

# Transboundary pollution and liability issues: private law vs public international law approaches. The cases of the rivers Rhine and Meuse\*

## **I The use of environmental covenants and contracts in the case of river pollution in the Netherlands**

### **(1) Introduction**

In The Netherlands, there has been more than casual interest in the issue of surface water pollution, especially of its central waterways. The country, appropriately named The Netherlands or Low Lands (Pays Bas), is by its location vulnerable to transboundary water pollution. Three main rivers of the European continent flow into it and eventually into the North Sea; namely, the Rhine, the Meuse and the Scheldt. All three rivers are heavily polluted. The Netherlands is in an 'end-of-pipe' position in regard to these great arteries of Western Europe that have been used over the years as open sewers for industrial and domestic waste.

In this paper I will discuss a typically Dutch approach to river pollution. This is the use of the legal instrument of an environmental covenant or contract concluded between the party suffering damage (the Municipality of Rotterdam, the ultimate 'end-of-pipe' station) and the industry situated in the river area of the upstream neighbouring countries. In the case of Rhine pollution the instrument has proved to be successful in combating the discharge of heavy metals from point sources by the industry. A recent project regarding pollution of the river Meuse from non-point sources (industry, agriculture and municipalities) is still under way, in a much more complicated setting from a technical and legal point of view. Here too, environmental contracts are envisaged as a solution to the river pollution.

Since negotiations have to do with the relative bargaining strengths of the parties involved, before going into the topic of environmental contracts itself, a brief overview is given of the position of a victim of [304] river pollution under Dutch tort law. Unlike some other European jurisdictions, in Dutch environmental law the role of tort law is substantial. This is also the case where government bodies, such as municipalities, are involved in instances in which environmental damage has been caused by third parties.

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\* In: J. Glazewski en G. Bradfield (Ed.'s), *Environmental Justice and the Legal Process*, Cape Town 1999, p. 303-338.

Specific topics of tort law are of interest in this regard, more particularly the nature of environmental liability (strict or fault liability?), transboundary environmental torts, and multiple causation and concert of action in tort.<sup>1</sup>

**(2) The role of tort law in environmental damage cases: fault or strict liability?**

The issue of the basis for environmental liability in tort has been dealt with in The Netherlands recently not only in case law but also particularly in the literature.<sup>2</sup> It concerned, first and foremost, the familiar question of whether such liability was based on fault or was strict? In the author's opinion, environmental liability can be characterised as a 'pseudo-strict' liability. Fault remains the basis for liability but has been so manipulated by the courts that it virtually corresponds to strict liability. The latter principle is found in modern legislation in the area of civil liability, both national and international. The point of departure for this viewpoint is what is known as the 'creation of danger' doctrine. This doctrine is described in a well-known Dutch textbook as follows: 'he who takes a lawful risk is responsible for the consequences, even if the harm caused is realised outside his fault'.<sup>3</sup>

The problem is that the 'creation of danger' or 'risk' doctrine, adopted in The Netherlands at the turn of the century from the German doctrine and now almost a century old, gathered dust and was lost to view in most textbooks on the law of obligations. Usually the fault doctrine is presented in its classic form; sometimes more objectified, at other times replaced by a legal presumption of fault, such as in the case of the liability for things (the battlefield for the dispute surrounding this doctrine). In these textbooks the 'creation of danger' doctrine and its supporters are never mentioned. [305]

Some authors, however, take the position, based on a return to the concept of fault, that only the awareness of danger makes a person liable for damages he or she caused. Even in pollution cases, the issue is whether the relevant party knew or ought to have known that danger would be created, and thus no duty to investigate is imposed. This prevails not only in the law of the 1960's, which is presently at issue in a number of soil pollution cases, but also under current law and future law.<sup>4</sup> However, it is not possible to ignore the creation of danger doc-

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<sup>1</sup> In this paper I have made use of several former publications that have been updated and are referred to in the footnotes of this article. These are not all easily accessible to the reader. For a more detailed discussion of legal and technical issues, reference should be made to those articles.

<sup>2</sup> For a more extensive treatment of this topic combined with a comparative survey of the law of other European countries, reference is made to J.M. van Dunné 'Environmental liability continental style' in J.M. van Dunné (ed) *Environmental Contracts and Covenants: New Instruments for a Realistic Environmental Policy?* (1993). This was a publication of the proceedings of the 1992 Rhine conference. A shorter version was published in the (1992) 4 *Review of European Community & International Environmental Law* 394.

<sup>3</sup> Pitlo-Bolweg *Verbindenissenrecht* 8ed (1979) 327 ff and 344 ff, also 7ed (1974), 6ed (1964). Compare also Van Dunné *Verbindenissenrecht* vol 2 3ed (1997) 144 ff.

<sup>4</sup> See J.B.M Vranken 'Zorgvuldigheidnorm en aansprakelijkheid voor bodemverontreiniging uit het verleden' (1990) *WPNR* 5953-5.

trine in either the literature or case law of this century. It is not based on an awareness of danger, but on the contrary, on an increase of the danger by an action for which one bears the risk, without there being any question of fault. Hence the term, 'creation of danger', which was circulated in a report of the Nederlandse Juristenvereniging (The Netherlands Law Association) of 1913 and which is a translation of 'Gefährdungshaftung', a concept that has been gaining ground in Germany since 1879.

Examination of earlier literature is fascinating. One recognises many modernisms vigorously advocated in Germany as early as the last quarter of the nineteenth century and in The Netherlands in the first decades of the twentieth century.<sup>5</sup> Those in today's business world who oppose strict liability are a century behind legal developments. As an example Paul Scholten, one of the most authoritative Dutch lawyers of this century, expressed the following opinion in his dissertation of 1899:

'Recognition of the concept enterprise is necessary for a proper development. Herein lies the supplementing function of art. 1403, s 3. Not only the things or the persons involved in the enterprise, but the combination of the two brings about the danger, the enterprise brings this about. And of the total effects of those persons and things, the enterprise has the benefit, it personifies all interests concerned. All damage caused by things or persons is a consequence of the enterprise, which is the inevitable liability of the profit it earns as such (enterprise profit). It unites in itself the elements which give rise to liability - *interest* and *danger* - thus these must attach to it. This is the only rational solution' (145 ff, my italics).

This is a surprisingly modern text in which the theory of 'enterprise liability' now advocated in American environmental liability law is clearly recognisable. [306]

In contemporary Dutch case law the line of pseudo-strict liability can be recognised in the *Kamerik Community Centre* case, which is a model for many environment cases.<sup>6</sup> The Hoge Raad, the Dutch Supreme Court, held there was a duty to investigate as well as a duty to warn. The case concerned a bucket of unknown liquid that was put out with the trash. The liquid subsequently turned out to be caustic soda lye left behind by painters. The Hoge Raad held that setting out a bucket of unknown liquid is wrongful, 'unless one knows or has "legitimate reasons" to assume that a liquid is involved that causes no danger on human contact'. The term 'legitimate reasons' is decisive for the duty to investigate. Liability does not attach if one monitors the trash bag and at pick-up '*warns of the presence* therein of a bucket containing a potentially hazardous substance' (my italics). One sees here the increase of danger through the action that lies in the risk sphere of the actor.

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<sup>5</sup> In the German literature, Loening (1897) discussed a duty to guarantee to compensate for damages being attached to a hazardous undertaking; Steinbach (1888) based liability of an entrepreneur on the benefits he reaped through his actions, while Mataja advocated apportioning liability on an economic basis. A. & R. Merkel (1888 and 1895 respectively) assumed that each person must bear the costs arising from the pursuit of his interests, and Unger, in his renowned book *Handeln auf eigene Gefahr* (1891), advanced the concept of 'Gefährdungshaftung': increasing danger and thus the risk of damages gives rise to liability. This approach to liability was quickly adopted in The Netherlands by P. Scholten (1899), Bruins (1906), Van Leeuwen en Hijmans (1913).

<sup>6</sup> HR 8 Jan 1982, *NJ* 1982, 614 note Brunner.

In a more recent, and larger, environmental case the duty to investigate was again encountered. In the *Benckiser* case, the German firm Benckiser sent large quantities of cyanide containing gypsum for processing. They used the transport company Bos, at approximately one third of the prevailing price, to transport the substance.<sup>7</sup> Bos dumped the gypsum in eight locations in The Netherlands in violation of the law. The state sought compensation from Benckiser. Benckiser had not obtained a licence to dump, and the processing of the material had failed.

In this context the Court of Appeal in The Hague imposed a duty to investigate on Benckiser. Benckiser, it held, should not have transferred the waste to a waste-processing firm without first carrying out a thorough investigation of the firm's reliability, particularly if there were indications that the firm only operated in pursuit of profit. The Hoge Raad concurred in this judgement. The Court of Appeal in The Hague held that Benckiser lacked a 'sense of responsibility' and should have investigated how Bos disposed of the waste. According to the Court of Appeal, Benckiser 'closed its eyes and knowingly assumed the risk that afterwards there would be something fishy about the affair'. Here we see the risk element dealt with. The Court of Appeal also considered whether the dumping of the gypsum was foreseeable for Benckiser and 'therefore imputable to it'.

In recent judgements of the Hoge Raad one again encounters the concept of causation of danger, in relation to, for example, the liability of the government for its actions. A watershed case, and the beginning of a line of cases, is that of *Hoffmann-La Roche*.<sup>8</sup> At issue were the [307] decisions taken by several members of the government under art. 24 Wet Economische Mededinging (Economic Competition Act) which were subsequently reversed by the 'College van Beroep voor het Bedrijfsleven' (Industrial Tribunal) as conflicting with the law. That occurred contrary to expectations, on non-prevailing grounds. Was the government liable for damages its decisions had caused? The Hoge Raad held as follows:

'If a governmental body commits a wrongful act by taking and upholding a decision that is subsequently reversed by the court because it is in conflict with the law, the governmental body is in principle liable. The argument that an exception is called for here, on the basis that the court accepted a view of the law that was unforeseen by the governmental body at the time of the decision and which this body did not have to take into consideration, is found wanting. This sole circumstance is never acceptable in the way that the governmental body must charge to its own account the consequences of such a judgement and therefore does not alter the fault of this body fixed in principle.'

Here we see the Hoge Raad paying lip service to the concept of 'fault', but completely undermining it by adding the qualification 'in principle liable'. The government must 'charge to its own account' the consequences of its actions, a famous expression that was also used in the old case *Voorste Stream VI*.<sup>9</sup> In other

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<sup>7</sup> HR 14 April 1989, *NJ* 1990, 712 note Brunner & Schultsz. Also noted by Addink & Braams in (1989) 3 *Tijdschrift voor Milieu Aansprakelijkheid/ Environmental Liability Law Review*, Vermande, Lelystad (*TMA/ELLR*) 90.

<sup>8</sup> HR 26 September 1987, *NJ* 1987, 253 note Scheltema.

<sup>9</sup> HR 19 March 1943, *NJ* 1943, 312 *Gem. Tilburg - Haas cs.* The last decision on this river pollution is from 1952, nr VII. Finally the city installed a purification plant which brought litigation to an end.

words, the invalidity of the decision in this instance falls within the risk sphere of the government.

In most environmental liability cases the causal relationship between discharge and pollution is complicated from a technical point of view and, as a consequence, also from a legal point of view. The proximity of damage, under the doctrine of causation, often is the bottleneck of compensation claims.

In modern tort law, however, the development of the doctrine in this century, from the old *conditio sine qua non* theory, via the adequacy theory (with its foreseeability test), to the reasonable imputation of damage theory, definitely offers support for a plaintiff in pollution cases. This is clearly the case under Dutch law and it is basically the situation under German law as well, whilst the French, with their traditional ingenuity and flair in the application of traditional legal concepts, in practice often reach the same results.

Established by the Dutch Supreme Court in the 1970 mini-pollution case of *Water-extraction area*<sup>10</sup> (an accident with a tanker-lorry), the imputation theory found another application in the above mentioned *Kamerik Community Center* case of 1982 (the disposed bucket of toxic liquid). Here the Court held that, [308]

‘in principle it does not matter, in the case in question, whether the exact way in which the injury through contact with the substance is caused was foreseeable for the party which failed to take into account the relevant standard of care’.

This decision is widely cited in soil pollution cases. It was followed by the District Court Rotterdam in the *Shell Gouderak* case, which involved a government clean-up claim of over Dfl 130 million.<sup>11</sup> It may be noted that, in this approach by the courts, the principle of risk-taking (the creation of danger) on the liability issue is extended to the establishment of the causal connection. As a consequence, negligence and causation can be reduced to the same denominator, reasonable imputation.

### **(3) Transboundary pollution and tort liability: the French Potassium Mines case (1988)**

As indicated in the introduction to this article, due to its location, The Netherlands offers a contribution to the law of transboundary pollution. The pollution of the water of the river Rhine gave rise to well-known litigation. After a 14-year lawsuit a decision of the Netherlands Supreme Court, the Hoge Raad, was finally handed down. It became a leading case internationally in the field of transboundary water pollution and pollution in general. The case was that in which Dutch nursery firms took issue over the salt pollution of the Rhine by the French Potassium Mines

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<sup>10</sup> HR 20 March 1970, *NJ* 1970, 251.

<sup>11</sup> District Court, Rotterdam 9 October 1987 note Van Dunné (1987) 1 *TMA/ELLR* 98; the Court of Appeal, The Hague handed down a judgment in this case on 10 January 1991 but did not rule on this issue. It concerns the dumping of 15 000 kg of drins on what was to become a building site. On 30 September 1994 the Hoge Raad surprisingly held Shell not liable for the soil pollution. In this decision, criticised from different quarters, use was made of the *Schutznorm* theory (‘relativity theory’) in a curious way. Compare my note and article ‘Oud zeer in nieuwe zakken. Ernstig verwijtbaar handelen. State of the art en state of the industry volgens art 75 lid 5 Wbb (I), (II)’ (1995) 9 *TMA/ELLR* 116 & 136 with further references.

(MDPA) in the Alsace.<sup>12</sup> This decision has received much international publicity in the past, a side effect welcomed by plaintiffs, originally the Foundation Reinwater, as the salination of the Rhine is just one of the minor evils threatening this river, of vital importance to some 40 million people in several countries. The Low Countries have, understandably, a keen interest in the proper maintenance of this waterway. It must be noted that a complicating factor in this case was the fact that the huge discharges of chlorides into the Rhine by MDPA, which caught the imagination of the general public, caused, in the formulation of the lower courts, only 'relatively minor damage' to plaintiffs. The potassium mines account [309] for 40 per cent of the total industrial salt discharge into the Rhine, which in peak years reached a staggering 22 million tons. After a reduction in 1987, the mines still discharge a daily amount of 10 000 tons. However, their contribution to the salination at the site of the nursery firms is only 14,5-17 per cent and 8,8 per cent respectively and this is due to seawater influences in the Dutch coastal areas. Under these circumstances, the mines are only minor polluters. This makes the case even more interesting. Most water pollution is caused by a number of minor polluters. This makes it difficult to hold an individual polluter, causing relatively little damage, liable in tort. Therefore, the present decision is of paramount importance for water pollution in general. Although some improvement has been made, at the moment hundreds, and sometimes even thousands, of tons of toxic substances are still discharged into the Rhine by industries of riparian states. Some years ago, it was calculated that total discharge equalled one sixth of the tonnage of goods shipped on that river. Two other rivers flowing into The Netherlands, the Meuse and the Scheldt, also heavily polluted. The Netherlands is at the end of the line, and therefore strongly interested in the acceptance of a good neighbour doctrine in this field.

In this context, it is remarkable to note that the Hoge Raad in upholding the tort principle resembling the rule of *sic utere tuo ut alienum non laedas* in public international law, applied by the Court of Appeal, The Hague, used the terms 'extreme pollution' and 'extensive discharges'. This does not seem quite appropriate to the case at hand. The approach of the highest court reminds one of the law of nuisance, where the gravity of the nuisance inflicted and the weighing of interests are the central issues. This topic will be discussed in more detail below. In the present situation, the economic interests of the discharging company were weighed against the interests of the downstream user of the river water, and the specific use made by that party. Thus, as the Hoge Raad ruled, there was a reasonable expectation of the said party that a river would not be 'extremely' polluted by 'extensive' discharges. There is a direct line to a 1915 decision in the case of the pollution of the Voorste Stream, a small river near Tilburg.<sup>13</sup> In that case, however, the water had become completely unusable as a consequence of municipal discharges of waste water. The court held that 'some pollution caused by normal

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<sup>12</sup> HR 23 September 1988, *NJ* 1989, 743 note by Nieuwenhuis & Schultsz (1989) 3 *TMA/ELLR* 26 (with English translation), note Van Dunné (with English summary). Compare also the author's article in (1988) 2 *TMA/ELLR* 33.

<sup>13</sup> HR 19 March 1915, *NJ* 1915, 691 *Voorste Stream I*, a decision based on art 676 BW (Dutch Civil Code) which gives riparian owners the right to use river water for irrigation purposes. This means, in the Court's opinion, unpolluted water. Compare art. 644 French Code Civil and in the same sense. Cour de Cassation, 6 July 1897. In a more recent decision, the court imposed an obligation to build a purification plant on a company polluting a river, *CdC* 12 February 1974, noted by Despax in *JCP* II 18 106.

use of the water by the upstream user' should be accepted by the downstream owner. Thus a basic level of nuisance had to be tolerated by adjacent property owners. This is the general [310] rule of the law of nuisance. In the *Potassium Mines* case the court actually went much further, although this was disguised by the wording chosen. The French, apodictic style in deciding the case - a homage to the defendant? One wonders - leaves the reader puzzled.

The question of proximity, a common stumbling block in pollution cases, did not raise any problems here, as the lower courts had established a linear connection between the increase in salination and the decrease in the crop and its quality. The line of causation in regard to the costs of desalination for the nursery firms did not cause trouble either. It was held that the damage was incurred by the MDPA discharges. The overall necessity for those installations, so the court held, did not affect the position of the latter party.

Finally, the Hoge Raad discussed the role of the French licence permitting MDPA the present discharges. The Court of Appeal was of the opinion that, according to French law and the wording of the licence, it did not relieve the defendant of liability in tort, just as is the case under Dutch law. The Hoge Raad did not go into this question. It heeded the argument that according to the Dutch law of civil procedure it was not permitted to hear issues regarding the application of foreign law. The defendant's appeal to the norm of chloride discharges of the Bonn Salt Treaty of 1976 was also rejected by the court. A major issue, not yet mentioned, was the defendant's plea that a Dutch court is bound by this Treaty, which solely governs the liability question raised and overrides national tort rules. The Hoge Raad, referring to the extensive conclusion of attorney-general Franx had no problem in rejecting this argument. The Treaty is only binding upon the concluding States and not individual citizens of those States in their relations with others. Thus, the Supreme Court of The Netherlands indicated that transboundary pollution is not a matter to be left to inter-state treaty law or international law in general. These issues of international law will be discussed more extensively below.<sup>14</sup> This opinion is, of course, a matter of policy, and therefore, of politics. The civil law approach to the fight against international pollution, promoted by those weary of the long and twisted paths of international treaties based on compromises designed to please economic interests, finds strong support in the present case.

#### **(4) Environmental contracts regarding Rhine pollution**

##### *(a) Environmental history, contract characteristics*

Before discussing some of the legal issues arising from the environmental contracts regarding the reduction of Rhine pollution, I would like to give an overview of the fight against Rhine pollution since 1971, [311] roughly the year when the critical condition of the river Rhine became public knowledge. For an impression of the location of this great river in Western Europe, reference is made to the map reproduced in Figure 1. [312]

The City of Rotterdam is situated, as was mentioned before, in an 'end-of-pipe' position, at the estuary of the river where toxic material discharged by industry settles in the harbour basins, causing pollution of harbour sludge. The reason for undertaking negotiations with the industries abroad was to solve that prob-

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<sup>14</sup> These issues of international law will be discussed more extensively below.

lem.<sup>15</sup> If one studies the tables of discharge data one may conclude that there was a spectacular reduction of discharges of some heavy metals in the period 1971-1983, but only marginal improvements since 1985 (especially for Cadmium, Chromium, Lead, Copper and Zinc).<sup>16</sup> The goal of the Rhine Action Programme of the riparian states (agreed to in 1987 in reaction to the Sandoz disaster) is a 50 per cent reduction of the 1985 figures by 1995. Given the condition of the Rhine water at the outset, it was clear that this goal almost certainly could not be reached.

The long-term objective of the Municipality of Rotterdam is 'clean' harbour sludge by the year 2002 (later 2010). To reach that goal, the necessary reduction of most heavy metal discharges should be 70-90 per cent. These figures were the basis for negotiating discharge reduction agreements with the German, French and Swiss industries.<sup>17</sup> Rotterdam's position was based on technical research undertaken by the Amsterdam-based International Centre of Water Studies (ICWS) as part of its Rhine research that started in 1985.

In the course of this Rotterdam project, the ICWS research involved some 7 000 water samples taken from 1987 to 1990 at 400 discharge points on the Rhine and its 85 tributary rivers.<sup>18</sup> For the purpose of this unique investigation, special apparatus had to be designed by the researchers, such as the 'measuring fish': a torpedo-like instrument that could feed the board computer with pollution data while the measuring barge patrolled the Rhine. This research resulted in the classification of the main discharging companies (discharges in excess of one per cent of the total annual discharge at the German-Dutch border (Lobith), reference year 1985). In consequence, 13 dischargers of toxic waste have [313] been selected by Rotterdam for a round of negotiations: two Swiss, four French and seven German companies. As a matter of fact, the data produced by Rotterdam were accepted as accurate by the industry and as a result, in 1991, the negotiating parties could talk business. The negotiations resulted in environmental contracts with the following parties: VCI (the German Association of Chemical Industries), Duisburger Kupferhütte, Berzelius, Deutsch Giessdraht, and Ara Pro Rheno. Unilat-

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<sup>15</sup> For this issue in general see the proceedings of the 1990 Rotterdam conference published by the Institute of Environmental Damages, Rotterdam: J.M. van Dunné (ed) *Transboundary Water Pollution, The Case of the River Rhine* (1991). Compare also my paper 'The case of the river Rhine: the Rotterdam Contribution' in P. Thomas (ed) *Water and the Environment* (1993) 75. This publication was a record of the proceedings of the IBA conference held in San Francisco in 1992. See too my paper 'Private law aspects of polluted sediments in the case of transboundary pollution' in *Transboundary River Basin Management and Sustainable Development* (1993) 111. This was a publication of the proceedings of the RBA conference in Delft in 1992.

<sup>16</sup> For more extensive information see T. Vellinga 'Rotterdam's initiative to reduce contaminant discharge into the river Rhine' in the Delft conference proceedings (n 15). The tables are reproduced in the 1991 Rotterdam proceedings and the 1993 San Francisco proceedings (n 15).

<sup>17</sup> For a discussion of these negotiations leading to environmental contracts, see F.H. Kernkamp's paper in the proceedings of the 1992 Rhine conference (n 2).

<sup>18</sup> For this topic compare J. Dogterom et al 'Rhine Study Project Phase II, Technical Study' in *Transboundary Pollution and Liability - The Case of the River Rhine* (1991) 159. Compare also their contribution to the 1993 Delft proceedings (n 15).



eral contracts, containing a warranty regarding the reduction of discharges by the industry, were concluded with Sandoz, Rhône-Poulenc and Atochem.<sup>19</sup>

Under Dutch law, Rotterdam is in a strong position when suing foreign dischargers of toxic substances into the Rhine for the compensation of the damage incurred in the harbour as a consequence of the discharges. This is the outcome of the *French Potassium Mines* case of 1988 (Dutch Supreme Court), discussed *supra*, regarding transboundary water pollution. Dutch law is applicable and the Dutch courts are competent to hear the case, and an action in tort would lie in such a case. Recent case law on environmental liability, which also was discussed earlier, is in favour of the position of Rotterdam as a plaintiff. Furthermore, the plea that the discharger acted in compliance with its national, local licence, is no defence under Dutch law (compare also German and French law which is basically the same). It should be noted that this is not common knowledge in industrial circles.

In the negotiations with the industry, the Municipality of Rotterdam relied on research into its legal position under Dutch law, as well as under German, French and Swiss law, carried out by the Institute of Environmental Damages of Erasmus University Rotterdam. The summary versions of the reports, in English, were made available to the counterparts.<sup>20</sup>

A feature of negotiated contracts is that, as a rule, negotiations result in a contract that is a compromise, and the Rhine contracts are no exception. Consequently, the reduction of toxic waste disposal by industry along the Rhine, as agreed to by the parties, is a compromise. This point can also be illustrated by reference to the contract clauses discussed below.

From several points of view, the contents of the agreements reached by the parties on reduction of discharges are of a confidential nature. With the exception of the 1991 contract with the VCI, the German [314] Association of Chemical Industries, the contracts have not been made public.<sup>21</sup>

Some contracts, comparable to the VCI contract, are the outcome of intensive and elaborate negotiations. Others have the character of a unilateral contract, a self-binding proposal related to consultations between the parties in the past, in the form of a letter addressed to the Rotterdam authorities.

*(b) Further characteristics of the Rhine contracts: terminology, duration, waiver of claims, rescission*

In continental environmental law, agreements regarding adherence to environmental norms or improvement programmes are known as 'environmental covenants' or 'contracts'. When the government, or a government agency is acting as such and the agreement involves a commitment by the authorities with respect to their attitude toward the environmental conduct of the other party (e.g. to refrain

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<sup>19</sup> Compare for this topic, the proceedings of the 1992 Rhine Conference in Rotterdam (n 2).

<sup>20</sup> These reports, *Liability for environmental damage in the case of harbour silt polluted by discharges* Part 1 (1986); Part 2 (1988); Part 3 (1991) were published by the Institute and are still available upon request at nominal costs.

<sup>21</sup> For the 1992 Rhine Conference (n 2). However, the clauses on the legal issues of those contracts were made available, translated into English. The names of the contracting industries, particulars about those parties and all technical data have been deleted. For the purpose of discussion the contracts were named 'Green contract', 'Blue contract', etc (see appendix to the proceedings 261 ff).

from legislative action if the agreement is adhered to by the private party), the use of the term 'covenant' is to be preferred. However, if the issue dealt with in the agreement is of a private law nature (e.g. waiver of an action in tort for damages incurred by the public party), the term 'contract' is more appropriate. In the present case, where Rotterdam in concluding the agreement acted essentially as a private party (owner and manager of the harbour), there are even stronger arguments for calling the resulting agreement an 'environmental contract'. No public duties are involved here. The Rhine contracts, as one will notice upon reading, are normal long-term contracts, subject to the rules of contract law.<sup>22</sup>

The philosophy of the contracts is to give the private party a considerable extent of time to reach, according to internal company policies and logistics, the position that it can comply with the environmental standards favoured by the public party. Sometimes the necessary investment in purification installations can be realised on a short-term basis. At other times this may take longer (for instance, in combination with a planned major renovation). Therefore, environmental contracts typically are long-term contracts. Compare the duration of the VCI contract and some other contracts that run until 2010. The contracts [315] contain a system of checks and balances. During the contract evaluations are to be conducted to see whether the industrial party is meeting the contract terms on reduction of toxic disposal. The first evaluation took place in 1995. The general impression was positive. The outcome was that the industrial parties were performing well, and were even ahead of schedule (especially in the case of German parties).

The contracts make use of 'categories' (I-IV) for various substances (compare the VCI contract, clause 3). They further contain control measures and make provision for interim and final reports on the reduction of toxic discharges (compare VI, clauses 4 and 2.2).

The essential part of the negotiated Rhine contracts is the waiver of claims by Rotterdam in consideration of the fulfilment of contractual duties by the private party. The claims concerned are claims in tort for environmental damage inflicted on Rotterdam as a result of the pollution of harbour sludge caused by the private party's discharges of toxic substances. This may concern not only claims in the past, i.e. before negotiations started or before the date of the first evaluation in 1995, but also claims in the future. These claims, based on the legal research mentioned above, are substantial and may run into millions of guilders. The construction costs of the offshore basin for toxic substances ('slufter') alone are Dfl 200 million, Dfl 100 million of which were paid by Rotterdam. Thus there is a stick behind the contract: it is not a matter of trust only.<sup>23</sup>

The rescission of contract in the case of breach by the other party is usually combined with a *terme de grâce* of three or six months (granted by Rotterdam).

The modes of dispute resolution chosen in the contracts vary. An option for the domestic court as well as for arbitration (ICC) can be found.

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<sup>22</sup> See, in more detail, my contribution to the *Nederlands Juristenblad* special issue on covenants (1993) 480 (in Dutch); also *Verbindenissenrecht* vol 2 60 ff. Compare also E.M. Basse 'The contract model - the merits of a voluntary approach' (1994) *Environmental Liability Review* 74.

<sup>23</sup> The reader with an interest in the contents of the waiver of claims clauses and in other contractual topics discussed here is referred to the contracts reproduced in the 1992 conference proceedings (n 2).

(c) *Special legal issues: the consequences of changed circumstances ('Imprévision'), group representation, 'hold harmless' clause*

A characteristic of long-term contracts is that they are susceptible to a change of circumstances that may jeopardise the contract. The year 2010 is still far away, and it is not easy to predict the state of the environment and legislation at that time, or even at the turn of the century. In contract law, several kinds of clauses have been developed to cope with the issue of the change of circumstances, in common law [316] countries known as 'frustration of contract', in civil law jurisdictions as *imprévision* or 'Wegfall der Geschäftsgrundlage'.<sup>24</sup>

To some extent, the Rhine contracts contain clauses covering this problem.<sup>25</sup> These clauses, however, are somewhat one-sided, since the position of the private parties is better covered than that of the public party.

It is suggested that the use of a 'hardship clause' may be helpful here. Characteristically, such clause provides for rules of procedure for renegotiating. Furthermore, the obligation to renegotiate in good faith could be included. This is standing law in The Netherlands. The courts may even impose the obligation to continue negotiations upon a party trying to back out in the final stages of renegotiating the contract.<sup>26</sup>

The VCI represents some 1 600 chemical companies, of which some 400 are discharging toxic substances into the Rhine. The Municipality of Rotterdam negotiated, and thereupon concluded the contract with VCI representatives. This creates the issue of the binding character of the contract as regards the member companies. Compare the solution found in clause 2.1 of the VCI contract.

The original German text for the phrase found there, that 'VCI shall be committed to forcibly and in a promising way influencing its subscribing firms...', is:

'Der VCI verpflichtet sich, auf seine Mitgliedsfirmen am Rhein und dessen Nebenflüssen nachdrücklich und in Erfolg versprechender Weise einzuwirken...'

It is therefore a matter of commitment by the VCI only. It did not guarantee the acceptance and, more importantly, the fulfilment of the contract by its member companies, which are actually involved in the Rhine pollution.

This is a sensitive issue for the public party. The other party is only bound by the contract to put its members under pressure to co-operate in the execution of the contract and make it a success. There is, of course, no direct obligation created vis-à-vis the individual members by the contract, due to the privity of contract rule. It therefore is just a matter of trust. However, the 'stick' behind the contract, the revival of tort claims, is directed at the individual members involved in the

<sup>24</sup> Compare my article 'Adaptation by renegotiation. Contractual and judicial revision of contracts in cases of hardship' in F. Nicklisch (ed) *The Complex Long-term Contract* (1987) 413. It is based on an empirical study of Dutch long-term contract practice and an analysis of contract adaptation clauses.

<sup>25</sup> For instance: the VCI contract, clauses 6 and 3d.

<sup>26</sup> Compare my paper for the International Academy of Comparative Law, Montreal 1990, entitled 'The prelude to contract, the threshold of tort. The law on pre-contractual dealings in The Netherlands' in E.H. Hondius & G.W.J Steenhoff (eds) *Netherlands Reports to the 13th International Congress of Comparative Law* (1990) 71. Incidentally, Dutch law and Japanese law have a very strong view on good faith bargaining.

Rhine [317] pollution. Therefore, there is a rather strong connection between the contracting parties and the 'back-benchers', the individual chemical companies.

As always, and these contracts are no exception to the rule, a certain risk is involved in contracting. Rotterdam was willing to take that risk, preferring a rather loosely drafted contract based on trust and a commitment by the private party to an execution in good faith to an elaborate contract binding parties (and third parties) by hard rules. Criticism regarding this issue has been heard from environmental groups arguing that the contract is too open-ended.

*(d) Assessment of the environmental Rhine contracts*

A comparison of the Rhine contracts as a result of the Rotterdam Rhine Research Project with Rhine Action Programme (RAP, 1987), leads to a difference in outcome. In the RAP, the goal is a 50 per cent reduction of toxic disposal by 1995 compared to the levels of 1985 (as submitted, an unrealistic goal). In the Rotterdam project, the objective is, in principle, a 70-90 per cent reduction per substance compared to the situation in 1991, to be reached by 2010 with a first evaluation in 1995. There are, however, exceptions to the percentage given, e.g. the reduction level of cadmium discharges in Germany was set at 35 per cent, taking into consideration reasonable efforts of German industry in the past.

In comparing the two schemes one should be aware of a difference in character: the RAP is an agreement between states and not binding upon individual companies or the industry as such.

Even if a state is fulfilling its obligations under the RAP, there is no guarantee that individual companies are on the same path and have actually reduced their toxic waste disposal into the Rhine.

We now come to a central theme in the evaluation of the Rhine contracts, the feasibility of the contract approach as compared with the public law approach. It is no secret that the abundant legislation in respect of environmental damage has very little effect in practice. This holds true not only for the national legislature but also for the lawmakers in Brussels who have issued some 150 directives on the environment thus far. This is not a very promising prospect, especially from a long-term perspective. The contract approach has psychological and financial advantages. In the first place, the consensus between parties, their agreement on the road to follow to reach the objective of cleaner Rhine water, is a motivation for the private party to fulfil its obligations. This motivation and commitment is lacking in the case of environmental standards imposed by the legislator.

The financial advantage of environmental contracts is that the schedule of discharge reduction is adjusted to the needs and possibilities of the individual company or group of companies. A side effect here is the [318] postponement of national or international legislation and the enforcement of existing legislation through the use of sanctions.

Finally, one of the incentives for the private party to take the contract seriously is the public relations aspect.<sup>27</sup> 'Pollution prevention pays', also in the appeal to the consumer public. In consequence, this may lead on the one hand to a 'green' corporate attitude, and on the other to a 'green' conscience for government bodies as well.

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<sup>27</sup> Public relations were an important part of the project. Rotterdam hired a German public relations agency to inform the German public about the pollution caused by German industry on the sidewalk of their friendly Dutch neighbours.

Therefore, the conclusion seems justified, that in combating river pollution there are indications that a private law approach is superior to a public law approach, as an effective legal instrument.

#### **(5) The pollution of the river Meuse: the legal issues involved**

If we look at the location of the river Meuse (Figure 2), linking France, Belgium and The Netherlands, its international setting is abundantly clear. [319]

As a consequence of this location water pollution is by definition transboundary pollution. The Meuse is one of the most polluted rivers of Western Europe. Of all the toxic substances causing pollution, which is, regrettably, customary for a major river running through agricultural, industrial and municipal areas, the substances causing most trouble for Dutch drinking water companies in recent times are pesticides (herbicides and insecticides). Current filtering techniques in the production of drinking water are insufficient to remove pesticides, and state of the art filtering processes are extremely expensive. These costs amount to an estimated Dfl 20 million per year (as regards the Water Company Europoort).<sup>28</sup> Furthermore, expenses are incurred to deal with temporary heavy pollution of river water by constructing extra storage reservoirs (Water Company Brabantse Biesbosch). In 1993 for instance, water intake was halted for six weeks when major diuron pollution occurred. Other damage to downstream parties as a result of pesticide sediments in harbours, etc involves additional dredging costs borne by a number of Meuse municipalities and the De Biesbosch National Park. These costs amounted to an estimated Dfl 30 million. Finally, the De Biesbosch National Park is suffering ecological damage, estimated to amount to Dfl 1,5 million annually. The latter damage is, according to recent developments in Dutch law culminating in the enactment of art. 6:175 Civil Code in February 1995, a type of damage that can be claimed in tort.

The damage is caused by the influx of pesticides into the river water. Three highly toxic pesticides are found in considerable concentrations in the water and are: diuron, atrazin and simazin. If one compares the contributions of these substances to Meuse water in the Dutch watershed area to that of foreign sources (mainly Belgium) by comparing the data at the Eijsden and Keizersveer measuring points respectively, the outcome is approximately a 60-40 or 50-50 basis.

These pesticides illustrate a number of liability issues: diuron for instance, is emitted almost completely by municipal sources (waste water treatment plants), whereas atrazin and simazin are also contributed by agricultural sources, on an equal basis. As to the uses of the latter pesticides in agriculture, atrazin is solely used for maize crops, and simazin is applied in the growing of leek and asparagus, and furthermore in nurseries and orchards. On the municipal side, diuron is used to fight weeds on paved surfaces; atrazin and simazin are applied for the same purpose in parks and greens to treat trees, shrubs and lawns.

It should be noted that the use of diuron by municipalities presently has practically ceased, and as a consequence, so too the pollution caused [320] by it on Dutch territory. This occurred at the request of VEWIN (Vereniging van Ex-

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<sup>28</sup> Further information can be found in J. van Dunné (ed) *Non-Point Source River Pollution: The Case of the River Meuse* (1996), a collection of the 1995 Meuse conference proceedings. The Municipality of Rotterdam is heading the Meuse Project, although that is primarily a drinking water problem, and making use of the experience gained in the Rhine Project.

pluimant van Waterleidingbedrijven in Nederland, a Board of Water Companies) after consultation with the Dutch Meuse municipalities involved.<sup>29</sup> In the meantime, most municipalities use changeyphosate as pesticide, a little known substance, believed to have no major detrimental environmental effects.

The use of pesticides in agriculture deserves another, general remark. The Netherlands and Belgium are countries with the highest use of pesticides per hectare in the European Union. The annual sales of plant protection products per hectare of arable land and land under permanent crops are about 17 kg in The Netherlands, which is about four times higher than the average in the EU. The economic aspects are illustrated in the output figures in crops per hectare of utilised agricultural area, which is in The Netherlands about five times higher than the European Union average.<sup>30</sup> In Belgium, coming second in Europe, the figure is 11 kg per hectare. It is clear that a reduction in the use of pesticides will have considerable effects on crop yields and therefore on farmers' income. This explains the delicate nature of our topic from a social and political point of view. For a discussion of this theme reference is made to papers in the 1995 Meuse Conference Proceedings concerning the Laholm Bay Project in Sweden and the Halden Watercourse Project in Norway, by Katarina Eckerberg and Per Kristen Mydske, respectively.<sup>31</sup>

#### **(6) Liability issues regarding non-point sources of pollution (Meuse)**

##### *(a) The legal basis for liability: concert of action and alternative causation*

The liability issue in regard to point sources is relatively easy compared to that in the case of non-point sources. It is possible to come to terms with industrial point source dischargers of toxic substances and to conclude environmental contracts (or covenants) as illustrated by the Rhine Research Project discussed in the preceding paragraph. It is hoped the same road can be followed in the Meuse Project. In the Rhine Project, dealing with water pollution by heavy metals causing pollution of harbour sludge in Rotterdam, it became clear in the end that the river pollution was caused to a considerable extent by non-point sources even in the case of some heavy metals like copper, zinc and lead. Water pollution by pesticides is by definition non-point source in nature. [321]

Non-point source pollution of surface waters is a complicated matter from a technical point of view and also from a legal point of view.<sup>32</sup>

The legal issues encountered in point source water pollution, such as matters of proof and liability, are multiplied when one has to do with non-point source

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<sup>29</sup> VEWIN's request was directed at 163 Meuse municipalities and had a high response (100 by the end of 1994).

<sup>30</sup> Figures derived from Floor Brouwer's paper, 1995 conference proceedings (n 28). Compare also Stichting Natuur en Milieu, *Bestrijdingsmiddelenverbruik in de land- en tuinbouw* (1994) February.

<sup>31</sup> Compare 181 ff; 197 ff.

<sup>32</sup> For further information on these matters, see J. Dogterom's paper in the 1995 conference proceedings (n 28) 7. To establish the use of arable land, the crops that are grown, which correspond with certain types of pesticides (e.g. maize - atrazin), intricate area mapping was done with the help of satellite pictures (see 1995 proceedings (n 28) 61 ff). For a discussion of the legal use of this information in establishing a causal connection between crop growing and water pollution, reference is made to my paper in those proceedings (n 28) 59 ff. For the same issue regarding municipal sources (waste water treatment plants), see (n 28) 42 ff.

pollution. This is not just caused by the problem of the sheer number of possible tortfeasors in a certain watershed area, which may run into the thousands and cause logistical problems of their own. It is also caused more particularly by the fact that each individual tortfeasor is only making a marginal contribution to the pollution as a whole and may therefore escape liability under the traditional tort rules. This is especially the case where pollution by pesticides is concerned. These pesticides are used by numerous farmers or municipal agencies in their continuous fight against weeds and insects for the improvement of agricultural products, municipal pavements and recreational facilities.

As discussed earlier in this paper, the conditions of modern tort law for holding groups of individual polluters liable for their contribution to the pollution of river water deserve further investigation. Prospects are not as bleak as one might expect due to recent case law of the Dutch Courts (see *infra*). In this context it should be stressed that co-operation of polluters in programmes regarding reduction of the use of pesticides in watershed areas on a voluntary basis is definitely to be preferred.<sup>33</sup> However, when consensus cannot be reached in that respect due to financial or political restraints, the presence of legal obligations to prevent environmental damage to downstream users of the river water may serve as an incentive for co-operation by upstream polluters. Here too, the ultimate goal is the conclusion of environmental contracts with associations or groups of polluters. At the moment, negotiations to that end are still in progress. By mid-1998 a couple of environmental contracts had been concluded with Walloon parties.

*(b) The Dutch DES case (1992): a precedent for alternative causation in environmental cases*

The first Dutch *DES* case brought a surprise compared to the American *DES* cases of the previous years. It established joint and [322] several liability in tort for the manufacturers.<sup>34</sup> Market-share liability, a result strongly advocated by the Attorney-General Hartkamp in his 'conclusion' (a legal opinion on behalf of the public prosecutor's office in civil cases, based on the French tradition) in this case, was explicitly turned down by the Court. The reason for rejecting this basis for liability was that it was not in the interest of plaintiffs, the *DES* daughters. Rejected too, were arguments based on group liability and collective liability combined with a fund. The decision of the Court of Appeal, Amsterdam, in favour of defendants was reversed.

The central theme in this litigation was the rule of the 'alternative causation' in concert of action liability cases, derived from art. 6:99 Dutch Civil Code, in force as of 1 January 1992. This establishes joint and several liability for the tortfeasors involved. The rule is regarded as the prevailing law of the 1960's and 1970's when the *DES* tablets were taken by the *DES* daughters' mothers. The issue here was the application, and therefore, interpretation of this statutory rule in regard to the case at hand. Article 6:99 Dutch Civil Code was modelled on the famous American 'two hunters' case, *Summers v Tice* (1948), as may be inferred from its parliamentary history. Therefore, it was alleged by defendants, its wording, combined with the intention of the legislator would bar its application in a

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<sup>33</sup> Recent developments in this field (also Dutch Brabant) are discussed s 3.1 of the 1995 conference proceedings (n 28).

<sup>34</sup> HR 9 Oktober 1992, *NJ* 1994, 535 note Brunner; note Van Dunné (1993) *TMA/ELLR* 15. *DES* is a medicine to prevent miscarriage during pregnancy.

situation where an unknown number of potential tortfeasors is involved. The precise number of tortfeasors has to be established for art. 6:99 Dutch Civil Code to be applicable. The District Court and Court of Appeal, Amsterdam, accepted that view. The latter Court furthermore required the tort action of any defendant to be more specific as regards the damage inflicted to plaintiffs. A general tortious act consisting of putting a potentially dangerous drug onto the Dutch market would not be sufficient in that respect.

Surprisingly, the Supreme Court took the opposite view even though the lower Courts found support from the Attorney-General Hartkamp on this issue. The difficult position of the manufacturers in a lawsuit based on tort influenced the lower Courts in their decisions, whereas the Supreme Court was more concerned with the position of the victims and their formidable burden of proof.

The Court held that art. 6:99 of the Dutch Civil Code is also to be applied in cases in which a large number of victims is involved and each manufacturer may have caused only part, which would be statistically determinable, of the total amount of damage. In its decision, the Court took into consideration the wording and the legislative history of art. 6:99, but primarily, its legal meaning, to wit, the support for reasons of equity of the victim in distress who are not able to prove which person caused its damage. The requirement of a 'specific tortious act', imposed [323] by the Court of Appeal, was therefore rejected by the Supreme Court as inconsistent with the true meaning of art. 6:99. The result reached by the lower court was considered unreasonable by the highest court since victims would be left with their damages if the identity of the DES manufacturer that committed the tort could not be established by them. It would be unfair to restrict the application of art. 6:99 to damage caused by a small number of persons who could be traced.

Along the same line of thought, the Court rejected the lower court's view that the 'circle of liable persons' be exactly established by plaintiffs. This was considered an unreasonable requirement in the light of the virtual impossibility of tracing all DES manufacturers involved.<sup>35</sup> Liability in this concert of action situation is based on the existence of a tort committed by a member of the circle of persons involved in the act. It should be noted, that in this litigation there was a presumption of such tort by the DES manufacturers. This issue still has to be dealt with by the lower court, in subsequent litigation.

This presumption, however, gave rise to an interesting defence, proposed by Mrs Dommering in a recent thesis, and submitted to the Supreme Court by Mr Hartkamp in his conclusion.<sup>36</sup> If the manufacturer sued in tort has a valid defence (e.g. state of the art), the rule of art. 6:99 of the Dutch Civil Code will not apply. But this will also be the case if it can be established that there is at least one member in the group of manufacturers that could make use of such a defence. The Supreme Court, however, had no difficulty in rejecting this argument too. If the DES tablets were produced and marketed by a manufacturer that was not negligent in doing so and the plaintiffs' damage may have been caused by it, the other manufacturers remain liable, with the exception of instances in which such liability would be unreasonable under the given circumstances. The example given is the

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<sup>35</sup> The Court mentions the possibility, available for the manufacturers that are liable for all the damage, to have recourse against each other. As a consequence, they will only have to take a share in the compensation of the total damage.

<sup>36</sup> L. Dommering-van Rongen *Produktaansprakelijkheid* (1991).



situation where there is a considerable chance that the actual damage was caused by a non-liable manufacturer.<sup>37</sup>

It should be noted that the Court's view is consistent with the doctrine of causation under Dutch law. This is based on 'reasonable imputation' (the case law dates from 1970). As a consequence, alternative causation must be applied on the basis of fairness and equity. [324]

Opponents of joint and several liability of manufacturers in concert of action have stressed the unfair results of this approach in the case where a certain manufacturer held liable by a victim cannot have sufficient recourse against other manufacturers. The reason may be that they cannot be traced, are out of business or in bad financial shape. It could be submitted that it would be even more unreasonable to lay this risk on the victim. This was also the view of the Supreme Court. As mentioned before, the Court was of the opinion that the construction of market-share liability should be rejected exactly on this ground.

For several reasons, sympathy for the hardship caused to the group of DES manufacturers by this risk contribution is not well founded. One is that the production of DES was not protected by patent. The drug was rather easy and cheap to make and distribute. The manufacturers had trusted to safety research done by others. The doctrine of 'creation of danger' comes to mind. This doctrine had been developed in Germany since 1876 (*Gefährdungshaftung*) and introduced to Dutch jurisprudence at the beginning of the century. Incidentally, the six DES daughters had summonsed a group of ten DES manufacturers, which held an approximately 90 per cent share of the Dutch drugs market at the time, and an estimated share of the DES market of well over 50 per cent. Therefore, a substantial percentage of the DES manufacturers involved were held liable in this law suit.<sup>38</sup>

Another form of liability in multiple tort cases was also tested in this case, the group liability of art. 6:166 of the Dutch Civil Code. Basically, this is a concept of Roman law. The tort is committed by a group of people *in turba* through crowding, jostling and disorder. Its application in the present case was rejected by the Court of Appeal, and this was approved of by the Supreme Court.

It is submitted, however, that the use of the rule of art. 6:166 deserves support. It must be admitted that, in its application, obstacles of the kind we have met in the application of art. 6:99 are to be expected. The legislative history of the article indicates that it is directed at damage caused by reckless youths and the like, and also demonstrations. For group action some authors require a mutual influence in the group, a high degree of attuning of the behaviour of the group members (some even speak of 'psychic causation'). Comparative research may be helpful in the interpretation of this article and the determination of its reasonable

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<sup>37</sup> The subsidiary argument of 'market-share liability' proposed by plaintiffs was not accepted by the Court even though it was advocated by Attorney-General Hartkamp in his 'conclusion' to this case. It is after all not satisfactory, the Court held, that under this system the risk of financial insolvency of one of the manufacturers, as well as the risk that the company no longer exists or can no longer be traced, is placed on the victim and not the manufacturer.

<sup>38</sup> The *DES* decision's role as precedent in environmental liability cases is also advocated by G. Betlem *Civil Liability for Transfrontier Pollution: Dutch Environmental Tort Law in International Cases in the Light of Community Law* (1993) ch 9.

meaning.<sup>39</sup> The difference between this kind of liability [325] and the one covered by art. 6:99 is that, in the case of group liability, a member of the group may be held liable for damages inflicted by the group even if it is established that he or she did not commit the tortious act. Membership of the group is the sole basis for liability.

A third form of liability, collective liability in combination with the obligation to establish a fund, was also rejected with scant consideration by the Supreme Court. It is a form of liability advocated by Knottenbelt in his Rotterdam thesis of 1990, combined with joint and several liability of multiple actors.<sup>40</sup> The Dutch DES litigation is a good illustration of the assets of a fund construction. The millions of guilders paid by defendants in the course of this lawsuit would have been well spent in such a fund for the victims. Incidentally, the defendant DES manufacturers seemed prepared to go all the way in the next stage of the litigation, before the Court of Appeal, The Hague. This stage entailed the establishment of negligence of the manufacturers in producing and marketing DES. The DES daughters were still in for a long ride. Settlement negotiations failed and as a consequence proceedings were continued in the spring of 1996. In 1998, however, the parties came to terms and a settlement was reached. Meanwhile, the number of DES daughters registered had increased to over 20 000.

#### (7) Provisional conclusions

In this section the use of a typical private law instrument, the environmental contract (covenant), in Dutch legal practice has been discussed as a method of combating river water pollution by point and non-point sources, both in The Netherlands and abroad. Although of a contractual nature, this instrument is well founded on tort: the liability in tort of the discharger of toxic waste into the river, directly or indirectly. The Dutch example proves that even government bodies (here the City of Rotterdam) may make use of that instrument, which by its nature is well suited to deal with the specific circumstances of the pollution and the position of the party causing it, be it the industry or other sources. This instrument allows fine-tuning that is hard to achieve in a public law setting. Furthermore, the sanctions are quite realistic: an action for damages of an impressive amount. All in all, the environmental contracts have proved to be effective in the case of Rhine pollution (point source). It is too early to predict its use or effectiveness in the field of Meuse water pollution by non-point sources. The formidable difficulties encountered in that case in regard to technical and legal issues, causation, concert of action, etc, are, in the opinion of the author, not insurmountable as has been proved by the first results. In this field also, the tort background of the environmental contract gives sufficient support for its legal status and viability in an [326] area of environmental damage where the traditional legal instruments have thus far proved to be ineffective.

The environmental contract (covenant) as a legal instrument is still in its infancy. The Dutch example may serve as an indication of a bright future.

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<sup>39</sup> For this subject, reference is made to the research report by the present author entitled *Liability for Environmental Damage in the Case of Harbour Silt Polluted by Discharges* (1991).

<sup>40</sup> J. Knottenbelt *Hoofdstukken Produktaansprakelijkheid* (1991) 118 ff.

## II Private law approaches in neighbour law: public international law approaches

### (1) Liability for water pollution, based on neighbour law, water servitudes and nuisance

#### (a) Introduction

This section examines the grounds other than tort for an action in damages in a civil law system; neighbour law, water servitudes and nuisance.<sup>41</sup> Several actions in this sphere are not based on fault liability, but on (more or less) strict liability. The Belgian and French practice in the field of nuisance (*troubles de voisinage*) is the most far reaching in this respect.

The use of the common private law action in tort for environmental damage in the case of transborder pollution is also worth comparing with the approach to the principles of liability for wrongful and lawful acts under public international law. It may not come as a surprise, that the same issues encountered in civil law are widely discussed in international law. Interestingly enough, these principles of international law have been applied by a Dutch lower court in a civil case of transboundary pollution (Rotterdam District Court, in the *French Potassium Mines* case, discussed *supra*).

Finally, some concluding remarks are made about this comparative journey, within the realm of private law and across its peripheries.

#### (b) Neighbour law, water servitudes and nuisance

The impression that an action for damages in cases of industrial or municipal pollution of river water is of rather recent origin is false. The legal position of municipalities discharging waste water and the acceptance of a duty of care in that respect with regard to third parties making use of the water, is the subject of a range of cases. These start at the beginning of this century with the series on the pollution of the Voorste Stream, a river in the Dutch Province of North-Brabant that received untreated sewage water from the Municipality of Tilburg. The pollution, dating from the 1870's, gave rise to some hundred lawsuits that were filed before the local court from 1913 to 1953. [327] These eventually led to seven Supreme Court decisions. Finally, after a 1953 decision, Tilburg installed a waste water treatment plant, thus putting an end to litigation.

The cases reflect the development of the law in this area. At the time of the first case, the 1915 decision *Voorste Stream I*, the law of tort was still underdeveloped. Liability in negligence and a duty of care to third parties were only accepted in 1919 (*Cohen v Lindenboom*). In 1915, tort still had to be based on the infringement of a statutory duty, and therefore the plaintiff brought his claim under art. 676 of the Dutch Civil Code. In terms of this article the downstream landowner is granted the right to use river water for agricultural purposes. The Dutch Supreme Court took the view that by polluting the river water the upstream landowner was injuring the downstream landowner's right to make use of the water, which should be in a proper condition for such use. As a result, the upstream landowner was held liable in tort.

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<sup>41</sup> The following part is taken from my contribution entitled 'Liability in tort for the detrimental use of fresh water resources under Dutch law in domestic and international cases' in E.H.P Brans *et al* (eds) *Scarcity of Water. Emerging Legal and Policy Responses* (1997) 196 at 202.

With the development of the concept of negligence after 1919, the courts came to accept a liability based directly on a duty of care to other users of river water, and the approach through art. 676 became obsolete.<sup>42</sup> In French law, however, the use of the identical art. 644 CC in water pollution cases still is common practice, and has led to the acceptance of a strict liability of polluters outside the realm of negligence in tort. The obligation art. 644 imposes on owners of riverside property is considered to be a 'servitude' (easement) to use the river water for agricultural purposes. In a decision at the turn of the century, the *Cour de cassation* held that a riparian landowner who has permission to use river water for industrial purposes is under an obligation to respect the rights of down-stream property owners, especially to prevent the water from becoming unsuitable for normal use.<sup>43</sup> In a more recent decision, the *Cour de cassation* has ruled that under this article a company has the obligation to construct a purification plant, so that the river water used by the company on its premises will be discharged into the river again in its natural purity.<sup>44</sup>

The tort cases involving the Voorste Stream pollution fit well into the traditional doctrine of nuisance under Dutch law, which is based on negligence. A characteristic of this doctrine is the weighing of interests of the parties. The duty of care of one party in regard to another party in the vicinity suffering damage is set against its interest in operating a [328] factory or other commercial enterprise at the site. An interesting decision in this context is *Voorste Stream VI*.<sup>45</sup> The polluting city's defence was an argument based on the shortage of financial means to build a purification plant and the choice of the cheaper way of disposing of the untreated -waste water into the river. This was rejected by the Supreme Court. It held that such a policy might be justified from the point of view of the general interest or even be obligatory under the given circumstances, but this would not relieve the Municipality of its obligation to bear the costs of the detrimental effects of its policy to third parties. The Court's reasoning is identical to that in the case of *Municipality, The Hague v Jochems*, decided a year later.<sup>46</sup>

This case law of the mid-century is still current law. It found a recent follow-up in the *French Potassium Mines* case of 1988, which was discussed previously. The river Rhine is of vital importance as a source of fresh water to some 40 million people in several countries. In the *French Potassium Mines* the Dutch Su-

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<sup>42</sup> The current version of art. 676 CC is art. 5:40 CC (New Civil Code, in force since 1992). It is part of the section on nuisance, art. 5:37 CC, which is explicitly based on tort (negligence), the general art. 6:162 CC.

<sup>43</sup> *Cour de cassation* 6 July 1897, *DP* 1897 1.536. In the same sense, the decision of 4 December 1963, *D* 1964, 104, *La Pouponnire de Fouderaie v Grand*.

<sup>44</sup> *Cour de cassation* 12 February 1974, *JCP*1975, II 18106 note Despax. Compare also the recent decision of 18 July 1995, *Simoës v Bonifas* (unpublished; available from Lexis).

<sup>45</sup> HR 19 March 1943, *NJ* 1943, 312 *Gem. Tilburg v Haas et al.* Compare this author's comments in (1988) *TMA/ELLR*, 38 (with English summary).

<sup>46</sup> HR 18 February 1944, *NJ* 1944, 226. This case is discussed extensively in my 1997 article, mentioned in the previous footnote. For a presentation of the Dutch Groundwater Act and case law in that area reference is also made to that article. Surprisingly, with local fresh water sources of 688 m<sup>3</sup>, The Netherlands is way below the United Nations' standards for water poor countries: the poverty line of 1 000 m<sup>3</sup> per year. As a consequence, groundwater shortage and groundwater pollution, are important issues, reflected in Dutch water law. The country's dependence on river water taken from transboundary rivers that are seriously polluted will be clear.

preme Court's approach to the matter resembled that in nuisance cases in general. The Court held that the question of negligence should be answered by taking into consideration the character and severity of the damage to third parties and the extent of time over which the damage was inflicted, regard being had to the circumstances of the case. The dischargers of toxic substances should be guided in their conduct by a weighing of their own interests against those of the downstream users of river water. The Court ruled in particular that the fact that this use was sensitive to the substances emitted was of importance. Furthermore, the downstream user was justified in expecting that the river would not be polluted excessively by considerable discharges.

Another point of interest is the Potassium Mines' defence that the chloride discharges were to be dealt with in accordance with the Bonn Salt Treaty of 1976, under rules of public international law. In fact, the emissions were within the standards laid down in that treaty (which came about after 25 years of negotiations, and clearly represents a compromise of all interests involved). The Supreme Court, in rejecting that argument, held that the Treaty was only binding upon the concluding States, and not upon individual citizens of those States in [329] relation to each other. As a consequence, in transboundary river pollution, civil claims could be brought before the Court, on the basis of Dutch tort law.<sup>47</sup>

The competency of a Dutch Court, at the location where the damage occurred, is based on a decision of the European Court of Justice, at the request of the Dutch Court in the *French Potassium Mines* case (a prejudicial decision of the Luxembourg Court).<sup>48</sup> The European Court of Justice held that a plaintiff in a transboundary tort case has the option of selecting either the court of the country where the damage was suffered, or the court of the country where the defendant had committed the tortious act. That is, for the EEX Convention to be applicable there has to be a commercial dispute (art. 1).<sup>49</sup> In regard to the law governing the dispute, according to rules of private international law on tort liability, the plaintiff has a similar choice, which in the German terminology commonly used, is expressed as the choice between *Fallort* and *Handlungsort*.

In the *French Potassium Mines* case the Dutch plaintiffs chose Dutch law, with the consent of the French defendant (whose law in environmental cases is more on the line of strict liability than Dutch law).

The pollution of the river Meuse thus far has not led to decisions of the Dutch Supreme Court. The litigation instituted by a Dutch NGO against the Belgian company Cockerill Sambre regarding water pollution caused by PAH's in the production of cokes resulted in a very unsatisfactory decision of the Court of Appeal, Den Bosch (*Bois-le-Duc*) in 1994. The Court ruled that in the absence of a

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<sup>47</sup> The Potassium Mines' appeal to the conditions of its permit was rejected by the Court of Appeal and this was confirmed by the Supreme Court - since, according to French law and taking into account the wording of the permit, these did not relieve defendant of its liability in tort (which is also the case under Dutch law).

<sup>48</sup> European Court of Justice 30 November 1976, *NJ* 1977, 494. For this subject, see also G. Betlem *Civil Liability for Transboundary Pollution: Dutch Environmental Tort Law in International Cases in the Light of Community Law* (1993).

<sup>49</sup> If the dispute is treated as an administrative matter, this may create a problem because the EEX Convention will then not be applicable. Compare European Court of Justice 16 December 1980 *S & S* 1981, 46 *Otrarte* (the State's action for damages for costs of removal of a ship wreck is a civil case under Dutch law, whereas in the law of most EC countries administrative law is applied to such a case).

clear (written) norm in regard to the emission of the particular toxic substances, no action in tort would lie against the polluting company.<sup>50</sup>

In this context, reference should also be made to an associated issue, the maintenance of waterways. The decision of the Dutch Supreme Court in the *Bargerbeek* case of 1981 comes to mind. In this case it was held that the water authority was under a duty of care to third [330] parties for the proper maintenance of the local brook.<sup>51</sup> The plaintiff's crop had been damaged by an inundation due to deficient maintenance of the brook. The Court held that the water authority had some discretion in its operations, thereby also taking into account financial aspects. In recent case law, however, this latter aspect is given less weight.<sup>52</sup> In his note Brunner defends the reversal of the burden of proof of the plaintiff in cases such as the one at Bar.

One may conclude from this survey of Dutch case law, that a municipality or industry, emitting waste water into rivers is, according to Dutch tort law, under a duty of care in regard to downstream users of river water such as drinking water companies etc, not to discharge toxic substances into surface waters that will have detrimental effects on parties using the water in the production of drinking water or for similar purposes.

In the light of the international character of this topic, it may be of interest to give an overview of Belgian and French private law regarding river pollution, being the jurisdictions of the upper course of the river Meuse where most of the pollution originates.

Decisions in Belgian case law are comparable to the Dutch case law discussed so far regarding the discharge of untreated waste water into the surface water by municipalities. In the case of the Julienne, a small river flowing into the Meuse, fish farmers sued the municipality and the Walloon Province. The Court of Appeal, Liège held both defendants liable in tort for having acted negligently in disregarding the fish farmers' interests. Furthermore, the municipality infringed the Surface Water Act of 1971 and the Province acted negligently by refraining from building a water treatment plant.<sup>53</sup> In the *Brugelette* case a similar action was brought before the Cantonal Court by local beekeepers against the Municipality of Brugelette, which approved of pollution of a brook by industrial discharges of waste water. These discharges had caused damage to their beehives and the bee populations. The judge of first instance held the municipality liable in tort (negligence) and imposed an obligation to implement measures to bring the pollution to an end under a recognizance.<sup>54</sup>

A typical aspect of Belgian environmental law, and of French law as well, is the use of the action in nuisance, *troubles de voisinage*, to the effect that strict liability of the person disturbing the 'balance' in the neighbourhood is assumed (art. 544 Belgian Civil Code). The nuisance caused to other persons must be ab-

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<sup>50</sup> Court of Appeal, Den Bosch 31 May 1994, *Cockerill Sambre. Foundation Reinwater et al* (1995) *TMA/ELLR* 60, discussed at 41 ff and 46 ff. Compare for this subject the author's 1996 paper (n 15) 57 ff.

<sup>51</sup> HR 9 October 1981, *NJ* 1982, 332, note Brunner.

<sup>52</sup> See my *Verbintenissenrecht* vol 2 452 ff.

<sup>53</sup> Court of Appeal, Liège 9 February 1984, *JT* 1985, 320, note Jadot.

<sup>54</sup> Cantonal Court (Justice of the Peace), Lens 27 May 1986, *RGAR* 1987, nr 11 250; confirmed by District Court, Bergen 23 December 1986. Compare also Cantonal Court, Lens 9 April 1990, *AR* 1990, 6 661.

normal. No negligence is required, [331] but the actor is under a general obligation to restore the equilibrium by paying a reasonable compensation.<sup>55</sup> The Belgian Supreme Court held in a 1973 decision that a plaintiff, confronted with difficulties of proving negligence on the part of the defendant in a common tort action, may resort to the nuisance action as an alternative. This action is essentially one of an infringement of property rights of persons located in the neighbourhood.

Case law offers interesting examples of the use of this instrument in environmental disputes. A municipality had to pay compensation to the owner of a fish pond that was polluted by the discharge of untreated sewage water into a local canal. A farmer was held to be under an obligation to pay damages to adjacent farmers when pesticides sprayed on his land were carried along with rainwater and caused pollution of farm land in the vicinity.<sup>56</sup>

In French law we find a similar use of the action in nuisance; in a 1971 decision the *Cour de cassation* held that the obligation to give compensation for impairment in case of *trouble de voisinage* is not based on negligence (*faute*).<sup>57</sup> At times the compensation consists of building purification works or at least an indemnification of the costs required to do so. In a 1972 decision the defendant had to pay the costs of a river cleanup.<sup>58</sup> It should be noted, however, that the French courts are sensitive to the amount of compensation involved in relation to the economic position of the defendant polluting company.

## **(2) The comparison of civil law (tort) and public international law in regard to the principles governing wrongful acts, causing cross-border pollution**

The international character of the topic, where transboundary pollution is concerned, calls for a comparison with public international law and the solutions offered in that field. However, only a brief account of the state of law in the international context can be given here. In the [332] discussion of this matter reference will be made to a 1991 publication of the present author written in conjunction with Johan Lammers.<sup>59</sup>

In developing rules of public international law regarding cross-border pollution in the last decades a central role has been played by the United Nations In-

<sup>55</sup> Belgian Supreme Court 6 April 1960, *Arr Verbr* 1960, 722. In establishing this rule of law, the Court is referring to the Constitution. For this subject, compare L. Cornelis *Begin-selen van bet Belgische buitencontractuele aansprakelijkheidsrecht* (1989) 670 ff; H. Bocken *Het aansprakelijkheidsrecht als sanctie tegen de verstoring van het leefmilieu* (1979) 270 ff. See also Bocken's 1995 article (n 6).

<sup>56</sup> Compare respectively: District Court, Turnhout, 3 June 1985, *Res Jura Imm* 1985, 181; District Court, Hoei 25 June 1986 *RGAR* 1987 nr 11 280.

<sup>57</sup> *Cour de cassation* 4 February 1971 *JCP* 1971, II 16781 note Lindon. The same holds, the court decided in 1994, for a situation where otherwise the requirements for liability for things according to Article 1384 CC would apply. See for this subject: G. Viney *Trait de droit civil V, Obligations* (1988) nr 90; Mazeaud/Chabas II *Biens* 8ed (1994) nr 1341; E.H. Hulst *Grondslagen van milieu-aansprakelijkheid* (1993) 337 ff.

<sup>58</sup> *Cour de cassation* 17 February 1972, *Bull civ*, II nr 50, 36, cited by Viney (n 57) with other cases and literature. Compare also Malaurie/Ayne's IV *Les Biens* (1994) 3ed nr 1070.

<sup>59</sup> See the reports to the Netherlands Association of International Law 1991 *Aansprakelijkheid voor schade door grensoverschrijdende milieuverontreiniging: volkenrechtelijke en civielrechtelijke aspecten* (1991) 206. Special reference is made to the present author's treatment of public international law concepts in regard to those in civil law at 132 ff.

ternational Law Commission (ILC). Its study on 'international liability for injurious consequences arising out of acts not prohibited by international law' was commenced in 1978 and resulted in a Sixth Report in 1990. This report contained draft articles for a convention on the subject, written by the Special Reporter Julio Barboza.<sup>60</sup> Another draft covering transboundary pollution is the 1994 ILC Draft Articles on the law of the Non-Navigational Uses of International Watercourses. The principles and norms formulated in this draft, however, are, according to Lammers and other authors, too broad and vague to be of much use in international water disputes.

In May 1997 the Convention was adopted by the UN General Assembly.<sup>61</sup> As could be expected, the Convention received considerable criticism regarding its effectiveness from several authors, in particular Nollkaemper and Fitzmaurice.<sup>62</sup> In the context of this article, however, reference is made only to the Convention's core articles on liability:

'Article 5. Equitable and reasonable utilisation and participation.

1. Watercourse States shall in their respective territories utilise an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilisation thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse.
2. Watercourse States shall participate in the use, developments and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilise the water course and the duty to cooperate in the protection and development thereof, as provided in the present Convention. [333]

Article 7. Obligation not to cause significant harm.

1. Watercourse States shall, in utilising an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse States.
2. Where significant harm nevertheless is caused to another watercourse State, the States whose use causes such harm shall, in the absence of agreement to such use, take all appropriate measures, having due regard for the provisions of articles 5 and 6, in consultation with the affected State, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation.

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<sup>60</sup> This Draft is discussed at length by Lammers (n 59) at 72 ff, in combination with the 1986 Report of the WCED Experts Group on Environmental Law 'Legal Principles for Environmental Protection and Sustainable Development'.

<sup>61</sup> For a discussion of the Convention, see S. McCaffrey & R. Rosenstock 'The International Law Commission's Draft Articles on International Watercourses; an Overview and Commentary' (1996) 5 *RECIEL* 89, S. McCaffrey & M. Sinjela 'The 1997 United Nations Convention on International Watercourses' (1998) 92 *American Journal of International Law* 97.

<sup>62</sup> See M. Fitzmaurice 'Convention on the law of the non-navigational uses of international watercourses' (1997) 10 *LJIL* 501; A. Nollkaemper 'The contribution of the International Law Commission to international water law, does it reverse the flight from substance?' (1996) 27 *Netherlands Yearbook of International Law* 39.



For our topic the 1992 Helsinki Watercourses Convention, in force since October 1996, also is of interest (Convention on the Protection and Use of Transboundary Watercourses and International Lakes, which came into force in 1996).

This Convention, drafted under the auspices of the Economic Commission for Europe, was ratified by 21 countries and is directed at water management of 158 rivers, including 27 main rivers.<sup>63</sup>

To comply with the obligations under the Helsinki Convention, the Parties will, *inter alia*, have to set emission limits for discharges of hazardous substances from point sources based on the best available technology. In addition, they will have to apply at least biological treatment or equivalent processes to municipal waste water.

They must also issue authorisations for the discharge of waste water and monitor compliance. Moreover, they have to adopt water quality criteria and define water quality objectives. To reduce the input of nutrients and hazardous substances from diffuse sources, in particular from agriculture, they must develop and implement best environmental practices. Furthermore, environmental impact assessment procedures and the ecosystem approach must be used to prevent any adverse impact on transboundary waters.

Consequently, the Helsinki Convention addresses such issues as monitoring, assessment, warning and alarm systems, and exchange and presentation of information. For example, the parties bordering the same transboundary waters will have to set up joint or co-ordinated systems for monitoring and assessing of the conditions of transboundary waters, and set up co-ordinated, or joint communication, warning and alarm systems. The clear objective of monitoring and assessment systems such as the Helsinki Convention is to ensure that changes in the conditions of transboundary waters caused by human activity do not lead to significant adverse effects on flora and fauna, [334] human health and safety, soil, air climate, landscape and historic monuments or other physical structures or the interaction among these factors.

The Convention's article on liability is the following:

'Article 7. Responsibility and liability - The Parties shall support appropriate international efforts to elaborate rules, criteria and procedures in the field of responsibility and liability'.

The slow pace of law-making in the field of international law in regard to transboundary pollution has drawn several comments from observers in the past. Gaines' comment must be quoted:

'the persistent obstacle has been the unwillingness of governments to yield State sovereignty over national resources in order to secure a clear definition of State responsibility.'<sup>64</sup>

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<sup>63</sup> For this convention and the Charleville-Mézières Treaty on the protection of the river Meuse concluded by the riparian States in 1994 reference is made to several recent articles. A. Gossenes 'The 1994 agreements concerning the protection of the Scheldt and Meuse Rivers' (1995) *Eur Environm Law Review* 9; N. Bouman 'A new regime for the Meuse' (1996) 5 *RECIEL* 161.

A common distinction made in public international law is that between wrongful acts and lawful acts. The former are usually governed by the criterion of due diligence, a duty of care based on fault liability which, in its application in practice, is similar to negligence, that is, acting against norms generally accepted in the society of nations. The use of strict standards of negligence in practice, has as a consequence the blurring of the border line between fault and strict liability as has been evident in the field of private tort law in most European countries for some time. The real difficulty in the international sphere lies in treatment of lawful acts under public international law. It may be tempting to accept strict liability here, as is advocated by several authors. That concept, however, is quite unusual in international treaties, and a state practice in that sense is practically non-existent. As a consequence, some international lawyers, like Brownlie, would prefer the application of the standards for wrongful acts (i.e. due diligence), which are thought to be sufficiently severe, also in the case of lawful acts.<sup>65</sup> In this context, some writers make a distinction between continuous pollution and accidental pollution, in an effort to exclude the injunction in the latter situation, the introduction of which clearly will make some states even more hesitant to accept state liability in the area of lawful acts (e.g. Handl).

As regards the prospects of the Draft-Convention on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law, one may wonder what assets are in stock for the handling of international water disputes. The choice for the [335] acceptance of a state liability based on the concept of due diligence (comparable to fault) has drawn a number of critical comments from international law scholars over the years, that seem convincing in the civil law tradition. However, due diligence (fault) liability was advocated by Lammers in his 1984 thesis and in the 1991 Report, basically for pragmatic reasons: the creation of a treaty acceptable to a reasonable number of States. If the lengthy and laborious preparation of the Draft by the ILC reflects the further procedure of establishing the treaty, there still is a long way to go in international law, and therefore, a practical approach may make sense.

Interestingly enough, the legal policies underlying state liability as advocated by several authors are quite familiar to the civil law reader. These include compensation of damage, deterrence, prevention and peaceful vindication of rights. The same holds for the principles involved here, namely: equity, good neighbourliness or comity, solidarity, equality, duty to co-operate and unjust enrichment.

In other areas too, an intertwining of public and private law can be found. When reading the water treaty between France and Spain, which was tested in the well-known *Lac Lanoux* arbitration, it strikes the reader that the wording of the Act, added to the treaty, is taken almost literally from a water servitude in the French Civil Code, art. 640 CC.<sup>66</sup> The wording is:

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<sup>64</sup> S.E. Gaines 'International principles for transnational environmental liability: can developments in municipal law help break the impasse?' (1989) 30 *Harvard International Law Journal* 311 at 313.

<sup>65</sup> For sources, reference is made to the author's 1991 report (n 59).

<sup>66</sup> See art. 12 of the Additional Act of May 26 1866 to the three Treaties of Bayonne, *Lac Lanoux Arbitration (France v Spain)*, Arbitral Tribunal 16 November 1957, (1957) 24 *ILR* 101.

'The downstream lands are obliged to receive from the higher lands of the neighbouring country the waters which flow naturally therefrom together with what they carry -without the hand of man having contributed thereto.'

As a consequence, in the construction of that paragraph of the Act, knowledge of the relevant French private law can be most helpful. What is meant here is a real and cogent obligation resting on the downstream land to receive the water. This characterises the water servitude in French law and other legal systems based on the Napoleonic Code (such as that of The Netherlands).

An example of the use of international law in a civil case, on the other hand, is the interlocutory decision of the District Court, Rotterdam in the *French Potassium Mines* case.<sup>67</sup> The Court, presided over by Erades, an international law specialist, applied the principle of *sic utere tuo ut alienum non laedas* ('in the use of property act in such way not to harm another person') taken from international law in a private law [336] tort litigation. Leading authors, like Sir Hersch Lauterpacht, are cited extensively by the Court. In the final decision, under another president, the *sic utere* principle is placed in juxtaposition with the action based on negligence. On appeal, however, the Court of Appeal, The Hague found little difficulty in setting aside the international concept as foreign to national tort law doctrine, in a sweeping statement. Thus, negligence in a casual way is being placed again on the throne of the land of tort, a decision not tested in that respect before the Dutch Supreme Court.

Interestingly enough, the civil law origin of the *sic utere* principle is stressed by Lauterpacht in his textbook, as taken from the law of nuisance in common law. Therefore, it could be seen as belonging to the 'general principles accepted by civilised nations', mentioned as a source of international law by art. 38 of the Statutes of the Permanent International Court of Justice.<sup>68</sup> As far as the connection between international law and civil law is concerned, the circle has closed. It may also be noted that the concept of negligence in English law with its duty of care towards third parties is based on the concept of the good neighbour introduced by Lord Atkin in his famous opinion in the landmark case of *Donoghue v Stevenson*, of 1932. Again, good neighbourliness also is an old concept of international law derived from the Roman concept of *comitas* or comity by

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<sup>67</sup> District Court, Rotterdam 8 January 1979, *NJ* 1979, 113. For a discussion of the decision, which has drawn attention in other countries, reference is made to the author's article in (1988) *TMA/ELLR* 34. Compare also J. van der Meer, (1987) *TMA/ELLR* 16 (note Court of Appeal's decision). The Court's final decision is that of 16 December 1983, *NJ* 1984, 341; Court of Appeal, The Hague 10 September 1986 (1987) *TMA/ELLR* 15.

<sup>68</sup> Oppenheim-Lauterpacht *International Law* vol I 8ed (1955) 346 ff, cited by the Rotterdam Court in its 1979 decision at 319:

'The conferment and deprivation of nationality is a right which international law recognises as being within the exclusive competence of states; but it is a right the abuse of which may be a ground for an international claim. The duty of the state not to interfere with the flow of a river to the detriment of other riparian states has its source in the same principle. The maxim, *sic utere tuo ut alienum non laedas*, is applicable to relations of states no less than to those of individuals; it underlies a substantial part of the law of tort in English law and the corresponding branches of other systems of law; it is one of those general principles of law recognised by civilised states which the Permanent Court is bound to apply by virtue of Article 38 of its Statute'.

17th century international lawyers such as Grotius. Here we see the circle turning once more.<sup>69</sup>

The overall conclusion could be that the state of affairs in international law offers little inspiration to the civil law brethren. The reason for this is the international law maker's policy, based on the middle-of-the-road approach, to secure the acceptance of a treaty by a sufficient number of States, also the not liability-prone ones, of which there are so many.

In this context, it seems that Gaines' observation of the situation in *internationalibus* was correct when he wrote,

'Questions of liability and compensation for environmental harm have undergone dramatic doctrinal development in the municipal legal systems, while international law remained essentially static.'<sup>70</sup> [337]

Strict liability for environmental damage definitely is the trend, in the area of national law, European Community or Treaty law. The Brundtland Report of 1986 advocated that type of liability, and it was endorsed by the ministers of the environment of the European Community countries in Strasbourg in the following year as the basis for future policy. In the European Union, the EC Commission, urged to take action by the European Parliament, has not been sitting idle in the past years. The production of hazardous waste, to give just one example, was the subject of a 1989 Draft EC Directive (amended in 1991), which is characterised by strict liability of its producer. We find the same regime in the field of the transport of toxic waste, where under the 1989 Geneva Convention on Civil Liability for Damage Caused During the Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD), the transport company is held strictly liable. An important step in the same direction was taken by the Council of Europe with the drafting of the Lugano Convention of 1993, the Convention on Civil Liability for damage resulting from activities dangerous to the environment. Articles 6-8 of the Convention contain a no-fault liability for an operator involved in dangerous activities or in the exploitation of a site for the permanent deposit of waste.

### (3) Conclusions regarding Part 2

Reviewing our excursion into international environmental law, one cannot but come to the conclusion that compared with civil liability for pollution in an international setting, the developments in international law concerning that subject present a quite different scenario, where strict liability still is considered a novelty. Moreover, due to a chronic shortage of case law from the Permanent International Court of Justice or arbitral tribunals, on transboundary pollution disputes, the cases widely discussed in the international forum are aging (*Trail Smelter, Lac Lanoux, e tutti quanti*). Therefore, hope must be placed in the work of the ILC and subsequently the traditional and time-consuming tug of war around a treaty that has survived the draft stage. This is not a comforting thought though, at least for the environment in jeopardy.

<sup>69</sup> For this topic compare the author's paper delivered at the 13th World Congress on Philosophy of Law and Social Philosophy at Kobe, Japan in 1987, entitled 'Rhine pollution by industrial discharges: new dimensions of the good neighbour doctrine?' (1991) 12 *Rechtstheorie, Beiheft* 375 ff.

<sup>70</sup> Gaines (n 64) at 315.

This being the case, the role of a civil law approach to liability in international disputes, such as the ones concerning the detrimental use of fresh water sources, still seems to be well-founded and increasingly of current interest.<sup>71</sup> Meanwhile, it is suggested that international lawyers may take notice of the state of the law in field of tort liability under [338] national law, to their advantage in dealing with the development of the adjacent international law of transboundary pollution. In the sphere of solutions for environmental problems too, there is safety in numbers. As a closing remark, it may be noted that water disputes are commonly governed by the rule of good neighbourliness, be it in civil law, in the guise of an action in nuisance, '*troubles de voisinage*', water servitudes or plain negligence, or in international law, in the figure of the *sic utere* principle or the comity of nations. The words of Lord Atkin in 1932 in his opinion in *Donoghue v Stevenson* set the right tone, as do those of his Roman colleague in the remote past, handing down the *sic utere* maxim for generations to come. Lord Atkin said:

'There must be, and is, in some general conception of relations giving rise to a duty of care, of which the particular cases found in the books are but instances ... The rule that you are to love your neighbour becomes in law 'you must not injure your neighbour'; and the lawyer's question 'Who is my neighbour?' receives a restricted reply. You must take reasonable care to avoid acts or omissions which you can reasonably foresee would be likely to injure your neighbour. Who, then in law is my neighbour? The answer seems to be - persons who are so closely or directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omissions which are called in question'.

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<sup>71</sup> For a comparable view on the role of civil law in the litigation and settlement of international disputes, with regard to the underdeveloped character of state liability under international law, see Gaines (n 64) 342 ff.