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The Enforcement of the Precautionary Principle by German, French and Belgian Courts

Nicolas de Sadeleer

INTRODUCTION

With the precautionary principle having growing success in the international legal order, several national legislators in Europe have followed its success by increasingly setting it out in the recitals of environmental codes of law or in framework laws. In German law, the principle has for some time now implicitly followed on from sectoral laws relating to listed installations, biotechnology, nuclear energy and water management. In France and in Belgium, it has been introduced more recently by framework laws which initiated the codification of environmental law.

When looking for substantive indications of its existence, one finds that the principle is more clearly present in national legal regimes than one might think. By giving increasing importance to uncertainty, several legislative systems have already brought the principle into play without expressly referring to it. The doctrine acknowledges that national biotechnology laws represent one of its most important advances. It is, however, at the level of litigation that the principle has been most successful. As will be demonstrated by discussing case law from Germany, France and Belgium, some legal regimes have already made a breakthrough by integrating uncertainty into their reasoning, thus applying the precautionary principle without necessarily being aware of it. Since the objective of the principle is to govern decision making under conditions of uncertainty in an all-encompassing manner, the principle is also advancing, in a perhaps more striking manner, in other fields of law, such as health law.[1]

FEDERAL REPUBLIC OF GERMANY

Environmental law principles play an extremely important role in German environmental law.[2] In Germany, the concepts of precaution and prevention tend to be merged into the term *Vorsorge*. Nonetheless, German legal literature distinguishes between prevention (*Prävention*), which refers to foreseeing known dangers, and precaution (*Vorsorge*), which does not require certainty of the occurrence of the risk which is being provided against. As we will see, this distinction has been confirmed by case law.

For the administrative agencies concerned with listed installations, nuclear plants and biotechnology, German case law has succeeded in fashioning a true legal principle of precaution on the basis of texts which were not intended for this purpose. Article 5.2 of the Federal Emission Control Law (*Bundesimmissionsschutzgesetz*), for instance, specifies that: 'Installations subject to authorization are to be constructed and operated in such a manner that precaution is taken against damaging environmental effects ...'.

[1] For further comments about the enforcement of the environmental law principles by national courts in Europe, cf. N. de Sadeleer, *Les Principes du Pollueur-payeur, de Prévention et de Précaution*, (Bruylant/Agence Universitaire Francophone, 1999).

[2] B. Bender, R. Sparwasser and E. Engel, 'Hauptprinzipen des Umweltrechts', in *Umweltrecht*, 3rd edn, (Heidelberg, R. Müller, 1995), at 24; S. Boehmer-Christiansen, 'The Precautionary Principle in Germany', in T. O'Riordan and J. Cameron, *Interpreting the Precautionary Principle*, (London, Cameron and May, 1994), at 31; M. Bothe and H. Scharp, 'La juridiction administrative allemande empêche-t-elle le développement de l'utilisation pacifique de l'energie nucléaire?', 4 *Revue Juridique de l'Environnement* (1986), 420; M. Kloepfer, 'Die Principien im einzelnen', in *Umweltrecht*, (München, 1989), at 74; K.-H. Ladeur, 'Zur Prozeduralisierung des Vorsorgebegriffs durch Risikovergleich und Prioritätensetzung', in *Jahrbuch des Umwelt*, (Heidelberg, TechnikelB, 1994), at 297; D. Murswiek, 'Der Bund und die Länder Schutz der natürlichen Lebensgrundlagen', in M. Sachs *Grundgesetz – Kommentar*, (Munich, Beck'sche Verlagsbuchhandlung, 1996), at 653; E. Rehbinder, 'Vorsorge Prinzipe und Präventive Umweltpolitiek', in U.E. Simonis, *Präventive Umweltpolitik*, (1988), at 129–141; E. Rehbinder, 'Prinzipien des Umweltrechts in der Rechtsprechung des Bundesverwaltungsgerichts: das Vorsorgeprinzip als Beispiel', in *Bürger-Richter-Staat, Festschrift für Horst Sendler*, (Münich, Hg. Franssen/Redeker/Schlichter/Wilke, 1991), at 269; A. Reich, *Gefahr-Risiko-Restrisiko*, Umweltrechtliche Studien, No. 5, (Düsseldorf, Werner-Verlag, 1989); G. Roller, *Genehmigungsaufhebung und Entschädigung im Atomrecht*, (Baden-Baden, Nomos, Frankfurter, Schriften zum Umweltrecht, 1994); K. Von Moltke, 'The Vorsorgeprinzip in West German Environmental Policy', in *Royal Commission on Environmental Pollution*, 12th Report: Best Practicable Environmental Option, Cmnd 310, (London, HMSO, 1988); H. Von Lesner, 'Vorsorgeprinzip', in *Handwortbuch des Umweltrechts*, Bd. II, (Berlin, 1988), at 1086; G. Roller, 'Environmental Law Principles in the Jurisprudence of German Administrative Courts', 2 *ELNI Newsletter* (1999) 29.

From a perspective of precaution, the German Federal Administrative Tribunal (*Bundesverwaltungsgericht*) accepts the use of administrative measures which limit freedom of action and which are taken without clear proof of a causal link between the activity being regulated and the environmental damage. This case law is particularly interesting in that it draws a rather fine distinction between dangers, risks and residual risks, which will be considered later in this section.

In a judgment of 17 February 1978 concerning the operation of a coal-fired power plant,[3] the German Federal Administrative Tribunal ruled that:

> according to Article 5 of the Federal Emission Control Law, installations must be established and operated in such a way that harmful effects on the environment and other dangers, disadvantages and considerable nuisances are avoided and that the necessary precautions are taken against pollution, particularly by limiting emissions on the basis of best available techniques.

The same tribunal, in a judgment of 14 February 1984,[4] specified the conditions under which it was possible to appeal to the principle:

> Precaution... is indicated when there are sufficient grounds to believe that there is the danger that emissions *might* lead to environmental damage – even if a causal link has not been proven for the case under consideration.

The precautionary principle also made remarkable progress in the area of nuclear law, due to the legal interpretation of Article 7 of Germany's Atomic Energy Law (*Atomgesetz*). This provides that authorization may only be granted if 'the precautions demanded by the current level of scientific and technical knowledge are taken against possible damage caused by the establishment or operation of the installation'.

The Federal Constitutional Court (*Bundesverfassungsgericht*) ruled, in a judgment of 8 August 1978 relating to the operation of the Kalkar nuclear reactor, that Article 7 of the Atomic Energy Law was consistent with the Constitution and aimed to ensure the optimal defence against dangers and the greatest precaution against risks, based on the protection afforded by fundamental constitutional rights, including the right to the protection of health.[5] The Constitutional Court also ruled, in the same case, that indeterminate concepts such as 'precaution' and 'the current level of scientific and technical knowledge' should be made more precise by administrative authorities rather than by judges, and that it was therefore legitimate to confer upon the executive the task of implementing the principles laid down by the law:

> Evaluation of the probability of future damage due to the construction and operation of a nuclear installation must take account of similar situations in the past. In the absence of specific past situations, the evaluation must be based on simulations. To the extent that in this field only approximations, rather than certainties, exist, any new event as well as any new development in knowledge should be taken into account as it arises. Thus, to require legislation definitively to exclude any impairment of a fundamental right (*Gefährdung*) would make it impossible for the administrative authorities to grant an authorization. It is therefore proper to undertake a reasonable assessment of the risks. As concerns injurious effects on life, health and goods, the federal legislator has established an assessment scale based on optimal prevention of potential dangers and risks as set out in Article 1 and 7 of the Atomic Energy Law: authorizations may not be granted unless, based on the current level of scientific and technical knowledge, the occurrence of damage may be practically excluded.

The contribution of the judgment is fundamental on this latter point. Precautionary measures must be adopted with reference to the latest scientific knowledge. If they cannot be carried out because of technical difficulties, authorization must simply be refused, based on the fact that, as the Court stressed, 'precaution is not limited by what is technically achievable'. That said, the Constitutional Court judged that it was not the function of tribunals to substitute their judgment for that of political bodies, particularly in the absence of legal criteria. Moreover, if the legislator had to exclude all danger in order to secure fundamental rights, he would disregard the potential of human intelligence and would forbid practically any State authorization of technical operations.

Risks should therefore be against a criteria of practical reasoning (*Anschätzungen anhand praktischer Vernunft*) – that is, a reasonable assessment. Beyond the threshold of practical reason, uncertainties are inevitable; these are the residual risks (*Restrisiko*) that every citizen must tolerate as a socially fair distribution of burdens (*sozialadäquate Lasten*). The basic argument is thus: if a residual risk must be tolerated by everyone, no one has a subjective right to contest exposure to such a risk.

Despite the Constitutional Court's judgment, the majority of German legal opinion in the early 1980s continued to consider that Article 7 of the Atomic Energy Law only covered protection from or prevention of hazards (*Gefahrenabwehr*); that is, the adoption of policy measures needed to avoid known dangers. This provision could not cover the anticipation of risks

[3] *BVerGE*, 17 February 1978, Bd. 55 (1978), at 250.

[4] *BVerGE*, 17 February 1984, Bd. 69 (1985), at 43.

[5] *BVerGE* 49, 89 (143) and 53, 30 (58/58).

(*Risikovorsorge*) or the prevention of minimal residual risks (*Restrisiko*).[6]

In a judgment related to the operation of the nuclear power station in Wyhl, the Federal Administrative Tribunal rejected this overly narrow interpretation. In this case, the complaint concerned the legality of the operating authorization for the power station, in that it did not consider protection in the case of an accident to the reactor. Failure to set conditions that would trigger a strong protection mechanism to protect the population against the risk of nuclear radiation led the Administrative Tribunal of Freiburg to rescind the contentious authorization in March 1978. The administrative authority that had granted the authorization had, for its part, relied on the opinion of a number of experts who considered that protection against a nuclear reactor accident was not required as a necessary precaution, based on the current level of science and technology (*Stand von Wissenschaft und Technik*), as set out in Article 7 of the Atomic Energy Law.

This first decision was nevertheless reversed on 30 March 1982 by the Mannheim Administrative Appeals Tribunal, which judged that 'one aspect of the natural sciences is to choose which facts should be taken into account when investigating risks' and that the analyses which had been ordered by the public authorities prior to authorizing the nuclear power station respected the requirements set out in Article 7 of the Atomic Energy Law.

On 19 December 1985, the Federal Administrative Tribunal in Berlin, ruling in a second-stage appeal, granted the administrative authority a relatively significant margin in assessing risks.[7] This ruling produced particularly interesting clarifications regarding the obligation for precaution set out in Article 7 of the Atomic Energy Law, which had a considerable impact on the evolution of German administrative case law:

> Article 7(2) sub 3 should be interpreted not in terms of the predetermined notion of 'danger' of classical administrative law, but with regard to the specific protection which appears in Article 1(2) of the Atomic Energy Law. Consequently, precaution in the sense of the standard in question does not mean that measures of protection may only be taken if 'certain situations or facts can, by the law of causation, give rise to other, prejudicial, situations or facts' (definition given by the Superior Administrative Court of Prussia, judgment of 15 October 1894). On the contrary, it is necessary to take account of the possibilities for damages that do not yet represent 'dangers' in this sense, since science in its present state is not capable of predicting with certainty the consequences of certain acts and can therefore not say whether or not these effects represent a danger.
>
> It is necessary to take into consideration the suspicion of danger or of 'reasons for concern' (*Besorgnispotential*). Precaution also means that in assessing the probability of damage, reference to practical technical knowledge is not sufficient; security measures should also be considered according to 'purely theoretical' thinking and calculations, so as adequately to exclude risks arising from uncertainties and lacunae in scientific understanding.
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> In order to take the precautions required according to Article 7(2) sub 3 of the Atomic Energy Law, dangers and risks must be practically excluded. The evaluation needed for this task should refer to 'the current level of science and technology'. Uncertainties relating to research and risk assessment must be considered according to the reasons for concern associated with them under sufficiently conservative hypotheses. In this process, the administrative authority charged with granting the authorization should not just rely on dominant theory but should take account of all tenable scientific knowledge.

Following on from these considerations, the Federal Administrative Tribunal defined the notion of residual risk in the strictest possible manner. It imposed an obligation to act because 'dangers and risks must be practically excluded'. Since science is no longer omniscient, precaution must apply to 'possibilities for damage which do not yet represent a danger'. By attaching greater importance to probabilities than to certainties, the Tribunal correctly distinguished risks the causation of which is uncertain from the classical concept of danger. By not allowing the public authorities to take refuge behind a 'dominant theory', since 'science in its present state is not capable of predicting with certainty the consequences of certain acts and can therefore not say whether or not these effects represent a danger', the Tribunal also recognized the plurality of truth.

The German Federal Administrative Tribunal thus applied a greatly widened concept of precaution, which went much further than that originally envisaged by the drafters of the national legislation and allowed at the time by most legal analysis.[8] This case law demonstrated that judges are likely to draw from such a principle those elements that permit them to ensure firm control of administrative decisions without, however, taking the opportunity to weaken the separation of powers. While legal control is thereby increased, it nonetheless remains marginal in verifying respect for

[6] E. Rehbinder, 'Prinzipien des Umweltrechts in der Rechtsprechung des Bundesverwaltungsgerichts: das Vorsorgeprinzip als Beispiel', in *Bürger-Richter-Staat, Festschrift für Horst Sendler* (Munich, Hg. Franssen/Redeker/Schlichter/Wilke, 1991), at 272; G. Roller, *Genehmigungsaufhebung und Entschädigung im Atomrecht*, (Baden-Baden, Nomos, 1994), at 54.

[7] *NVwZ*, 1986, at 208.

[8] E. Rehbinder, 'Vorsorgeprinzip im Umweltrecht und Präventive Umweltpolitik', *op.cit.*, at 269; G. Roller, *Genehmigungsaufhebung und Entschädigung im Atomrecht, op.cit.*, at 54 and following.

the current state of science and technology. Based on the case law related to the Kalkar fast breeder, the Federal Administrative Tribunal expressed the opinion that it was not up to administrative tribunals to substitute their assessment of scientific controversies for the evaluation carried out by administrative authorities. The Tribunal rejected the appeal, based on the fact that the competent authority had studied differing scientific opinions in the case of the Whyl power plant.

More recently, litigation concerning the implementation of the precautionary principle in German environmental law has also taken place in the field of biotechnology, based on the provisions of the law of 16 December 1993 (*Gentechnikgesetz*). Article 6(2) of this law states that:

> In conformity with the current level of science and technology, the operator must take all measures to protect the rights set out in Article 1(1) and to anticipate the creation of dangers ...

Article 13 of this law states that:

> Authorization for the operation and establishment of a biotechnology installation ... may not be granted until:
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> ...
>
> (4) It is guaranteed that the measures required have been taken at all necessary levels of protection, in conformity with the current level of science and technology, and this without it being necessary to wait for damaging effects by emissions on the rights protected under Article 1(1).

In a judgment of 27 January 1995, the Administrative Appeals Tribunal of Hamburg specified the scope of the precautionary principle set out in Article 6(2) of the Biotechnology Law, which requires an operator to take steps to protect against and prevent the occurrence of potential dangers. After recalling that the concept of the current level of science and technology could be subject to judicial review, the Tribunal stressed that this concept comprises both the prevention of danger (*Gefahrenabwehr*) and precaution against risks (*Risikovorsorge*).[9] The Tribunal then recalled the case law of the Federal Administrative Tribunal in the Kalkar case, which conferred a power of assessment upon the administrative authorities. The tribunal inferred from this that its judicial review should be limited to verifying that the contentious assessment was based on sufficient information and non-arbitrary assumptions.

German administrative courts will thus exercise their jurisdiction only in order to control the procedural aspects of risk assessment, and will leave the administration a margin of appreciation concerning the substance of the measures that must comply with the precautionary principle.

FRANCE

The *Conseil d'État*, the highest French administrative tribunal, used a precautionary approach for the first time in a case which had nothing to do with the environment – that of AIDS-contaminated blood. One of the recitals of the judgments of 9 April 1993 reproaches the French Government for not having acted in the presence of 'a serious risk' when there was no need to 'wait for certainty' on the issue. The argument of *Commissaire du Gouvernement* Legal was even more explicit. He concluded that: 'In a situation of risk, a hypothesis that has not been invalidated should provisionally be considered valid, even if it has not been formally demonstrated'.[10]

The *Conseil d'État* adopted an identical line of argument in the *Rossi* judgment, where it questioned the legality of a prefectoral decision which found water abstraction works to be in the public interest and established a narrow safety perimeter around the abstraction site. The *Conseil* adjudged that the administration could not base its decision on scientifically proven data alone:[11]

> the facts that a fluorescine infiltration test may not have confirmed such risks and that the hydrogeological report ... may not have considered that the narrow safety perimeter is insufficient do not in themselves demonstrate that there is no need to enlarge the said safety perimeter in order to guarantee the quality of the waters in question.

This judgment can be seen as implementing the precautionary principle, since the *Conseil d'État*, in effect, reproaches the administration for not having demonstrated that there was no need to enlarge the safety perimeter when the risk of infiltration had not been established with certainty. The judgment thus marks a profound change in perspective concerning the legality of administrative action on environmental matters. In case of doubt, an administration must be able to prove that it is not necessary to go beyond the level of protection laid down in its decision.

The Administrative Tribunal of Versailles adopted a similar position in a separate bore hole case. It judged that, insofar as the impact assessment was at variance with the opinions submitted by specialized services, 'the prefect should have had more thorough studies carried out to complete the dossier, particularly con-

[9] OVG Hamburg, 27 January 1995, 2 *Zeitschrift für Umweltrecht* (1995), 93.

[10] C.E. fr., 9 April 1993, *M. et Mme B., M.D., M.G.*

[11] C.E. fr., 4 January 1995, *Ministre de l'Intérieur c/ M. Rossi.*

cerning the foreseeable future effect of bore hole exploitation on underlying waters'.[12] In other words, uncertainty is no excuse for incomplete investigations.

The *Conseil d'État* also took a precautionary stance in the case of *Com. De Quévillon*, where it ruled that modification of a land-use plan (*Plan d'occupation des sols*) in order to set apart agricultural lands for the deposition of dredging spoil were not allowed, even though the lands were eventually to be restored to their original use.[13] This could be gathered 'from the risk of harmful effects linked, in particular, to the final restoration to agricultural use of lands used for dredging spoil, of which toxicological effects are not guaranteed to be harmless'. It thus fell to the author of the planning instrument to demonstrate that the deposited spoil would not give rise to toxicological effects.

Article 200-1 of the Rural Code was recently discovered by French environmental lawyers .[14] This article, introduced by the law of 2 February 1995, which initiated the codification of environmental law in France, defines the precautionary principle as:

> the principle according to which the absence of certainty, taking account of current scientific and technical knowledge, ought not to delay the adoption of effective and proportionate measures aimed at preventing a risk of serious and irreversible damage to the environment, at an economically acceptable cost.

Administrative case law did not really reflect this new legal principle, however, until its application in the case of transgenic maize. In this case, an appeal had been made to the *Conseil d'État*, by Greenpeace France among others, to suspend the execution of an Agriculture Ministry order, which would have registered three varieties of genetically modified maize in the catalogue of species and varieties of plants grown in France. In his conclusions of 25 September 1998, *Commissaire du Gouvernement* J.H. Stahl cast doubt on whether the precautionary principle could be said to have a direct effect: the principle could not be appealed to directly because of the provision in the Barnier law of 2 February 1995 which states that the principles set out in the law 'inspire' environmental policies 'in those laws which define its range':

> Moreover, we do not consider it possible that the other principles established by this Article – the principle of preventive action and of prevention at source, the polluter pays principle, the principle of participation – can be directly applied in the absence of legislative provisions which give them concrete form. We are dealing here with a political principle intended to guide legislative and regulatory action in the field of environment ...

In addition, the *Commissaire du Gouvernement* proposed to combine the precautionary principle with other applicable legislative provisions:

> The combination of legislative provisions should thus rather lead to application of the law of 13 July 1992 (by which the legislator authorized, organized and set conditions for the dissemination of genetically modified organisms) in the light of the precautionary principle of Article L200-1 of the Rural Code. In carrying out the procedure of the 1992 law, the conduct of the administration should be marked by a high degree of precaution. And the judge considering its legality may assess this conduct. Under the control of the judge, the administrative authority must thus carefully study the risks – at least those that can be identified; take into consideration all opinions that appear useful – perhaps beyond what is required by law; modify its decision in cases of serious risk; and finally, if necessary, provide for a follow-up provision.

In its ruling of 25 September 1998, which gave rise to some comment since it expressly invoked the precautionary principle for the first time, the *Conseil d'État* departed from the conclusions of its *Commissaire du Gouvernement*; the ruling stated that the grounds put forward by the plaintiffs, who claimed the procedure leading to the decision was irregular owing to insufficient information on the one hand and a violation of the precautionary principle on the other hand, appeared sufficiently serious to suspend the contested decision.[15] Thus, violation of the precautionary principle must be considered an infringement of a legal obligation; the fact that specific laws do not give concrete form to the principle does not prevent a court from applying it directly.

However, on 11 December 1998, the *Conseil d'État* asked the European Court of Justice for a preliminary ruling as to whether the competence of the French State

[12] T.A. Versailles of 8 October 1996.
[13] C.E. fr., 30 April 1997, *Commune de Quévillon*.
[14] Ch. Cans, 'Grande et petite histoire des principes généraux du droit de l'environnement dans la Loi du 2 Février 1995', 2 *Revue Juridique de l'Environnement* (1995), 195; S. Charbonneau, 'De l'inexistence des principes juridiques en droit de l'environnement', in *Preventique-Sécurité*, No. 23, September–October (1995), at 43; J. De Malafosse, 'Les principes généraux du droit de l'environnement', in *Mélanges Jouri Boyer*, (Université des sciences sociales de Toulouse, 1996); C. Huglo, 'Principes de précaution et procédures d'urgence', in *La Décision Politique*, at 125; Y. Jegouzo, 'Les principes généraux du droit de l'environnement', 12(2), March–April *RFD Adm* (1996), 209; L. Lanoy, 'Réflexions sur la place et la portée des principes généraux du droit de l'environnement', 2 *Bulletin du Droit de l'Environnement Industriel* (1996) , 6; C. Lepage, 'Les grands principes tels que les décline la Loi Barnier sont à Revoir', March *Le Courrier de l'Environnement* (1995), 23.

[15] C.E. fr., 19 February 1998, *Association Greenpeace France*. Cf. Ch. Cans, 'Le principe de précaution, nouvel élément du contrôle de légalité', July *RFD Adm* (1999), 750.

to consent to the commercialization of genetically modified organisms is bound by the preliminary decision taken by the European Commission.[16] In March 2000 the ECJ gave its ruling (see the article by Douma and the case note by Matthee in this issue of *RECIEL*). This case is now going back to the *Conseil D'État* in order for it to be settled.

In a more recent decision,[17] the *Conseil d'État* considered the legality of a decree that extended the prohibition of the marketing of products of bovine origin which might present a risk of BSE transmission to ovine and caprine products. On the basis of the precautionary principle, which urged that the Government take particular account of 'the care required for the protection of public health', the *Commissaire du Gouvernment* decided that it would be difficult for the French Government to have committed a manifest error of appraisal. The *Conseil d'État* rejected the request to annul the decree, indicating that even if the risk of transmission had not yet been established, decisions on the point could not be made with any certainty. The *Conseil d'État* concluded that '[w]ith regard to the precautionary measures that are indispensable when dealing with public health ... the Prime Minister has not committed an error of appraisal'.

BELGIUM

Although relatively rare, rulings underpinned by a precautionary stance are not exceptional in litigation under Belgian law.[18] Use of the precautionary principle is implicit in two judgments of the Belgian constitutional *Cour d'arbitrage*. In the first, the Court accepted as admissible an environmental tax which set a higher tax for PVC packaging than for packaging made of other materials, despite the absence of unanimity among experts on the justification for such a measure: [19]

> Despite the absence of unanimous scientific agreement that PVC causes a particular threat to the environment, it was reasonable for the legislator on the basis of available data to deem that PVC containers would lead to more environmental problems than other containers.

The Court applied similar reasoning with respect to a Flemish regional law that 'was progressively dismantling gravel quarrying in Limbourg province with a view to halting environmental damage'.[20] The judgment explicitly stressed that a regulatory measure may always be reversed, while the continuation of quarrying could have irreversible consequences for the ecosystem under threat:

> the law-maker must weigh the environmental benefits and threats posed by quarry works and thus has sole responsibility for determining whether or not the environmental impact of these works should be considered negative on the whole and, if necessary, to decide if they should be halted as soon as possible ... All the more so since, if the environmental discussion later results in a reappraisal of current conclusions, the law-maker can always reconsider this measure rather than allowing quarry works to continue with the risk of irreversible damage occurring.

Thus applied, the precautionary principle has served to guide the reasoning of the Belgian Constitutional Court towards recognition of certain legal measures taken to deal with injurious activities even when scientific proof about the effects of those activities on the aquatic environment is not conclusive. These two judgments are the more remarkable in that they were handed down at a time when the precautionary principle was not recognized in Belgian law.

Certain judgments of the Belgian *Conseil d'État* similarly draw inspiration from the precautionary principle. Thus, the *Conseil d'État* determined that a polluting industry could be closed down even if it had not been proven that it endangered the environment, since the mere existence of risk was sufficient basis for action.[21] Demonstrating a risk of serious damage which cannot easily be remedied, as required by the preliminary ruling, also appears to open the way for the use of the principle. In particular, the *Conseil d'État* was of the opinion that this condition should be considered as established in cases where an environmental impact assessment had not been carried out.[22] This is also the case where industrial expansion of a site heightens the risk of malfunctions, which have in the past endangered local residents, yet the objective increase in risk does not appear to warrant the adoption of supplementary safeguard measures as part of a modified licence. [23]

Since the more recent *Venter* decision,[24] consideration of the precautionary principle appears to be required by constitutional law when dealing with protection of

[16] Case C-6/99, *Greenpeace France et Ministère des Affaires Étrangères*.
[17] C.E., 24 February 1999, *Société Pro-Net*, req. no. 192465.
[18] K. Deketelaere, 'Flemish Environmental Policy Principles', Oct. *European Environmental Law Review* (1996), 275; N. de Sadeleer, 'Het Voorzorgsbeginsel: Een Stille Revolutie', 2 *Tijdschrift voor Milieurecht* (1999), 82; L. Lavrysen, 'The Precautionary Principle in Belgian Jurisprudence: Unknown, Unloved?', *European Environmental Law Review* (1998), 75.
[19] C.A., No. 7/95 of 2 February 1995.
[20] C.A., No. 35/95 of 25 April 1995.
[21] C.E. b., No. 41.398, 17 December 1992, 2 *nv SU. TMR* (1993), 93.
[22] C.E. b., No. 45.755, 26 January 1994, 2 *Maniquet et Lecomte. Amén.-Env.*, (1994), 65.
[23] C.E. b., No. 56.416, 22 November 1995, 2 *asbl Environnement Assistance, Amén.-Env.*, (1996), 80.
[24] C.E., No. 82.130, 20 August 1999, *Venter*.

health and of a healthy environment. Even when the complainant could not present supporting evidence for his claim that electric cables passing above his home posed a risk to health, the *Conseil d'État* decided that there were sufficient grounds for reasonable suspicion of a health risk, even if existing standards were being respected. Since it was not its role to settle this scientific controversy, the *Conseil d'État* decided that while a risk to health could not be proved, neither could it be excluded. To the extent that the risk threatened basic constitutional rights to health and environmental protection, the injury could be considered sufficiently serious to warrant suspending the contentious administrative Act.

The precautionary principle was first introduced in Belgian legislation in a decree of the Flemish Region of 5 April 1995, which stated that:

> Environmental policy shall seek to achieve a high level of protection ... It shall be based on, *inter alia*: – the precautionary principle.[25]

Recently, however, in its judgment of 25 January 1999 suspending a licence for the construction of a new incineration plant close to Brussels, the *Conseil d'État* dismissed as not serious the violation of the precautionary principle found in the Flemish Decree:[26]

> That a first reading of the provisions that were invoked prompts the conclusion that these provisions do not contain any enforceable rules, merely general principles in the area of general environmental policy, principles that need to be worked out further and translated into enforceable regulations; that consequently, leaving aside the question whether or not these principles have been ignored, in the current state of the proceedings there is nothing to indicate that a possible violation of the principles should, or even could, lead to the annulment of the disputed licence.

In another case concerning an incineration plant close to Antwerp, the President of the Tribunal of First Instance of Antwerp judged that the prevention and precautionary principles had been ignored by the new licence to operate the plant. In his judgment of 2 February 1999 he ordered the plant to be shut down and concluded that 'with regard to public health no compromises should be made, precisely because it is the future of residents and their quality of life that are at stake'.[27] However, on the 11 October 1999, the Court of Appeal of Antwerp reversed the First Instance decision :

> whereas ... principles are only to be taken into account in so far as they can be transposed to provisions of laws, decrees, ordinances, regulations or decisions concerning environmental protection, against which an evident violation or the serious risk of a violation is presented;
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> ...
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> whereas the government has given shape to the precautionary principle by imposing on ISVAG the emission standards stated in the environmental licence; whereas these permits, as regular unilateral administrative legal acts of the competent administrative authority, should be deemed to be in accordance with the law and are therefore applicable in this respect;
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> ...
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> the dioxin emission standard of 0.1 ngTEQ/Nm3 ... is perfectly acceptable and that it meets the legal emission limits and the objectives of the precautionary principle.

At the Federal level the principle was recently reiterated in the Federal law of 30 January 1999 aimed at protection of the marine environment in the maritime areas under Belgian jurisdiction. Article 4 of this law states that:

> ... when carrying out activities in maritime areas, operators must take into consideration the precautionary principle ... which means that preventive measures must be taken when there are reasonable grounds for concern about pollution of marine areas, even if conclusive proof of a causal link between the introduction of substances ... and deleterious effects does not exist.

The Federal law stipulates that 'the users of the marine environment and the government shall take into consideration ... the precautionary principle ... when carrying out their activities in the marine environment'; the principle is thus directly binding on all users of the marine environment, both public and private.

CONCLUSION

In environmental matters, everything has become a matter of time: we must not lose any more time, we can't make up for lost time, we can't predict the future. But a change in thinking about time should translate into a change of attitude, and the precautionary principle symbolically marks just such a change. It transforms duty of care into an essential element of any policy; in other words, 'a policy for action in the face of uncertainty'.

The road that remains to be travelled before we see the precautionary principle begin to take root in positive law at first glance appears strewn with obstacles, given the heavy reliance of legal systems on certainty rather than probability. We have had occasion to observe, however, that most of the reforms advocated in the name of precaution may already be found, in bits and pieces, in normative texts and in the case law of three Member States, which were among the founders of the European Community. This movement will undoubtedly develop further as legal systems are forced to adapt in order to anticipate ecological risks.

[25] Article 1.2.1, Article 2.
[26] C.E., No. 78340 and 78341, 25 January 1999, *Vlabrever*.
[27] Antwerp Trib., 2 February 1999, 2 *Tijdschrift voor Milieurecht* (1999), 132. Cf. I. Larmuseau, 'Het Voorzorgsbeginsel niet langer een Papieren Tijger?', note in *AJT* (1998/99), 811.

Nicolas de Sadeleer is Professor in environmental law and director of the Centre for the Study of Environmental Law at the University of Saint-Louis in Brussels. He is also visiting Professor at the University of Paris XI and at the Université Catholique de Louvain. He has been writing his Ph.D. thesis about the polluter-pays, the prevention and the precautionary principle (published in 1999 in the 'Collection Universités Francophones' by Bruylant/Agence Universitaire Francophone).