIS. In this perspective it is evident that the person taking initiative can be required to make adjustments between these two steps. The procedural objections of the government in this respect are not convincing. It is, however, correct that this approach requires decision-making in two steps, but in chapter six it has already been stated that it is desirable that the non-contentious procedure be split into intention and a draft phases; in this vision the procedural objections fall away.

Secondly, the EIA-procedure can contribute to the formation of open norms in environmental law. Art. 7.35 EA has the effect that the competent authority must reflect upon the technical and social adequacy of the norms laid down. From this point-of-view the risk of serious environmental damage is not only the basis for the obligation to deploy EIA, but also for an open link to 'continued setting of norms'.

3. Hereafter referred too as EIA.

4. Hereafter referred too as ECW.

5. Hereafter referred too as EIS.

The conclusion is that the EIA-procedure fits in well with the theory of the satisfactory decision. In this connection the selection of alternatives to be investigated in connection with the laying down of guidelines are particularly striking. By way of conclusion it can be stated, in accordance with the ECW and the government, that the EIA-provision is a reasonably (not to mention 'satisfactorily') functioning instrument.

The second subject in this chapter is the care for the expertise of citizens. In decision-making in matters of technical complexity, the way should be paved, also substantively, for openness or access to the debate in respect of the decision to be taken. The administration not only has a duty of care to provide citizens with relevant information, but also to place citizens in the position to consult an independent expert. The 'exchange of ideas' in Art. 3:25 first section ALC seems to provide a possible point of reference. At the same time the starting-point in the non-contentious procedure must remain that a citizen only has to provide the initial initiative to the obtaining of evidence. Too generous provisions would result in an increase in the burden of proof laid upon citizens in non-contentious procedures.

Furthermore chapter seven contains a plea for the creation of a general right in independent experts to give advice in technically complicated decision-making. Thus the provision of contradictory expertise can be institutionally guaranteed. This could be achieved through the creation of an organisation with regional branches. In this connection two 'instances', the EIA-committee and the Environmental Hygiene Inspection Service, are compared. This comparison reveals that the Inspection Service does not meet the required standards of independence. As far as the content of the advice is concerned it is established that such advices should not only be concerned with technical insight but also with the task set by the legislature (in particular to strive for the highest possible level of protection of the environment).

Finally the legal points of departure for the reduction of uncertainty will be considered. In that connection will be considered: the openness of decision-making, the comparison of alternatives, the making explicit of gaps in knowledge, the ALARA- and principle of taking precautions, evaluation, the duty to keep up to date, compensation provisions and insurance.

The *fourth part* of the study is concerned with safeguarding the (non-contentious) guarantees. This is an issue which invokes the question how the administrative court treats (the input by) expertise. This question will be discussed in two steps. First the function of the administrative judge will be considered. It is, namely, interesting to consider from which point-of-view, in which way, and to what extent that administrative judge should engage in the establishment of the facts. Moreover it is interesting to examine the establishment of facts itself and the role of the factor expertise in that process. The aim of

the research and the rules of evidence in administrative law are, in this matter, especially of importance.

Chapter eight begins with a sketch of the contours of the new administrative procedural law. The choice for the judicial review function of administrative procedure is expressly approved. At the same time the starting-point of autonomy of the parties is accepted. This starting-point does, however, expressly leave room for application of 'compensation for inequality' by the administrative court - particularly through the possibility of supplementing the legal grounds of the claim and the facts.

An important matter is the relationship between the non-contentious and the contentious procedure. The point-of-departure is that the court must avoid performing unnecessary or unrequested activities which are precisely belonging to the non-contentious procedure. In support of this perspective it is (once again) pointed out that the non-contentious procedure also has a democratic character and the character of offering the individual judicial protection against the administration. Several features are expressed in the open procedure in which consultation can take place about the decision to be taken in its entirety (having regard to all possible consequences). In this process the endeavour to achieve optimal individual administration of justice is primary. This includes the endeavour to accord effective respect to interests affected - in specie rather than in financial terms. In this context it is appropriate for the judge to contribute to the possibilities of taking decisions, in a non-contentious manner, which are as fully as possible adjusted to the situation. It is entirely in accordance with this approach that, for practical reasons, in administrative law the disputed administrative decision is identified as the object of dispute and that the court, if the decision turns out to be unlawful, can quash the decision. In this regard there is a point of principle at play to the extent that, the decision having been quashed, the administration cannot escape its responsibility to take a new decision.

Furthermore express attention is drawn to the margin of appreciation connected with the establishment of the facts by the administration. In connection herewith the court has to proceed on the basis of the primacy of the administration in establishing the facts. Accordingly the court must conduct a substantive review of the establishment of the facts by the administration according to the test of 'objective reasonableness'.

Following from this approach the desirability (not to mention, permissibility) for the court to take the decision itself requires attention. If and insofar administrative discretion is at issue - and the presumption is that such will be the case in respect of the facts (the normative choices) - the court should not take the decision itself. Also the public effect of decisions and the decision whether to set the decision aside or to quash it completely constitute a limitation for the courts to take the decisions themselves. The kernel of the discus-

sion in the eighth chapter is the protection of the value of the non-contentious procedure as well as the concern for an excessive trust in (the capacity of) judicial resolution of disputes. On balance therefore it is argued that in the case of judicial review the primacy of the administration in establishing the facts and the criterium of 'objective reasonableness' come to the fore. Concerning the question whether the court should take the decision itself the restriction to taking measures with a 'relative' character seems to offer a practical guarantee for respect for administrative discretion. Last but not least attention is (again) drawn to the importance of judicial decisions at two instances - exactly (also) because it concerns technically complicated disputes.

Chapter nine, apart from a short outline of the contentious procedure, gives central attention to the law of evidence in administrative law. First the role of the administrative judge as *dominus litis* is considered, more specifically as resigned but active judge. In the light of the great judicial influence upon the proceedings, considerable importance is attached to the ability to criticise and control judicial decisions - in connection with which the desirability of a judicial decision at two instances must be recalled. There is, above all, reason for concern about the ability to criticise the judicial decision to commission research to be undertaken by experts. Art. 8:47 ALC offers the parties to the proceedings little consolation. It is to be feared that the judge in technically complicated cases will make an autonomous decision to commission expert research, by which - notwithstanding all the autonomy of the parties - such a broad term of reference will be given that it will all too quickly become a complete re-establishment of the facts - notwithstanding all the guarantees in non-contentious proceedings. Therefore a stronger position of the parties to the proceedings in the stage proceeding research is to be recommended.

On the basis of a short discussion of the 'new-style permanent-expert-procedure' the issue of the dualism of the judge and expert again emerges. Here the point of view formulated in the first rule of thumb is appropriate: in-house technical expertise is useful (and to a certain minimum would appear even necessary), but in-house expertise must not become the sole basis for legitimating an (administrative or) judicial judgment.

The law of evidence in administrative law is subsequently more closely investigated by studying the problem of the scope of the evidence, the distribution of burden of proof, the various sorts of evidence and the evaluation of the evidence. At the outset it must be pointed out that the determination of the substantive truth - as primary objective - is embedded in a number of normative propositions which are connected with the function of the procedure and the role of the parties therein.

In respect of the scope of the evidence the court, given the judicial review element, will have to take party autonomy seriously. On this basis the court should abstain from any integral re-investigation of the facts on its own initiative. The parties to the procedure should be given the opportunity as early as possible in the proceedings to make their views of the facts known.

Also in the distribution of the burden of proof the autonomy of the parties should make itself felt. The court could, however, by way of compensation for the (negative) inequality of the citizen who is party to the proceedings, bear part of the burden of proof. Furthermore the presumption of lawfulness is an important gage to the distribution of burden of proof between the parties. As well as in the 'porchway' to the production of evidence, the motivating of the appeal and in the pre-procedural explanation given by the defending administrative body, as well as in real leading of evidence this presumption with the compensation for inequality plays an important role. Moreover it appears a good idea to resist the temptation to apply the maxim 'he who makes a proposition, must prove it'; the pattern of distribution of burden of proof is distinctly too capricious for that.

In the matter of the various sorts of evidence the defence principle is of great importance. The parties to the proceedings must have the opportunity to express their views on all procedural documents relevant to the judicial decision. In technically complicated disputes the possibility to call contra-expertise should be the rule. On the subject of expertise, expert reports are particularly interesting. In this respect the experience with official reports in environmental disputes is instructive. From this experience it becomes apparent the extent to which it is necessary to guard against undermining of the judge's position as *dominus litis* and for automatically going for re-examination of the facts. In this light it seems advisable to opt for giving advice to the judge on an *ad hoc* basis. Such advice should be directed to specific questions, after the parties have been given the opportunity to provide evidence themselves. In any event the parties should have the possibility, as originally suggested by the government, to give their opinion of the terms of advice requested of the expert. With such an approach there is no need to fear for standard re-examination of the facts, nor for infringement of the autonomy of the parties; the administration can immediately be held accountable for its 'pre-procedural burden of proof'. In this way the judge can realise his passive but active role to the full, and the non-contentious procedure retains its independent value.

Finally the evaluation of evidence is considered. The independent position of the judge is evident in this. Therefore the phenomenon of 'convincing the court' requires attention. In that connection the desirability of a critical judicial attitude comes quickly to the fore. In the interests of clarity: 'convincing the court' does not mean that uncertainty can be eliminated in the lea-

ding of evidence. The point is to attain the legally required level of certainty: namely, 'reasonable certainty'. In the case of vulnerable interests the burden of proof will be heavier - for the administration, but in consequence also for the opposing citizen. The motivation for the judicial evaluation of the evidence is then very important. Especially when it concerns a judgment about methodological criticism. In this context the desirability of a right to introduce contra-expertise and case law in two judicial instances is (again) indicated. Finally the pros and cons of formalising evidence must be considered. An important point is the proposition that the administration may decide, in some circumstances, on the basis of new insights, to depart from or to supplement the formal rules of evidence.

In the last and *fifth part* of the study (chapter ten) it is time, with the assistance of a summary of the matters which emerged in the earlier parts of the study, to reach certain conclusions and recommendations.

In this context it is attractive to bring attention once more to the formulation of the problem: which legal safeguards should be observed when technical-scientific evidence is obtained in applications for environmental licences?

By way of conclusions there are five points which require further attention.

First, the insight that the problem of expertise is not so much a question of more or less expertise (quantitative analysis), but much more the question how 'to work with' expertise (qualitative analysis).

Second, the importance of a specific 'public law legitimisation' of the work done by the administration requires attention. Here the non-contentious procedure plays an essential role, especially in the light of democratic calibre, the administration of justice to individuals (judicial review) and the technical-substantive quality of the decision-making. Here the opportunity for reciprocal argumentative influence by the concerned bodies and individuals is of vital importance. In that regard a two-phase procedure must be chosen (intention and draft) which is a departure from the present notice of objection procedure. In the procedure the substantive equality between the various bodies and individuals must be regarded. Although the administration primarily has responsibility for the establishment of the facts, whereas an opposing citizen 'only' has to indicate his or her interest, it is desirable, in technically complicated decision-making, to make provision for technical-expert support for third parties.

The crucial role of the non-contentious procedure has consequences for the contentious proceedings concerning the administration. It must be avoided that the court undermines the non-contentious guarantees. In particular powers of judicial review and judicial rulings must take account of the opportunity given to the administration in the establishment of the facts.

Thirdly, it cannot be stressed enough that it is impossible to achieve certainty in respect of the facts. Legally speaking only 'reasonable certainty' can be required of the administration. Neither the administration nor the court should pretend to a 'super-expertise'. The point is not to find the greatest expertise but to create knowledge which is open to criticism. In this respect the administration fulfills legally a pivotal function, which implies that normative choices are made.

Fourth, the paradigm of progressive setting of norms requires attention. The connected creation of open norms is apparent in many places: in the license system, the duties of care, the extended competence to make decisions, the duty to bring things up to date, the guidelines and the legal concepts derived from the Civil Code. Progressive laying down of norms is the basis for the role of the expert in environmental law. Progression of norms does not detract from the fact that it must be realised when decisions are taken that we are only able to make 'satisfactory decision'. The point is to make a decision which is, from a legal point of view, rationally acceptable, but being fully aware that decisions once taken may require revision in the light of later acquired insights.

Finally there are still the rules of thumb. Actually it consists of a collection of points-of-departure with an heuristic function. With hindsight the guidelines provide a peg upon which to hang the summary of the study.

At the last stage in the study it is attractive to inventarise the recommendations made within the study. It is useful to approach this task from the point of view of the various actors in the process of establishing norms: citizens, the administration, judge and the expert. Consideration of the position of the expert provokes the following remarks. In this study the model of the expert-authority, who unilaterally and more-or-less without being vulnerable to contradiction reaches a (binding) expert-conclusion, is expressly rejected. On the contrary an open, argumentative model is preferred. It follows from this choice that some form of measure must be found for the degree of certainty (or minimal required knowledge), and 'buffers' must be considered with a view to preventing or managing damage attributable to technical-scientific mistakes. The open model for working with expertise will (in the longer term) serve to promote confidence in the laying down of norms and in the protection of vulnerable interests. It implies for technically complicated decision-making that there is no easy way out. Decision-making will do well to take place on the basis of 'the praise of criticism'.