

No 1/2018

ENVIRONMENTAL
LAW NETWORK
INTERNATIONAL

RÉSEAU
INTERNATIONAL
DE DROIT DE
L'ENVIRONNEMENT

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REVIEW

The genome editing technique is covered by Directive 2001/18 - Comment on Advocate Bobek's Opinion in case C-528/16

Ludwig Krämer

The ECJ Rules Environmental NGOs Must Have Access to Justice in Water Law Procedures

Summer Kern and Gregor Schamschula

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Recent Developments

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Editorial

The current issue of *elni Review* contains several contributions focussing on different aspects in the field of European environmental law practice.

In his profound article “The genome editing technique is covered by Directive 2001/18 – Comment on Advocate Bobek’s Opinion in case C-528/16” *Ludwig Krämer* argues that genome editing must be understood as being covered by the provisions of Directive 2001/18 on the deliberate release of genetically modified organisms into the environment.

“The ECJ Rules Environmental NGOs Must Have Access to Justice in Water Law Procedures” by *Summer Kern* and *Gregor Schamschula* assesses the current developments of implementation with regard to access to justice in Austrian Water Law. The ruling in question can certainly be seen as a milestone in environmental case law.

The article by *Erjon Muharremaj* “The role of legislation and courts in the protection of the environment in the European Union and its impact on the European integration of Albania” delivers interesting insights with regard to

the current state of environmental law in Albania and its shortcomings with regard to jurisdiction. This certainly will have an impact on the acquisition negotiations with the European Union.

Finally, *Martin Führ, Jaqui Dopfer, Kilian Bizer et. al.* discuss simulation games as a method for regulatory impact assessments. They set out their experiences with the method acquired during the impact assessment of the EIA Amending Directive 2014/52/EU.

The current issue of the *elni Review* delivers information about recent developments; a summarized version of the “Peoples’ Climate Case”-application delivered by the applicants and a review of the book “Environmental Crime in Europe” by the editors Andrew Farmer, Michael Faure and Grazia Maria Vagliasindi.

We hope you enjoy this issue.

Nicola Below/Martin Führ

July 2018

Simulation games in the Regulatory Impact Assessment – Simulation of the implementation of the EIA Amending Directive 2014/52/EU

Martin Führ, Jaqui Dopfer, Kilian Bizer et al.*

1 Introduction

Laws have the task of influencing the behaviour of the respective addressees in such a way that the legislator achieves their intended goals. A (new) law would not be required if existing framework conditions were already designed such that regulatory goals could be achieved. In this case actors would already have sufficient incentives to behave in a targeted manner. But this is not usually the case; on the contrary: legislation has the task of addressing "non-conforming" behaviour and of getting actors to participate in the implementation of regulatory goals. This is a demanding task and applies even in cases where compliance can be assumed. However, it is even more difficult if evasive behaviour is to be expected or it is feared that the addressees could develop and implement individual or collusive counter-strategies.¹

For all the above-mentioned constellations, it is helpful if legislators can rely on a more precise understanding of the facts to be regulated. Moreover, constitutional principles even suggest this (see Section 2). Accordingly, the "rules of the game" for the preparation of legislation by the executive both at the national level (§ 44 GGO) and in the European Union² stipulate that an impact assessment must first be carried out and documented in advance for draft legislation.

Beyond simple constellations, in which an immediate behavioural requirement – according to the motto: "Refrain from behaviour X" or "You shall not X" – is sufficient, the regulatory challenge is to shape the legal framework in such a way that several actors with different interests will comply. This often depends on a temporal sequence of conduct contributions; in addition, the individual contributions are normally dependent – either sequentially or alternately. In other words, those who draft bills as desk officer (in the following referred to as legal experts) encounter a multi-layered constellation of actors. Especially in such cases, which are likely to be the rule rather than the exception, the

legal experts are reliant on methodologically-based approaches to real analysis during the design of the body of laws. In this case simulation games are particularly suitable as they allow for dynamic interaction and its influence on legal requirements to be tested and estimated (see Section 3). The application of this methodology to the implementation of the EIA Amending Directive 2014/52/EU illustrates both the possibilities and the limitations of the methodology (Section 4).

The present contribution and the underlying simulation games on the EIA Amending Directive were funded by the German Federal Environment Agency in the research project "Further development of the EIA instrument – solution proposals and simulation game for the implementation of the EIA Amending Directive 2014/52/EU" (duration 2015 – 2017) within the environmental research plan.³

This essay is split into two parts. The first part primarily regards the experience from the simulation game on the EIA Amending Directive, which was aligned with the new version of the German Environmental Impact Assessment Act (EIAA). The second part of the essay, which will be published in the next issue of the *elni Review*, deals with experiences from other simulation games and, based on this, describes more comprehensively the possibilities and limits of simulation games for the purpose of regulatory impact assessment.

2 Legal demands for real analysis

Before making decisions, legislators must carry out a "social science-based real analysis of the living conditions that have to be regulated".⁴ Although this national legal requirement is not explicitly stated in the text, it is so fundamental that it can claim validity even without a textual reference. It results directly from the rationality claim of the law: The Federal Constitutional Court develops it from the two elementary material rationality criteria: the principles of proportionality and equality before the law. There is also a close interconnection in this respect between the two criteria: "The principle of equality and the prohibition of excessiveness have in common that they can seek a legal measure and estab-

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¹ For a current example of a strategy in the area of pollutant reduction from passenger car engines see Führ, M., Der Dieselskandal und das Recht - Ein Lehrstück zum technischen Sicherheitsrecht, NVwZ 2017, pp. 265-273.

² Standardized in the Impact Assessment (see Bizer, K./Lechner, S./Führ, M. (eds.), The European Impact Assessment and the Environment, Heidelberg 2010); redrafted in 2015 as part of the Better Regulation Initiative (see Purnhagen, K. P. / Feindt, P.H., Better regulatory impact assessment: making behavioural insights work for the Commission's New Better Regulation Strategy. In: European Journal of Risk Regulation 3/2015, pp. 361 – 368).

³ FKZ 3715111010; the final report is available on the website of the German Federal Environmental Agency; download at <https://www.umweltbundesamt.de/publikationen/fortentwicklung-des-uvp-instrumentariums-planspiel>. (last

⁴ Denninger E., Freiheitsordnung – Wertordnung – Pflichtordnung, JZ 30, 1975, 545-550, 546. The following description is based on Führ, M., Eigen-Verantwortung im Rechtsstaat, Duncker & Humblot, Berlin 2003, p. 226 f.

lish a balance, therefore presupposing the measurability of state action and understanding any state action as a rational act of taking measures." This "act" requires a corresponding basis, namely that the "shaping and regulating state authority takes up the legal and actual structures of order found in the subject matter of the regulation, and values them as a justification for equality or distinction".⁵

Both material principles require a real analysis that must be procedurally processed by the state authorities.

On the basis of fact-finding, the legal expert has to prepare forecasts of future development (compulsory forecasting), which forms the basis for an assessment of the constellation (obligation to assess). This may result in the obligation to act in a legislative manner (obligation to act) in a way, taking into account conflicting legal interests, to ensure that the objectives of action are effectively achieved.⁶ If the legal expert acts, they are required to disclose their regulatory objectives and the assumptions and valuations on which they rely (duty to give reasons). The justification provides the foundation for an examination on the basis of the principle of proportionality, as the German Federal Constitutional Court stated in its decision on the Capacity Regulation:⁷ "Such content control presupposes that the assumptions and valuations of the legislature which determined its consideration" are "disclosed" in court proceedings.⁸

The obligation to observe can also be described as a constitutionally justified obligation for "law evaluation". The legislator must regularly empirically check the existing status of laws to ensure that it still complies with the constitutional requirements. The enshrined feedback of legal reality creates the basis for a proceduralized "learning process" of the legislature: It must again ask whether the assumptions regarding the actual development on which the original initial assessment was based are still correct and whether any discrepancies give reason for an adjustment of the regulatory concept.

In summary, it must be stated that the demand for the rational justification of legislative decisions, rooted in the foundations of legitimacy of law, has been reflected in a requirement profile further specified by the case law of the German Federal Constitutional Court. A permanent, empirically-based real analysis is required

from the legislators; it remains unclear on which methodological basis this has to be done.

However, in order to capture the actual effects of existing behaviours and to subsequently provide forecasts for possible alternative regulatory options, the theoretical approach and its methodological implementation must assess their respective impact on the policy behaviour of individuals in a forward-looking way.⁹

3 „Simulation game“ and transposition of EU legislation

There is no agreement on what is meant by a "simulation game". Accordingly, the term is used in very different ways. Some use it for a structured discussion alongside case studies. The term as used here can be described as follows: The simulation game depicts a real context of action in a game situation and thus makes dynamic processes accessible for analysis: The game participants adopt the roles of real actors and rely on a – simplified – description of a concrete action situation.¹⁰ In this context they "simulate" („simulation game"¹¹) the communication, negotiation and decision-making processes that take place in "real life". The "stations" that these processes have to go through correspond to those in reality; however, they are condensed in the simulation game to one or two days. The actors either take on their own professional role or play the role of other actors whose thinking and acting patterns are familiar to them from their professional experience.

The simulation game has the essential characteristics of a game (rules, game management, etc.). The framework conditions of the game are given by "game documents", which represent a part of the reality, but whose complex relationships are reduced to the characteristic factors that are relevant and necessary for the purpose of the simulation game.¹² The simulation game object is not created statically but is subject to a dynamic development process: For example, missing information or documents can be supplemented by the actors or the game management. Furthermore, the game management can feed additional "impulses" in order to depict the actions of other "stakeholders" (NGOs, press, political debates).

⁵ Kirchhof, P., Der Allgemeine Gleichheitssatz, HSR, Band V, § 124, 1992, para. 205.

⁶ In summary BVerfG of 29.11.1995 - 1 BvR 2203/95 - NJW 1996, 651 ("Ozon").

⁷ BVerfGE 85, 36/57 - "Kapazitätsverordnung".

⁸ In this respect the legislature has a "burden of proof". If the standard "was not provided with a justification from the outset, which makes the relevant aspects clear, the history of origin must be reconstructible afterwards" (BVerfGE 85, 36/57 - Capacity Regulation). Justification gaps or errors in the context of deduction can lead to the conclusion that there are material shortcomings which, as a result, can give rise to the unconstitutionality of the norm.

⁹ For the quality standards to be applied for the impact assessment, see Bizer/Lechner/Führ 2010, supra note 2.

¹⁰ Rönsch, H.D. /Reimann, B.W., Planspiel, in: Fuchs-Heinritz/Lautmann/Rammstedt et al. (eds.), Lexikon zur Soziologie, 3. Aufl. 1995, Opladen, p. 499.

¹¹ Herz, D./Blätte, A., Einleitung, in: Herz, Blätte (eds.), Simulation und Planspiel in den Sozialwissenschaften. Eine Bestandsaufnahme der internationalen Diskussion, Münster 2000, p. 3.

¹² Golombiewski, B., Steuerliche Planspiele: Anforderungen, Leistungsvermögen und Eignungsprüfung steuerlicher Planspiele als Instrument steuerlicher Ausbildung: Forschung und Planung sowie Entwicklung eines anforderungsgerechten Referenzmodells für die Planspielkonstruktion, Bielefeld 1995, p. 5 f.

The essential characteristics of a simulation game in the understanding described here include:

- There is one game management, which assigns specific roles to the participants and provides them with the relevant basic information exclusively (i.e. not or only partly visible to the other participants).
- The simulation game is divided into several "rounds" - in the case of the EIA these were the procedural steps of the EIA, the so-called "EIA stations". Each round, temporally much shorter than in real life, reproduces a certain time sequence in reality.
- In each round, the actors can perform certain pre-defined actions; such as
 - o send messages and documents to other actors,
 - o propose meetings with other actors,
 - o write press releases and carry out other forms of public relations.
- For the subsequent evaluation, but also for a control of the simulation game which is as realistic as possible, all the above actions are only possible "through the game management". The game management decides, for example, in the case of incompatible conversation requests, which meetings come about (in this round) and which not.
- All actions – including the course and results of bi- or trilateral meetings – as well as the associated intentions need to be documented directly by the simulation game participants (on the basis of prepared "forms" in paper form, to be completed by the participants and to be handed over to the game management at the end of each round).
- In case the simulation game "comes to a halt" or the closeness to reality is in question, the game management can feed additional impulses; for example, in the form of contributions from actors who – for reasons of simplification or simply a lack of suitable participants – are not involved in the game.

A simulation game structured in this way allows us to test certain relevant processes in a "protected" environment. It thus offers the participants decision-making aids, for example with regard to the choice of a preferred (e.g. entrepreneurial) strategy. As a research method, the simulation game allows us to gain information about a particular object of investigation (exploratory experiment),¹³ or to test specific hypotheses (decision experiment), which allow for a fluent transition to the field experiment.¹⁴

The possibility of examining participants' reactions to specific framework conditions also qualifies the method as an instrument of legal impact assessment: It helps

to assess whether a regulation is appropriate and necessary to achieve the intended normative effect and to what extent undesirable effects are to be expected. The role of the simulation game is usually to test existing draft regulations before they are translated into applicable law. The method is therefore usually classified as a tool of the accompanying regulatory impact assessment.¹⁵

The simulation game outlined below is assigned to the "artefactual field experiments", in which probands are recruited from their usual field of action in order to increase the external validity.¹⁶ Such "experiments" are designed on the basis of documents taken from stylized but real cases to maintain the usual environmental factors. In this way, it is ensured that the simulation game remains as close to reality as possible and at the same time changed framework data can be introduced.

4 Simulation game to implement the EIA Amending Directive

In order to illustrate the simulation game methodology, the course of a simulation game is briefly sketched below. It should be emphasized that the research project¹⁷ underlying this paper was about accompanying the process of implementing an EU Directive. The aim was to contribute to a federal law implementation of the EIA Amending Directive in compliance with European law, while at the same time being practicable and enforceable and furthermore ambitious from an environmental point of view. The EU Directive only changed the existing EIA rules selectively. The regulatory "opportunity space" to be represented by the simulation game was thus limited in several respects. It was therefore a specific form of "accompanying" legislative impact assessment.

4.1 Subject and concept

The simulation game design intended to subject the new national regulations, which result from the implementation obligation with regard to the EIA Amending Directive 2014/52/EU,¹⁸ to a practical suitability test (test object). Therefore, the simulation game tested the

¹³ Golombiewski 1995, supra note 12, p. 32.

¹⁴ Harrison, G.W./List, J.A., „Field Experiments“, Journal of Economic Literature, Vol. 42/2004, No. 4, pp. 1009-1055.

¹⁵ Böhret, C. /Konzendorf, G., Handbuch Gesetzesfolgenabschätzung (GFA). Gesetze, Verordnungen, Verwaltungsvorschriften, Baden-Baden 2001, p. 96. In contrast, the simulation game is rarely used in the sense of a prospective consequence analysis, which examines several alternatives without effect on results in order to exploit optimizing potentials.

¹⁶ For the validity of the simulation results see Bizer, K./Scheier, J./Spiwoks, M., Planspiel Kapitalmarktprognose. Ein empirischer Vergleich der Prognosekompetenz von Amateuren und Experten, sofia-Studien zur Institutionenanalyse 13-2, Darmstadt 2013; Harrison/List 2004, supra note 14.

¹⁷ FKZ 3715111010 "Further development of the EIA instrument – solution proposals and simulation game to implement the EIA Amending Directive 2014/52/EU" (duration 2015-2017, on behalf of the German Federal Environmental Agency); see already paragraph 3.

¹⁸ See Bunge, Th., Neue Anforderungen an die Umweltverträglichkeitsprüfung: die UVP-Anderungsrichtlinie 2014, NVwZ 2014 and Balla, S./Peters, H.J., Die novellierte UVP-Richtlinie und ihre Umsetzung, NuR 2015, pp. 297-305.

regulations that go beyond the status quo of the German standard in the EIA law of the federal government. The basis of the simulation game was the legal situation, which arises from all proposed changes, as contained in the documents submitted by the contracting authority (work or draft bill), adopted in this form by the legislature.

The game players acted on the basis of the - fictitious - already amended EIA standards (status quo + amendments to the Directive). The task of the simulation is to represent the incentive and inhibition situation of the key actors as realistically as possible, and in particular to gain insights into the dynamic processes that result from the expectations of the individual actors and their interaction (see section 4.1.3).

4.1.1 Considerations

To obtain meaningful results for the later law enforcement

- the structurally different "stations"¹⁹ on the one hand and
- project types from different systematic groups, such as the project for the "Evaluation of the EIA Act " on the other hand²⁰

need to be considered. The simulation game focused on projects from two comparatively frequently occurring project types:

- Installations according to the Industrial Emission Directive (2010/75/EU) as well as
- infrastructure projects (for example in traffic).

Thus, two structurally different process constellations are the subject of the simulation games..

For other types of projects, in particular for the EIA in the process of establishing or modifying a development plan²¹ and the broad wreath to "other projects", it was not possible for reasons of capacity to carry out a separate simulation game.

The research project was content-related designed that on the one hand as many of the aspects which are the subject of the implementation of the EIA Amending Directive, can be mapped in the game plan, and on the other hand to reduce the content of the simulation game which is not the focus of an EIA. The specification in Art. 3 (2) EIA Directive (new version) requires that environmental impacts resulting from the susceptibility of the project to major accidents and disasters should also be taken into account. Therefore, the German Federal Immission Control Act project had to be located spatially in the potential flood area of a river. The

general conditions of the road construction project were also adapted accordingly.

4.1.2 Simulation game structure

These preliminary considerations resulted in a three-stage simulation game structure:

1. Simulation game 1: concerning the screening process²² ("Federal Immission Control Act plant": new construction and operation of a pig farm (space for 2,475 animals) with biogas plant);
2. Simulation game 2: EIA procedure ("Federal Immission Control Act plant": new construction and operation of a pig farm (space for 5,280 animals) with biogas plant);
3. Simulation game 3: EIA procedure ("infrastructure project": construction of a new state road as a bypass).

Simulation game 1 depicts the special features that determine the screening process. The topics addressed in simulation games 2 and 3 respectively show similarities (subjects in the statements of the project sponsor are now in the "EIA report"). However, the procedures run in different administrative and procedural contexts and the benchmarks for the decisions are not identical (Planning approval: fundamental consideration, better possibility to include alternatives; legal immission protection authorization: generally bound decision to consider alternatives in principle only if proposed by the developer).

4.1.3 Simulation game design

The three-stage structure allowed learning processes to be taken into account by the participants (in the transition from simulation game 1 to simulation game 2) as well as by the project team (especially with regard to simulation game 3).

The basic concept in this simulation game, according to the previous remarks was to apply the work or regulation draft provided by the legal experts to concrete cases and to map – as close to reality as possible – the actions of the actors in the real administrative units, but also involve experts and other stakeholders. The simulation was thus carried out by the actors usually involved. These include project sponsors, appraisers, approval and environmental authorities as well as associations. The group of participants included 10-15 people each, therefore about:

- 2 representatives of the project sponsors
- 2-3 appraisers
- 3-5 representatives of the approval and environmental authorities
- 2-3 representatives of the associations (objectors/ stakeholders)

¹⁹ For the approach of dividing the EIA process into individual "stations", see Führ, M./Dopfer, J./Bizer, K. et al., Evaluation des UVP-Gesetzes des Bundes, Darmstadt/Göttingen/Kassel 2008, p. 31.

²⁰ See Führ/Dopfer/Bizer et al. 2008, supra note 19, p. 41.

²¹ The area of the EIA of the urban development planning project is not considered in more detail because a parallel project took place on this subject of investigation.

²² The term refers to the examination of whether or not an EIA should be carried out in individual cases.

Most of the participants played their "own" role but some also slipped into new roles. In this case, the respective actor (e.g., project sponsor or authority) was represented by several persons, so that a basic role understanding was given. The change of roles also allowed the participants (such as the participating legal experts) to gain new perspectives and bring this into the gameplay.²³

In the case of the appraisers and associations, it was partly possible for the same people to participate in two or all three simulation games.

In order to detect unintended effects as well, the simulation game was not limited to those aspects where the legislative draft included changes; rather, a complete procedure with all EIA stations was played through on the basis of the concrete cases.²⁴

The intervention points created by the new law, which would be worth considering for each actor, were summarized in advance by the project team in a table. At the same time this table formed the basis for the list of hypotheses to be examined in the simulation game.

Stations of the EIA

- 0 Screening
- 1 Scoping
- 2 „EIA report“
- 3 Government participation
- 4 Public participation
- 5 Summarised presentation
- 6 Rating
- 7 Consideration in decision
(and possibly remedies)
- 8 Information (transparency)
- 9 Monitoring

Table 1: Stations of the EIA

Due to the size of the simulation game documents (for example, the EIA report, 47 pages), it was important to make them available to the players before the game in order to enable them to familiarize themselves with the materials.

After the individual stations, each participant had to complete a short questionnaire in order to query as directly as possible the impressions of the actors on the effects of the new regulations.

4.2 Implementation of the simulation games

4.2.1 Selection of suitable actors

Parallel to the design of the simulation games, the selection of suitable simulation game participants took place. Persons with as many years of experience as possible in the implementation, management or moni-

toring of environmental impact assessments and audits were considered suitable.

For the area of the project sponsor as well as the approval and, if applicable, environmental authorities, suitable representatives of the authorities were selected with the help of the circle of "experts for environmental assessment of the federal and state governments" (Circle of EIA / SEA ministries responsible, mostly environment ministries). The project types considered in the simulation games (Federal Pollution Control Act (BImSchG) facilities and infrastructure projects) had to be taken into account.

In addition, two to three reviewers were added, who have special expertise in environmental testing or other technical matters (e.g. plant safety). Participants with many years of experience in the field of EIA were also won from the ranks of environmental associations.

4.2.2 Creation of the simulation game documents

For the simulation games, the regulation proposals to be tested were prepared in such a way that the participants could use the simulation game documents to make the effects of the specifications *de lege ferenda* (in the form of the work or referent's draft) the basis of their "game". From the numerous individual points for which the EIA Directive requires implementation²⁵, those were to be selected for which it seemed sensible to "test" the corresponding implementation standard explicitly in a simulation game.

Based on the knowledge gained, the simulation team then created the simulation game documents. The respective projects (BImSchG plant and infrastructure projects) were based on real cases. However, the simulation game documents had to be tailored to the specific issues arising from the implementation of the EIA directive, which made a simplification and stylization of the resulting "neuralgic points" necessary: The documents must show a sufficient level of detail without overloading the course of the simulation game. As a result, they must ensure that a screening process (simulation game 1) and the work stages of the actual environmental impact assessment (simulation games 2 and 3) can be simulated.

The step-by-step design of the simulation game (see section 4.1.3) made it possible to use the findings from the simulation games already carried out as part of the research project to prepare the documents for the next simulation game accordingly. The simulation team also prepared supplementary materials that were not available to the simulation game participants from the beginning, but rather in the form of a "supplementary opinion" at a later date (for example, following the discussion date). Already during the implementation of the first simulation game it proved to be helpful to carry out a structured reflection, which enables feedback on the draft law, but

²³ In some constellations, they presented their behaviour particularly impressively, which was invigorating for the gameplay.

²⁴ See *Führ/Dopfer/Bizer et al.* 2008, *supra* note 19, p. 31; here now extended by the station "Information to the public".

²⁵ For a summary see Bunge 2014 and *Balla/Peters* 2015, *supra* note 18.

also compiles proposals for changes to the simulation game process with regard to the following simulation games. However, this round of feedback was also important in the second and third simulation games because it revealed further aspects that had to be considered in the evaluation.

come familiar with the topic (in preparation lasting several hours), but also had already exchanged and coordinated with players in their group before the game started and, if necessary, had already developed strategies relevant to the game together. All participants also had the opportunity to talk to the simulation game team

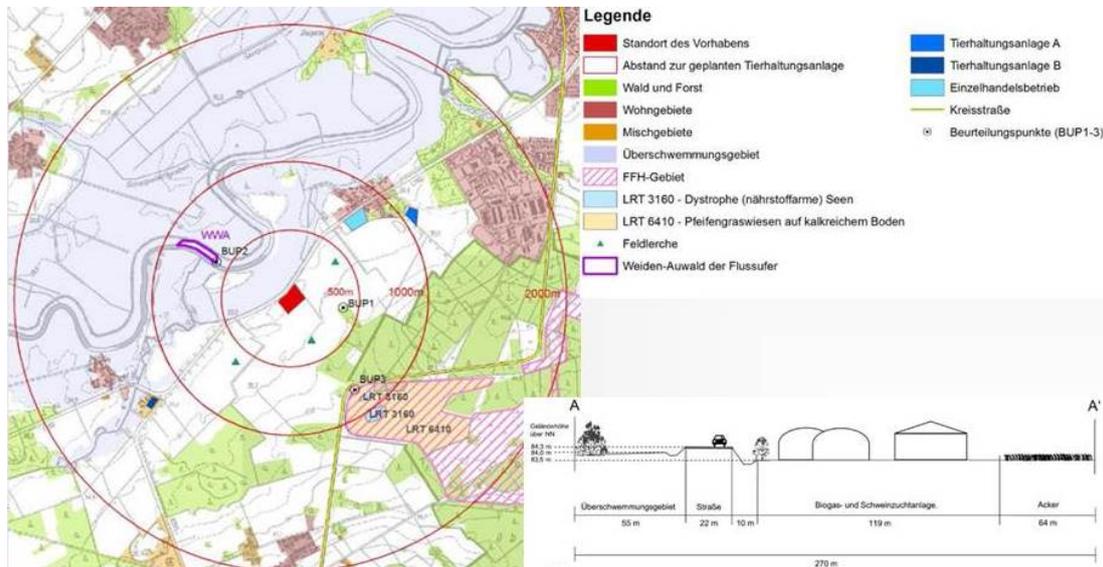


Figure 1: Documents for simulation game 1 (excerpt) - pig fattening farm with biogas plant

4.2.3 Implementation of the simulation game

As already mentioned, the simulation game took place in three variants that differ from each other. The screening (simulation game 1) was created as a one-day event with a subsequent expert discussion on individual questions (accumulation, existing facilities). The simulation games 2 (EIA procedure for a BImSchG project) and 3 (EIA procedure for an infrastructure project) each required a two-day event. The two BImSchG simulation games were carried out in cooperation with the Schader Foundation, Darmstadt; a conference centre in Hanover was used for the infrastructure project.

In order to ensure that the players were familiar with the documents and contents of the project at the start of the game and thus enable a smooth introduction to the simulation game, the documents were sent out before the simulation game date. In addition, the participants received in advance a questionnaire on key aspects of the draft amendment, comprising several pages, which had to be completed and returned before the simulation game. Finally, the participants were informed in advance of their role in the simulation game as well as the allocation of the other participants to the simulation game actors groups (for example, project sponsors, licensing and technical authorities (water, nature conservation), environmental association, appraiser). In this way, the participants in the simulation game could play their respective "role" – combined into groups – so that they could benefit from their specific knowledge and routines. As a result, the players had not only be-

in advance and to clarify any questions that might arise.

On the actual simulation day, all the actors first gathered together in one room. Afterwards, all groups of actors had the opportunity to withdraw in their own room, for example to consult within the group or to develop strategies for the further course of the game.

This was followed by the first simulation game block with stations 1-3; afterwards an equally long block was available for stations 4-7. In the two-day simulation game, more time had to be estimated accordingly.

4.3 Evaluation of the results of the simulation game

The evaluation of the results of the simulation game was based on the documentation of the individual interactions in the context of the simulation game (messages, conversation protocols, etc.), as well as on the other observations of the game management. In addition, the results were based on the evaluation of questionnaires.

Furthermore, the comments of the participants in the feedback rounds at the end of each of the three simulation games were added.

The individual "stations" of the EIA structured – analogous to the procedure for the evaluation of the EIAA²⁶ – the evaluation of the simulation game; It had to be taken into account that not only the relevant legal regu-

²⁶ See Führ/Dopfer/Bizer et al. 2008, supra note 19, p. 53 ff.

lations for the respective station influenced the behaviour, but also "pre-effects" from later stations (for example greater transparency vis-à-vis the public).

On the basis of the results of the evaluation, proposals were finally to be developed to describe whether and, if so, how it is recommended to redesign the examined regulatory objects in order to align them more closely with practice and to avoid misinterpretation and possible deficits in their application.

Finally, the following sections summarize the main results. This also includes design proposals that go beyond the previous drafts for amending the EIAA, by relating to the interaction with other specialist law.

4.3.1 Understandability and manageability of the EIAA Amending Directive

The evaluation of the game results, the technical discussions and additional written comments from the participants showed that some of the participants interpret the regulations in the EIAA amendment in very different ways and assess their relevance, manageability in practice or the scope of the regulations in some cases in a highly divergent way.²⁷ For many of the participants, this resulted in a high degree of uncertainty or in an assessment of the implementation, which in some cases differed greatly. However, this does not only apply to the new or amended regulations, but also in some cases to existing regulations.

Within the scope of the EIAA Amending Directive, not only the new requirements of the EIA Directive were implemented, but also modifications were made to regulations that had already caused difficulties in practice for years, such as, for example, the accumulation within the framework of the preliminary EIA review. In the course of extensive discussions in the simulation games and as a result of significant modifications to the draft amendments, the participants noted improvements in the comprehensibility and manageability of the specifications. The handling of cumulation issues in the context of the determination of the EIA obligation could remain difficult and error-prone, according to the impression from the simulation games, but also on the basis of the new regulations.

With regard to the comprehensibility and manageability of the EIAA Amending Directive, it should also be noted that participants also showed considerable uncertainties with regard to the implementation of legal texts which they assessed as "well understandable". The main difficulty was to interpret the new requirements correctly. These difficulties can only be remedied to a limited extent by reformulating the draft law. However, due to their relevance for implementation, they should be taken up and taken into account in the context of the

justification for the law, the general administrative provision for the implementation of the EIAA (UVPVwV) to be updated or in the context of further working aids.

Problems regarding the interpretation and implementation of legal requirements can also be understood as an indication of a need for additional qualification. In fact, the simulation games called on participants on several occasions to ensure that the experts involved in the preparation of EIA reports had sufficient expertise – as required in the EIA Amending Directive – to a greater extent than in the past.

4.3.2 Interaction between the EIAA and specialist law

The feedback of the participants and the evaluation of the questionnaires completed during the simulation game showed a significantly better result in simulation 3 (simulation game for the construction of a new state road) compared to simulation 2 (BImSchG plant with pig fattening farm) with regard to the comprehensibility and manageability of the specifications of the draft amendment. The reason for this is probably not only the fact that the EIA amending draft to simulation game 3 had already been updated and in some cases had already taken up suggestions from the participants of the first two simulation games. The differences with regard to problems in the manageability and implementation of the requirements were obviously mainly due to the requirements of the respective specialist law. This concerned both the substantive and legal interaction and the coordination of procedural requirements from EIA and specialist law. For example, the participants in the simulation game to the EIA plan approval procedure saw fewer – or even significantly fewer – problems with regard to manageability than the participants in the simulation game on legal immission protection proceeding with almost all the points asked for, such as "consideration of protection goods", "cumulation", "description of reasonable alternatives", "measures to avoid", "measures for monitoring".

This finding is presumably primarily due to the distinction between EIA law and specialist law. For example, participants in immission protection in particular are of the opinion that all specifications in the EIAA that are not covered by technical legislation, such as the description of reasonably tested alternatives, the preparation of an independent EIA report, monitoring measures, etc., are not to be taken into account in the context of the legal immission protection approval proceeding or may not be relevant to the decision.

This problem can only be partially addressed by additions and modifications within the framework of the EIAA Amending Directive. Above all, a strong coordination between EIAA and specialist law is necessary here. New contents in the EIAA Amending Directive, such as the "new" protective goods (e.g. land) and

²⁷ See the evaluation papers for the individual simulation games, which are documented in condensed form in the appendix to the final report (see footnote 17).

material testing requirements (e.g. environmental effects resulting from the vulnerability of projects to serious accidents and disasters), can only become effective if the relevant substantive legal assessment standards are provided.

4.3.3 Further approaches to optimization

In principle, the participants see various possibilities to improve the regulations even further. In simulation games 2 and 3 in particular, the participants criticized the references to other regulations, some of which were nested several times. This regulatory technique made the handling of the legal text considerably more difficult.²⁸

In general, this leads to the recommendation that such references should therefore be checked again to see whether it would be more user-friendly not to use them and to formulate the respective specification in detail instead. This would have to be weighed in individual cases against the disadvantage that the EIA Act might contain an excessive number of repetitions of text (and thus redundant text).

Another suggestion resulting from the simulation games is that "duplications" should be avoided and that the individual specifications should be more clearly distinguished from one another. This applies, for example, with regard to the coordination between the Annexes to the EIA Act draft amendment, in particular Annex 2 "Information provided by the project developer in preparation for the preliminary assessment of the individual case" and Annex 3 "Criteria for the preliminary assessment of the individual case within the framework of an environmental impact assessment".²⁹

5 First recommendations for the use of simulation games

The methodology for the simulation game for the EIA Amending Directive allowed the dynamics resulting from the interaction of the actors to be depicted relatively realistically, albeit under "laboratory conditions". In this respect, this methodology differs from a normal workshop that could also be structured along the "stations" of the EIA process. The preparation of such an approach would be much less time-consuming; However, in the findings to be expected, it would remain substantially behind those of a simulation game, because although the assessment of the actors regarding the effects of the new legal situation can be queried in each case, depending on the respective previous experience, only "static" statements will be obtained, which do not include any interaction. The conceptual design of the simulation game for the EIA amending directive

goes far beyond this, because it focuses on the interaction of the relevant actors under the newly applicable framework conditions and thus takes on a dynamic perspective.

Based on the evaluation of the simulation games (see section 4.3), proposals can be developed to describe whether and, if so, how it is recommended to redesign the examined regulatory objects in order to align them more closely with practice, to avoid misinterpretation and possible deficits in their application based on them. The draft regulations used in the simulation game were to be measured in particular by following the criteria:

- Comprehensibility and clarity of the wording,
- suitability for the purpose pursued (effectiveness) and
- practicability in enforcement (efficiency)

Special attention was paid to possible gaps and misleading wording. It was also examined whether individual requirements in the draft regulations are too general or too specific and are therefore expected to achieve their purpose in practice only to a limited extent.

It can be said that it has been possible to identify concrete and detailed possibilities for improving the designs. The participation of the legal experts in the simulation game ensured immediate access to the knowledge gained, so that the following simulation game could already draw on an updated version of the draft law. In the evaluation, the simulation game team formulated the most appropriate regulatory content and, in some cases, regulatory alternatives. Telephone conferences, in which the German Federal Environment Agency as client and the simulation game team as contractor as well as the legal experts from the responsible federal ministry took part, enabled an intensive technical exchange, both in the run-up to the simulation (for example on the content of the simulation and the problem orientation created in the game documentation) and in the evaluation.

²⁸ This criticism partly took up the continuation towards the finally adopted version of the Implementation Act.

²⁹ These duplications can also be found in the EIA Amending Directive; the legislator therefore did not take up this suggestion, although it seemed quite plausible to the legislators involved.

Imprint

Editors: Nicola Below, Martin Führ, Andreas Hermann, Gerhard Roller, Julian Schenten and Claudia Schreider

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The Editors would like to thank **Michelle Monteforte** and **Vanessa Cook** (both Öko-Institut) for proofreading the *elni Review*.

We invite authors to submit manuscripts to the Editors by email.

The *elni Review* is the double-blind peer reviewed journal of the Environmental Law Network International. It is distributed once or twice a year at the following prices: commercial users (consultants, law firms, government administrations): €52; private users, students, libraries: €30. Non-members can order single issues at a fee of €20 incl. packaging. The Environmental Law Network International also welcomes an exchange of articles as a way of payment.

The *elni Review* is published with financial and organisational support from Öko-Institut e.V. and the Universities of Applied Sciences in Darmstadt and Bingen.

The views expressed in the articles are those of the authors and do not necessarily reflect those of elni

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The institute's mission is to analyse and evaluate current and future environmental problems, to point out risks, and to develop and implement problem-solving strategies and measures. In doing so, the Öko-Institut follows the guiding principle of sustainable development.

The institute's activities are organized in Divisions - Chemistry, Energy & Climate Protection, Genetic Engineering, Sustainable Products & Material Flows, Nuclear Engineering & Plant Safety, and Environmental Law.

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The Society for Institutional Analysis was established in 1998. It is located at the University of Applied Sciences in Darmstadt and the University of Göttingen, both Germany.

The sofia research group aims to support regulatory choice at every level of public legislative bodies (EC, national or regional). It also analyses and improves the strategy of public and private organizations.

The sofia team is multidisciplinary: Lawyers and economists are collaborating with engineers as well as social and natural scientists. The theoretical basis is the interdisciplinary behaviour model of homo oeconomicus institutionalis, considering the formal (e.g. laws and contracts) and informal (e.g. rules of fairness) institutional context of individual behaviour.

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elni

In many countries lawyers are working on aspects of environmental law, often as part of environmental initiatives and organisations or as legislators. However, they generally have limited contact with other lawyers abroad, in spite of the fact that such contact and communication is vital for the successful and effective implementation of environmental law.

Therefore, a group of lawyers from various countries decided to initiate the Environmental Law Network International (elni) in 1990 to promote international communication and cooperation worldwide. elni is a registered non-profit association under German Law.

elni coordinates a number of different activities in order to facilitate the communication and connections of those interested in environmental law around the world.

Coordinating Bureau

Three organisations currently share the organisational work of the network: Öko-Institut, IESAR at the University of Applied Sciences in Bingen and sofia, the Society for Institutional Analysis, located at the University of Darmstadt. The person of contact is Prof. Dr. Roller at IESAR, Bingen.

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The elni Review is a bi-annual, English language law review. It publishes articles on environmental law, focusing on European and international environmental law as well as recent developments in the EU Member States. elni encourages its members to submit articles to the elni Review in order to support and further the exchange and sharing of experiences with other members.

The first issue of the elni Review was published in 2001. It replaced the elni Newsletter, which was released in 1995 for the first time.

The elni Review is published by Öko-Institut (the Institute for Applied Ecology), IESAR (the Institute for Environmental Studies and Applied Research, hosted by the University of Applied Sciences in Bingen) and sofia (the Society for Institutional Analysis, located at the University of Darmstadt).

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elni conferences and fora are a core element of the network. They provide scientific input and the possibility for discussion on a relevant subject of environmental law and policy for international experts. The aim is to gather together scientists, policy makers and young researchers, providing them with the opportunity to exchange views and information as well as to develop new perspectives.

The aim of the elni fora initiative is to bring together, on a convivial basis and in a seminar-sized group, environmental lawyers living or working in the Brussels area, who are interested in sharing and discussing views on specific topics related to environmental law and policies.

Publications series

elni publishes a series of books entitled "Publications of the Environmental Law Network International". Each volume contains papers by various authors on a particular theme in environmental law and in some cases is based on the proceedings of the annual conference.

elni Website: elni.org

The elni website www.elni.org contains news about the network. The members have the opportunity to submit information on interesting events and recent studies on environmental law issues. An index of articles provides an overview of the elni Review publications. Past issues are downloadable online free of charge.

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