

# The case of the river Rhine: the Rotterdam contribution\*

## 1. The Rhine Inquiry Project

### (a) Defining the problem: the purpose of the inquiry

The purpose of the research carried out as part of the Rhine Inquiry Project (started in 1985), could be stated as follows:

Of the 24 million cubic metres of silt and other substances dredged annually from the Rotterdam harbour in connection with the necessary maintenance of the harbour, approximately 10 million cubic metres of the dredging is moderately to severely polluted. The national government imposed limits which prohibited the dredging from being dumped into the sea after 1 January 1985: however, landfills were no longer feasible in light of certain environmental regulations and the unwillingness of the municipality itself. The municipality constructed “*de Slufter*” (the Sludge Basin), an artificial reservoir on the coast (at a cost of Dfl. 200m, half of which was contributed by the Dutch government) into which polluted dredging can be disposed of until approximately the year 2000.

The municipality has no interest in constructing a second “*slufter*”, particularly given the high costs associated therewith. It is thus logical that a goal of the municipality is to ensure that the quality of the dredging from the Rotterdam harbour area will be such that it may be discharged into the sea or used in large-scale projects. In order to deal effectively with the pollution of the dredging, it must be clear what the sources of pollution are in the Rhine and how the process of pollution occurs in the Rotterdam harbour. The intention of the municipality is to enter into sanitation agreements with those parties responsible for the discharge of hazardous waste from the various countries along the Rhine. To do so it must be possible to hold the parties who discharge hazardous substances liable for the harm they cause and, if necessary, to institute legal proceedings in Dutch courts, and possibly in foreign courts as well. [76]

Comprehensive research is necessary before these legal measures can actually be taken. Moreover, the results of this research are of great importance to the negotiating position of the municipality.

During the third phase of this research, 1989-91, we have come one step further: the municipality has been engaged in intensive negotiations with the industrial dischargers in Switzerland, France and Germany, and has successfully concluded an agreement to reduce the discharge of toxic substances in the coming years. The Institute has contributed to the negotiations - not in the least by drafting the condi-

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\* In: P. Thomas (Ed.), *Water Pollution, Law and Liability*, London: Graham & Trotman 1993, p. 75-87.

tions of the agreement. The breakthrough came during the international conference organised by the Institute, "Transborder Pollution and Liability: the Case of the River Rhine",<sup>1</sup> held in October 1990. During the conference, the German chemical industry (VCI, which has 400 members, 100 of which are dischargers into the Rhine) held a press conference in which it expressed its willingness to reach an agreement with the municipality in respect of a reduction in the discharge of heavy metals into the Rhine. Negotiations lasted several months, and have been concluded mid-1991. Sandoz in Basel has also offered reductions of its discharges, supported by guarantees. Intensive negotiations have been carried out with the German metallurgic industry since 1991, which led to an agreement with the Duisburger Kupferhütte. Other contracts were concluded, e.g. with Rhône-Poulenc (France). Negotiations with other companies are in progress.

Rotterdam is well on its way, but there is still far to go. Some of the negotiations have been unsuccessful; for instance, that is the case with the potassium mines in Alsace in respect of the dumping of vast quantities of silt in the Rhine, which sink to the bottom of the Rotterdam harbour, in polluted condition. During the "trip", heavy metals originating from other dischargers become attached to the silt - thus exacerbating the problems for Rotterdam. In addition to the environmental problems, the silt from the Alsace also results in extra dredging costs. The pollution causes huge storage problems. In light of the fact that an amicable settlement with the French Potassium Mines (*Mines de Potasse d'Alsace*) apparently is not possible, the municipality filed a law suit with the Court of Rotterdam at the end of 1990. The municipality is requesting damages in the amount of Dfl. 100m. It is intended that the Institute lend support to this lawsuit as well as in the upcoming negotiations with other domestic and foreign dischargers.

It has become abundantly clear to industrial dischargers along the Rhine that Rotterdam seriously wants to resolve the problems attending the pollution of the harbour silt. Preferably amicably through an agreement reached after negotiations; otherwise forcibly through the institution of legal proceedings. Although the municipality was dismissed a few years ago by German industry, it is now taken as a serious negotiating partner. Insight into Rotterdam's legal position, the purpose of the current project, [77] has been fundamental in this respect. For the progress of the projected developments the foundation is still indispensable. Vigilance is required in the preparation of discharge agreements, because the rights and duties of the parties during a period of many years are fixed. The legal aspects of this subject are almost virgin territory; as was the case earlier with respect to the legal position of the municipality as administrator and owner of a harbour at the mouth of a river that was polluted as a result of upstream discharges of toxic substances in four countries. Legal discussion on that issue continues, and the results are presented in this final report, thus giving a picture of the phase in which the municipality now finds itself with its concerns about a polluted harbour. From contacts abroad it appears that Rotterdam is the first harbour in the world to tackle the problem that plagues all large harbours, and thus far with success. From Kobe to Vancouver, immense interest has been expressed in the Rhine project.

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<sup>1</sup> The Proceedings of the international conference: "Transborder Pollution and Liability: the Case of the River Rhine", held in Rotterdam, 1990, referred to in this report, have been published by Koninklijke Vermande, Lelystad, The Netherlands, 1991, ISBC 90 6040981 7/CIP.

**(b) Framework of the study**

We will now set forth the general framework of the study as enunciated in previous reports:

This study addresses the issue of how polluters of harbour silt can be held liable in civil court for the harm they cause. To all appearances, this is an extremely complicated topic, in respect of the substantive legal issues, the grounds upon which a claim may be brought as well as in respect of the procedural issues, the jurisdiction of the court, issues of proof, applicable law, etc. If one also takes into account further issues regarding the influence of EEC law and international public law (i.e. principles of international law and treaties), one can begin to formulate a picture of a case which defies the fixation of legal and geographic boundaries. The law of environmental liability is still a very young branch of the jurisprudential tree. Many aspects remain in flux even though a few lines have begun to emerge.

Those lines merge in this report; the picture is clearer than before but is still incomplete. Gaps remain where case law is scarce or absent, and doctrines are undeveloped. Also absent in some areas is the interaction with the results of technical research or negotiations with the dischargers. Finally, various subjects must be highlighted within the framework of legal procedures; for example causation, the burden of proof and damages. For an outline of the issues reviewed, see heading 4. below.

Throughout the course of the study intensive consultations were conducted among the three "partners"; a Rotterdam law firm, the Port Authority Rotterdam, Legal Department, and the Erasmus University Rotterdam, Institute of Environmental Damages (Faculty of Law). Notes were exchanged and commented upon, and the course of the research readjusted as necessary. Regular commentary was given during these consultations, and a quarterly report was provided to the municipality, the contents of which were discussed during steering committee conferences.

Contact with the technical research staff of the International Centre of Water Studies, in Amsterdam, took place during the latter conferences, as well as in separately convened meetings. Further discussions were held [78] and correspondence exchanged with many experts both at home and abroad, research trips were taken, etc. An important part of the project was the effort to influence public opinion in the Rhine countries on Rhine pollution in general, and Rotterdam harbour pollution in particular. For that purpose a German PR agency was engaged, with considerable success.

One aspect of the research activities was the publication of a specialised journal, with a view to furthering legal development by providing information on international case law and doctrine. The first issue of *Tijdschrift voor Milieu Aansprakelijkheid/Environmental Liability Law Review (TMA)* appeared in 1987. Since 1990 it has been published six times per year. Various parts of the research have been published in *TMA*.

The above-mentioned conference held in October 1990 on problems with the Rhine constituted an important aspect of the research. During the two-day "Pre-conference", experts from industry, universities and the legal profession came together for an exchange of ideas. Represented were the four Rhine states and the US. Those represented included Bayer, BASF, VCI, Winterthur, Shell, the Universities of Bonn, Hamburg, Bremen, Ghent, Strasbourg, Paris, Amsterdam,

Tilburg and Rotterdam. Also present was the president of the Court of Rotterdam, the Assistant Attorney-General from Washington, D.C., the attorneys Huglo (Paris), Koeman and Kernkamp; the International Centre for Water Studies (Amsterdam) and the Ministry of the Environment, VROM; and representing the Port Authorities Jurriëns (Rotterdam) and Falvey (New York); Wegner (Hamburg) was unable to attend. Approximately 150 persons representing six countries took part in the conference itself, "Transborder Pollution and Liability: the Case of the River Rhine". All of the papers (as well as appendices) presented during the conference were published by Vermande in November 1991.

The conference programme consisted of four main themes: the Rhine cases, licences and liability, the basis of liability: fault or strict liability? and multiple causation and joint tortfeasors.

## 2. The French Potassium Mines Case (1988)

After a 14-year lawsuit a decision of the Netherlands Supreme Court, the *Hoge Raad*, was finally rendered in the above case, which appears to be a leading case in the field of transboundary water pollution and pollution in general. In this paragraph the author relies on his article on this subject in *TMA/ELLQ* 1988, p. 33, summary in English on p. 43. The case of the Dutch nursery firms, fighting the salt pollution of the Rhine by the French Potassium Mines "MDPA" in the Alsace, has received much publicity in the past. A side-effect, which was 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 for some 40 million people in several countries. The Low Countries have, [79] 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 only "relatively minor damage" to plaintiffs, in the formulation of the lower courts. The Potassium Mines account for a 40 per cent of the total industrial salt discharge in to the Rhine, which in peak years reached a staggering amount of 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, due to seawater influences in the Dutch coastal areas. Under these circumstances, the mines are only minor polluters, which makes the case even more interesting. Most water pollution is caused by a number of minor polluters, making it hard to hold liable in tort an individual polluter, causing relatively little damage. Therefore, the present decision is of paramount importance for water pollution in general. Although some improvement is made, at the moment still hundreds, and sometimes even thousands of tons of toxic substances are 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. Not to mention two other rivers flowing into The Netherlands: the Meuse and the Scheldt, also heavily polluted. We are 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 its decision, upholding the tort principle applied by The Hague Appeal Court, resembling the rule of *sic utere tuo ut alienum non laedas* in public international law, is using the terms "extreme pollution" and "extensive discharges". This seems not quite ap-

appropriate in the case at hand. The approach of the highest court reminds us of the law of nuisance, where the gravity of the nuisance inflicted and the weighing of interests are the central issues. In the present situation the economic interests of the discharging company are 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 is a reasonable expectation of the said party that a river will 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. 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 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, the general rule of the law of nuisance. In the Potassium Mines case the court actually is going much further, although this is disguised by the wording chosen. The French, apodictic style in deciding the case - a *hommage* to defendant? one wonders - leaves the reader puzzled.

The question of proximity, a common stumbling block in pollution [80] 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 measures taken by the nursery men to fight salination-damage included damage incurred by the MDPA discharges. The overall necessity for those installations did not affect the position of the latter party, the court continued. Finally the basis of the French licence, permitting MDPA the present discharges, is discussed by the *Hoge Raad*. 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 in Dutch law. The *Hoge Raad* did not go into this question with the argument that according to the Dutch law of civil procedure it is not allowed to hear issues regarding the application of foreign law. The defendant's appeal to the norm of chloride discharges on the Bonn Salt Treaty of 1976 was also rejected by the court. A major issue, not yet mentioned, was defendant's plea that a Dutch court is bound by the said Treaty which solely governs the liability question raised, at the cost of 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 upon individual citizens of those states in their relation to others. Thus, the Supreme Court of The Netherlands indicates that transboundary pollution is not a matter to be left to inter-state treaty law or international law in general. This opinion, of course, is 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.

The case is a landslide case. In other words, the mountain of pollution sent down the river, is in the process of sliding back to its source. If you live on the downstream side of that mountain, this is an attractive prospect for the near future.

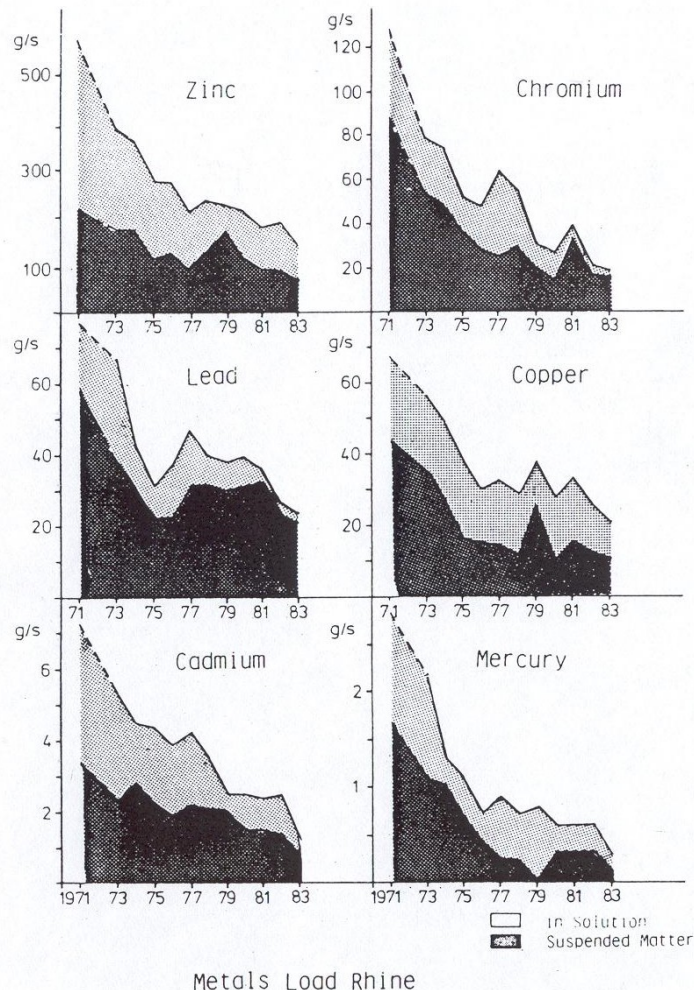
### 3. Some data on Rhine pollution

Some of the sheets shown at the presentation of the paper are printed here. They give an impression of the Rhine's pollution with the heavy metals: Zinc, Lead, Cadmium, Chromium, Copper and Mercury.

#### RHINE STUDY PROJECT PHASE II

These contributions are specified according to the 3 types of discharge points monitored namely: discharge plumes, open discharge channels and discharge pipes. The figures are presented in tonnes per year and as a percentage of the annual load measured at Lobith in 1985 (DBW/RIZA, samples). The loads and percentages should be seen as indicative only, because the variations in these extrapolated annual averages may be considerable.

[81]



[Figure 1. Metals Load Rhine (annual average, at Loth, Rhine km 86, German Dutch border)]

[82]



[Figure 2. The Rhine and its main tributaries]

[83] Table 1.1: Contribution of all direct discharge points

Metal	Discharge plumes		Discharge channel		Discharge pipes		Total	
	t/y	%	t/y	%	t/y	%	t/y	%
Cadmium	0.95	11	0.65	8	0.23	3	1.8	22
Chromium	117	29	51	13	1.0	-	169	42
Copper	35	10	27	8	1.8	-	64	18
Lead	39	16	20	8	18	8	77	32
Zinc	337	12	130	5	14	-	481	17

Table 1.2 shows the number of discharge points per metal and per country equal to or in excess of the criterion of 1%. The table also shows the number of discharge points discharging less than 1% but more than 0.5%.

*Table 1.2: Number of discharge points per country contributing more than 0.5 of the annual load at Lobith (1985)*

<i>Metal</i>	<i>Switzerland</i>		<i>France</i>		<i>Germany</i>	
	<i>&gt;1%</i>	<i>Between 0.5 and 1%</i>	<i>&gt;1%</i>	<i>Between 0.5 and 1%</i>	<i>&gt;1%</i>	<i>Between 0.5 and 1%</i>
Cadmium	1	-	1	-	4	5
Chromium	-	2	1	-	3	2
Copper	2	-	1	-	3	2
Lead	1	-	1	-	6	1
Zinc	-	1	1	-	3	3

*Source:* Proceedings Rhine conference, Rotterdam 1990, Vermande 1991 (see note 1)

#### **4. Summary and conclusions of the Research Report, Rhine Inquiry Project, Third Phase (1991)**

This third phase of the legal research within the framework of the project has been crucial for the success of the project. In respect of international recognition of the legal position of the municipality of Rotterdam one can speak of a breakthrough. Negotiations with German industry have produced the first results in the form of long-term agreements that guarantee the reduction of emission of toxic substances into the Rhine. It was no coincidence that the first initiative on the part of the German chemical industry came during an international conference on the Rhine which the researchers had organised in Rotterdam in October 1990, a conference [84] that will have an enormous impact on international research on transborder environmental pollution.

The other side of the picture was that where the negotiations were unsuccessful, the municipality was forced to initiate legal action for compensation for damages, e.g. with the Alsace Potassium Mines. In this instance the municipality could take action on the basis of a well-founded legal position.

The most recent period has been just as spectacular with regard to developments in case law, legislation and doctrine concerning environmental liability (and related areas of law). At this time much is still under discussion, and foundations are wavering in places. The researchers have attempted to contribute to this in the professional literature, which has been referred to in this final report. In the years to come the *Hoge Raad* will be facing radical decisions in proceedings concerning environmental damage; the same holds for the legislator who is firmly resolved to introduce bills in this field. A picture emerges of great turbulence in the area of environmental law and of the legal solutions advocated. The subject has become more fascinating, but certainly not simpler.

In the last two years there has been much discussion on the long-standing debate: "fault or risk?" which has had its repercussions in this report. We have given a solid foundation for the arguments advocating strict liability (not to be



confused with “absolute liability”) based on case law and literature in the last quarter of the previous century, to which even the 1909 Rotterdam *Wijnhaven* case has contributed. At that time, there were already Rotterdam scholars who advocated the risk doctrine (alias “creation of danger” doctrine), which was ultimately adopted by a majority of authors. This writer was drawn into a spirited discussion in *WPNR* by Vranken, a professor in the southern part of The Netherlands, where life is good as far as the environment is concerned. The editors of *Milieu en Recht* remarked that it is expected that this debate will become a classic. In any case, it reflects that legal policy questions are at issue here, and that the subject also has its emotional aspects. An interesting fact is that strict liability is as old as the hills.

Of greater practical importance is that in recent years the *Hoge Raad* has continued to advance towards strict liability: so, too, with regard, for instance, to civil authorities that, in a miscarriage of justice, cause damage to citizens or legal entities through their actions. The legislator has also exhibited the same tendency, even if it is not always clear how far he will go, or sometimes where he actually wants to go (the hills are not in the picture here). Fundamental changes in legislation are forthcoming; first the NBW, which took effect in 1992, in which strict liability has come into force in many respects. The manner in which this occurs, with what are by now infamous formulae such as “unless... if”, has been the subject of fierce debate for some time and will probably remain so for many years to come. At issue here is the liability for things, animals and constructions (*inter alia*, roads and watercourses) in Book 6 NBW.

No less controversial is the 1989 Hazardous Substances Bill, a supplement [85] to the NBW that was investigated by us on its merits; here, too, many new questions have arisen for which the answers are still unclear. This is also the case for concepts central to the legislation, such as “serious danger”, in which many authors in the commercial world will find an appropriate description of the legislation itself. The regulation also applies to dump sites and boreholes; it takes as point of departure strict liability, and several liability if several operators are involved. We have given further attention to a bill that has hardly been less tumultuously received, the reparations law of mid-1990, in this case Interim Soil Clean-up Act, art. 21, which regulates the recovery of clean-up costs by the state. It is suggested herein to abolish the relativity requirement for the tortiousness of pollution that occurred in the distant past. We have not participated in the criticism thereof, to which, undoubtedly, a lack of regard for the relativity requirement can be charged. For that matter, this was already a quite acceptable position before the war. Modern lawyers are not familiar with the latter, however, just as so many valuable cases in the case law of a half a century ago or more are ignored in the traditional textbooks of our time.

Other than the requirements of relativity of the action in tort, the wrongfulness of the action towards the plaintiff, other aspects of tort law have been further investigated. Much attention has been given to one of the most important defences in environment cases, the state of scientific norms at the time of the action (“state of the art”). The *Hoge Raad* has given several leading judgments in recent years. Thus it has been determined that with regard to the assessment of the defendant’s knowledge of the risks to the environment involved in the use of the substances, knowledge available abroad must be taken into account, particularly if industry abroad had more experience with the substances involved. Moreover, the knowledge available in the company as a whole must also be considered relevant, according to the *Hoge Raad* in *Janssen - Nefabas*, also known as *asbestosis* (1990).

In another case a “risk/benefit” analysis was employed in products liability. It concerned the harmful effect of medicines; one must weigh the harmful effects of a remedy (in this case a sleeping pill) against its medical benefits; compare the *Halcion* judgment (1989).

This trend in case law of the *Hoge Raad* confirms what the lower courts have accepted case law concerning environmental liability in recent years, which has been disputed by some authors (e.g. Vranken). In the meantime these cases such as *Shell Gouderak*, *Duphar/Volgermeerpolder*, and the like, have come before the Courts of Appeal. Given the interests at stake in these law suits, it is likely that in the years to come the *Hoge Raad* will be called upon to make a judgment, with the consequence that this area of the law will be further developed.

A topic of great importance for environmental liability is that of multiple tortfeasors and multi-causation. The complex factual circumstances of environmental pollution - many firms discharging different toxic substances at different points in time - are reflected in the equally complex legal problems. The concepts of multiple tortfeasors and group action are central here. The discussion in the literature is principally aimed at the [86] devices offered in the NBW; namely, alternative causation (the case of the two shooting hunters) and group liability (written for demonstrations with harmful outcome, reckless youths, etc.). The more socially relevant picture of a group of legal persons acting commercially and thereby inflicting damages - bringing into circulation defective products or discharging hazardous substances - is not regulated by law. It is a question of legal interpretation whether one of the two statutory provisions can be applied to such circumstances. The controversy has already flared up, and as always there are the “flexible” and the “punctilious” here.

In connection with the Second Phase Final Report and the international case law discussed therein, we advocated qualification of an industrial or commercial group as a group activity, with the consequence that an individual member of the group of companies is jointly and severally liable for the total damage. To support this we turned to a 1955 *Hoge Raad* case, *London Lancashire*, in which in respect of multiple tortfeasors, the risk of insolvency of the co-tortfeasors (if mutual redress is sought) would be imputed to the individuals and not to the injured party seeking recompense for damage.

In this connection the possibilities for market-share liability were also investigated, a concept that has gained support in environmental law as “pollution share liability” (*vervuilingsaandeel-aansprakelijkheid*). In the near future the *Hoge Raad* must pronounce on this matter in the *DES* case. The procedural aspects also came up for discussion in this connection, particularly the question of how many (potentially) polluting firms a plaintiff must subpoena. This topic is worthy of further investigation on the basis of concrete information on discharges. The advantage of joint and several liability, as advocated by us, is that one can leave this complicated question to the members of the group of polluters in the recovery actions among themselves. In our view there are sufficient possibilities available to limit the liability of the members of a group under the fairness doctrine. In this way the justifiable interests of the dischargers could be taken into account without neglecting the interests of the injured party. Of the views advocated here, a favourable outcome is expected in the direction of the creation of damage funds by discharging firms, and - even more desirable - the engagement of preventive measures with a view to environmental damage.

Finally, research was also conducted into the liability of the government where third parties suffer damages as a result of its negligence in supervising compliance with licensing conditions or even in determining the licensing conditions. Given the tendency, in both case law and legislation (NBW), towards strict liability in governmental actions in tort, there are strong possibilities here for a similar claim. This legal question has also been examined in German law, although the problem is more complicated because of a different approach to governmental liability. However, there are still possibilities in this area for a foreign injured party. This may particularly be the case if the conditions set in the German licences are inadequate to prevent damage in The Netherlands. An interesting aspect of [87] this issue is to what extent treaty norms have effect; this should be a subject for further investigation.

We come now to the final topic, the comparison of law and the international aspects of environmental damages. We investigated the issues discussed above in German, French and Swiss law. Updating the results of prior research as well as new topics concerned us here. In German law our attention was drawn to the proposal for a *Umwelthaftungsgesetz*, in which strict liability for environmental damage is linked to a duty to insure. Developments in European law were followed as well; particularly the draft directive for environmental damage caused by waste products (1989) which is characterised by strict liability and the formation of a fund.

On reflection, one can conclude that the legal development in the period covered by the investigation is decidedly advantageous for those who suffer environmental damage, such as the municipality of Rotterdam as the Rhine Harbour municipality. Case law and proposed legislation remain uncertain and unclear; in the not-too-distant future a number of legal solutions that have been developed with need to be tested by the highest court. It does seem, however, that we have come a step closer to a legal solution for the problems facing Rotterdam.<sup>2</sup>

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<sup>2</sup> This final paragraph is taken from the Report: "Liability for environmental damage in the case of harbour silt polluted by discharges", by Prof. Dr Jan M. van Dunné, 1991. It is published by the Institute of Environmental Damages, and is available upon request (Dfl. 30,-). Fax: 31 10 4529733.