

## **Civil Liability for Nuclear Damage:**

### **Advantages and Disadvantages of Joining the International Nuclear Liability Regime**

#### **A paper by the International Expert Group on Nuclear Liability (INLEX)**

## **I. Introduction**

There is a set of international conventions which are designed to provide compensation for damage arising from nuclear incidents. These conventions, which form an international nuclear liability regime, include: the Convention on Third Party Liability in the Field of Nuclear Energy of 29 July 1960 (Paris Convention); the Convention Supplementary to the Paris Convention of 1963 (Brussels Supplementary Convention, BSC); and the Convention on Civil Liability for Nuclear Damage of 1963 (Vienna Convention). All these conventions have been amended by protocols.<sup>1 2</sup> There is also the Convention on Supplementary Compensation for Nuclear Damage of 12 September 1997 (CSC), which was developed as an umbrella for the other international liability conventions and to provide the basis for a global nuclear liability regime that could attract broad adherence from countries with and without nuclear power plants. As yet, the number of States that have ratified or implemented<sup>3</sup> one of these conventions is still limited;<sup>4</sup> and the CSC is not yet in force.<sup>5</sup> Moreover, only about one half of all nuclear power plants are located in States which are contracting parties to one of the nuclear liability conventions.

Consequently, it is appropriate to ask whether more States should join the international nuclear liability regime. The answer to this question depends on an assessment of the pros and cons of adherence to the international nuclear liability regime. This is the aim of the present paper.

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<sup>1</sup> See the Additional Protocol of 28 January 1964, the Protocol of 16 November 1982 and the Protocol of 12 February 2004 to the Paris Convention, the Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage of 1997. In particular, there is the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention of 21 September 1988, which bridges the gap between the Paris Convention and the Vienna Convention and extends the rights under the one Convention to victims in the territory of the other Convention.

<sup>2</sup> The following conventions should be mentioned here. The Brussels Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material of 1971 exonerates the sea carrier of nuclear material from liability where the operator of a nuclear installation is already liable for the same damage either under the Paris or Vienna Conventions or under equally favourable national law. The Brussels Convention on the Liability of Operators of Nuclear Ships of 1962 has not yet entered into force and probably will never enter into force due to conflicting views as to whether the Convention should include nuclear warships.

<sup>3</sup> It is not within the scope of this paper whether and which States regard international treaties as self-executing so that legal action can be based on the respective convention itself, and in which States (as for instance Australia) international treaties must be implemented by way of national law so that legal action must be based on the respective national law. As to the general problem of whether and when international treaties are self-executing, see *Brownlie*, *Principles of Public International Law* (6th ed. 2003) 50 et seq. For the sake of simplicity and brevity, both situations can be covered here by the term 'nuclear conventions regime'. Similarly, where it is mentioned in this paper that the nuclear conventions are applicable, this will include the case that the respective convention has been implemented by way of national law, so that, strictly speaking, not the convention but the respective national law is applicable.

<sup>4</sup> The Paris Convention has thus far been ratified by 15 States, the BSC by 12 (European) States, and the Vienna Convention by 36 States worldwide. The Joint Protocol has been ratified by 25 out of the 51 Paris and Vienna convention States. But many of the most important nuclear States such as China, India, Japan, the Republic of Korea and the USA do not adhere to any of the nuclear conventions in force. About half of all nuclear installations worldwide are not covered by the nuclear conventions regime.

<sup>5</sup> Thus far the necessary number of ratifications has not yet been reached.

In assessing this issue, it is necessary to compare the position of a country that is a party to the nuclear liability regime with the position where no such system applies. Such a comparison is to some extent hypothetical, but nevertheless inevitable. The aspects that are compared are partly procedural and partly substantive in nature. On the procedural side, the following points will be compared: (1) Which courts are competent to decide cases of nuclear liability? This question includes the issue of possible State immunity. (2) Which law applies? (3) Are judgements on liability for nuclear damage recognized and enforced in other countries? On the substantive side, the questions: What are the differences between the substantive rules on liability for nuclear damage under the conventions and under national law will be answered. Although in the end the differences in the substantive rules are most decisive for the question of adherence or non-adherence, only after it has been ascertained which courts are competent and which law is applicable can rules of (the applicable) substantive law be compared.

It is neither possible nor necessary to include all countries in such a comparison; references to a few representative countries can suffice. The States selected include China and India (which have a number of nuclear power plants but have not yet ratified any of the nuclear liability conventions), the United States (which has approximately a quarter of the existing nuclear power plants in the world and has ratified the CSC), Germany (which has an extensive nuclear industry and is a Contracting Party to the Paris Convention) and Austria (which is a 'non-convention State' and operates no nuclear power plants though it does operate a research reactor). Other international conventions or regional regulations which concern the above-mentioned matters have also been taken into account.

At the outset a short scenario of possible nuclear incidents will be given in order to better understand the legal implications.

## **II. Scenarios of possible nuclear incidents**

A Chernobyl type accident is the first example of a nuclear incident that will be considered. Such an incident affects not only the inhabitants of the country where the nuclear installation is located, but also inhabitants of other countries. The State where the installation is situated may be either a Contracting Party to one of the nuclear liability conventions or may be a non-convention State. Also, the countries where the victims are living may or may not adhere to one of the conventions.

A second type of incident that will be taken into account is when nuclear material causes damage while being transported from one country to another. Again, the country where the damage occurs may be a convention State or a non-convention State, and so may be the State where the responsible operator or the carrier has its place of business.

## **III. Comparison of procedural aspects**

### **1. State immunity**

In the cases described, the State can be the operator of the nuclear installation – be it an installation for the production of energy or a research reactor. For victims of a nuclear incident at such an installation<sup>6</sup>, the question then arises whether the involved State can be made liable or whether the State can rely on the defence of state immunity. It is questionable whether activities like the supply of energy or the conduct of research, if provided by State agencies in the nuclear field, give rise to the defence of State immunity so that private claims against the responsible operator are not allowed.

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<sup>6</sup> Or, in the case of transport, involving nuclear material being transported to or from the installation.

### a) Situation covered by one of the nuclear liability conventions

If a case occurs in a situation where either the Paris or the Vienna Convention<sup>7</sup> is applicable, the liable State or its agency cannot invoke jurisdictional immunity. This is explicitly stated by both Conventions.<sup>8</sup> “Except in respect of measures of execution”<sup>9</sup> the contracting parties have waived their possible right of state immunity. Therefore, even if the nuclear installation is operated by the State to undertake typical State activities, the defence of sovereign immunity is not available. In the case of a nuclear incident at such an installation, victims could sue the State before the competent courts, regardless of whether the installation served public purposes.

### b) Situation not covered by any nuclear liability convention

Where none of the conventions on civil nuclear liability are applicable, the issue of State immunity is determined in accordance with, first, other applicable international conventions or, secondly, with the rules of customary public international law or, thirdly, with the autonomous national rules concerning the matter. Although there is a specialized convention on State immunity, namely the Basel Convention on State Immunity of 1972, according to Art. 29(b) this Convention does not apply to damage caused by nuclear energy.<sup>10</sup> Therefore, the international customary law on State immunity has to be applied as far as possible. Under its rules, it is decisive whether the State acted as a State (“*acta jure imperii*”) or like a private person (“*acta jure gestionis*”).<sup>11</sup> It is the prevailing view that the borderline between these two kinds of State activities must be determined according to the objective character of the activity.<sup>12</sup> It therefore depends on the purpose for which a State-run nuclear installation is used. In the case of a nuclear power plant which produces energy for general supply, it is doubtful whether a State as operator of a nuclear installation would enjoy immunity in the courts of other countries when this installation causes nuclear damage. In the aftermath of the Chernobyl accident, for instance, German courts denied that the then Soviet Union was immune, since energy could be produced and supplied in the same way by private enterprises.<sup>13</sup> But courts of other countries may decide otherwise. With respect to State-run research reactors operated for scientific or medical purposes,<sup>14</sup> it may be even more convincingly argued that the State should not be immune if the reactor causes nuclear damage.

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<sup>7</sup> It should be mentioned that neither convention covers nuclear damage due to military operations: see Art. I (1) (j) (i), IV (3) (a) Vienna Convention, Art. 1 (a) (ii), 9 Paris Convention, Art. II (2) CSC (“for peaceful purposes”).

<sup>8</sup> Art. 13 (e) Paris Convention; Art. XIV Vienna Convention. Art. XV CSC (which is not yet in force) leaves “the general rules of public international law” — which include rules on state immunity — untouched.

<sup>9</sup> See explicitly Art. XIV Vienna Convention and Art. 13 (e) Paris Convention.

<sup>10</sup> It should be noted, however, that there is no such exclusion under the United Nations Convention on Jurisdictional Immunities of States and Their Property. This convention, which is not yet in force, was adopted by the UN General Assembly on 2 December 2004 after extensive consideration in the International Law Commission and the Legal Committee of the UN General Assembly over a period of several years. Under Article 12 of that convention, it is not possible for a State to invoke immunity in a proceeding which relates to personal injuries and damage to property. See General Assembly resolution 59/38, annex, Official Records of the General Assembly, Fifty-ninth Session, Supplement No. 49 (A/59/49).

<sup>11</sup> See thereon *Brownlie* (supra fn. 5) 335 et seq.; *Stein/von Buttlar*, *Völkerrecht* (11<sup>th</sup> ed. 2005) no. 717 et seq.

<sup>12</sup> See, for instance, German Federal Constitutional Court (Bundesverfassungsgericht – BVerfG) Entscheidungen (BVerfGE) 16, 27; BVerfGE 46, 362; *Stein/von Buttlar* no. 719. Specific Immunity Acts which some States have introduced follow the same line; see, for example, the US-Foreign Sovereign Immunity Act (sect. 1603 (d) where ‘commercial’ acts are defined).

<sup>13</sup> Amtsgericht Bonn, NJW 1988, 1393; Landgericht Bonn NJW 1989, 1225.

<sup>14</sup> Such reactors fall also under the definitions of “nuclear installation” in Art. 1 (a) (ii) Paris Convention and “nuclear reactor” in Art. I (1) (i) Vienna Convention and Art. I (d) CSC, since with the exception of reactors comprised in a

### c) Summary

Viewed from the perspective of potential victims, it is certainly an advantage if the involved State cannot invoke the defence of immunity should a State-run nuclear installation cause damage. Within the nuclear convention regime, it is clear that at the jurisdictional level no such defence is available. This means that a victim can always sue the respective State and can, where justified, get at least a judgement against this State. Outside the nuclear liability convention regime it remains doubtful whether and when the defence may be invoked.

## 2. Jurisdiction

With respect to the envisaged case scenarios, the issue of — international — jurisdiction plays an important role. If victims reside and suffer damage in a country other than the one in which the operator of the nuclear installation<sup>15</sup> has its place of business, it is open to question as to where the victim can or must sue the operator of the damaging installation. The nuclear conventions generally come into play only if the nuclear installation is located on the territory of a convention State and the victim suffers damage in that or another convention State.<sup>16</sup>

### a) Situation covered by one of the nuclear liability conventions

Where the installation is located in a nuclear liability convention State and the victim suffers damage in another convention State<sup>17</sup>, the nuclear liability conventions apply.<sup>18</sup> They contain the following rule: the courts of the State where the nuclear incident occurred<sup>19</sup> have exclusive jurisdiction over actions concerning liability for the incident, provided that that State is a Contracting Party to one of the conventions.<sup>20</sup> If the incident occurred outside the territory of a Contracting Party<sup>21</sup>, or if the place of the incident could not be determined with certainty, then the courts of the State where the relevant nuclear installation is situated have exclusive jurisdiction, again provided that the installation State is a Contracting party.<sup>22</sup> The 1997 and 2004 amendments to the conventions, and the CSC, extend the

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means of transport the Conventions do not distinguish as to the purposes for which nuclear reactors are run; see also Exposé des Motifs (to the Paris Convention) no. 9.

<sup>15</sup> It shall also be assumed that the place of business of the operator and the location of the damaging nuclear installation are in the same country.

<sup>16</sup> The conventions also apply to certain damage suffered outside the territory of any State; see Art. 2 Paris Convention; Art. V (1) CSC. The revised Vienna and Paris Conventions may in some circumstances also apply to damage suffered in non-contracting States: ref. Art I A and Art 2(a).

<sup>17</sup> *Infra*.

<sup>18</sup> By virtue of the Joint Protocol (fn. 3) the territorial scope of the Paris and Vienna Convention can be regarded as one since the Protocol (where it has been ratified or implemented) grants the rights under the Paris Convention to victims in the territory of the Vienna Convention and vice versa.

<sup>19</sup> Art. 13 (a) Paris Convention; Art. XI (1) Vienna Convention; Art. XIII (1) CSC.

<sup>20</sup> See further thereto *Magnus*, International Nuclear Transport from the Private International Law Perspective, in: Reform of Civil Nuclear Liability. Budapest Symposium 1999 (ed. by OECD, 2000) 263 et seq., 282 et seq.; *Sands/Galizzi*, The 1968 Brussels Convention and Liability for Nuclear Damage, *ibid.* 475 et seq., 479 et seq.

<sup>21</sup> The territory of a Contracting Party includes also the exclusive economic zone of that party: Art. XIII (2) CSC; Art I A revised Vienna Convention and Art 2(a) revised Paris Convention.

<sup>22</sup> See Art. 13 (b) Paris Convention; Art. XI (2) Vienna Convention; Art. XIII (3) CSC. However, these provisions are binding only for the convention States. They cannot oust the jurisdiction of non-convention States. Thus, in this situation there can exist side by side exclusive jurisdiction in a convention State and (normally non-exclusive) jurisdiction of the courts of a non-convention State.

jurisdiction of coastal convention States' courts to incidents occurring in the Exclusive Economic Zone (EEZ). With respect to the exclusive jurisdiction under the conventions, it is irrelevant that the victim resides in another convention State or suffers the damage there.<sup>23</sup>

The exclusive jurisdiction rule requires the plaintiff to institute proceedings in the exclusively competent court, while all other courts of the Contracting States are no longer competent to hear the case and must on their own motion dismiss any claim concerning liability for the nuclear incident. The exclusive jurisdiction is also coupled with the channelling of liability onto the responsible operator<sup>24</sup>, who alone can be sued in the competent court while other potential defendants cannot be sued. Even in the case of nuclear damage caused during a transport of nuclear substances, the installation operator remains responsible.<sup>25</sup>

In principle, this exclusive jurisdiction has the effect that all actions arising out of one incident are heard in the same court. This leads to a concentration of actions in one court where a number of plaintiffs are involved, which in case of nuclear incidents is more likely to happen than in other tort cases. Exclusive jurisdiction may also facilitate equal treatment of multiple plaintiffs and equal allocation of available assets.

#### **b) Situation not covered by any nuclear liability convention**

Where the nuclear liability conventions are not applicable, general jurisdiction rules apply. They may be either part of international instruments — such as for instance EU regulations — or they may be autonomous national rules.

Outside the EU, some countries provide for (internal) exclusive jurisdiction at the place where the nuclear incident occurred;<sup>26</sup> while others allow the victim to choose among courts either at the defendant's domicile or place of business or at the place where the tort was committed or where the damage was suffered.<sup>27</sup> If several persons – operator, carrier, others – are possibly liable for nuclear damage, the victim is generally entitled but also often practically forced to sue them all in order to obtain full compensation (such a situation may not be that different inside the EU). Whether all possibly liable persons can be sued in one court or must be sued at their respective places of business may depend on the discretion of the court.

In Europe, harmonized jurisdiction rules apply: EU Regulation 44/2001/EC on Jurisdiction and the Enforcement of Judgements in Civil and Commercial Matters,<sup>28</sup> its predecessor, the Brussels Convention of 1968<sup>29</sup> on the same matters, and the Lugano Convention of 1988<sup>30</sup> (as well on the same

<sup>23</sup> For a critique, because this regulation may force victims to sue in foreign courts, see in particular *Fischerhof (-Pelzer)*, *Deutsches Atomgesetz und Strahlenschutzrecht I* (2nd ed. 1978) Art. 13 PÜ no. 1.

<sup>24</sup> Exceptionally, an action may also lie against an insurer or other financial guarantor; see Art. 6 Paris Convention. It should also be noted that a special “grandfather clause” is, contained in the Annex to the CSC (Article 2) in order to take into account the situation of the United States of America, whose domestic law on liability and compensation in respect of nuclear damage predates both the Paris Convention and the Vienna Convention and is based on the concept of “economic”, as opposed to “legal”, channelling of nuclear liability.

<sup>25</sup> See Art. 4 Paris Convention; Art. II (3) (b) Vienna Convention.

<sup>26</sup> As for instance in China; see *Li Zhaohui/Wu Aihong/Nan Bin*, Brief introduction to China's Nuclear Liability Regime, in: *Reform of Civil Nuclear Liability. Budapest Symposium 1999* (supra fn. ###) 541, 545.

<sup>27</sup> This is, for instance, true for India: sec. 19 and 20 of the Code of Civil Procedure; see further *Paras Diwan*, *Private International Law* (3<sup>rd</sup> ed. 1993) 569 s.

<sup>28</sup> The Regulation is directly applicable in all EU Member States except Denmark.

<sup>29</sup> This Convention still applies with respect to Denmark.

subject) provide rules on jurisdiction for law suits for the compensation of nuclear damage where the nuclear conventions do not apply.<sup>31</sup> All three instruments allow the victim a choice of forum: the victim is entitled to sue either in the courts of the country where the defendant is domiciled<sup>32</sup> or where the harmful event occurred<sup>33</sup> or threatened to occur.<sup>34</sup> The place where the harmful event occurred includes both the place where the tortfeasor/operator acted and where the victim suffered the harm. If these places are located in different (EU Member) countries, the defendant may choose between the courts of these countries (he can always choose the courts of the defendant's domicile if this lies in yet another country).<sup>35</sup> The mentioned instruments do not, however, provide for exclusive jurisdiction of the courts of a certain State<sup>36</sup>; nor is there a procedural channelling of liability onto the operator of a nuclear installation.

### c) Summary

From an individual victim's perspective, it is at first sight an advantage to be entitled to sue all possibly liable persons and to choose among various competent courts, and in particular to have access to the courts of the State where the damage occurred and where the victim is most likely to have his or her residence. The national solutions which allow such a choice appear to be preferable to the exclusive jurisdiction provided for by the nuclear liability regime and some national laws.

But if there are many victims in different countries — which is one of the possible scenarios — other considerations have to be taken into account. In such a case, it is in the interest of all victims that the assets available for compensation purposes are distributed in a fair and equitable manner, rather than victims who sue first getting all losses compensated while victims who come later receive less or nothing. Considerations similar to those in insolvency cases apply here, namely, to collect all available assets at one place and to distribute them by one distributor in a fair and equal way among the different classes of victims (for instance, those who were injured; those whose property was damaged or destroyed; those who lost profits). This 'procedural channelling' on one responsible operator can only be achieved within the framework of the nuclear liability conventions. National jurisdiction rules — even if they prescribe exclusive jurisdiction — cannot secure this effect where victims in more than one country are affected, since the national rules bind only the courts of that State but no court of any other State. However, even the nuclear liability conventions cannot achieve the desirable procedural concentration of claims if only a few States are contracting parties to the conventions, since outside the convention States national jurisdiction rules remain in force, so that victims may choose between the courts of the non-convention State and the court having jurisdiction under the applicable convention. The intended effects of the procedural channelling can therefore only be reached if many — at best all — States become convention States.

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<sup>30</sup> This Convention is applicable in most of the EU Member States and also in Iceland, Norway and Switzerland.

<sup>31</sup> Art. 71 Regulation 44/2001/EC, however, priority to specialized conventions like the nuclear conventions as far as they regulate jurisdiction in civil law matters; see ECJ, ECR 1994-I, 5439 (*Tatry v. Rataj*, C-406/92) at para. 28; see also *Sands/ Galizzi* (supra fn. ###) 497 and further *Kropholler*, *Europäisches Zivilprozessrecht* (8th ed. 2005) Art. 71 no. 1 et seq.

<sup>32</sup> Art. 2 of all three instruments.

<sup>33</sup> Art. 5, No. 3 of all three instruments.

<sup>34</sup> Art. 5, No. 3 of Regulation 44/2001/EC.

<sup>35</sup> See European Court of Justice (ECJ), ECR 1976, 1735 (*Handelswerkerij G.J. Bier v. Mines d'Alsace de Potasse*, C 21/76).

<sup>36</sup> Even an injunction against possible emissions from a nuclear power plant in a neighbouring EU Member State would not fall within the scope of Art. 22 Regulation 44/2001/EC, which provides for exclusive jurisdiction of the courts at the place where immovables are situated with respect to proceedings concerning rights in rem in such property; see ECJ 18 May 2006 (C-343/04, *Land Oberösterreich ./ CEZ as*).

### 3. Applicable law

#### a) Situation covered by one of the nuclear liability conventions

Where a scenario as envisaged above is covered by one of the nuclear liability conventions, then most (although not all) aspects of liability and compensation are regulated by the convention. For aspects not directly covered by the conventions, the conventions determine the applicable law uniformly: it is the law of the country where the competent court (see above) is situated.<sup>37</sup> The reference to this law includes, however, the rules of that law relating to conflict of laws.<sup>38</sup>

#### b) Situation not covered by any nuclear liability convention

If the above-mentioned scenarios are not covered by any of the nuclear liability conventions, then the applicable law must be determined in the ordinary way. First, according to applicable international instruments and, in their absence, according to national rules on the applicable tort law.

At the international level, there are thus far no conventions which unify the general conflict rules on international torts. At the European level, a regulation (“Rome II Regulation”) makes provision for the law applicable to non-contractual obligations.<sup>39</sup> However, non-contractual obligations arising out of nuclear damage have been explicitly excluded.<sup>40</sup> Therefore, generally the autonomous conflicts rules of the single states will remain applicable.

Again, the autonomous conflicts rule for torts in most countries follows the traditional *lex loci delicti commissi* maxim<sup>41</sup> — the law of the country where the nuclear incident happened or where the damage was suffered is applicable<sup>42</sup>. But also other approaches can be found, for instance the former English rule of double actionability<sup>43</sup>: The tort must give rise to an action in the country where proceedings are instituted, and the tort must not be justifiable in the country where it was committed.<sup>44</sup> Yet others regard the *lex loci delicti* principle only as a starting rule and follow in fact a multi-factor

<sup>37</sup> See Art. 14 (b) Paris Convention; Art. I (e) and VIII Vienna Convention; Art. I (k) and XIV (2) CSC.

<sup>38</sup> So expressly Art. I (e) Vienna Convention; Art. I (k) CSC. The same understanding applies to Art. 14 (b) Paris Convention and its reference to “national law” and “national legislation”; compare *Exposé des motifs* to the Paris Convention No. 60; *Haedrich*, Atomgesetz mit Pariser Atomhaftungsübereinkommen (1986) p. 649.

<sup>39</sup> See Reg. (EC) No.864/2007.

<sup>40</sup> See Art. 1 (2) (f) of the Reg. (EC) No. 864/2007.

<sup>41</sup> See, for instance, France: deduced from Art. 3 Code civil: Cour de Cassation, *Journal de droit international (JDI)* 1983, 123 with note Légier; for Germany: Art. 40 (1) Einführungsgesetz zum Bürgerlichen Gesetzbuch (Introductory Act to the Civil Code — EGBGB); for Great Britain: sec. 11 Private International Law (Miscellaneous Provisions) Act 1995.

<sup>42</sup> See for instance China: § 146 (1) General Principles of Civil Law: The law of the country is to be applied where the tort occurred. The place of tort is in general the place where the tortfeasor acted and committed the tortious conduct. However, the court may apply the law of the place where the damage was suffered if the case is more closely connected with the law of this place (see *Young*, *IPRax* 1993, 323 et seq.; *Xu Guojian*, *ICLQ* 1991, 684 et seq.). Where the tortfeasor and the victim are citizens of the same state and/or have their domicile in the same state the law of this state may be applied instead of the law of the tort (§ 146 (2) General Principles of Civil Law). But a foreign tort can be sued upon in China only if it constitutes a tort under Chinese substantive law as well (§ 146 (2) General Principles of Civil Law).

<sup>43</sup> The United Kingdom abolished the rule in 1995 when the Private International Law (Miscellaneous Provisions) Act 1995 entered into force.

<sup>44</sup> This is still the rule in India; see, e.g., *The Kotah Transport Ltd. v. The Jhalawas Bus Service Ltd.*, 1960 Raj.224; further *Paras Diwan*, *Private International Law* (3<sup>rd</sup> ed. 1993) 551 et seq., 570.

approach.<sup>45</sup> In this view, jurisdiction flows to the country with which the tort and the parties are most closely connected.<sup>46</sup> This has to be determined by weighing all relevant factors, in particular the place of the injury, the place of the tortious act, domicile, residence, nationality, place of business,<sup>47</sup> and other factors like the relevant policies of the forum, justified expectations of the parties, etc.<sup>48</sup> Only in simple cases can the outcome of this evaluation process be predicted with some certainty.

### **c) Summary**

With respect to the determination of the applicable law, the main difference between the nuclear convention regime and autonomous national solutions is that to a large extent, the conventions contain uniform substantive law on liability and compensation, and need to refer to national law only for a relatively few residual questions. Even in respect of those residual questions, the applicable national law is generally clear. In contrast, outside the conventions the outcome as to which law applies is difficult to predict. Considerable time and money could be spent on the determination of the applicable law and its contents even before substantive issues were considered. The convention regime offers advantages in this regard to all parties to actions arising from a nuclear incident.

## **4. Recognition and enforcement of judgements**

A further procedural aspect of great practical importance concerns the question as to whether a judgement which awards compensation for nuclear damage will be recognized and enforced in another country than that where the judgement was rendered. Again, the situation differs between countries which adhere to one of the nuclear liability conventions and those which do not.

### **a) Situation covered by one of the nuclear liability conventions**

Under the nuclear liability regime, the recognition and enforcement of foreign judgements is less likely to be required. The judgement against the responsible operator is generally rendered by the court where the nuclear incident occurred, because under the nuclear liability conventions this court is exclusively competent.<sup>49</sup> There is a relatively high likelihood<sup>50</sup> that the operator is located there and possesses assets there against which execution can be pursued. In particular, the financial security which the operator must maintain will be available at that place. Therefore it is likely that victims can successfully enforce judgements in the State where they have been rendered.

Nonetheless, the nuclear liability conventions provide further that judgements of a convention State which have been rendered by a court which is competent under the respective convention must be

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<sup>45</sup> This is the case, for instance, with the USA; see, e.g. *Babcock v. Jackson*, 191 N.E. 2d 279 (N.Y. 1963); *Reich v. Purcell*, 432 P. 2d 727 (Cal. 1967); further *Rosenberg/Hay/Weintraub*, *Conflict of Law. Cases and Materials* (10<sup>th</sup> ed. 1996) 520 ss.; *Scoles/Hay*, *Conflict of Laws* (2<sup>nd</sup> ed. 1994, Suppl. 1995) 570 ss.

<sup>46</sup> See also § 145(1) Restatement Second on Conflict of Laws.

<sup>47</sup> See § 145(2) Restatement Second on Conflict of Laws.

<sup>48</sup> See § 6(2) Restatement Second on Conflict of Laws.

<sup>49</sup> See above under III.2.a).

<sup>50</sup> If the nuclear incident occurred at the installation, the courts there are competent and it is very likely that the operator is located there. If the incident occurred outside the territory of a Contracting Party or if the place of the incident remains uncertain, the courts of the installation State are competent, and again it is very likely that the operator is located there. Only if the incident occurs during the transport of nuclear material in another convention State does jurisdiction lie with the courts of a State other than the installation State.



recognized and can be enforced in all other convention States without the need for re-litigation.<sup>51</sup> In these States, such a judgement has the same effect as a domestic judgement.<sup>52</sup> Recognition and enforcement may be denied only in very limited circumstances (like, for instance, public policy).<sup>53</sup> In any event, the merits of the case will not be subject to any further proceedings.<sup>54</sup>

## **b) Situation not covered by any nuclear convention**

Outside the scope of the nuclear conventions, the recognition and enforcement of foreign judgements is first regulated by international instruments, mainly bilateral treaties concerning this matter. In the absence of international instruments, the autonomous national rules of the State where recognition and enforcement is sought apply.

The various national rules under which foreign judgements are recognised and enforced vary rather widely. Some countries proceed on the basis that foreign judgements can only be recognized and enforced if a multilateral or bilateral treaty obliges the State to give effect to foreign court decisions.<sup>55</sup> Others provide that foreign judgements can generally be recognized on the basis of reciprocity only.<sup>56</sup> Yet others deny recognition only on certain specific grounds like the violation of the *ordre public*, etc.<sup>57</sup>

On a regional level, the aforementioned EU Regulation 44/2001/EC<sup>58</sup> as well as the Brussels and Lugano Conventions cover the recognition and enforcement of judgements of one Member State in another Member State. Judgements rendered in one Member State have to be recognized and enforced in all other Member States, with similar minor exceptions as allowed under the nuclear liability conventions<sup>59</sup> Judgements rendered in third States are, however, not covered by these instruments.

<sup>51</sup> Art. 13 (d) Paris Convention; Art. XII Vienna Convention; Art. XIII No. 5 CSC.

<sup>52</sup> Art. 13 (d) Paris Convention; Art. XII (2) Vienna Convention; Art. XIII No. 6 CSC.

<sup>53</sup> See Art. 12 (1) (a) – (c) Vienna Convention; Art. XIII No. 5 (a) – (c) CSC.

<sup>54</sup> Art. 13 (d) Paris Convention; Art. XII (3) Vienna Convention; Art. XIII No. 6 CSC.

<sup>55</sup> Until recently (but see the following fn.) this has been the case with the Russian Federation; see thereon *M.M. Boguslawskij*, Die Anerkennung und Vollstreckung von Entscheidungen ausländischer staatlicher Gerichte und Schiedsgerichte in der Russischen Föderation, in: *W. Seiffert* (ed.), *Anerkennung und Vollstreckung ausländischer Entscheidungen in Osteuropa* (Munich, 1994), 15 ss.

<sup>56</sup> See, for instance, Austria: §§ 79, 80 Gesetz über das Exekutions- und Sicherungsverfahren (Act on Procedure of Enforcement and Provisional Measures [EO]); Germany: § 328 par. 1 No. 5 Zivilprozessordnung (Civil Procedure Code – ZPO). In a similar sense see now the recent decision of the Supreme Court of the Russian Federation of 7 June 2002, IPRax 2003, 356 et seq. (in German translation).

<sup>57</sup> See, for instance, the USA where the recognition and enforcement of foreign judgements is a matter falling within the competence of the single States which, however, apply rather uniform rules. According to § 98 Restatement Second on the Conflict of Laws foreign judgements can only be recognized and enforced: if the judgement is final and conclusive under the law of the court which rendered the judgement; if the court which delivered the judgement had jurisdiction; if the defendant had been given proper notice of the suit; if the defendant had the opportunity to be heard; if the judgement does not violate the public policy of the recognition State.

<sup>58</sup> As to the applicability of the Regulation in case of nuclear damage see supra 36.

<sup>59</sup> See Art. 34, 35, 45 Regulation 44/2001/EC. Any judgement of a court of one EU Member State is to be declared enforceable in another Member State immediately and without any review under Art. 34 or 35 (see Art. 41). But on appeal of the judgement debtor the grounds of non-recognition listed in Art. 34 and 35 may lead to the refusal or revocation of a declaration of enforceability (Art. 45). Again, Denmark is not bound by these provisions of the Regulation but by the respective rules of the Brussels Convention. For the Brussels and Lugano Conventions, see their corresponding Art. 27, 28 and 34.

### **c) Summary**

The nuclear liability regime ensures that judgements rendered in one convention State are recognized and can be enforced in all other convention States. Outside the nuclear liability regime, it is uncertain whether a judgement for compensation of nuclear damage will be recognized and can be enforced outside the country where the judgement was rendered. It is clearly advantageous for victims if they can trust that a judgement rendered in one country will be recognized and enforced in others.

## **IV. Comparison of substantive aspects**

The most significant differences between the nuclear liability regime and national laws concern the substantive rules on liability and compensation for nuclear damage. The original Paris and Vienna Convention have been improved by a number of revisions and additional conventions — in particular the CSC. For a comparison of substantive aspects the most recent state of the conventions shall be taken into account even though, for instance, the CSC has thus far not entered into force.

### **a) Situation covered by one of the nuclear liability conventions**

The nuclear liability conventions pursue two aims: the primary aim is to ensure that victims of a nuclear incident can claim, and will in fact receive, adequate compensation for their losses. But an additional aim is also to enable the civil use of nuclear power by introducing maximum limits for the liability of operators of nuclear installations. It should be noted, however, that contracting parties are not constrained from providing greater liability or even unlimited liability at the national level. In general, the nuclear liability conventions define the conditions under which liability is incurred, state the remedies and try to ensure that sufficient means for compensation are available.

- The nuclear liability conventions introduce a regime of strict liability for nuclear damage. Victims are not required to prove fault of the liable person.<sup>60</sup>
- The nuclear liability conventions require non-discrimination based on nationality, domicile or residence, an advantage that may not be available under national laws.
- Only a few grounds of exemption from this liability — such as armed conflict, civil war, exceptional natural disaster<sup>61</sup> but not acts of terrorism — are accepted.<sup>62</sup>
- Liability is channelled to the operator of the nuclear installation.<sup>63</sup> Victims can only and need only to approach the operator in order to get compensation.<sup>64</sup>
- The notion of “nuclear damage” is uniformly defined. In the revised and most recent conventions, it is given a broad meaning which includes not only personal injury<sup>65</sup> and

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<sup>60</sup> Art. 3 Paris Convention; Art. IV Vienna Convention.

<sup>61</sup> Exceptional natural disaster has been removed as a ground for exemption under the revised Vienna and Paris Conventions.

<sup>62</sup> Art. 9 Paris Convention; Art. IV (2) and (3) Vienna Convention.

<sup>63</sup> Art. 3, 6 Paris Convention; Art. II Vienna Convention.

<sup>64</sup> Though there might apply the exception of Art. 6 Paris Convention that a claim lies also against the insurer or financial guarantor.

property damage, but also, a number of further heads of damage, including costs of measures for the reinstatement of the environment and costs of preventive measures (though the extent of compensation is partly left to the applicable national law).<sup>66</sup>

- The necessary causal link between damage and nuclear activity is detailed by the conventions themselves.<sup>67</sup>
- Maximum amounts of damages are provided for.<sup>68</sup>
- Uniform rules on time limits are provided for.<sup>69</sup>
- The conventions establish some uniform rules on burden of proof.<sup>70</sup>
- The conventions make payable sums freely transferable between the contracting parties.<sup>71</sup>
- It is of particular practical importance that the conventions require the operator of a nuclear installation to have and maintain insurance coverage or other financial security of a certain amount for a possible incident.<sup>72</sup> Thus, the very serious risk that the liable defendant cannot satisfy all successful claims is at least significantly reduced, if not almost excluded. (Additionally, insurers or other financial guarantors must give at least two months' notice of suspension or cancellation of coverage.)
- The revised conventions require that the State where the installation is located guarantees considerable further funds.<sup>73</sup>
- Further contributions by other contracting parties can be made available.<sup>74</sup>

#### **b) Situation not covered by any nuclear liability convention**

If none of the nuclear liability conventions are applicable, the provisions of national law have to step in. For situations such as those envisaged at the beginning of this paper, the respective rules of different States vary rather widely. To some extent, the differences depend on whether the State is one with or without a nuclear power industry.

- Some non-convention States have introduced a regime of strict liability for nuclear damage with certain grounds of exemption.<sup>75</sup> Other non-convention States still follow the traditional

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<sup>65</sup> However, the question whether and to which extent non-pecuniary damage is recoverable is still left to the applicable national law; see in this sense Exposé des Motifs (to Paris Convention) no. 39; further thereon *Fischerhof (-Pelzer)*(supra fn. ###) Art. 3 PÜ no. 6.

<sup>66</sup> See Art. I (f) CSC.

<sup>67</sup> Art. 3 Paris Convention; Art. II Vienna Convention.

<sup>68</sup> Art. 7 Paris Convention; Art. V Vienna Convention.

<sup>69</sup> Art. 8 Paris Convention; Art. VI Vienna Convention.

<sup>70</sup> Art. 3, 4 Paris Convention; Art. II Vienna Convention.

<sup>71</sup> Art. 12 Paris Convention; Art. XV Vienna Convention.

<sup>72</sup> Art. 10 Paris Convention; Art. VII Vienna Convention.

<sup>73</sup> See in particular Art. III (1) CSC.

<sup>74</sup> See Art. IV CSC.

tort law approach which requires fault, at least negligence, in order to incur liability.<sup>76</sup> The apparent effect of this rule is mitigated by the fact that for many common law jurisdictions, the law of nuisance/Rylands v. Fletcher (strict liability) might be applicable.

- Some of the non-convention States also channel liability to the operator of the nuclear installation.<sup>77</sup> But it appears to be the more widespread rule that victims can sue both the operator and other possibly liable persons.<sup>78</sup>
- Some of the non-convention States have introduced maximum amounts<sup>79</sup> while others have not; and, therefore, effectively provide for unlimited liability<sup>80</sup>.
- The national rules on prescription differ regularly.
- Free transferability of money payments is not everywhere and always secured. Even member States of the International Monetary Fund (IMF) may restrict the transfer of home currency to other countries as long as such restriction is in conformity with the Bretton Woods Agreement of 1944 which created the IMF.
- A number of non-convention States ensure that the operator of a nuclear installation has to take and to maintain insurance coverage or another financial security of a certain amount for nuclear incidents.<sup>81</sup> However, where no channelling to the operator is provided for, there is also regularly no obligation on potential tortfeasors to insure.

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<sup>75</sup> For instance, China has adopted the standard of the nuclear liability conventions including strict liability for its internal law. This has been effected by a Decree of the State Council: Guo Han (1986) No. 44. Also, the United States has provided for strict liability for nuclear damage on the federal level in cases where not already provided by applicable state law (see the Atomic Energy Act of 1954 with later modifications in particular by the Price-Anderson Act of 1957). Strict liability is incurred in the USA if the Nuclear Regulatory Commission qualifies any incident as an 'extraordinary nuclear occurrence (ENO)'. The nuclear incident at Three Mile Island in 1979 was not so qualified because of the low level of radioactive releases involved. Therefore, liability was based on fault liability in that case under the applicable law of the State of Pennsylvania; see *In re TMI (Three Mile Island)*, 67 F. 3d 1103 (3d Cir. 1995).

<sup>76</sup> This is still the case with India. Neither the Indian Atomic Energy Act of 1962 with later modifications nor the Radiation Protection Rules of 1971 provide for special rules on civil liability for nuclear damage (though the Atomic Energy Act entitles the Government to enact such special rules). The general Indian tort law follows the pattern of English Common Law. It is based on the fault principle: if negligent conduct of a tortfeasor is established which has caused damage, this person is liable for the full loss.

<sup>77</sup> Channelling to the operator is, for instance, provided for in China; see thereto See *Li Zhaohui/Wu Aihong/Nan Bin*, Brief Introduction to China's Nuclear Liability Regime, in: *Reform of Civil Nuclear Liability. Budapest Symposium 1999* (ed. by OECD, 2000) 541 et seq.; in the United States economic channeling to the operator is prescribed, see *Quattrocchi*, Nuclear Liability Insurance in the United States: An Insurer's Perspective, in: *Reform of Civil Nuclear Liability, Budapest Symposium 1999* (supra fn. 20) 383 et seq.

<sup>78</sup> This is even the rule in Austria which has introduced a Nuclear Liability Act rather recently though the country does not possess nuclear power plants (see § 16 Austrian Act on Civil Liability for Damage Caused by Radioactivity of 1999).

<sup>79</sup> For example China, see thereto See *Li Zhaohui/Wu Aihong/Nan Bin*, Brief Introduction to China's Nuclear Liability Regime, in: *Reform of Civil Nuclear Liability. Budapest Symposium 1999* (supra fn. 20) 541 et seq.; also the United States, see *Quattrocchi*, Nuclear Liability Insurance in the USA: An Insurer's Perspective, in: *Reform of Civil Nuclear Liability. Budapest Symposium 1999* (supra fn. 20) 383 et seq. The total financial amount available for the compensation of victims amounts to almost 10 billion US\$.

<sup>80</sup> For instance, India; however, also Austria where the Act of 1999 introduced strict liability. A limit applies only with respect to loss of income and immaterial impairment due to preventive measures or due to the danger of radiation (§ 11 (4) AtomHG).

<sup>81</sup> Again this is true, for instance, for China and the USA; see the references in fn. 78.

- Few non-convention States oblige the State to contribute to funds from which further compensation of victims is paid.<sup>82</sup>
- The non-convention States do not have the possibility to oblige other states to contribute to funds for the compensation of nuclear victims.

### c) Summary

If the substantive differences which exist between the situation as covered by one of the nuclear liability conventions and outside the conventions are compared, the first and most important difference is the uniformity under the conventions and the great variety under the various national laws. Looked at from the perspective of potential victims, the nuclear liability conventions offer the following advantages:

- generally strict liability with no necessity to prove fault; only some non-convention States also offer such a regime;
- generally channelling of liability to the operator with the good chance of a fair and equal distribution of all available assets; such channelling is offered by relatively few non-convention States;
- general inclusion of certain heads of damage which are not always included under national law;
- free transferability of payments;
- general requirement that the operator of a nuclear installation is reasonably insured or maintains other financial security; such a requirement is offered by relatively few non-convention States; and
- the obligation of the State and even other States to contribute to the funds available for compensation; a few non-convention States ensure contributions by the State itself, but obviously not by other States.

This list shows quite a number of substantive advantages for victims which the nuclear liability conventions — at least in their most recent form — bring about. The main advantage is the generalization of rules for the protection of potential victims. These rules may also be found in certain — though rather few — national laws outside the convention system. Most national laws do not, however, meet the standard of protection as set by the conventions. Outside the nuclear liability conventions, the protection of the victim would therefore entirely depend on whether a national law would be applicable which would protect victims in a similar way as do the conventions. This, in turn, would mainly depend on where the incident or the damage occurred. Therefore, it would be by mere chance that one of the few national laws which is as favourable as the conventions would be applicable. In most cases, a clearly less favourable law would apply.

It is only natural that there are also certain disadvantages of the substantive law of the nuclear liability regime as compared to national laws. The disadvantages are the following:

- possible limitation of liability of the operator by maximum amounts, while a considerable number of non-convention States allow unlimited liability (although regularly requiring

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<sup>82</sup> Although there are exceptions: for example, the Price-Anderson Act requires Congress to consider additional funds if the amount provided under that Act is not sufficient to compensate all victims.

fault on the part of the liable person and not requiring any insurance or other financial security);

- possible remaining limitations in the definition of "nuclear damage" as compared to some national laws (although the definition of nuclear damage in the recent instruments is consistent with, or broader than, definitions of damage in other regimes covering non-nuclear damage);
- prescription periods which are in some cases shorter than the periods allowed under national law; and
- third persons who are also liable under national law cannot be made liable under the nuclear liability conventions.

Comparing the differences concerning substantive liability law for nuclear damage, the nuclear liability conventions display considerable advantages — in particular, because victims outside the convention regime cannot trust that in case of a nuclear incident a national law which happens to be as favourable as the nuclear liability conventions will be applicable.

## **V. Conclusions**

The survey shows relevant differences between the situation where one of the nuclear liability conventions is applicable as compared to the situation where this is not the case. The advantages of the nuclear liability conventions are, in particular:

1. With respect to State immunity, the nuclear liability conventions ensure that a State cannot invoke this defence, while under national law it may be uncertain whether the operation of a State run nuclear power plant which produces energy for the public or a research reactor used for scientific research and/or medical radioisotope production entitle the involved State to invoke the defence of State immunity.
2. Under the nuclear liability conventions, jurisdiction is exclusively accorded to the courts at one place only; this is generally where the nuclear incident occurred or, exceptionally, where the relevant nuclear installation is situated. The national laws (including regional harmonization such as in the EU) do not normally provide for such procedural channelling. They regularly — but not without exception — allow the victim/plaintiff to choose between the courts of the defendant's domicile and the courts at the place where the damaging event took place or where the damage was suffered. Though this possibility to choose might at first sight appear as an advantage for victims, it does not allow a concentration of all proceedings and all available funds at one place in the hands of one distributing court. Such procedural channelling secures as far as possible a fair and equal treatment of all potential victims, and is therefore also advantageous for every single victim. The procedural channelling can only be achieved under a convention regime which coordinates the jurisdiction of courts of different States. National law alone is unable to achieve this channelling effect because national law is binding on its own courts only, not the courts of other States.
3. The nuclear liability conventions make it largely unnecessary to select, and to refer to, the applicable national law because the conventions provide for substantive liability rules themselves. Outside the scope of the convention system it is, however, always necessary as a first step to designate the applicable national law. The result of this selection cannot always be predicted with certainty. Not infrequently, the applicable conflicts rules grant courts a considerable discretion; partly victims are entitled to opt for either the law of the country of the damaging event or of the country where the

damage was suffered. The necessity to determine the applicable law and its substantive content costs time and money. Moreover, the applicable law may be much less favourable than the convention regime.

4. Under the nuclear liability conventions, the recognition and enforcement of judgements are secured. A judgement of a court of a convention State must be recognized and can be enforced in all other convention States. Under national or regionally harmonized law, recognition and enforcement may be doubtful since the conditions of recognition and enforcement of foreign judgements vary widely.
5. With respect to the substantive rules on liability for nuclear damage, the conventional system establishes a system of strict liability, channels this liability to the operator, sets uniform rules for the recoverable damage and the notion of causation, limits liability by certain maximum amounts of damages (although contracting parties are not constrained from providing greater liability or even unlimited liability at the national level), secures their payment by forcing the operator to maintain insurance coverage or other financial security and enlarges the means available for compensation by obliging the contracting parties to contribute. Under the different national laws, there are many solutions. Some countries provide for even higher maximum amounts; others follow the standard of the convention system only to some extent; still others provide for fault liability only. Further, the practically important aspect of securing the payment of an adjudicated compensation and a contribution by the State is differently — if at all — regulated. The main advantage of the nuclear liability conventions is to bring about a uniform liability system which is able to effectively protect victims. The convention regime avoids the situation that mere coincidence decides whether a national law that is as similarly favourable as the convention regime applies to victims, or whether a much less favourable national law applies. At present, the latter situation will be the much more likely case.

On the other hand, the nuclear liability conventions also contain a number of disadvantages, in particular the following:

1. Under the convention regime, victims of a transboundary accident will often if not regularly be forced to sue in a foreign State because of the exclusive jurisdiction of the courts of that State. This is the necessary corollary of the procedural channelling and the price for the advantages of the channelling.
2. The nuclear liability conventions allow States to set limits on the amount of liability. However, apparently Japan, the USA, Switzerland and South Africa are the only non-convention countries which provide for higher amounts of liability than the amounts mandated under the revised conventions.
3. Claims against third persons who under general law would also be liable for nuclear damages are excluded due to the channelling of claims to the operator. This limitation would indeed affect victims where the liable operator and the further available means would not be able to fully satisfy the claims of the victims, but where full satisfaction would be reached if also these third persons could be made liable.
4. The nuclear liability conventions do not cover all situations where nuclear damage can occur. Military installations are excluded.
5. The existence of several nuclear liability conventions which are in force in only a few States or which are not in force at all is unsatisfactory and impedes a truly uniform nuclear liability regime. This disadvantage could be lessened by a greater number of ratifications of the conventions, particularly those — the CSC and the Joint Protocol — which seek to unify the Paris and Vienna regimes.

Balancing the advantages and disadvantages, the nuclear liability conventions considerably improve the protection of victims in comparison to most national laws. Quite a number of the advantages, like procedural channelling, recognition and enforcement of judgements, liability for damage caused by State-run nuclear activities, free transferability of payable sums and contributions of other States to compensation funds can only be achieved by international agreements. National laws are unable to achieve these advantages.