

# ARTICLES

## **The reform of the Paris Convention on Third Party Liability in the Field of Nuclear Energy and of the Brussels Supplementary Convention**

### **An overview of the main features of the modernisation of the two Conventions**

**by Roland Dussart Desart\***

#### **A. Introduction**

##### ***A.1. The beginnings: the fundamental principles***

The arrival of nuclear energy gave rise to the need, almost half a century ago, to devise a regime of liability in keeping with the new risks associated with this technology: risks that were not only catastrophic, but also insidious, because they were incapable of detection by ordinary human beings. The principles underlying this regime have stood the test of time, even if the accusation is now sometimes made that some of them were also designed to protect an industry in its infancy.

These principles are as follows:

- the operator of a nuclear installation is objectively liable, meaning that the victim of nuclear damage does not have to prove fault in order to be compensated;
- channelling of the liability onto the operator alone, both to avoid sterile debate between professionals and to allow the insurance sector to mobilise the necessary resources;
- financial limitation on the liability of the operator.

The international nature of the nuclear industry, the serious risk of transborder damage and the carriage operations in this sector led to international conventions being entered into which, having enshrined the three abovementioned principles, were designed in particular to:

- avoid jurisdictional conflicts arising between a number of courts belonging to more than one state;
- prevent the available coverage from being unwisely used up by excluding from its benefit those assets connected with the operation of installations;

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- fix uniform periods of limitation;
- regulate transport operations in order to guarantee continuity of coverage;
- unify and limit clauses excluding liability.

These were the guiding principles that led to the signing, in succession, of the Paris Convention on Third Party Liability in the Field of Nuclear Energy,<sup>1</sup> a regional instrument within the framework of the OEEC (which became the OECD in 1961) in 1960 (referred to hereinafter by the initials PC), and the Vienna Convention on Civil Liability for Nuclear Damage,<sup>2</sup> a worldwide instrument under the auspices of the IAEA, in 1963 (the VC).

The perceived need to increase the amounts of cover paid for out of public funds led to a third instrument being entered into on 31 January 1963, the Brussels Supplementary Convention (BSC)<sup>3</sup> which offers some states that are Parties only to the Paris Convention the security of two additional tiers of compensation: a second one payable by the installation state where the incident originated and a third made up of contributions from the Parties, prorated according to their Gross National Product and their installed nuclear capacity.

There have been some interim modifications to this machinery, mostly to increase the amounts of money available, but overall it is still in place.

#### ***A.2. The impetus for the modernisation process***

The Chernobyl catastrophe acted as a catalyst for the negotiation and adoption of a number of international conventions in the field of nuclear energy. I will cite here instruments such as the Convention on Early Notification of a Nuclear Accident (1986), the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (1986) or the Convention on Nuclear Safety (1994).<sup>4</sup>

It further demonstrated how inadequate was the coverage provided under the existing conventions on liability for nuclear damage, and showed the extent of crossborder damage, which had previously been a virtual concept but which suddenly took on a very real dimension.

#### *The Joint Protocol*

In the field of liability for nuclear damage, the first bridge to be hastily put in place between the Vienna and Paris Conventions, came with the Joint Protocol on the Application of the Vienna

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1. The text of the Paris Convention currently in force is available on the Web site of the NEA at: [www.nea.fr/html/law/nlparis\\_conv.html](http://www.nea.fr/html/law/nlparis_conv.html).
  2. The text of the Vienna Convention of 1963 is available on the Web site of the IAEA at: <http://www.iaea.org/Publications/Documents/Infcircs/1996/inf500.shtml>.
  3. The text of the Brussels Convention currently in force is available on the Web site of the NEA at: [www.nea.fr/html/law/nlbrussels.html](http://www.nea.fr/html/law/nlbrussels.html).
  4. The text of these three Conventions is available on the Web site of the IAEA at: [www.iaea.org/Publications/Documents/Conventions/index.html](http://www.iaea.org/Publications/Documents/Conventions/index.html).

Convention and the Paris Convention<sup>5</sup> (adopted on 21 September 1988, entered into force in 1992), which extends the benefit of the application of whichever of these two Conventions the installation state is Party to, to the States Parties to the other convention, provided they have ratified the Joint Protocol. If the Parties to the VC have for the most part ratified this Protocol, the Parties to the PC have been less diligent about doing so.<sup>6</sup>

### *Revision of the Vienna Convention<sup>7</sup>*

In the same time-frame, programmes for international cooperation on nuclear safety have been developed, and this has revived interest in the Vienna Convention, to which several countries from Central and Eastern Europe have now adhered. In the same way as the Paris Convention, that convention however seemed to have become outdated in a number of respects. In 1990, as a result, the IAEA set in motion the process of revision of the Vienna Convention. The Parties to the Paris Convention played an active part in this work and drew on it quite openly when they began their own process.

### *The Convention on Supplementary Compensation for Nuclear Damage (CSC)<sup>8</sup>*

Given the relatively low levels of coverage suggested by the Parties to the Vienna Convention, the proposal was made to supplement it from the outset by an instrument calling upon international cooperation.

This Convention on Supplementary Compensation, which for a long time was referred to as the “Umbrella”, is intended to offer a worldwide supplement to the amounts provided for under national law, whether these are based on the Vienna Convention or the Paris Convention, or comply with a number of criteria that guarantee equivalence, which are listed in an Annex. This formulation has been called the “grandfather clause”. In practice, as currently drafted, especially as regards the provision in its Annex requiring compliance with the legal conditions in force on 1 January 1995, it affects only the United States.

The CSC was also designed to serve as an umbrella for regional supplementary conventions, both those already in existence, like the Brussels Supplementary Convention, or still at the concept stage, like the regional convention discussed during the drafting work by the South American states, or another one that might be put in place in the Far East.

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5. The text of the Joint Protocol is available on the Web site of the NEA at: [www.nea.fr/html/law/nljoint\\_prot.html](http://www.nea.fr/html/law/nljoint_prot.html).

6. As at 10 March 2005, 14 Parties to the VC (Bulgaria, Cameroon, Chile, Croatia, the Czech Republic, Egypt, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Ukraine) were Parties to the Joint Protocol while only nine Parties to the PC (Denmark, Finland, Germany, Greece, Italy, the Netherlands, Norway, Slovenia and Sweden) have ratified that instrument.

7. For a general analysis of the topic, see Vanda Lamm “The Protocol amending the 1963 Vienna Convention”, *Nuclear Law Bulletin* No. 61, p. 7.

8. For a general analysis of the topic, see Ben McRae “The Compensation Convention: Path to a Global Regime for Dealing with Legal Liability and Compensation for Nuclear Damage”, *Nuclear Law Bulletin* No. 61, p. 27.

Given the small number of ratifications, everyone is asking when this Supplementary Convention will enter into force. It will require ratification by states with a substantial number of nuclear installations, foremost among them being the United States, the main promoter of the convention, or perhaps France, Russia or Japan, before this instrument becomes a reality and attracts other states to adhere to it.

*Revision of the Paris Convention on Third Party Liability in the Field of Nuclear Energy (PC) and the Brussels Supplementary Convention to the Paris Convention (BSC)*

The completion in 1997 of the process of revision of the Vienna Convention coincided with the official start of work on revising the Paris Convention, which in turn was followed by work starting on the revision of the Brussels Supplementary Convention (1999).

Because the Vienna and Paris Conventions are so closely related, it is possible here to make an almost systematic comparison between the results of the two revisions.

The two Supplementary Conventions will be examined at the end of the article.

## **B. The Revision of the Paris Convention<sup>9</sup>**

### ***B.1. Problem areas***

The revision process will always seem too long to an outside observer. The time it took to revise the Vienna Convention and to update the Convention on Supplementary Compensation will remain in people's minds: the temptation to go back to the beginning was too great, especially in a forum where the Contracting Parties, in particular those of them that have nuclear installations, were in the end in the minority. Much time was also lost in trying to find ways of making the state liable as the issuer of operating licences.

It also has to be admitted that the length of time it took to revise the Paris and Brussels Conventions, from 1998 to 2004, was also fraught with setbacks.

#### *The different approaches of the Law of the Sea*

Even the extension of geographical scope to cover exclusive economic zones, with all its corollaries in terms of jurisdiction of the courts, gave rise, as it did in Vienna but between different Parties, to a prolonged dispute illustrating the different approaches to the law of the sea.

#### *The search for other means of financing*

In setting themselves very ambitious standards at the outset, especially with regard to the minimum amounts to be offered, the negotiators found themselves faced with a hesitant insurance market. True, the convention also allows resort to financial guarantees, but the cost of these and their scarcity make them unattractive. At one point during the Vienna negotiations the setting up of

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9. The Protocol of 12 February 2004 amending the Paris Convention is available on the NEA Web site at : [www.nea.fr/html/law/paris\\_convention.pdf](http://www.nea.fr/html/law/paris_convention.pdf).

“managed” voluntary pools of operators had been envisaged, but in the end this did not attract sufficient support.

*Assessing the terrorist threat after the attacks of 11 September 2001*

The 11 September attacks undoubtedly gave the insurers a rude awakening in their assessment of the risks. Though the risk of terrorism was clearly well covered by the Paris Convention, since there is no clause excluding terrorism in Article 9, the probability of a nuclear power station becoming the object of such an attack was suddenly dramatically increased, which quite naturally prompted a new assessment of capacity, and a request from the insurance sector for Article 9 to be reviewed. In the final analysis, terrorism will remain covered by the conventions; what is more, the way in which it is covered will, as in the past, for reasons connected with « historic » forms of terrorism, sometimes be subject to special arrangements whereby the state acts to insure the risk, in exchange for a premium.

*Adaptation or adoption of other international conventions or instruments containing clauses excluding nuclear risks*

The development of other international instruments has had to be kept under constant scrutiny, given the risk that the negotiators of such texts would base themselves on a literal reading of the old Paris Convention, only to find that their cover was inadequate and delete the nuclear exception, or allow claims for damages beyond those covered by the twin Paris/Brussels instruments. It was therefore necessary not only to explain in other fora the existing regime with all its extensions and interpretations (for example the PC provides a coverage of 15 million Special Drawing Rights (SDR) but there is a recommendation by the NEA<sup>10</sup> to increase this to SDR 150 million), but also to “sell” the positive effects of a revision whose date of entry into force nobody knew, on the basis of a protocol that had not yet been opened for signature. The most striking example in this respect is still that of the EU Directive on environmental liability,<sup>11</sup> which was being negotiated while work was going on to revise the Paris Convention and which was adopted a short time later.

*Adoption of European Union Council Regulation (EC) 44/2001<sup>12</sup>*

This regulation, on jurisdiction and the recognition and enforcement of judgments in civil et commercial matters, suddenly deprived most of the Parties to the Paris Convention that are also members of the European Union (excluding Denmark) of the right to adopt international conventions derogating from the provisions of that regulation. That was indeed the purpose of revising Article 13, which derogated from the Community law principle of deciding which court has jurisdiction on the basis of the domicile of the victim, thus allowing one single forum. In the end, it took two years to convince the competent European Union bodies of the relevance of the provisions proposed, and for the Parties that are members of the EU to be authorised to sign the Amending Protocols, on 12 February 2004.

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10. Recommendation of the Steering Committee of 20 April 1990 [NE/M(90)1].

11. Directive 2004/35/EC of the European Parliament and the Council of 21 April 2004 on environmental liability, as to the prevention and compensation of environmental damage [Official Journal No. L 143 of 30/04/2004 p. 0056-0075].

12. Council Regulation (EC) n° 44/2001 of 22 December 2000 on jurisdiction, recognition and enforcement of judgments in civil and commercial matters [Official Journal No. L 012 of 16/01/2001 p. 0001-0023].

## ***B.2. Key points in the revision of the Paris Convention, in light of the Vienna Convention***

### *B.2.a. Definitions*

#### 1. Nuclear incident

The first definition to feature in the Paris Convention [Article 1(a)(i)] is noticeably shortened, reducing a nuclear incident to any occurrence or succession of occurrences having the same origin which causes nuclear damage.

The part of the original definition of an incident relating to the radioactive properties and hazardous properties that go to make up a nuclear incident are moved into the new definition of nuclear damage, which means that the notion of a nuclear incident still has all the same components, once all the various elements are brought together.

This phrase in the definition confirms the interpretation already given to the pre-existing definition, whereby even emissions authorised by the rules could qualify as an incident where they gave rise to nuclear damage.

On the other hand, the corresponding definition that appears in Article I(1) of the Vienna Convention adopted identical wording, but was accompanied by supplementary language that also included “as regards preventive measures, [any occurrence that ] creates a serious and imminent threat of damage of this kind”.

The Vienna definition thus includes a temporal paradox which assimilates a nuclear incident to a threat of damage, while nuclear damage can only be caused by a nuclear incident. The Vienna Convention resolves this paradox in its definition of preventive measures, which are presented as being taken after a nuclear incident. The serpent is thus biting its own tail.

The Paris Convention attempts another solution to avoid this paradox, by its definition of preventive measures, which are subject to compensation, whether they are taken after a nuclear incident has occurred or after an event that creates a serious and imminent threat of nuclear damage, to reduce nuclear damage once it has actually happened, in other words after a “true” nuclear incident. This is designed to avoid a situation where only “ordinary” safety measures such as acquiring equipment or training emergency teams are eligible, while, as will be seen later with regard to the definition of safety measures, some national laws have mechanisms that are if not equivalent in effect, then at least very similar.

#### 2. Nuclear installations

The Protocol to amend the Paris Convention expanded the definition of the nuclear installations covered by Article 1(a)(ii) to those installations in the course of decommissioning as well as installations intended for the disposal of nuclear substances. These two extensions clearly do not prevent one of the Parties from relying on Article 1(b) of the convention, in order to obtain an exemption for these installations from the Steering Committee of the OECD/NEA on the grounds that they present a reduced risk. In the case of the disposal, their operator will most probably be a public authority, given the exceptionally long-lasting nature of the operation.

If the revised Vienna Convention remains silent as to these two types of installations, it still appears that they are covered, because final disposal is after all still storage.

The Vienna Convention is more explicit on a different issue: it now expressly states in the new Article I B that it does not apply to nuclear installations used for non-peaceful purposes, even though one French diplomat did point out the paradox in the adage *si vis pacem para bellum*.

It differs in this respect from the Paris Convention which, in the absence of any express exemption, can be taken to apply to military installations where these installations fulfil the criteria in the definition. As to the BSC, it expressly refers, in its one paragraph of preamble, to the use of nuclear energy for peaceful purposes, and says so in Article 2. It therefore does not apply to military nuclear installations; it is hard to see how a mechanism for inter-state co-operation could apply to manifestations of national sovereignty such as these.

### 3. Damage

Both the Paris Convention [Article 3] and the Vienna Convention [Article I] offer a laconic definition of damage, limited to personal injury and damage to property, and excluding damage to the installation. National legislators were thus free in practice to come up with an ad hoc definition, or even to refer to the general law.

*A laconic definition or an incomplete one?*

The definition of damage was the subject of long debate during the review of the Vienna Convention, the concern being to expressly cover the broadest field possible, while at the same time laying down certain safeguards to avoid abuses that could result in the available coverage being prematurely used up, at the expense of the most « traditional » kinds of damage.

In the Paris Convention as amended [Article 1(a)(vii)], nuclear damage now covers:

“1. loss of life or personal injury;

2. loss of or damage to property;

and each of the following to the extent determined by the law of the competent court:

3. economic loss arising from loss or damage referred to in sub-paragraph 1 or 2, insofar as not included in those subparagraphs, if incurred by a person entitled to claim in respect of such loss or damage;

4. the cost of measures of reinstatement of impaired environment, unless such impairment is insignificant, if such measures are actually taken or to be taken, and insofar as not included in subparagraph 2;

5. loss of income deriving from an economic interest in any use or enjoyment of the environment, incurred as a result of a significant impairment of that environment, and insofar as not included in subparagraph 2;

6. the costs of preventive measures, and any loss or damage caused by such measures.”

For all these types of damage, with the exception of those referred to in item 6, the loss or damage must result from ionising radiation emitted by a source inside a nuclear installation or emitted by fuel in a nuclear installation, or nuclear substances that are being transported (...) whether the loss

is caused by the radioactive properties of this matter or from a combination of these properties with toxic, explosive or other properties (...).

*Subtle differences between Paris and Vienna: a detail or an obstacle?*

It should be noted here that there is a difference from the amended Vienna Convention which includes in the foregoing list – which served as a model for the Paris text – an Article I(1)(k)(vii) referring to “any other economic loss, other than any caused by the impairment of the environment, if permitted by the general law on civil liability of the competent court”.

The actual object of this last subsidiary provision was never very clear in Vienna and its promoters, who wanted more than anything else to have a “catch-all” type of clause, were unable to put forward any convincing examples. Faced with this uncertainty, and the impossibility of giving it a meaningful definition, this item did not appear in the final amended Paris Convention. The fear was expressed that this difference might cast doubt on the ratification of the CSC by one of the Parties to the Paris Convention as amended. In this respect, Article II of the CSC makes the States Parties to the Paris and Vienna Conventions, as well as to their respective amendments, fully eligible; ratification of the CSC would also mean adoption of the provisions on the definition of damage found both in the body of the CSC and in its Annex. All the Parties concerned would have to do is make a finding that such a provision “is not permitted” in the law of the competent court.

*Definitions ancillary to that of damage*

The definition of damage contains new concepts which in turn require supplementary definitions:

Measures of Reinstatement: reasonable measures, approved by the competent authorities, which aim to reinstate or restore damaged components of the environment or to reintroduce such components into the environment. The law of the state where the damage is suffered shall determine which authorities are competent to give such approval.

Preventive Measures: reasonable measures taken by any person, after a nuclear incident has occurred or an event taken place that causes a serious and imminent threat of nuclear damage, to prevent or reduce the damage referred to above, authorised by the competent authority if this is required by the law of the state where the measures were taken.

Reasonable Measures: found under the law of the competent court to be appropriate and proportionate, having regard in particular to the nature and extent of the damage, the extent to which such measures are likely to be effective, and the relevant scientific and technical expertise.

*Damage to the environment: a reasonable challenge*

Where environmental damage is concerned, it should be borne in mind that it is often forgotten that cases of *res nullius* are increasingly rare: much of what we consider as being part of the environment belongs to an actual or legal person, which may be a public body, and which, as such, already has the right to seek reparation for damage to property, and this reparation, under the general law, must in principle be made in kind.

The extent of the environmental damage that can be taken into consideration is governed by a number of factors:

- it is limited to the effective reinstatement of the impaired environment;
- insignificant impairment is excluded;
- the reinstatement measures must be reasonable;
- they have to be approved by the competent authorities;
- measures to reintroduce destroyed components must also be reasonable.

This framework is even rounded off by a definition of reasonable measures which could well appear shocking to judges who apply the principle of proportionality on a daily basis, but they will be consoled by the fact that the circumstances to be taken into account are given for information only.

#### *Loss of profit deriving from enjoyment of the environment*

The most original feature, and the one most likely to present a new risk for the insurance companies, is undoubtedly that of loss of profit deriving from use of the environment.

However, this notion too is narrowly drawn. While the principle has to be present in the laws of the Parties, they are free to vary its scope of application. It is only loss of income that is subject to compensation: anyone who merely has rights of enjoyment of the environment without earning money from it has no right to be compensated. What is more, the loss of income must derive from a significant impairment to that environment. There will no doubt be attempts to emphasise the adjective significant, but on the basis of current trends, it is probable that this test will more and more often be satisfied. The essential feature is the requirement that there be actual impairment to the environment itself. There can thus be no question of compensation for loss resulting simply from fear or rumour.

#### *One assessment among others of the new definition of damage*

Great importance was attached to the definition of damage both in Vienna and Paris. However, for civil law countries that have watched the notion of damage developing through case-law rather than the building up of a body of statutory provisions, the respective scope of the damage covered before and after ratification of the Protocol will often be quite similar, simply more clearly delineated.

A detailed demonstration of this can be given by reference to the law of one State Party, Belgium. Items 1 and 2 of Article 1(a)(vii) do not pose any problems, in the PC text; item 3 was already included under items 1 and 2. Preventive measures (6) are covered by application of the general insurance regime, and the extent of environmental damage (4) is, in the end, relatively limited in the sense that a substantial portion of the reinstatement measures will fall under item 2.

The new definition certainly has several things to recommend it: to a large extent, it unifies the concept of damage, even if items 3 to 6 are limited by the law of the competent court; it follows the trend and the concepts used in other “modern” conventions; it is compatible with the VC and the CSC and it allows the Joint Protocol to be applied. Finally, in spite of everything, it leaves states freedom to manoeuvre in the definition of some aspects of damage and, ultimately, it provides for recourse to the courts to decide whether certain measures are reasonable and proportionate.

A further direct and immediate advantage of this extensive and explicit definition finally emerged with the justification of the nuclear exclusion clause in the European Directive on environmental liability.<sup>13</sup> Without this definition, the nuclear exclusion clause adopted in that draft

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13. See note 11.

directive would not have survived, and that would have cast doubt on the exclusive nature of the cover of nuclear incidents by the twin Paris/Brussels regime, and with it the whole basis of the system that had been in existence for some forty years.

However, one cannot hide the fact that, for all its detail, the definition of damage will continue to be written about and will still be of interest to the legislators.

As to preventive measures, for example, there could be a number of very different approaches to having the cost of intervention borne by the various public services. In the most extreme case, such intervention would be deemed to be part of the normal duties of the authority concerned, and it would therefore not be able to recover the costs. At the opposite extreme, some legal systems appear to provide for fixed amounts to be billed upon intervention, which are supposed to represent a share of the costs incurred in keeping these services available in readiness for an incident. In the case of a major disaster exceeding the available coverage, the state might be expected to waive any such claims (this has already happened in Belgium with fire insurance); the impact of “pricing” of this kind might be greater in the case of minor incidents.

### *B.2.b. Geographical Scope*

While the original Vienna Convention was silent on this point – and thus, in principle, generous – Article 2 of the Paris Convention confined its application to incidents and damage occurring within the territory of the Parties alone, except where a Party enacted more generous provisions in its national law. Certain Parties have made use of this option, but most of them have not; this timid provision, in contradiction with the principle that the polluter pays, was finally unable to hold out against the global trend.

The new machinery set up under Article 2(a) extends the benefit of the Paris Convention to cover damage that occurs within the territory:

- of the Contracting Parties;
- of the Parties to the Vienna Convention that are also Parties to the Joint Protocol, provided the state of the operator is also a Party to the said Protocol;
- of non-Contracting States that do not have nuclear installations;
- of other non-Contracting States that have such installations but offer reciprocal advantages based on principles identical to those in the Paris Convention, such as the objective and exclusive liability of the operator, recognition and enforcement of judgments and the free transfer of compensation.

This machinery thus satisfies “non nuclear” states that are neighbours of Parties to the Paris Convention and often highly critical of them, because they will now be able to benefit unconditionally from it. The risk remains, however, that the victims of damage in the territory of such states will try to make use of the Convention both in the courts of the installation state and the courts of the place where the damage occurred, if, for example, they did not obtain full satisfaction from the first court to hear the case. The execution of the judgments of courts that do not have jurisdiction under the PC can be prevented in the territory of the Parties; on the other hand, if the operator has assets in the territory of this non-Contracting State, the issue becomes more problematic.

As to states with nuclear installations, it should be noted that Article 7(g) provides that a Contracting Party may set amounts of liability for nuclear damage that are lower than those fixed

under Article 7 or Article 21(c) (phasing-in, see below), where the non-Contracting State does not grant equivalent reciprocal advantages. Article 7(g) thus defines the principle of reciprocity contained in Article 2(a)(iv), as applying only to the compensation offered. The content of Article 7(g) might have formed part of Article 2, but it seemed more logical to group all the financial provisions together in Article 7. This provision could give rise to problems of allocation, a fortiori if several non-Contracting States are claiming different amounts. It is, of course, always possible to find mathematical formulae to express this unequal division, but, on the ground, the fact that damage is spread out over time means that those responsible for dividing up the amounts of compensation could be faced with an extremely delicate task.

Article I A, introduced into the Vienna Convention, sets out machinery which has a similar effect but is based on the reverse logic: the scope of application is, a priori, generous, but counterbalanced by the possibility each Party has of excluding damage occurring in the territory of non-Contracting States where these have nuclear installations and do not offer reciprocal advantages. However, it does not go into the same level of detail as the Paris Convention; it will be a matter for interpretation which of the texts will in the end be judged to be clearer.

#### *B.2.c. Transport*

The transport regime, governed by Article 4 of the Paris Convention, underwent only one change of substance, with the insertion of a new Article 4(c), of which there is no equivalent in the Vienna Convention. This provision limits the option of transferring liability for carriage to another nuclear operator to cases where the latter has a direct interest in the said carriage. This is a novel measure, the object of which is to put an end to the practice noted by some Parties of designating operators subject to very low levels of liability as the operators liable for certain carriage operations. This practice could be viewed as distorting competition; it also increases the risk and the amount of the compensation to be paid by the state if a disaster should occur, with the difference between the reduced amount and EUR 700 million being payable by the authorities responsible for such undervaluations.

#### *B.2.d. The amounts*

The amounts discussed below are sometimes covered by insurance, sometimes by financial guarantees, and sometimes by commitments made by the public authorities. We are not referring here to budgetary funds that are called upon on a regular basis such as those set up by the IOPC Funds<sup>14</sup> to compensate the victims of oil spills : it is a characteristic feature of the Paris and Brussels Conventions that they have never been put into practice. It would thus be counterproductive to permanently tie up the capital committed to them, the management of which would give rise to problems on a daily basis and require cumbersome permanent structures to be set up.

##### *The units of account*

The Vienna Convention used the gold dollar as its unit of reference. Questions were raised about the actual value of this unit of account. The problem was solved by adopting the only workable unit for a global instrument, the special drawing right [Article V]. This basket of currencies managed by the International Monetary Fund was put together, during the revision process, from American

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14. International Oil Pollution Compensation Funds.

dollars (USD), pounds sterling (GBP), Japanese yen (JPY), French francs (FRF) and German marks (DEM). Since then, the euro (EUR) has taken the place of the franc and the mark.

Up until now, the Paris and Brussels Conventions had used the SDR as the unit of account. The SDR was supposed to offer the Contracting Parties two appreciable advantages: on the one hand, a degree of stability in the face of the risk of competitive devaluations, and on the other, neutrality for the Parties each of whom had their own monetary instruments. It was, however, paradoxical to make the compensation of victims who were presumably European depend on the progress of a currency as unstable as the dollar or as distant as the yen. These two currencies in fact represent between them more than 50% of the SDR basket.

The introduction of the euro changed the nature of the problem: this currency is already shared by 9 of the 14 “historic” Contracting Parties, among them most of the main contributors under the Brussels Supplementary Convention.

The replacement of the SDR by the euro brings a series of immediate advantages:

- complete transparency not only for Parties that have already adopted the euro but also for their citizens;
- easier mobilisation of insurance capabilities which, in the euro zone, no longer need to take account of exchange risks between their national currency and the SDR;
- greater stability for most of the other Parties whose economy and currencies have a natural tendency to converge with those in the euro zone rather than those of the United States or Japan.

#### *The base amounts*

Article V of the Vienna Convention henceforth provides, instead of USD 5 million gold which could be valued at EUR 50 million, for an amount of liability of SDR 300 million (equivalent to EUR 360 million), which may be reduced to SDR 150 million where the installation state makes up the difference.

Article 7 of the Paris Convention set a maximum amount of liability of the operator at SDR 15 million, or EUR 18 million. This amount could further be reduced by two-thirds, for low-risk installations or for transport operations. Most of the Contracting Parties did not wait for work to begin on revising the Paris Convention, any more than did those concerned with the Vienna Convention, to make substantial changes to the amounts laid down in their respective national laws. Taking into consideration the growing disparity between the amounts offered by the legal systems of the Contracting Parties, the inadequacy of the amount in the Paris Convention and the Chernobyl disaster, the Steering Committee of the NEA adopted a recommendation in 1990<sup>15</sup> whereby the Contracting Parties were invited to bring the amount for a nuclear operator’s liability up to at least SDR 150 million, or around EUR 180 million.

Article 7 of the convention thus underwent several fundamental changes. Going forward, it presents the amount at which the Parties must fix the operator’s liability as a common minimum and no longer as a maximum. This new baseline thus expressly leaves the Parties free either to fix a different, higher level of liability (which still represents a maximum for the operator), or to adopt an unlimited liability regime.

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15. See note 10.

The new base amount is raised to EUR 700 million, which represents almost a fourfold increase in the SDR 150 million recommended in 1990. It was arrived at by taking into account not only currency erosion, but also the multiple factors which serve to increase the amount needed if an incident should occur, in different degrees depending on the law of the Parties, such as the extension of the geographical scope to non-Contracting States, on certain conditions, or also the new definition of damage extending to the environment or to preventive measures. The ultimate criterion for setting the common base was, finally, that of insurance capability for civil liability for nuclear damage.

*A novel option henceforth institutionalised: unlimited civil liability*

It should be pointed out here that Germany chose the option whereby the operator is subject to unlimited liability, with German law nonetheless always fixing that portion of the operator's liability for which it must have cover from a third party. Beyond that, the operator must compensate the victims until its own assets are exhausted.

The compatibility of this system with the Paris Convention and its implications in the light of the tiers in the Brussels Supplementary Convention have long fuelled the debates of the NEA Group of Experts on nuclear third party liability which led to the adoption of recommendations that make fairly free with the texts so that Germany can continue to benefit from the international tier of the BSC. Since Switzerland took the same course without however having ratified the Paris Convention, the negotiators thus had two additional reasons to amend the Paris and Brussels Conventions: to better integrate the unlimited liability regimes, while satisfying Germany and preparing the way for Switzerland's entry.

Article 10(b) of the revised PC adapts, for those operators whose liability is not limited, the obligation already incumbent on "ordinary" operators under Article 10(a), to have and maintain a financial security of the amount established under Article 7(a) or (b). Since, in the absence of a ceiling, an operator cannot obtain unlimited security or insurance, the Contracting Party must assign it a minimal limit, which clearly may not be less than the minimum established for operators benefiting from a regime of limited civil liability, under the same Article 7 (a) or (b).

*Phasing-in*

The Vienna negotiators put in place a transitional formula for states unable to offer the new base amounts straight away. By virtue of the option opened up by Article V(1)(c), states (which includes Parties to the VC) may, for 15 years from the entry into force of the Protocol, offer a transitional amount of liability of not less than SDR 100 million (= EUR 120 million). The same article allows a still lower amount, provided the state compensates up to SDR 100 million.

The raising of the base amount in the Paris Convention could also have proved an obstacle to its ratification by new Parties. Article 21(c) of the final provisions of the Paris Convention was also amended so that only those states adhering after 1 January 1999 (in which respect the Protocol amending the PC is visibly more restrictive than the one that amends the VC), may limit the operator's liability to EUR 350 million for a period of five years starting from 12 February 2004. It should be noted here that a Party that relies on this technique may nevertheless ratify the Brussels Supplementary Convention as long as it agrees to cover, from public funds, the difference between the operator's liability and the EUR 700 million minimum [BSC, Article 3(e)].

*Special cases: carriage and low-risk installations*

Article V(2) of the revised Vienna Convention now allows a special amount to be fixed for low-risk installations, as long as this is not less than SDR 5 million (equivalent of EUR 6 million).

The revised Vienna Convention thus arrived at the amount set in the old Paris Convention for these same installations.

In Paris, these amounts were also the subject of an upward revision, proportionately much higher than the rise in the amount of the civil liability of the operator.

The minimum amount for low-risk installations is multiplied by 12, giving EUR 70 million pursuant to Article 7(b)(i); the minimum amount for carriage is multiplied by 14, giving EUR 80 million pursuant to Article 7(b)(ii).

It would be difficult to analyse these amounts objectively since they were the fruit of political compromise, and, for instance, to justify the difference of EUR 10 million between the respective minimum amounts for low risk installations and carriage. The increase coefficient could be explained, for carriage, by concern about drawing attention to an activity that is often controversial and, for low-risk installations, by the realisation of what the cost of pollution, even at a low level, would be in populated areas like university campuses.

In the end, in Vienna as well as Paris, it is the state that assumes the risk of the wrong decision having been taken with regard to the “base” amounts, in other words EUR 700 million for Paris and EUR 360 million for Vienna.

*The State guarantee*

The Paris Convention, by contrast with Article VII(1) of the Vienna Convention, did not contain any fallback clause for cases where the insurance or the financial security of the operator became unavailable, for example in case of bankruptcy. It might indeed have been thought that the Installation State, even if it had complied with its international obligations by enacting adequate legislation, would be in default for not ensuring that these were effective. The insertion of an express provision had the clear advantage of obviating any discussions that would cause delay in an emergency situation. Article 10(c) henceforth imposes on the state the obligation to pay the compensation for nuclear damage for which the operator is liable to the extent that its insurance or financial security is either unavailable or insufficient to cover the amounts referred to in Article 7(a) (at least EUR 700 million) or 21(c) (phasing-in).

Even if it is highly improbable that the same installation would be the scene of two separate incidents in the same year, there is one other case in which the state guarantee might be called on. This would be where the sum offered by the insurer is not, as the strict wording of Article 7(a) requires, at least EUR 700 million for each nuclear incident, but only EUR 700 million per year covered by the premium. Other, minority, Parties want these policies to include a clause requiring immediate reconstitution (meaning within one or two months) of the cover, thus decreasing the risk that they will have to intervene under Article 10(c). Such a reconstitution clause still represents a cost, however, in terms of insurance capability as well as premiums, and it is not impossible that the question will one day arise in terms of distortion of competition.

### *The amounts in the Supplementary Conventions*

The first Supplementary Convention, that of Brussels, had made it possible to increase the amount of liability of the operator under the Paris Convention. This complement is made up of two tiers of public funds offered in succession, according to need, by the installation state of the incident, and afterwards by the community of Contracting Parties.

The tier borne by the Installation State was intended to cover the difference between the amount for which the operator was liable and SDR 175 million, or around EUR 210 million. With the progressive increase in national amounts, the installation state tier has been “wiped out” in part or even entirely for many states over the years.

The international tier allocated by the Contracting Parties covered the reparation of damages between SDR 175 million and 300 million, in other words between EUR 210 million and 360 million.

The revised Brussels Convention maintains the principle and the nature of these three tiers in Article 3(b).

In order to grant the Parties the possibility of continuing with the practice of making the operator bear all or part of their own tiers, the tier for which the installation state is liable now covers the difference between the amount offered under the first tier and EUR 1.2 billion. Put another way, the second tier will be borne entirely by the operator under an unlimited liability regime, even though this tier is by nature considered as coming out of public funds.

The third tier is always fed exclusively from the public funds of the Contracting Parties, with an initial amount of EUR 300 million. When this tier was increased this was not done in the same proportion as the operator’s tier; this was in particular because the new contribution formula increased the part played by the installed nuclear capacity.

The total amount of the three available tiers is thus now EUR 1.5 billion, in other words a fourfold increase in compensation by comparison with the system as it was before.

The Vienna conference devoted a great deal of attention to the Brussels Supplementary Convention in an attempt to supplement the Vienna Convention with a similar system, but one which would have the advantage of serving as an umbrella not only for Vienna but also for Paris, or even for other regional conventions. Its principles will be examined later. What the Convention on Supplementary Compensation intrinsically proposes is an amount that depends on the number of Contracting Parties, and more especially of their installed nuclear capacity. This Supplementary Convention therefore still remains subject to a question mark, both as to what its effects will be and when it will enter into force.

The following is a comparative table allowing the few available figures to be better understood:

<i>Table showing amounts of civil liability for nuclear damage</i> (1) (M = Million)				
<b>Notes</b>	<b>Paris Convention</b>	<b>Revised Paris Convention</b>	<b>Revised Vienna Convention</b>	<b>Vienna Convention</b>
Amount of operator's civil liability	EUR 18 M maximum (2)	EUR 700 M minimum	EUR 360 M	USD-gold 5 M = approx. EUR 50 M
Phasing-in	–	EUR 350 M	EUR 120 M	–
Duration	–	5 years	15 years	–
Reduced civil liability Transport	EUR 6 M	EUR 80 M	EUR 6 M	–
Reduced civil liability Installations	EUR 6 M	EUR 70 M	–	–
<b>Supplementary Conventions</b>				
	<i>Brussels Supplementary Convention</i>	<i>revised BSC</i>	<i>Convention on Supplementary Compensation</i>	
Operator	From EUR 6 M to (2)	EUR 700 M minimum	EUR 360 M	
Installation State	Up to EUR 210 M (3)	Up to EUR 1 200 M (3)	Optional	
International Tier	Up to EUR 360 M (4)	Up to EUR 1 500 M	Depends on Parties	
(1) Amounts in SDR (PC, BSC, VC, RVC) are converted here at the rate 1 SDR=1.2 EUR				
(2) Raised to EUR 180 M by a 1990 NEA recommendation				
(3) Tier that could be “wiped out” if it is absorbed by the one for which the operator is liable				
(4) Total amount available depending on the amount of civil liability of the operator				

### *B.2.e. Periods of limitation*

By virtue of Article 8 of the Paris Convention, actions for compensation had to be begun within ten years from the nuclear incident, if they were not to be time-barred, but national legislation could allow more generous time limits provided this did not prejudice the rights of those who had begun actions within the ten-year time period. It was also open to the national legislator to fix a period of limitation of at least two years to run from the moment the victim became aware of the damage and of which operator was liable.

These provisions were unfavourable to victims, especially in the case of personal injury happening a long time after the incident itself, and they have now been radically modified by the Protocol.

The period of limitations for actions for compensation for personal injury has gone from ten to 30 years [Article 8(a)(i)], and the period for other forms of damage stays fixed at ten years. The revised Convention still allows longer periods to be laid down by the national legislature, subject to the same reservation that the rights of claimants who filed a claim during the principal period must be

protected. Even though the causal connection between the nuclear incident and the personal injury suffered will be more and more difficult to establish with the passage of time, the new time limit of 30 years (which some Parties were already applying) undoubtedly responds to a social need.

The “optional” time limit that starts to run from awareness of the injury has gone from two to three years [Article 8(d)].

It should be noted that the revised Vienna Convention provides for identical periods of limitation in Article VI but that Article VIII(2) now gives mandatory priority to cases of personal injury.

However, this option was rejected for the Paris Convention. Some Parties saw this as an attack on the constitutional principle of equality, while others raised questions about the practical workings of such a mechanism which would have obliged them to build up reserves for a hypothetical future, not to mention its potentially perverse effects on the triggering of the application of the Brussels Supplementary Convention. The attitude when faced with the principle of priority obviously varies depending on which options were chosen with regard to the amount of the liability. Under one regime, that of unlimited civil liability, it is a simple matter to reject any notion of priority, even if, on the facts, the assets available belonging to the operator liable are also limited and will tend to decrease over time.

Finally, we should note that one provision common to both conventions, setting a limitation period of 20 years for incidents involving fuel, radioactive products or radioactive waste that are stolen, lost, thrown overboard or abandoned at the time of the incident, has disappeared from both conventions [Article VI(2) of the Vienna Convention of 1963 ; Article 8(b) of the Paris Convention of 1960].

#### *B.2.f. Exclusion clauses*

Article 9 of the Paris Convention exempts the operator from all liability if the damage is caused by acts of armed conflict, civil war or insurrection; as has been mentioned earlier, this clause has been interpreted from time immemorial as not granting exemption for acts of terrorism, on whatever scale.

By contrast, the Paris Convention allowed the Parties to exempt the operator from liability in cases of natural disasters of an exceptional character. This possibility to derogate is abrogated by the Amending Protocol. This modification is in line with a culture of security that is unable to come to terms with the fact that installations might not be able to resist such events and, a fortiori, that the victims of such an unforeseen circumstance should be deprived of compensation.

The maintenance of coverage of terrorism and the deletion of the possibility of excluding risks of disaster are two important gains at a time when both terrorism and the vagaries of nature have shaken the confidence of the insurance world. As to terrorism in particular, it should be noted that special temporary mechanisms have cast some states that are particularly exposed in the role of insurer, on payment of a premium. These exceptional systems have – and will for the future – made it possible to face up to severe difficulties in securing an adequate overall insurance capability.

Article IV(3)(b) of the Vienna Convention, which used to exclude natural disasters and left it to the Parties to add them, has also been deleted, despite momentary hesitation on the part of certain countries that are particularly vulnerable to earthquakes. Acts of terrorism are covered here, too.

### *B.2.g. The rules on jurisdiction*

Under the original Conventions [Article 13(a) and (b) of the PC ; Article XI(1) and (2) of the VC], the courts of the Contracting Party in whose territory the incident occurs have jurisdiction. Where the incident occurs outside such territory or in a place which cannot be determined with certainty, actions shall lie with the courts of the Contracting Party in whose territory the installation of the operator liable is situated. There are special rules to resolve jurisdictional conflicts [Article 13(c) of the PC ; Article XI(3) of the VC].

#### *Jurisdiction over the exclusive economic zone or its equivalent*

Article 13 of the Paris Convention, like the corresponding provision in the Vienna Convention, was the subject of protracted debate when it came to extending jurisdiction to exclusive economic zones or their equivalents established by maritime states with differing conceptions of the law of the sea.

From now on, under Article 13 of the revised Paris Convention or Article XI *bis* of the revised Vienna Convention, nuclear incidents that occur within the exclusive economic or similar zones, provided these have been notified to the Secretary-General of the OECD before the incident, fall under the jurisdiction of the courts of the Party that has established the said zone. This provision was controversial because it sets up a system of “floating” jurisdiction, less obvious than the rule of the courts of the installation state of the operator liable, but justified by the need to favour the court that will probably also be the closest to the greatest number of victims. Fears persist, however, that it will be no easy matter to determine which is the competent court, because this depends on knowing the exact time and place of the incident, while the courts of the state of the operator liable had the advantage of remaining a constant factor throughout.

The new Article 13(e) of the revised Paris Convention refines this provision so that it will not be taken as a precedent for other purposes than those of the convention; it was not thought necessary to go into such detail in the Vienna Protocol.

#### *The single forum*

Another provision introduced as Article 13(h) of the Paris Convention and also featuring in the revised Vienna Convention [new Article XI(4)] obliges national legislators to ensure that only one court has jurisdiction over any given incident.

The object of this provision is to make it easier to do this as a sort of “closed bid” process without having to decide disputes between the courts. It also allows states to select, at the outset, the court best able to deal with a large number of claims: to take the example of Belgium, the Court of First Instance of Brussels was chosen as, though there is no nuclear installation within its area, it has the best logistical resources and can hear cases in both the country’s main languages.

#### *Action by the state on behalf of its nationals*

While the drafters of the revised Vienna Convention were inspired to adopt a single forum by the Parties to the Paris Convention, who introduced it into “their” convention after the fact, the new Article XI A of the Vienna Convention is itself an innovation in that it obliges the Contracting Parties to allow states to bring actions on behalf of their nationals or persons resident in their territory, provided these persons have given their consent. A similar provision was introduced in Article 13(g) of the Paris Convention. It will greatly facilitate the representation of victims who, without it, would

have thought twice about taking proceedings in a foreign court, with all the expense and problems of language, traditions and legal procedure that this involves.

### *B.2.i. Joint and several liability*

Article 5(d) of the Paris Convention governs the situation where several operators are liable for the same nuclear damage. This article, or at any rate its French text, created a problem resulting from a literal translation into French of the expression “joint and several liability”, which came out as “*solidaire et cumulative*” which is at the very least ambiguous: what was the extent of this joint liability, were the debtors each liable for the whole or could they still discuss it between themselves and divide it up? The new wording of Article 5(d) removes this doubt by keeping only the term “*solidaire*”.<sup>16</sup> Each operator may thus be subject to a claim for the whole of the damage, leaving him free to make a claim against the other operator liable for that portion which exceeds his own liability. “Own liability” here does not necessarily mean the amount fixed for him by the applicable legislation pursuant to Article 7(a), but the actual part of the damage for which he is responsible. This might not necessarily be a simple matter of dividing by the number of operators involved, but could be arrived at by a study of causation or by reference to contractual agreements entered into before or after the incident, always provided that these factors have no impact on the total compensation available for the victims. This reasoning clearly only makes sense in the case of nuclear incidents causing an amount of damage that is less than the sum total of the amounts for which the operators concerned are liable.

The revised PC maintains the exception in this context for cases where the nuclear damage occurs in the course of carriage, whether in one and the same means of transport or during incidental storage at one and the same nuclear installation, limiting the total amount of liability to the highest amount established for any one of the operators pursuant to Article 7.

As in the pre-existing regime, in no case may the final amount of the operator’s liability be greater than that established for it pursuant to Article 7.

### *B.2.j. Other amended provisions*

The Protocol to Amend the Paris Convention covers various other provisions: these are of course changes made necessary by the adoption of new definitions or the renumbering of some of the articles; they also include modifications of a more technical nature, such as the exclusion of definitions of national law and national legislation, the conflict of law rules [Article 14], a reservation concerning the application of general rules of public international law [Article 16 *bis*], a minor simplification of the dispute resolution clause [Article 17], the setting up of five-yearly consultations between the Parties [Article 22], and changes to the final clauses to bring them into line with current treaty practice [Articles 18, 19, 20, 23 and 24].

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16. Translator’s note : literally « joint », but normally used to translate the legal concept of « joint and several ».

## C) **The Brussels Supplementary Convention (BSC)**<sup>17</sup>

### *C.1 Basic Principles*

In the end, the revision of the Brussels Supplementary Convention went into less detail than that of the Paris Convention: its main principles remained the same, as do its relationship to the Paris Convention and its geographical scope.

#### *C.1 a. Its origins*

The Brussels Supplementary Convention was born out of the realisation that the amounts of liability of operators bore no relation to the actual consequences of a serious incident. On 31 January 1963, 13 of the Parties to the Paris Convention thus adopted this supplementary instrument.

#### *C.1 b. Supplementing the Convention and its limits*

The supplementary nature of this instrument is clear from Article 1 – left intact by the revision – which states that the regime set up under the BSC is subject to the provisions of the Paris Convention. It follows – and unrevised Article 19 of the BSC expressly says so – that no state may become or remain a Party to the BSC if it is not a Party to the PC.

In the case of a nuclear incident causing nuclear damage for which an operator covered by the Paris Convention is liable, the amount of which exceeds the cover provided by the said operator, the BSC is triggered on the basis of the definitions and mechanisms in the Paris Convention, subject however to two exceptions:

- the BSC only applies to installations for peaceful use;  
To avoid any disputes arising out of this provision, each Party must communicate to the Depository of the BSC, pursuant to Article 13, a list of the nuclear installations for peaceful use located in its territory. This article has not been substantially modified.
- the scope of application of the BSC is limited to the territory of the Contracting Parties to the BSC;  
The territory referred to has indeed also been extended to include the exclusive economic zone of a Contracting Party and to such Party's continental shelf where the said shelf is explored or exploited. It still remains the case, though, that states that are not Parties to the BSC, even if they are Parties to the PC, are excluded from the benefit of this provision [Article 2].

#### *C.1 c. The basis of intervention: solidarity not liability*

There was no debate, as there had been over the underlying premises of the revision of the Vienna Convention itself, about the possibility of imputing liability to states as holders of the powers of authorisation and supervision over installations that proved defective.

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17. The Protocol of 12 February 2004 to amend the Brussels Convention is available on the Web site of the NEA at: [www.nea.fr/html/law/brussels\\_supplementary\\_convention.pdf](http://www.nea.fr/html/law/brussels_supplementary_convention.pdf)

Article 3(c) thus continues to provide that the laws of each Contracting Party must:

- either establish the liability of the operator at not less than EUR 1.5 billion (except where this is increased pursuant to Article 12 *bis*);
- or provide that where the liability of the operator is limited to EUR 700 million (or to a higher amount established by the same legislature), the public funds allocated by the Installation State as well as by all the Contracting Parties are allocated on a basis other than coverage of the liability of the operator.

## ***C.2 Modifications to the BSC***

The modifications made to the BSC are thus mainly of a technical nature. Their purpose was mostly to bring the BSC into line with unlimited liability regimes, to avoid situations where the international tier was held back until the operator's resources were completely used up: from now on, the international tier may, under the provisions of the convention itself, be called up once the threshold of EUR 1.2 billion is reached, with no need to wait until the operator's cover is exhausted. The text of the convention is thus brought into line with declarations made by the Parties in the past that they did not wish to penalise the most generous regimes.

### *C.2 a. The amounts*

The amounts provided for by this Convention have already been discussed above; they fall under the same regime as those distributed pursuant to the Paris Convention [Article 1, BSC], unless they are reserved for victims in the territory of Parties to this Supplementary Convention alone, subject to the extension already described in item C.1.c [Article 2, BSC].

### *C.2 b. The structure*

The structure in three tiers is maintained in Article 3(b), with the necessary adaptations required by the introduction of phasing-in or state security:

- the tier falling under the Paris Convention, the amount of which is at least EUR 700 million, payable by the operator liable [or the state called upon to intervene in case the latter defaults, pursuant to Article 10(c) PC, or also the state relying on phasing-in pursuant to Article 21(c) PC, in which case its adhesion to the BSC is subject to coverage of the difference between the reduced amount and EUR 700 million];
- followed by the tier of the installation state, which can be from EUR 500 million to zero, according to whether or not the national legislators have chosen to burden the operator with cover obligations exceeding EUR 700 million, and finally;
- an international tier, jointly provided by all the Parties, of EUR 300 million.

### *C.3 c. Trails that lead nowhere*

At the Vienna negotiations, other sources of additional finance, for example the setting up of voluntary pools to which operators could contribute; either based on the number of reactors in service, or on the installed nuclear capacity, were contemplated.

### *C.3 d. Calculation of contributions*

A new balance can be seen in the method of calculating the contributions of the Contracting Parties: formerly, these contributions were calculated with 50% based on gross national product (GNP) and 50% based on the level of thermal power. From now on, this will be 35% based on gross domestic product (GDP) and 65% based on thermal power [Article 12, BSC].

This new ratio is the fruit of political negotiation concerned with the need to reconcile the application of the principle that the polluter pays, which is only partly relevant here, since public funds are involved (it would be more appropriate to say that the licence-giver pays) with the need to maintain the principle of solidarity between Parties that have nuclear installations and those that do not. As to replacing the GNP by the GDP, this was prompted by the concern to use the nomenclature best suited to national accounting, now that the former GNP has become less reliable as between the European Union States whose intra-Community exchanges are becoming more difficult to calculate.

### *C.3. e. The variability of the international tier*

Finally, while in the original BSC the international tier was fixed, irrespective of the number of Parties [Article 3(b)(iii) BSC], there is now a new Article 12 *bis* that, by an extrapolation of the formula used in Article 12, allows the international tier to be increased pro rata according to the GDP and the nuclear installations brought into the existing “baskets” by a new Party. The expected effect will be limited in financial terms, unless a lot of states with nuclear installations ratify the BSC; the new formula is however much more satisfactory from the political and intellectual standpoints – for one thing, the proselytising tendency of the Parties to the BSC can no longer be suspected of being aimed at reducing the Parties’ contributions, and for another, the increased risk resulting from new adhesions is compensated by an increase in the third tier.

This mechanism at last offers some consolation for the relatively low increase in the third tier in comparison with the other two. The third tier in practice represents no more than 20% of the total funds available, as against 40% before the revision, and this can be explained by the substantial increase in the contribution of the state having the greatest number of nuclear installations, and *inter alia* by the new weighting of factors in Article 12 which mean that one single Party bears almost 40% of this tier. This same pitfall arose in Vienna when the financing of the CSC was discussed; the impact of even more extreme weighting factors is compensated for in that case by introducing a mechanism for setting a ceiling on contributions.

### *C.3. f. Reciprocity*

The notion of reciprocity appears in several provisions of the revised convention. It first concerns non-Contracting States:

Article 2(a)(iv) of the Paris Convention, to which we refer above, introduces reciprocity in relation to geographical scope, laying down the conditions under which the benefit of the Convention may be extended to damage suffered in non-Contracting States which have nuclear installations and which themselves offer reciprocity based on legislation affording equivalent benefits. Article 7(g) clarifies the principal of reciprocity in respect of compensation, allowing a Party to limit the amount available for such a state if its legislation does not afford reciprocal benefits of an equivalent amount.

Each Party, even though bound by the principle of reciprocity laid down in Article 2(a)(iv) (provided that requirements are effectively met), remains free pursuant to Article 7(g) to give effect to this reciprocity in relation to the amount available for non-Contracting States. It remains to be seen how Parties will exercise this option, which shall certainly impact on the speed at which Paris funds are exhausted and therefore on the mobilisation of the Brussels Supplementary Convention.

Lastly, reciprocity could also apply to certain States Party to both the Vienna Convention and the Joint Protocol. Even where some of these states accede to the revised Vienna Convention, the difference in amounts offered by the two systems could lead some Parties to express a reservation pursuant to Article 18 of the Paris Convention. Such a reservation could also apply to damage suffered in other territories to which a Contracting Party extends the scope of application of its legislation pursuant to Article 2(b).

Nevertheless, even amongst Parties, the increase of the operator liability amount to the highest common denominator has not eliminated all disparities and therefore the door has been left open for the application of the reciprocity principle.

In fact, when Parties adopt an unlimited liability regime, the non-discrimination rule set out in Article 14 of the Convention can no longer reasonably be considered to apply. Article 15(b) of the Paris Convention, which provides that compensation for damage in excess of the SDR 5 million initial amount may be applied “under conditions”, only applies to the public funds. Revised Article 15(b) does away with this criterion and therefore allows the application of the principle of reciprocity to the amount to be made available by the operator in excess of EUR 700 million. After application of the Brussels Supplementary Convention, the authorisation to derogate from the non-discrimination rule will be applied beyond EUR 1.5 billion. This discrimination may not be applied either to states without nuclear installations, or to states designated in Article 2(a)(ii) or (iv) or Parties designated in Article 2(a)(i) which offer reciprocal benefits, whether in the form of unlimited liability or of amounts higher than the minimum laid down in the convention. These principles of application of the reciprocity principle are set out in the Recommendation on the Application of the Reciprocity Principle to Nuclear Damage Compensation Funds adopted by the Contracting Parties during the Conference on the Revision of the Paris Convention and of the Brussels Supplementary Convention, and attached in Annex III to the Final Act of this Conference dated 12 February 2004.

The principle of reciprocity sometimes gives rise to criticism; nevertheless, it should also be considered as a factor generating emulation for all states involved, whether or not they are Parties to the international third party liability conventions.

### *C.3. g. Changes to other provisions*

The Protocol to Amend the BSC includes a variety of other provisions: these changes are consequential upon the modifications to the Paris Convention, such as adaptation of the following:

- Articles 6 and 7 to the new rules on limitation periods;
- Article 5(a) extending the rights of recourse of the Contracting Parties that intervene pursuant to Article 3(b) and (g), where the operator has such a right by virtue of Article 6(f) of the PC;
- Article 14(b) to reflect the impossibility of excluding natural disasters of an exceptional nature; or
- renumbering of certain articles.

They also include modifications of a more technical nature, such as:

- the deletion of Article 4 which was an unnecessary transposition of the rules on joint and several liability in Article 5(d) of the PC to apply to public funds;
- the minor simplification of the dispute resolution clause [Article 17 PC]; and
- the adaptation of the final clauses to bring them into line with current treaty practice [Articles 18, 20, 21 and 25 PC].

### *C.3. h. A gateway to the Convention on Supplementary Compensation (CSC)*

The Convention on Supplementary Compensation, concluded in Vienna, was drafted from the outset with the possibility in mind that it would be superimposed on the “regional” Conventions, whether they already existed, like the BSC, or were still at the concept stage. The Parties to the BSC did not wish to exclude that possibility. However, since funds under the BSC are by definition reserved to the Contracting Parties alone, the possibility that third tier funds could be used to satisfy obligations under another international agreement (e.g. the CSC) is made subject, in the new Article 14(d), to the agreement of all the Contracting Parties to the BSC. In other words, all the Parties would have to simultaneously ratify the CSC. Such a move could only be envisaged if the CSC were to attract a number of other states with a lot of nuclear installations, failing which the risk of public funds being called upon by a larger number of states will increase, without the prospect of a better return to compensate.

This provides a good opportunity to refer briefly to that other Supplementary Convention.

## **D. The Convention on Supplementary Compensation (CSC)**

Is there really any point in comparing the CSC and the BSC? The CSC is admittedly described as supplementing the regional solidarity agreements, where appropriate, and Article XII(a) thereof expressly recognises these mechanisms, whether they involve the Parties acting together to fulfil their “national” obligations or to provide supplementary financing falling outside the scope of the CSC. The fact must not be lost sight of that most of the Parties to the BSC claimed that they found it hard to envisage signing two complementary conventions with different mechanisms, allocation rules and beneficiaries.

The BSC has the advantage of being part of one single regime, that of the PC. The CSC is open not only to Parties to the Vienna and Paris Conventions, but also to Parties whose legislation bears some relationship, but presents a higher risk of divergence.

Intrinsically, the BSC proposes clear thresholds for its three tiers, even if the first two might become confused. What is more, the amount of EUR 1.5 billion is available from the date of entry into force of the protocol of amendment, and if new Parties adhere this can only increase.

The CSC has offered an open formula from the outset. In order to enter into force it needs at least five Parties and 400 000 units of nuclear power [Article XX CSC]. But, even if the principal states in terms of installed power were to adhere, the CSC would still only offer EUR 360 million (equivalent of SDR 300 million), mostly because of the effect of a mechanism that caps the intervention of those states that are potentially its largest contributors [Article IV(c) CSC].

Lastly, the CSC provides for the available funds to be shared, with half divided on an equal basis among all the eligible victims, and half going only to those victims located outside the installation state [Article XI(1) CSC]. This mechanism is only overridden if the Installation State “offers” at least EUR 720 million (equivalent of DTS 600 million) under its national laws [Article XI(2) CSC].

To conclude, if states without any nuclear installations look favourably on a CSC that

- favours the compensation of damage incurred outside the borders of the Installation State [Article XI CSC]; and
- exempts them or considerably reduces their contributions using a contributions system that gives a 90% weighting to the installed nuclear capacity [Article IV(a)(i) CSC] and 10% to the rate of assessment at the United Nations [Article IV(a)(ii) CSC];

in spite of everything, the final result will on the whole be disappointing. Other states that have nuclear installations and are thus potential contributors have shown hesitation with regard to the CSC because it grants preferential treatment to damage suffered outside the borders of the state of the installation that is liable, a form of discrimination that is difficult to justify to their national parliaments. However, what is required of the Parties to the PC in order to circumvent this discrimination is never more than EUR 20 million, plus a margin to protect against fluctuations in the SDR.

## **E. Conclusions**

We have thus arrived at the end of a long process of international negotiations that are now slowly being transposed into national legislation. The revised Vienna Convention came into force on 4 October 2003, between Argentina, Belarus, Latvia, Morocco and Romania.

Pessimists will ask why, from three Conventions (PC, VC, BSC) at the start, we will soon have five (RPC, VC, RVC, CSC, BSC), since both the revised and unrevised Vienna Conventions will no doubt also be cohabiting for a time. They will be sorry, too, that it was not possible to find a timely solution to some of the thorny old problems, such as the paradox of property at the site of the installation, or why other, simpler, issues have not been expressly dealt with, such as the treatment of military installations. They will also say that there was a lack of foresight in not covering nuclear fusion installations, and that certain aspects of the geographical scope of the instruments are already proving controversial. It is regrettable, too, that reciprocity, a concept that is anathema to multilateral international conventions, has infiltrated each instrument to a greater or lesser degree. It would be surprising if anyone had actually made a full study of the impact reciprocity that varies according to circumstance would have in the operational context of a major disaster.

Optimists will say that the new instruments all show a substantial increase in the amount of cover they provide, this in spite of the difficult climate prevailing in the insurance sector and where public authorities are concerned. What is more, it has proved possible to achieve this result in a world in which, even for the Contracting Parties, there are a number of exceptional factors weighing on the future of the nuclear industry.

Apart from the amounts themselves, there are some substantial improvements in the RPC and the RVC:

- to the limitation periods, now extended;
- to the limits on the exemption clauses;
- to the fate of victims in the territory of non-Contracting States;
- in the clarification of which court has jurisdiction;
- in the coverage of damages to the environment;
- with the principle of the single competent court.

In the RPC:

- to the list of installations referred to;
- by the introduction of objectivity for transport operations;

In all the conventions:

- by the inclusion of unlimited liability regimes.

In the Supplementary Conventions:

- to the observance of the polluter pays principle in the contribution factors under the Supplementary Conventions.

The revised Vienna Convention has already entered into force, and it should not be long before the Paris Convention follows. In practice, Parties that are also members of the European Union were invited to deposit their instruments of ratification simultaneously, and to do so no later than the end of 2006. It is important to keep to this timetable, because it will serve to justify the “nuclear exception” that appears in several community law provisions.

We can thus now look at the choices made by each of the Parties with regard to the options opened up by the Protocols.

How many Parties will adopt base amounts above EUR 700 million or an unlimited liability regime?

Will unlimited liability not one day become the rule, with conventions limited only to the much less vital tasks of setting the amounts to be covered by insurance and financial assistance mechanisms?

Will they decide that it is necessary to define the extent to which the types of damage described in Article 1 (vii)(3) to (6) are covered?

How will they settle the amounts of less than EUR 700 million for carriage and low-risk installations?

How many of them will enact limitation periods longer than those in Article 8?

What limits will they set on the kinds of damage covered, other than personal injury and damage to property?

Will the Convention on Supplementary Compensation for Nuclear Damage enter into force one day?

Aside from these questions, which will provide much food for thought for specialists in international and comparative law, my lasting impression is that the seal of approval has been set on this system and these principles which, despite major geopolitical upheavals, have remained relevant for over 45 years, and will continue to be relevant for a long time to come.