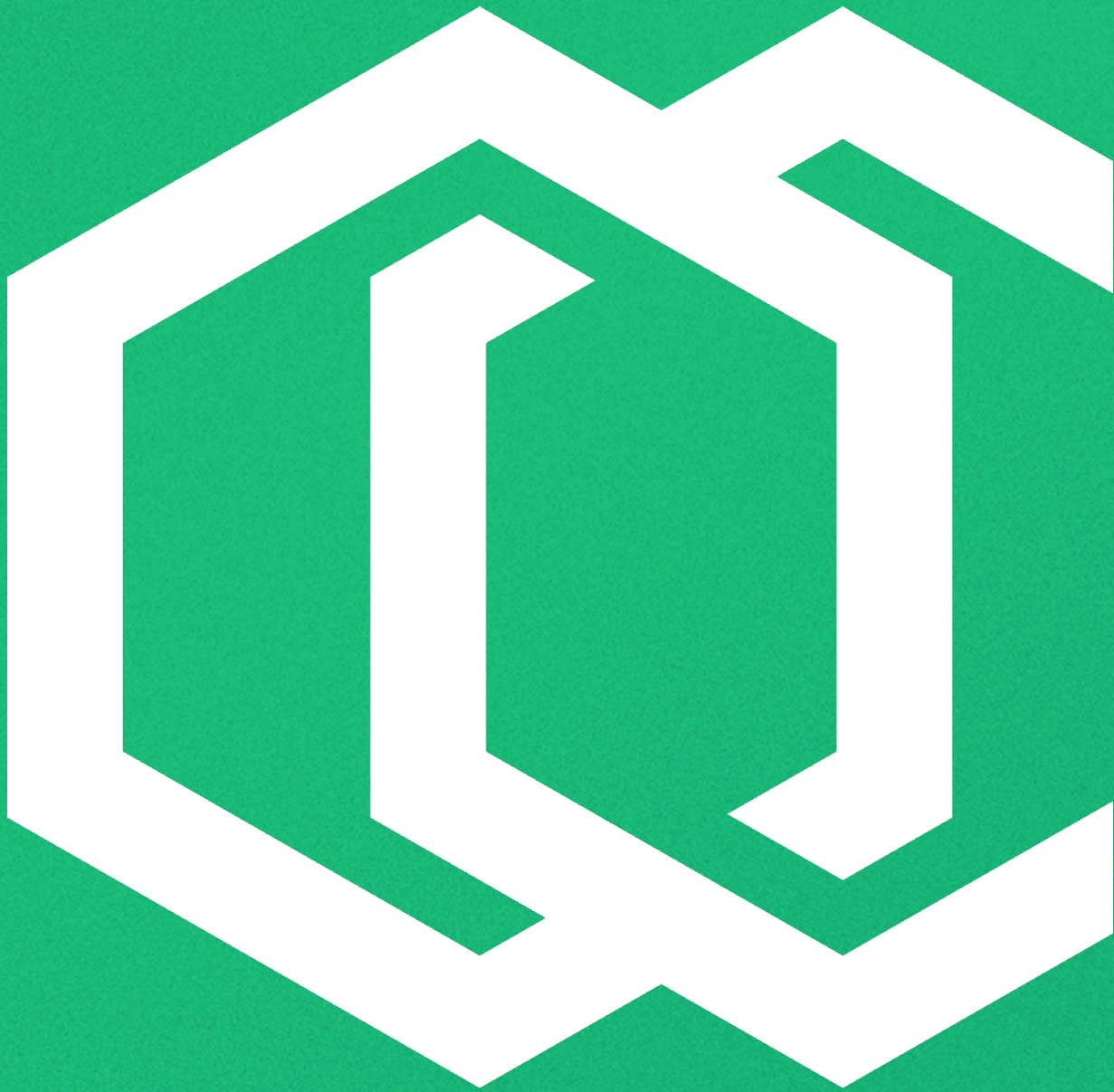




world nuclear
transport institute



Fact Sheet

Document Reference Number
WNTI/PUB/2026/001

Revision Number
002

Fundamentals of Nuclear Liability and International Framework

Table of Contents

1. What you need to know about nuclear liability	3
2. How do the International Conventions Interact?	4
3. What are the Nuclear Liability principles?.....	5
4. When do these principles apply?.....	7
5. What are the minimum Nuclear Liability amounts provided in the Conventions?.....	7
6. What are the Nuclear Liability amounts provided for transportation in the Conventions?	8
7. What are the Nuclear Operators' third-party Liability amounts and financial security limits in the different countries?	8
8. What is the geographical scope of the Conventions?.....	9
9. References	10
10. Acknowledgements.....	10

Table of Images

Figure 1: Timeline.....	3
Figure 2: International Conventions for cross-border damage and legislative harmonization (source: Ximena Vásquez-Maignan, White & Case LLP)	4

Table of Tables

Table 1: Nuclear Liability Amounts.....	7
---	---

1. What you need to know about nuclear liability

Early in the development of nuclear power, the need for developing an international legal framework for the compensation of potential victims of nuclear damage (i.e. loss or damage arising out of or resulting from ionising radiation emitted by a source of radiation) caused by a nuclear incident occurring at a nuclear installation or during transport of nuclear material led to the adoption of international instruments that set up a specific third party liability regime: first the Paris Convention on Third Party Liability in the Field of Nuclear Energy (Paris Convention or PC) and the Vienna Convention on Civil Liability for Nuclear Damage (Vienna Convention or VC) in the 1960s, and then the Protocol to amend the Vienna Convention (the Revised Vienna Convention or RVC) and the Convention on Supplementary Compensation for nuclear damage (Convention on Supplementary Compensation or CSC) which were adopted after the Chernobyl accident in 1997, as well as the Joint Protocol relating to the Application of the Paris Convention and the Vienna Convention (the Joint Protocol or JP). Over the years, countries have been joining one or several of these instruments and transposed them into national laws.

These conventions provide for the same internationally accepted nuclear liability principles. Most countries that have developed nuclear energy programs but have not adhered yet to any of these conventions have also provided in their national legislation similar principles (e.g. China, Korea or South Africa).

The transport of nuclear substances / material forms an integral part of the nuclear fuel cycle and is governed by the nuclear liability conventions and the related national frameworks. The basic principles of nuclear liability also apply to transport of nuclear substances / material. Please note that the Paris Convention refers to “nuclear substances” as the other conventions use the term “nuclear material”, but they both comprise nuclear fuel (other than natural uranium and other than depleted uranium) and radioactive products or waste.

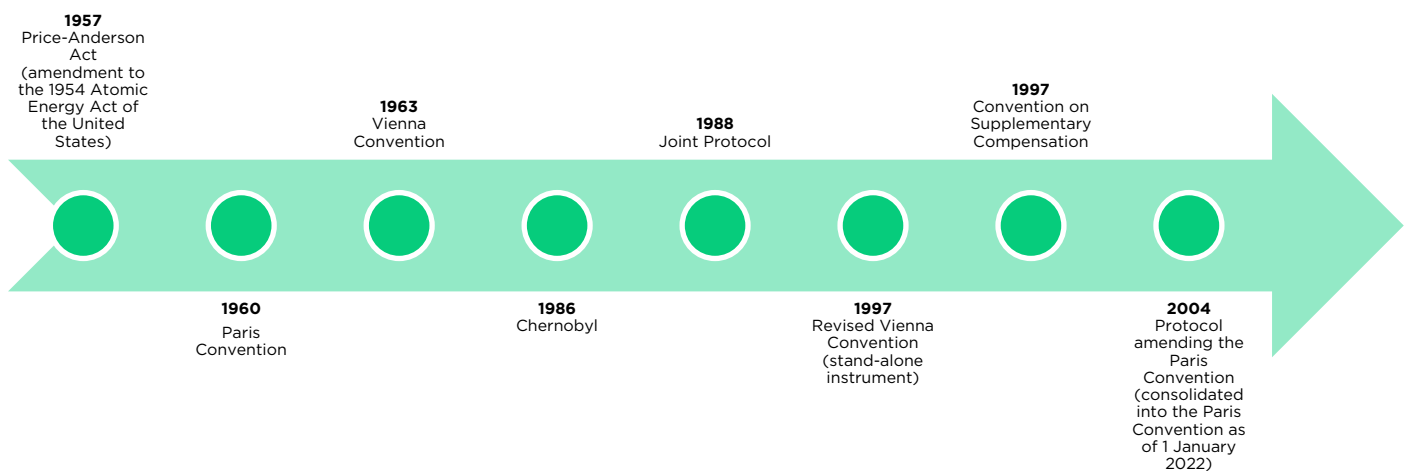


Figure 1: Timeline

2. How do the International Conventions Interact?

The Paris Convention, the Vienna Convention, the Revised Vienna Convention and the CSC provide for the international accepted nuclear liability principles we will see in the following section. The purpose of these conventions is to harmonise national legislation and to decide on the competent court and applicable law in case of transboundary nuclear damage.

These nuclear liability principles only apply between countries that are parties to the same convention, in which case it is said that those countries have “treaty relations”. If countries do not have such treaty relations, then any transboundary nuclear damage (i.e. loss or damage arising out of or resulting from ionising radiation emitted by a source of radiation) caused by a nuclear incident occurring at a nuclear installation or during transportation of nuclear substances / material will depend on international private law, which means in practice that there will be difficult legal issues to be solved, including the determination of the competent court and applicable law, and of the entity that will have to compensate the victims for the nuclear damage suffered.

Chernobyl demonstrated to the world the possibility of having transboundary damage. At that time only two nuclear liability conventions existed: the Paris Convention and the Vienna Convention. A “bridge” between the two was established in order to ensure treaty relations between the countries belonging to one or the other convention with the adoption of the Joint Protocol (which applies not only to the Vienna Convention countries, but also to the Revised Vienna Convention countries).

If the Paris Convention and the Vienna Convention countries can be linked by adhering to the Joint Protocol, the countries to the CSC do not have that possibility. However, this latest convention aims to gather among its parties countries that have joined the Paris Convention, the Vienna Convention and the Revised Vienna Convention, as well as those countries that have not joined any of them, but which legislation implement the internationally accepted nuclear liability principles, that are restated in the Annex of the CSC. In fact, the countries that join the CSC which are of the latter category are called the “Annex States”. This is the case for example of Canada, India and the United States.

The co-existence of all these conventions and the fact that some countries have not adhered to any of them have a direct impact on the organization of international transport of nuclear substances / material, and more specifically on the amount of insurance to cover the journey to destination.

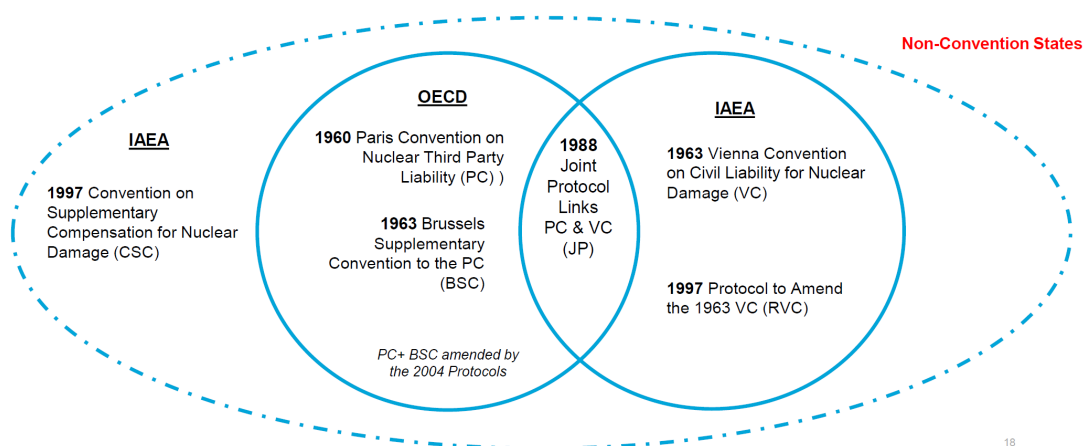


Figure 2: International Conventions for cross-border damage and legislative harmonization (source: Ximena Vásquez-Maignan, White & Case LLP)

With regard to the Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (NUCLEAR), it is important to note that it is specified therein that such convention provides that “any person who by virtue of an international convention or national law applicable in the field of maritime transport [that may] be held liable for damage caused by a nuclear incident” shall be exonerated from such liability if the operator of a nuclear installation is liable for such damage under the Paris or the Vienna Conventions, or by virtue of a national law, provided that such national law provides for a nuclear liability regime equivalent to the Paris or the Vienna Conventions.

3. What are the Nuclear Liability principles?

“Nuclear third party liability”, “nuclear liability” or “civil liability for nuclear damage” refer to the same special regime that determines the entity that will be liable to compensate victims suffering nuclear damage after a nuclear incident has occurred at a nuclear installation or during the transport of nuclear substances / material.

- **Operator’s Liability:** Typically, the operator (= the entity holding the operating license (the licensee) or any person designated or recognized as such by the competent public authority) of a nuclear installation will be solely liable for any nuclear damage resulting from a nuclear incident, such as loss of life or bodily injury, loss or damage to property, economic loss and environmental harm.
 - **Operator’s strict liability:** victims do not need to prove fault or negligence; but will have to prove the causal link between the nuclear damage and the nuclear incident.
 - **Operator’s exclusive liability:** all liability is channelled to the operator; no one else is liable (e.g. suppliers of services/goods); and no other law than the nuclear liability law applies (e.g. tort law or environmental law).
 - **Operator’s liability in amount:** usually limited to a specified amount which cannot be less than the amounts provided in the international conventions, but a few numbers of countries provide for unlimited liability (e.g. Germany, Japan, Switzerland)
- **Financial Coverage:** Nuclear operators are required to maintain adequate financial coverage to meet their liability obligations of an amount to be specified by the relevant national law or regulation. This often takes the form of insurance, or other financial security that are acceptable to the competent public authority (such as private insurance provided by the nuclear insurance pools or mutuals, State guarantees or insurance, captive insurance companies, self-insurance).
- **Operator’s liability in time:** The international nuclear liability conventions have established a maximum period during which nuclear operators may be held liable for nuclear damage in the event of a nuclear incident. These limits vary from country to country but cannot be shorter than the periods provided under the international conventions: 10 years from the date of the nuclear incident for the prescription period (extended to 30 years for bodily injury under the Paris and the Revised Vienna Conventions).
- **Supplementary Compensation:** In some cases, governments may establish supplementary compensation mechanisms to provide additional funds beyond the operator’s liability limit to ensure that victims of a nuclear incident are adequately compensated. The 1963 Brussels Convention Supplementary to the Paris Convention and the CSC require the State where the

nuclear incident occurred and subsequently as necessary all their respective parties to provide additional public funds to compensate the victims suffering nuclear damage.

In case the nuclear incident causes transboundary damage, the following principles will apply:

- **Unity of Jurisdiction:**
 - In principle, the courts of the State where the nuclear incident occurred will have jurisdiction. If the place of the nuclear incident is not certain, the courts of the State where the liable operator's installation (either the sending or the receiving operator) is located will have jurisdiction.
 - Competent courts apply the international nuclear liability convention ratified or accessed by its State, and its national law.
 - The nuclear liability conventions provide that judgments will be recognized by other States that are parties to the same convention and be enforceable in the territories of the same.
- **Non-discrimination:** The international nuclear liability conventions establish that there cannot be any discrimination among the victims based on their nationality, domicile or residence.

States remain free to take additional measures outside the Convention, as long as they do not contradict the principles established therein.

4. When do these principles apply?

- Nuclear liability is an exceptional regime that covers risks of an exceptional character for which common tort law is not suitable.
- Whenever risks associated with nuclear activities can properly be dealt with through existing legal processes, insurance or radioprotection measures, they are left outside the scope of the regimes established by the nuclear liability conventions. This is for example the case of natural or depleted uranium, and radioisotopes used outside a nuclear installation by other industries (e.g. farms, factories, hospitals).
- The special regimes apply mainly to nuclear damage caused off-site by a nuclear incident occurring at a nuclear installation, or to all nuclear damage caused in the course of transport of nuclear substances / material.

5. What are the minimum Nuclear Liability amounts provided in the Conventions?

The international nuclear liability conventions provide for minimum nuclear liability amounts that their respective State parties need to comply with when establishing the nuclear liability cap under their national law.

Table 1: Nuclear Liability Amounts

International Nuclear Liability Convention	Nuclear Operators' Minimum Nuclear Liability Amount
Paris Convention	EUR 700 million
Vienna Convention	USD 5 million based on USD gold value on 29 April 1963
Revised Vienna Convention	SDR 300 million
Convention on Supplementary Compensation	

SDR means Special Drawing Rights, an international reserve asset based on a basket of currencies, which is defined and maintained by the International Monetary Fund. The SDR rates are calculated daily and can be found here: www.imf.org/external/np/fin/data/rms_sdrv.aspx

6. What are the Nuclear Liability amounts provided for transportation in the Conventions?

Having regard to the nature of the nuclear substances / material involved and to the likely consequences of a nuclear incident originating therefrom, a State may establish a lower nuclear liability amount for the carriage of nuclear substances / material, provided that in no event shall any amount be less than:

Paris Convention	Vienna Convention	Revised Vienna Convention	CSC
EUR 80 million	/	SDR 5 million	SDR 5 million

In case a nuclear incident occurs during transportation of nuclear substances / material, if the total amount of compensation to be paid to victims of nuclear damage exceeds the lower nuclear liability amount established by the State, the later will have to provide public funds up to the “normal” amount of nuclear liability provided under Section 5 above.

7. What are the Nuclear Operators’ third-party Liability amounts and financial security limits in the different countries?

See the OECD Nuclear Energy Agency website link: www.oecd-nea.org/upload/docs/application/pdf/2024-02/2020.10_operators_liability_amount_table_general_final_clean_v2_2022-06-30_13-34-34_716.pdf

8. What is the geographical scope of the Conventions?

Each international Nuclear Liability Convention has a specific geographical scope, which may potentially cause some overlap.

Paris Convention	<p>applies to nuclear damage:</p> <ul style="list-style-type: none">• suffered in a Paris Convention State and on high seas if the ship or aircraft is registered with a Paris Convention State• suffered in a Vienna Convention or Revised Vienna Convention State that is also a party to the Joint Protocol, if the Paris Convention country is also a party to the Joint Protocol• suffered in a non-Paris Convention State that has no nuclear installations• suffered in a non-Paris Convention State that has nuclear installations if such States provides in its national legislation for “equivalent reciprocal benefits”
Vienna Convention	<p>applies to nuclear damage suffered in a Vienna Convention State or on the high seas</p>
Revised Vienna Convention	<p>applies to nuclear damage whenever suffered.</p> <p>The national legislation of the Revised Vienna Convention State may exclude non-Revised Vienna Convention States that have nuclear installations and does not afford “equivalent reciprocal benefits”.</p>
CSC	<p>applies to nuclear damage suffered in CSC States, and to other States as provided under the international nuclear liability convention(s) the Installation State may be a party to, or may have provided under its national legislation in accordance with the CSC Annex.</p>

9. References

Vienna Convention: www.iaea.org/topics/nuclear-liability-conventions/vienna-convention-on-civil-liability-for-nuclear-damage

Revised Vienna Convention: www.iaea.org/publications/documents/infcircs/protocol-amend-vienna-convention-civil-liability-nuclear-damage

Convention on Supplementary Compensation: www.oecd-nea.org/jcms/pl_29288/convention-on-supplementary-compensation-for-nuclear-damage-csc

Paris Convention: www.oecd-nea.org/jcms/pl_20196/paris-convention-on-third-party-liability-in-the-field-of-nuclear-energy-paris-convention-or-pc

Brussels Supplementary Convention: www.oecd-nea.org/jcms/pl_20318/brussels-convention-supplementary-to-the-paris-convention-on-third-party-liability-in-the-field-of-nuclear-energy-brussels-supplementary-convention-or-bsc

Joint Protocol: www.iaea.org/topics/nuclear-liability-conventions/joint-protocol-relating-to-application-of-vienna-convention-and-paris-convention

Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material: [*Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material \(NUCLEAR\)*](#)

10. Acknowledgements

These excerpts have been taken with the permission of the presenters at the INLA/ WNA/WNTI Workshop on Nuclear Liability and Transport that was held on January 11, 2024: Ximena Vásquez-Maignan (White & Case LLP), Khalil Bukhari (newcleo), Anna Schmidder-Ricchiuto (DKVG); Kirsty Snape (NDA); Jean-Denis Treillard (ELINI); Jim Stewart (W4C Ltd.); Mehboob Vadiya (NTS)

Thank you to Ximena Vásquez-Maignan (White & Case LLP) and Khalil Bukhari (newcleo) for your contribution and your expertise for the review of the document.

Disclaimer

Whilst the WNTI will use all reasonable efforts to ensure that the information in this Fact Sheet is accurate, we cannot guarantee the accuracy of all information and we will accept no liability for any loss or damages incurred, howsoever caused and cannot be held liable for any use or reliance you may make of or put on it. The WNTI also cannot be held liable for your use or inability to use the Fact Sheet or the information or services that it contains. Errors and Omissions Accepted. This should not be relied upon in place of Legal Advice.

The WNTI offers the use of this Fact Sheet freely to members and non-members of the transport community. Where any interpretation of the information has been made, it has been done so with the interests of the wider transport community. Although the Fact Sheet has been extensively reviewed by industry experts, if you have any issues in use or content, please contact the WNTI so we can rectify the issues and conflicts in systems etc.

**The information presented is valid as per:
March 2026.**

4th Floor
York House
23 Kingsway
London WC2B 6UJ

Tel: +44(0) 203 398 0637

Web: www.wnti.co.uk
Email: wnti@wnti.co.uk