Facing the challenge of nuclear mass tort processing

by Norbert Pelzer[*]

1. Specific features of nuclear damage – A challenge for procedural law

There is ample literature and other material available to describe the detrimental effects and far-reaching consequences of major nuclear incidents.[1] Their potential magnitude became evident in particular through the 1986 Chernobyl nuclear accident[2] and the 2011 Fukushima Daiichi nuclear power plant (NPP) accident.[3] It is obvious that after a major nuclear accident, hundreds of thousands of people may suffer damage and thus may emerge to claim compensation for such damage.[4]

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1. See, e.g., Sovacool, B. K. et al. (2016), "Balancing safety with sustainability: assessing the risk of accidents for modern low-carbon energy systems", *Journal of Cleaner Production*, Vol. 112, pp. 3952-3965, at Table 3.
2. See, e.g., WHO/IAEA/UNDP, Joint News Release, "Chernobyl: the true scale of the accident" (5 September 2005), available at: www.who.int/mediacentre/news/releases/2005/pr38/en/. For more detail, see United Nations Scientific Committee on the Effects of Radiation (UNSCEAR) (1988), *Sources, Effects and Risks of Ionizing Radiation: United Nations Scientific Committee on the Effects of Atomic Radiation 1988 Report to the General Assembly, with annexes*, Annexes D, "Exposures from the Chernobyl accident" and G, "Early effects in man of high doses of radiation", available at: www.unscear.org/unscear/en/publications/1988.html; UNSCEAR (2000), *Sources, Effects and Risks of Ionizing Radiation: United Nations Scientific Committee on the Effects of Atomic Radiation 2000 Report to the General Assembly, with annexes,* Report, Annex J, "Exposures and effects of the Chernobyl accident", available at: www.unscear.org/docs/publications/2000/UNSCEAR_2000_Annex-J.pdf; UNSCEAR (2001) *Sources, Effects and Risks of Ionizing Radiation: United Nations Scientific Committee on the Effects of Atomic Radiation 2001 Report to the General Assembly, with Scientific Annex*, Annex, "Hereditary effects of radiation", available at: www.unscear.org/docs/publications/2001/UNSCEAR_2001_Annex.pdf; UNSCEAR (2008), *Sources, Effects and Risks of Ionizing Radiation: United Nations Scientific Committee on the Effects of Atomic Radiation 2008 Report to the General Assembly, with scientific annexes*, Annex D, "Health effects due to radiation from the Chernobyl accident", available at: www.unscear.org/docs/publications/2008/UNSCEAR_2008_Annex-D-CORR.pdf.
3. See, *inter alia*, International Atomic Energy Agency (IAEA) (2015), *The Fukushima Daiichi Accident: Report by the Director General*, IAEA Doc. GC(59)/14, available at: http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1710-ReportByTheDG-Web.pdf; Japan (2011), *Report of Japanese Government to the IAEA Ministerial Conference on Nuclear Safety – The Accident at TEPCO's Fukushima Nuclear Power Stations*; UNSCEAR (2013), *Sources, Effects and Risks of Ionizing Radiation: United Nations Scientific Committee on the Effects of Atomic Radiation 2013 Report to the General Assembly, with scientific annexes*, Annex A, "Levels and effects of radiation exposure due to the nuclear accident after the 2011 Great East-Japan Earthquake and Tsunami", available at: www.unscear.org/docs/publications/2013/UNSCEAR_2013_Annex-A-CORR.pdf. See also Tokyo Electric Power Company (TEPCO) (2017), "Records of Applications and Payouts for Indemnification of Nuclear Damage", available at: www.tepco.co.jp/en/comp/images/jisseki-e.pdf (updated monthly).
4. On the extent of economic damage caused by Chernobyl, see Nuclear Energy Agency (NEA) (1987), "Study: The Accident at Chernobyl – Economic Damage and its Compensation in Western Europe", *Nuclear Law Bulletin*, No. 39, Organisation for Economic Co-operation and Development (OECD), Paris, pp. 58-65.

Irrespective of whether a claim is justified or not, the person liable, the insurer and, at the end of the day, the judge will have to deal with the claim. This situation, *inter alia*, forms an immense organisational challenge. The person liable and the insurer have to deploy additional staff to satisfy claims or to negotiate with the claimants, and courts have to increase their personnel and provide additional courtrooms and offices. A great number of experts are needed to assess the nuclear damage claimed. Moreover, in order to avoid or to mitigate cases of hardship in individual cases, decisions on the payment of compensation have to be made quickly. It is not helpful to build on the well-known experience that the mills of justice grind slowly but steadily. The goal must be prompt reparation, including provisional payments, with a view to quickly re-establishing social peace.

Ionising radiation and radioactivity cannot be recognised by human senses. That makes them an eerie power that may cause unreasonable and unnecessarily expensive actions of the people concerned. This peculiarity may further increase the number of claimants. It may also trigger hysterical reactions. The author of this article was involved in Chernobyl compensation in Germany, and, indeed, strange claims were made.[5] For example, after the return from a walk in the rain, a family heard about the Chernobyl accident in the news and that there was a radiation risk for Germany. The family immediately disposed of all of their wet clothes, which required compensation. Other persons travelled to Cyprus and requested reparation for the travel costs. Cherries from Algeria could no longer be sold as all cherries were deemed to be contaminated by radioactivity, and dealers claimed compensation for a loss of turnover.[6]

Thus, processing major nuclear damage does not only cause organisational problems. The procedural law has to deal with people who are in an exceptional situation and in a state of real or perceived emergency. The invisibility of radiation makes people feel exposed to a scary and fatal threat. These people cannot easily be compared to other claimants. Adequate yardsticks have to be developed. The proceedings have to match the specific situation of the people damaged by nuclear energy and radiation. This applies not only to court proceedings but one must also consider whether the extraordinary situation warrants or even requires a special procedural approach for facilitating alternative dispute settlement.

5. Section 38(2) of the German Atomic Energy Act establishes a right of compensation to be paid by the Federal State ("*Ausgleich durch den Bund*" [Compensation by the Federation]) if the prosecution by a victim of a nuclear damage suffered in Germany in the state in whose territory the harmful event originated has no prospect of success. *Gesetz über die friedliche Verwendung der Kernenergie und den Schutz gegen ihre Gefahren (Atomgesetz)* [Act on the Peaceful Utilisation of Atomic Energy and the Protection against its Hazards (Atomic Energy Act)] of 23 December 1959, in the version of 15 July 1985 (*Bundesgesetzblatt* (BGBl.) 1985 I, p. 1565), as last amended by the Act of 27 January 2017 (BGBl. 2017 I, p. 114). An English translation of the Atomic Energy Act as last amended on 15 December 2016 is available at: www.bfe.bund.de/SharedDocs/Downloads/BfE/EN/hns/a1-english/A1-07-16-AtG.pdf?__blob=publicationFile&v=2. Section 38(2) of the Atomic Energy Act was applied to Chernobyl because the Soviet Union refused to pay any compensation for the accident. Roughly 300 000 claims were made and approximately DEM 500 million (equivalent to EUR 250 million) was paid out.
6. On details of the German compensation after Chernobyl see Eich, W. (2003), "The Compensation of Damage in Germany following the Chernobyl Accident", in NEA (ed.), *Indemnification of Damage in the Event of a Nuclear Accident: Workshop Proceedings*, Paris, France, 26-28 November 2001, OECD, Paris, pp. 89-116.

2. Nuclear mass tort litigations under the nuclear liability conventions

While the international nuclear liability conventions[7] are designed and equipped to deal in substance with the described large losses, i.e. with catastrophic damage and any other kinds of compensation for claims made, it is not likewise apparent that they also provide the necessary procedural regulations needed to process the claims at court. As a matter of fact, the nuclear liability conventions do not address procedural questions or even mass tort litigations. This is a consequence of the leitmotif of the conventions: "Whenever risks, even those associated with nuclear activities, can properly be dealt with through existing legal processes, they are outside the scope of the Convention."[8] For the drafters of the conventions, this appears to be the case as the national procedural law of the contracting parties shall continue to apply. There is no international harmonisation; rather, national rules regulate the procedure of bringing compensation claims. It follows that there might be differences in approach and in substance among the states.

There is one exemption, though. This exemption is of extraordinary and decisive importance: the conventions, in a binding way, define the court that has exclusive jurisdiction over actions made under the conventions. Jurisdiction lies exclusively with the courts of the contracting party in whose territory the nuclear incident occurred or, where the incident occurs outside the territory of the contracting parties, with the courts of the party in whose territory the nuclear installation of the liable operator is situated. Likewise, there are provisions on the enforcement of judgements.[9] Under the 1997 Vienna Convention and the 2004 Paris Convention,

7. The term "international nuclear liability conventions" refers to the following conventions: Convention on Third Party Liability in the Field of Nuclear Energy of 29th July 1960, as amended by the Additional Protocol of 28th January 1964 and by the Protocol of 16th November 1982 (1960), 1519 UNTS 329 (Paris Convention or PC); Protocol to Amend the Convention on Third Party Liability in the Field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982 (2004) (not yet in force), available at: www.oecd-nea.org/law/paris_convention.pdf (2004 Paris Protocol) (once in force, the Convention on Third Party Liability in the Field of Nuclear Energy of 29 July 1960, as Amended by the Additional Protocol of 28 January 1964, by the Protocol of 16 November 1982, and by the Protocol of 12 February 2004, "2004 PC"); Convention of 31st January 1963 Supplementary to the Paris Convention of 29th July 1960, as amended by the Additional Protocol of 28th January 1964 and by the Protocol of 16th November 1982 (1963), 1041 UNTS 358 (Brussels Supplementary Convention or BSC); Protocol to Amend the Convention of 31 January 1963 Supplementary to the Paris Convention of 29 July 1960 on Third Party Liability in the Field of Nuclear Energy, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982 (2004) (not yet in force), available at: www.oecd-nea.org/law/brussels_supplementary_convention.pdf (2004 Brussels Protocol); Vienna Convention on Civil Liability for Nuclear Damage (1963), IAEA Doc. INFCIRC/500, 1063 UNTS 266, entered into force 12 November 1977 (Vienna Convention); Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage (1997), IAEA Doc. INFCIRC/566, 2241 UNTS 302, entered into force 4 October 2003 (1997 Protocol to Amend the Vienna Convention or, as consolidated, the 1997 VC); Joint Protocol Relating to the Application of the Vienna Convention on Civil Liability for Nuclear Damage and the Paris Convention on Third Party Liability in the Field of Nuclear Damage (1988), IAEA Doc. INFCIRC/402, 1672 UNTS 293, entered into force 27 April 1992 (Joint Protocol); Convention on Supplementary Compensation for Nuclear Damage (1997), IAEA Doc. INFCIRC/567, 36 ILM 1473, entered into force 15 April 2015 (CSC).
8. NEA (1982), *Revised text of the Exposé des Motifs of the Paris Convention*, approved by the OECD Council on 16 November 1982, Para. 7, available at: www.oecd-nea.org/law/nlparis_motif.html.
9. PC and 2004 PC, Article 13; VC, Articles XI and XII; 1997 VC, Articles XI, XI A and XII; CSC, Article XIII.

contracting parties also have to ensure that only a single one of their courts is competent in relation to any one nuclear incident.[10]

The procedural concentration of lawsuits to the courts of one country, and even to a single court of the country that has jurisdiction, is an indispensable component for successfully overcoming the complex problems of mass tort litigation in cases of transboundary nuclear damage. It supplements the substantive concentration of liability solely onto the operator of a nuclear installation (channelling of liability). Without material and procedural channelling, the compensation of nuclear damage after a major nuclear incident with transboundary detrimental effects would be a most difficult and complex affair. The courts of all states in whose territories nuclear damage was suffered would be competent to hear claims. It does not need an explanation that such multiplicity is not at all helpful for smooth and quick compensation. Diverging judgements are probable, and that situation will not contribute to legal peace.[11]

But there are also – minor – drawbacks of the jurisdiction provisions. Although it is reasonable to link the court competence to the place of the nuclear incident or, if the incident occurred outside the territory of a party, to the place of the liable operator, this regulation did not find general acceptance. Some states felt threatened by transports of nuclear material passing their coasts outside their territorial waters.[12] If a nuclear incident happened off their coasts they nevertheless would not have been granted jurisdiction. For that reason, the 1997 Vienna Convention, the 2004 Paris Convention and the CSC introduced provisions whereby jurisdiction lies with the coastal state if the incident occurs in the exclusive economic zone of that state.[13] This certainly is in most cases a purely random competence, and there is doubt as to whether all of those coastal states, as, e.g. some small South Pacific island states, are adequately equipped to organise mass tort litigations to deal with the complex field of compensation for nuclear damage. However, it has to be taken into account that a nuclear incident occurring in the course of transport in a defined zone of the high seas will probably cause damage on a smaller scale than inside a populated land territory. Thus the risk of mass tort litigation in the coastal state may be deemed remote.

10. 1997 VC, Article XII(4) and 2004 PC, Article 13(h). There is no corresponding provision in the CSC.
11. This picture unfortunately becomes slightly unclear among European Union (EU) member states who are party to the liability conventions and those who are not. See Magnus, U. (2010), "Jurisdiction and Enforcement of Judgments under the Current Nuclear Liability Regimes within the EU Member States", in Pelzer, N. (ed.), *Europäisches Atomhaftungsrecht im Umbruch: Tagungsbericht der AIDN/INLA Regionaltagung in Berlin 2009* [European Nuclear Liability Law in a Process of Change: Conference Report of the AIDN/INLA Regional Conference in Berlin 2009], Nomos, Baden-Baden, pp. 105-121.
12. See Ludbrook, J. (2005), "Sea Transport of Nuclear Material – a Matter of Concern for Coastal States", in Pelzer, N. (ed.), *Die Internationalisierung des Atomrechts: Tagungsbericht der AIDN/INLA Regionaltagung in Celle 2004* [Internationalizing Atomic Energy Law: Conference Report of the AIDN/INLA Regional Conference in Celle 2004], Nomos, Baden-Baden, pp. 239-247.
13. 1997 VC, Article XI (1bis); 2004 PC, Article 13(b); CSC Article XIII(2).

In summary, nuclear mass tort litigation is only in parts, but not comprehensively, covered by the international nuclear liability conventions.[14] Reference to the respective national legislation and practice of states is necessary.

3. National law on nuclear mass tort litigations

3.1. General approaches

Dealing with disasters was a task of mankind from the beginning, and disasters also provide, as a matter of course, legal problems.[15] Disasters are either of a natural origin, like earthquakes, floods, tsunamis, fires, hurricanes and tornados as, for instance, was Hurricane Katrina in 2005, or are man-made, like chemical disasters such as the 1976 Seveso accident and the 1984 Bhopal accident. Reference has also to be made to oil and gas accidents, among the most famous of which are the 1967 Torrey Canyon accident, the 1978 Amoco Cadiz accident, the 1989 Exxon Valdez accident and the 2010 Deep Water Horizon accident.[16] The Torrey Canyon accident triggered international treaty making including liability instruments for oil spill damage.[17] Major nuclear accidents add a new facet to man-made disasters. The Chernobyl nuclear accident, so to speak, became the Torrey Canyon accident for nuclear pollution damage: it was the incentive for far-reaching international treaty making and in particular it improved international nuclear liability law by initiating the amendment of existing conventions and the adoption of new ones. Unfortunately, this effort did not considerably enhance the legal situation already existing at the time of Chernobyl regarding claiming catastrophic nuclear damage. There is still limited liability providing insufficient amounts of compensation – although the amended conventions now expressly permit unlimited liability by introducing minimum liability amounts – and there are still no international procedural provisions or at least recommendations on how to organise and internationally harmonise mass tort litigations.

This outcome may be regretted. But, on the other hand, it is for good reasons that the conventions leave the organisation of bringing claims to the laws of the contracting parties. It is true that states have general experience with the handling

14. This does not likewise apply to the nuclear disaster prevention. Here particularly Chernobyl triggered intensive international treaty-making. See, Handl, G. (1988), "*Après Tchernobyl: Quelques réflexions sur le programme législatif multilatéral à l'ordre du jour*" [After Chernobyl: Considerations on the current multilateral legislative programme], *Revue générale de droit international public*, No. 92, pp. 5-63; Pelzer, N. (2006), "Learning the Hard Way: Did the Lessons Taught by the Chernobyl Nuclear Accident Contribute to Improving Nuclear Law?", in NEA and IAEA (eds.), *International Nuclear Law in the Post-Chernobyl Period*, OECD, Paris, pp. 73-118.
15. See for example Caron, D., M. J. Kelly and A. Telesetsky (eds.), *The International Law of Disaster Relief*, Cambridge University Press, New York; Lauta, K. C. (2015), *Disaster Law*, Routledge, London.
16. See e.g. International Tanker Owners Pollution Federation Limited (ITOPF) (2017), "Oil Tanker Spill Statistics 2016", available at: www.itopf.com/fileadmin/data/Photos/Publications/Oil_Spill_Stats_2016_low.pdf; Sovacool, B. (2008), "The costs of failure: A preliminary assessment of major energy accidents, 1907-2007", *Energy Policy*, No. 36, pp. 1802-1820.
17. International Convention on Civil Liability for Oil Pollution Damage (1969), 973 UNTS 3, entered into force 19 June 1975. Among the rich literature on this accident, *inter alia*, see the comprehensive study by Chao, W. (1996), *Pollution from the Carriage of Oil by Sea: Liability and Compensation Issues*, Kluwer Law International, London. See also, Utton, A. E. (1968), "Protective Measures and the 'Torrey Canyon'", *Boston College Law Review*, Vol. 9, pp. 613-632; Cowan, E. (1968), *Oil and Water: The Torrey Canyon Disaster*, Lippincott, Philadelphia; Burrows, P., C. Rowley and D. Owen (1974), "Torrey Canyon: A Case Study in Accidental Pollution", *Scottish Journal of Political Economy*, Vol. 21, Issue 3, pp. 237-258.

of catastrophes, and the skeleton of a nuclear disaster does not considerably differ from any other type of disaster. However, consequences and ramifications are different. Nuclear disasters nearly unavoidably have transboundary effects. International co-operation is therefore a necessary element of fighting a nuclear disaster. Such co-operation cannot immediately and successfully be started only at the moment an accident occurs. It has to be learnt in advance and trained prior to the occurrence of an accident. Independent of the fact that the conventions are silent on this issue, one can nevertheless conclude that there exists a silent or implied accessory obligation to be prepared in time to make the conventions fully "workable". Where the conventions leave areas to the national law, contracting parties have to ensure that the respective national law can be applied properly with a view to meeting the objectives of the conventions. Since national procedural law shall govern mass tort litigation and since that field needs international co-operation with the parties concerned, the prerequisites of such co-operation have to be in place prior to the incident. Mutual knowledge of and familiarity with competences and administrative hierarchies have to be available among neighbouring states. This applies to all stakeholders: operators, insurers and authorities. In all states that are potentially affected by the accident, it has to be organised that the general public will quickly be informed on both the occurrence of a nuclear accident and the way to claim compensation.[18]

One could get the impression that this special field is not exactly a prime focus for states. The topic is neither the subject of governmental statements nor of declarations or action plans of international organisations. Of course, there are co-operation projects and practices among states in the field of preventive disaster protection, and this applies also to the nuclear field.[19] Reference has particularly to be made to the 1986 Convention on Early Notification of a Nuclear Accident[20] and to the 1986 Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency[21] and their national implementations. It is also known that the insurance industry co-operates internationally. So there is at least a rudimentary framework for international disaster co-operation available. But this framework is not specifically designed to solve the procedural problems of compensating nuclear mass damages.

In this connection, the NEA's activities deserve attention. Since 1993, the NEA has been organising International Nuclear Emergency Exercises (INEX).[22] States can train to handle nuclear emergencies with transboundary effects based on simulated cases. The 2001 INEX and the 2005 INEX included international and national

18. Article 10 of the BSC and Article VI of the CSC stipulate notification obligations of the parties. But these obligations are meant to enable the parties to prepare the necessary arrangements to settle the procedures under the conventions. They are not meant to ensure the information of the general public.
19. See on this subject in particular Handl, G. (2016), "Nuclear Off-site Emergency Preparedness and Response: Some International Legal Aspects", in Black-Branch, J.L. and D. Fleck (eds.), *Nuclear Non-Proliferation in International Law*, *Vol. III. Legal Aspects of the Use of Nuclear Energy for Peaceful Purposes*, Asser Press, The Hague, pp. 311–354.
20. Convention on Early Notification of a Nuclear Accident (1986), IAEA Doc. INFCIRC/335, 1439 UNTS 276, entered into force 27 October 1986 (Early Notification Convention).
21. Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (1986), IAEA Doc. INFCIRC/336, 1457 UNTS 134, entered into force 26 February 1987 (Assistance Convention).
22. For more information on INEX exercises, see the NEA INEX website at: www.oecd-nea.org/rp/inex/.

compensation of nuclear damage.[23] Both workshops provided valuable insight into the problems of compensating nuclear disaster damage, including procedural issues. But, mass tort litigation nevertheless did not gain the attention it deserves. The INEX activities are the adequate fora to address the problems of nuclear mass tort litigation and especially to train international co-operation connected thereto. Those exercises should include teaching personnel, including judges and other lawyers, the basics of international nuclear liability law.[24]

Currently, the EU is also dealing with harmonisation and improvement of the nuclear liability regime within the Union.[25] It would certainly be most helpful if the EU embarked on discussing the procedural issues of mass nuclear tort litigations with a view to establishing a harmonised approach among its member states.

3.2. Catastrophic nuclear damage under national legislations

Most national nuclear liability laws do not provide special provisions on organising nuclear mass tort litigations in a case of catastrophic nuclear damage. However, general national law has options to deal with mass litigations. Those options may be used in the nuclear field as well. Mass litigations, for instance, require the bundling of actions of an identical type to minimise the number of lawsuits. Class actions and test case proceedings may be helpful, and there are other instruments available under national law.[26] So states may think that there is no urgent need for a detailed advance regulation of nuclear proceedings. They defer decisions to the time when concrete actions are needed after a nuclear incident. If they insert an express deferment decision into the national legislation it could serve as a reminder for the legislator to take action when it is needed. Such need may emerge if the magnitude of the nuclear damage exceeds the amount of the limited liability of the nuclear operator, or in cases of unlimited liability, exceeds the amount of coverage including all assets of the operator liable. Any detailed organisation of mass tort litigation prior to a nuclear emergency could miss the decisive issues that need to be considered in that specific case. In particular, the social consequences connected with wide-spread nuclear damage will require problem-adjusted special rules to adequately organise the proceedings to secure prompt compensation. The way compensation claims are processed may contribute to either mitigating or to amplifying scare and even hysteria on the part of the general public *vis-à-vis* radiation exposure.

An example of a deferred legislative approach is the 1959/1985 German Atomic Energy Act.[27] In cases where the damage exceeds the compensation money available, Section 35 of the Atomic Energy Act provides that the distribution of the compensation money available and "the procedure to be observed in this context shall be governed by an act or, pending such act, by statutory ordinance". The

23. NEA (ed.) (2003), *Indemnification of Damage in the Event of a Nuclear Accident: Workshop Proceedings*, Paris, France 26-28 November 2001, OECD, Paris; NEA (ed.) (2006), *Indemnification of Damage in the Event of a Nuclear Accident: Workshop Proceedings, Bratislava, Slovak Republic, 18-20 May 2005*, OECD, Paris.
24. See Pelzer, N. (2010), "Compensation for Large-scale and Catastrophic Nuclear Damages", in Tamás, N. and T. Gábor (eds.), *Prudentia Iuris Gentium Potestate: Ünnepi tanulmányok Lamm Vanda tiszteletére* (*Liber amicorum* Vanda Lamm), MTA Joqtud. Int., Budapest, pp. 341-357, 352 et seq.
25. See the unofficial status report at Beyens, M., D. Philippe and P. Reyners (eds.) (2012), *Prospects of a Civil Nuclear Liability Regime in the Framework of the European Union: Proceedings*, Bruylant, Brussels. See also EC (2013), "Green Paper on the insurance of natural and man-made disasters", COM(2013)213 final, 16 April 2013, no. 4.2, "Third-party nuclear liability insurance".
26. On these questions see Pelzer, N. (2010), *supra* note 24, p. 353.
27. Atomic Energy Act, *supra* note 5.

provision is not only a reminder but it also contains a clear mandate: an adequate procedure shall be adopted to deal with the distribution of the money available. This procedure may include specifically designed mass tort litigation rules.[28]

Another example is the French Nuclear Liability Law.[29] If the money available is insufficient to cover all nuclear damage, the cabinet of ministers has to state this "*situation exceptionnelle*" [exceptional situation] in a "*décret*" [decree] within six months after the nuclear incident and to fix the modalities of compensation within the amounts established under Articles 4 and 5 of the Nuclear Liability Law. Personal injury has to be prioritised, and the remaining money has to be apportioned among the victims with personal injury and victims suffering other damage (French Nuclear Liability Law, Article 13(3)).

The 1983 Swiss Nuclear Liability Act[30] contains a similar provision. If the financial means available to cover all compensation claims are insufficient ("*Grossschäden*"/ "*grand sinistres*"), Parliament shall, in accordance with Article 29 of the Act, adopt a regulation on compensation ("*Entschädigungsordnung*"/ "*régime d'indemnisation*"). For implementing this regulation, Parliament may establish a special independent authority. Decisions of this special independent authority must be appealable to the Federal Supreme Court (Swiss Nuclear Liability Act, Article 29(3)).

As compared to the German and to the French Acts, the Swiss Act contains an additional element: a special independent authority, which is not a court, may be established. Even without such express provisions, Parliaments would, of course, be entitled to establish special compensation authorities. But, it is a noteworthy aspect that the Swiss legislator explicitly inserted that possibility into the law. Comparative studies show that a considerable number of other countries also follow the same approach. An early example is the Netherlands. According to the Dutch Nuclear Accidents Liability Act,[31] the competent court may, in cases of catastrophic damage, apply special measures that include, *inter alia*, appointing a committee of liquidators

28. The legislator (Parliament) is, of course, not bound by this "mandate". Parliament may do more or less than what Section 35 prescribes. This does not apply for the statutory ordinance, which may be issued as a provisional instrument as long as the act on apportionment is still pending.
29. *Loi n° 68-943 du 30 octobre 1968 relative à la responsabilité civile dans le domaine de l'énergie nucléaire* [Act No. 68-943 of 30 October 1968 on third party liability in the field of nuclear energy], *Journal officiel de la République Française* [Official Journal of the French Republic] (JORF), 31 October 1968, p. 10195; as last amended by *Ordonnance n° 2012-6 du 5 janvier 2012 modifiant les livres Ier et V du code de l'environnement* [Ordinance No. 2012-6 of 5 January 2012 amending Books I and V of the French Environmental Code], JORF, 6 January 2012, p. 218, text no. 4; ratified by Article III of *loi n° 2015-992 du 17 août 2015 relative à la transition énergétique pour la croissance verte* [Act No. 2015-992 of 17 August 2015 on the energy transition for green growth], JORF, 18 August 2015, p. 14263, text no. 1).
30. *Kernenergiehaftpflichtgesetz (KHG) / Loi sur la responsabilité civile en matière nucléaire* (LRCN) of 18 March 1983 as amended, *Systematische Sammlung des Bundesrechts (SR) / Recueil systématique du droit fédéral* (RS) [Systematic Collection of Federal Laws] 732.44.
31. *Wet van 17 maart 1979, houdende regelen inzake aanspraklijkheid voor schade door kernongevallen (Wet aansprakelijkheid kernongevallen)* [Act of 17 Marh 1979 containing rules on liability for damage caused by nuclear accidents (Nuclear Accidents Liability Act)], as last amended on 17 March 1979 (*Staatsblad* [Official Gazette] 1979, no. 160) and on 27 March 2014 (*Staatsblad* 2014, no. 129).

("*commissie van vereffenaars*") (Nuclear Accidents Liability Act, Article 22) to deal with preparatory questions of the satisfaction of claims.[32]

In fact, the total or partial outsourcing of nuclear claims processing to committees or fora other than courts may be attractive. There are an enormous number of claimants, and there is a need to decide quickly on compensation claims. Committees may react more flexibly and faster than a court that is part of the complex state judiciary. Claims adjustment will be accelerated. So there are advantages. But there are also disadvantages. The most serious one surely is that there might be a conflict with the fundamental law of being heard before a court established by law. Victims have a right to a fair and public hearing before a court.[33]

Committees also pose organisational problems. In theory, the number of those committees may, if necessary, be multiplied easier than the number of courts. The more committees that are involved, the more claims can be processed. But, at short notice it will be difficult to find and recruit a sufficient number of people to sit on the committees. They should at least have basic knowledge of the law and some understanding of the technical problems of nuclear energy and of radiation. It is also difficult to ensure that the committees are truly independent and impartial. Of course, the availability of those prerequisites can be organised. But that organisation takes time and thus may reduce the attraction of the committee approach, namely fast compensation that helps re-establish legal peace.

The described drawbacks can only be balanced if the final decision of a case remains with the courts. The committees may be entrusted with an important task in the peaceful settlement of disputes. However, if a claim is controversial and cannot be settled by the committee, then the competent court has to decide. Committees only have auxiliary functions to support courts. They cannot replace courts. This might compromise their advantages.

In the following text, focus will be on some selected national legislations that developed special procedures to handle the organisation of compensating major nuclear damage and that also build on "committees" or on other "out-of-court fora". The nuclear compensation regimes of Canada, India, Japan and the United States will be dealt with.

4. Canada: Nuclear Liability and Compensation Act

4.1. The Nuclear Claims Tribunal

As of 1 January 2017, compensation of nuclear damage in Canada is governed by "An Act respecting civil liability and compensation for nuclear damage in case of a

32. See in detail: Horbach, N. (2005), "Catastrophic Nuclear Damage under the Dutch Nuclear Liability Law", in Pelzer, N. (ed.), *Die Internationalisierung des Atomrechts*, *supra* note 12, pp. 213-228, 222 et seq. Horbach, in footnote 19 of her article, recommends the PhD thesis by Vanden Borre, T. (2001), "*Efficiënte preventie en compensatie van catastroferisico's: Het voorbeeld van schade door kernongevallen*" [Effective prevention and compensation of catastrophic risks: The Example of damage caused by nuclear accidents], Intersentia Uitgevers, Antwep, as a "very exhaustive and excellent description" of the Dutch regime.
33. See, e.g., United Nations General Assembly (UNGA) (1948), "Universal Declaration of Human Rights", UN Doc. A/RES/3/217/A, adopted on 10 December 1948, Article 10: "Everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal, in the determination of his rights and obligations and of any criminal charge against him."; European Convention for the Protection of Human Rights and Fundamental Freedoms (1950), European Treaty Series No. 5, Article 6(1): "… everyone is entitled to a fair and public hearing within a reasonable time by an independent and impartial tribunal established by law."

nuclear incident, repealing the Nuclear Liability Act and making consequential amendments to other Acts", the short title of which reads "Nuclear Liability and Compensation Act" (NLCA).[34] It replaces the Nuclear Liability Act 1976/1985[35] and at the same time implements the CSC[36] after Canada's envisaged ratification.

In accordance with Section 36 of the Nuclear Liability and Compensation Act, the Governor in Council (e.g. the Prime Minister and the Cabinet)[37] may declare that claims for compensation are to be dealt with by a "Tribunal", "if he or she believes that it is in the public interest to do so, having regard to the extent and the estimated cost of the damage, and the advantages of having the claims dealt with by an administrative tribunal." This declaration has to be published, without delay, in the *Canada Gazette*, Part II. On the day of the declaration, NLCA, Section 34 on the jurisdiction of courts ceases to apply. Any proceedings brought or taken before the declaration are discontinued, and any further claims are only to be brought before the Tribunal (NLCA, Section 37). After the declaration, the Minister (NLCA, Section 4) has to prepare a report on the estimated cost of the indemnification to be presented to Parliament (NLCA, Section 38). The Minister may pay "interim financial assistance" to victims of the nuclear incident that the declaration relates to. The maximum amount of that assistance must not exceed 20% of the difference between the amount set out in NLCA, Section 24(1)[38] and the total amounts that are paid by the liable operator before the declaration was made (NLCA, Section 39).

The Tribunal has to be established "as soon as feasible after the declaration". Its purpose is "to examine and adjudicate claims for damage arising from the nuclear incident as expeditiously as the circumstances and consideration of fairness permit". Claims have to be dealt with "in an equitable manner, without discrimination on the basis of nationality or residence" (NLCA, Section 41).

The Governor in Council must appoint a minimum of five persons to the Tribunal; one of them is to be designated as chairperson. A majority of them have to be persons "who are sitting or retired judges of a superior court or members of at least 10 years' standing at the bar of a Province or the Chambre des notaires du Québec" (NLCA, Section 43). The members shall be appointed "to hold office during

34. Statutes of Canada (S.C.) 2015, Chapter 4, Section 120 (S.C. 2015, c. 4, s. 120), available at: http://laws-lois.justice.gc.ca/PDF/N-28.1.pdf. Order on the entry into force: Order Fixing January 1, 2017 as the Day on which Certain Provisions of the Nuclear Liability and Compensation Act Come into Force, P.C. 2016-302, 6 May 2016, available at: www.gazette.gc.ca/rp-pr/p2/2016/2016-05-18/html/si-tr23-eng.php.
35. An Act respecting civil liability for nuclear damage (Nuclear Liability Act), R.S.C., 1985, Chapter N-28. The 1985 Act deals with the compensation of nuclear damage exceeding the maximum liability of CAD 75 million and the related procedure in its Part II "Special Measures for Compensation" (Sections 18-31). See also Pelzer, N. (2010), *supra* note 24, p. 354.
36. On the international obligations of Canada, see NLCA, Sections 70-76. On the development of the Canadian nuclear liability law, see McCauley, D. and J. Hénault (2014), "Strengthening Canada's Nuclear Liability Regime", in Manóvil, R.M. (ed.), *Nuclear Law in Progress: XXI AIDN/INLA Congress – Buenos Aires 2014*, Legis, Buenos Aires, pp. 695-707 (2014).
37. See, e.g., Parliament of Canada (n.d.), "Compendium of Procedure: Parliamentary Framework", www.parl.gc.ca/About/House/Compendium/web-content/c_g_parliamentary framework-e.htm.
38. NLCA, Section 24(1) limits the operator's liability as follows: (a) CAD 650 million for a nuclear incident arising within one year after the day on which this paragraph comes into force – (b) CAD 750 million for a nuclear incident arising within one year after the year referred to under (a) – (c) CAD 850 million for a nuclear incident arising within one year after the year referred to in (b) – (d) CAD 1 billion for a nuclear incident arising after the year referred to in (c).

good behaviour for a term that the Governor in Council considers appropriate and may be removed for cause" (NLCA, Section 44).

The part of the NLCA on the Nuclear Claims Tribunal contains detailed provisions on the Tribunal's powers and duties regarding hearings to be held, interveners, witnesses and documents. As for evidence, in the hearing of claims, the Tribunal is not bound by the legal rules of evidence but it must not accept evidence that would be inadmissible in a court by reason of any privilege under the law of evidence. The Tribunal may make any rule it deems necessary to perform its duties and functions such as procedures for bringing claims, rules on evidence, fees or expenses.

The chairperson of the Tribunal may establish panels of the Tribunal consisting of one or more members to hear claims. In order to accelerate procedures, the Tribunal may establish classes of claims to be determined by a claims officer without oral hearing. It may designate as a claims officer anyone that it considers qualified (NLCA, Sections 49-60). A claimant or operator who is dissatisfied with a claims officer's decision is entitled to apply to the Tribunal for a rehearing by a panel. If a claim has been heard by a panel that consists of less than three members, the claimant may apply in writing to the chairperson for leave to appeal. The appeal must be heard by a panel consisting of three other members (NLCA, Sections 61-62).

The Act allows judicial review of the decisions of the Nuclear Claims Tribunal only in a few exhaustively listed cases. NLCA, Section 63 reads as follows:

> Subject to sections 61 and 62, every decision of the Tribunal is final and conclusive and is not to be questioned or reviewed at any court except in accordance with the Federal Courts Act on the grounds referred to in paragraph 18.1(4)(a), (b) or (e) of that Act.

The exceptional right to appeal applies according to this Section only if the Tribunal:

> (a) acted without jurisdiction, acted beyond its jurisdiction or refused to exercise its jurisdiction;
>
> (b) failed to observe a principle of natural justice, procedural fairness or other procedure that it was required by law to observe; …
>
> (e) acted, or failed to act, by reason of fraud or perjured evidence.[39]

NLCA, Sections 64-69 contain "Financial Provisions". At the end of the rehearing or appeal period, the Minister must pay the awarded amount out of the Nuclear Liability Account. The operator has to reimburse the amount paid by the Minister as defined in NLCA, Section 67.

The Governor in Council is entitled to issue general regulations (NLCA, Section 78), regulations on the Tribunal (NLCA, Section 79) and on compensation (NLCA, Section 80). The regulations on compensation shall deal with the compensation to be awarded and may include the establishment of priorities for classes of damage, the reduction of compensation on a *pro rata* basis and the fixing of maximum amounts for specified classes of damage, and the establishment of classes of damage for which compensation is not to be awarded.

39. An Act respecting the Federal Court of Appeal and the Federal Court (Federal Courts Act), R.S., 1985, c. F-7, s. 1; 2002, c. 8, s. 14, Paragraph 18.1(4) available at: laws-lois.justice.gc.ca/PDF/F-7.pdf.

4.2. Appraisal

NLCA, Section 34 stipulates that actions involving nuclear damage have to be brought to the court in Canada that has jurisdiction in the place where the incident occurs; in certain specified cases, the Federal Court is the competent court. The competence of the respective court is exclusive. This scheme concurs with the jurisdiction clauses of the international nuclear liability conventions. Notwithstanding this clear principle, NLCA, Section 36 et seq. authorises the Governor in Council to declare that another body, namely a so-called Nuclear Claims Tribunal, shall exclusively be competent to deal with nuclear claims. The declaration on the Tribunal discontinues procedures pending before courts. The nuclear jurisdiction is entirely shifted to the Tribunal.

One might question whether the legislator is well advised if it authorises the executive branch to encroach in such a comprehensive way on fundamental elements of the judiciary. In principle, only independent courts based on an Act of Parliament are the guarantors of the right to a "public hearing by an independent and impartial tribunal".[40] On the other hand, the catastrophic character of major nuclear incidents may require extraordinary means to fight their consequences. So the details of the Canadian approach have to be looked at more closely.

The authorisation provision of NLCA, Section 36(1) limits the authorisation to make a relevant declaration to "claims in respect of a nuclear incident". There is no explicit, but only an implied and not plain reference to the catastrophic extent of the nuclear incident and there is no reference to any other extraordinary specific of the nuclear incident. It suffices if the Governor in Council "believes that it is in the public interest to do so, having regard to the extent and the estimated cost of the damage, and the advantages of having the claims dealt with by an administrative tribunal". That language grants the executive a wide range of discretion. It stresses at the same time that the basis of the declaration is of a political rather than of a legal nature.

In Canada, "a tribunal is a public body that handles cases submitted to it, according to rules set out by law."[41] Administrative tribunals, which exist at the federal, provincial and territorial levels, are specialised and focus on specific subject areas.[42] They are referred to as "quasi-judicial" adjudicative bodies.[43] A website of the Canadian Department of Justice describes those administrative tribunals as follows:

> Administrative boards and tribunals
>
> There are other kinds of disputes that do not need to be dealt with in the courts. Different kinds of administrative tribunals and boards deal with disputes over the interpretation and application of laws and regulations, such as entitlement to employment insurance or disability benefits, refugee claims, and human rights.
>
> Administrative tribunals are less formal than courts and are not part of the court system. However, they play an essential role in resolving disputes in

40. Universal Declaration of Human Rights, *supra* note 33.
41. Council of Canadian Administrative Tribunals (2007), *Introduction to Administrative Justice and to Plain Language*, pp. 19, available at: www.ccat-ctac.org/CMFiles/Publication/CCAT-EN-new2.pdf.
42. *Ibid*.
43. *Ibid*., p. 72.

> Canadian society. Decisions of administrative tribunals may be reviewed in court to ensure that tribunals act fairly and according to the law.[44]

The author of this article is not sufficiently familiar with the Canadian legal system, but this is a surprising definition if we apply it to the Nuclear Claims Tribunal, which is not at all meant to deal with *minima* but possibly with the compensation to be paid after a catastrophic incident that may seriously impact on the general public and the entire state. Why do those lawsuits "not need to be dealt with in the courts"?

It is the Tribunal's purpose "to examine and adjudicate" nuclear claims "as expeditiously as the circumstances and considerations of fairness permit" (NLCA, Section 41(2)).This is a mandate that is different from that of ordinary courts. It in particular refers to "fairness" rather than to justice. A political element of the establishment of the Tribunal becomes evident if we look at the appointment of judges: each member of the Tribunal is to be appointed to hold office during good behaviour for a term that the Governor in Council considers appropriate and may be removed for cause.[45] So the Governor in Council has discretion to determine the tenure of judges. Moreover, the Tribunal apparently is not bound by the general rules on procedure but "may make any rules that it considers necessary for the exercise of his powers and the performance of its duties and functions" (NLCA, Section 55).

In summary, the picture of the Nuclear Claims Tribunal is not entirely clear. From the point of view of a foreign lawyer, there seem to be a number of legal drawbacks of the Tribunal approach that trigger questions: the transfer of nuclear compensation lawsuits from courts to the Tribunal will be established by a political decision of the Governor in Council and are not based on well justified legal prerequisites determined by Parliament; there are doubts as to whether the judges of the Tribunal enjoy the necessary independence to act impartially;[46] the right of appeal to a court is strictly and exhaustively limited to certain rare cases that in practice may result in a total denial of appeal to a court; the NLCA authorises the Governor in Council to issue regulations that cover areas that are to be decided by Parliament and not by the executive. This applies particularly to the regulation on compensation. It has, however, to be admitted that the Tribunal may be in a position to deal with compensation cases more expeditiously than courts, particularly because it may make its own rules of procedure and is not bound by the legal rules of evidence. Prompt compensation of nuclear victims is a major step on the way to regaining legal peace after a nuclear incident causing mass tort litigations.

44. Canada Department of Justice (2017), "The judicial structure", available at: www.justice.gc.ca/eng/csj-sjc/just/07.html.
45. This wording differs from the corresponding provision on the tenure of judges at general courts in Canada, see the British North America Act 1867 as amended in 1960 (British North America Act, 1960, 9 Eliz. II, c. 2 (UK)), Section 99, available at: www.justice.gc.ca/eng/rp-pr/csj-sjc/constitution/lawreg-loireg/p1t251.html.
46. On the independence of judges in Canada see: Gélinas, F. (2012), "Judicial Independence in Canada: A Critical Overview", in Seibert-Fohr, A. (ed.), *Judicial Independence in Transition: Strengthening the Rule of Law in the OSCE Region*, Springer, Berlin (Vol. 233 of *Beiträge zum ausländischen öffentlichen Recht und Völkerrecht* [Contributions to Foreign Public Law and International Law]), pp. 567-600; Binnie, I. (2011), "Judicial Independence in Canada", paper is submitted to the World Conference on Constitutional Justice on behalf of the Supreme Court of Canada in anticipation of its Second Congress to be held in Rio de Janeiro 16-18 January 2011, available at: www.venice.coe.int/WCCJ/Rio/Papers/CAN_Binnie_E.pdf.

5. India: The Civil Liability for Nuclear Damage Act, 2010

5.1. *Claims Commissioner and Nuclear Damage Claims Commission*

In India, the compensation of nuclear damage is regulated under the terms of:

> An Act to provide for civil liability for nuclear damage and prompt compensation to the victims of a nuclear incident through a no-fault liability regime channeling liability to the operator, appointment of Claims Commissioner, establishment of a Nuclear Damage Claims Commission and for matters connected therewith or incidental thereto.[47]

This is also known as "The Civil Liability for Nuclear Damage Act, 2010" (CLNDA). The CLNDA is supplemented by the Civil Liability for Nuclear Damage Rules, 2011.[48]

In the event of the occurrence of a nuclear incident, the Atomic Energy Regulatory Board[49] shall, within a period of 15 days from the date of occurrence of a nuclear incident, notify that incident and cause wide publicity to the occurrence if the gravity of the threat and risk involved so requires (CLNDA, Section 3). Victims of that nuclear incident shall be entitled to claim compensation in accordance with the provisions of this Act (CLNDA, Section 9(1)).[50]

For the purposes of adjudicating such claims, the Central Government shall, by notification, appoint "one or more Claims Commissioners" (CLNDA, Section 9(2)). This provision removes the competence to hear claims for the compensation of nuclear damage from the competence of the civil courts and transfers it to the Claims Commissioner. The Commissioner is exclusively competent in that area. Pursuant to CLNDA, Section 12(5), the Commissioner enjoys the privileges of a civil court: "the Claims Commissioner shall be deemed to be a civil court for the purposes of section 195 and Chapter XXVI of the Code of Criminal Procedure, 1973".[51] The details of the position of the Commissioner, the adjudication procedure to be followed and the powers of the Commissioner are regulated in CLNDA, Sections 13-18.

CLNDA, Section 16(5) is of outstanding relevance: every award made under Section 16(1) shall be final. That means there is no appeal possible against the Commissioner's decision on the award.

47. The Civil Liability for Nuclear Damage Act, 2010, No. 38 of 2010, *The Gazette of India*, Extraordinary, Part II, Section 1, No. 47 of 22 September 2010. The Act received the assent of the Indian President on 21 September 2010.
48. Civil Liability for Nuclear Damage Rules, 2011, No. 611, *The Gazette of India*, Extraordinary, Part II, Section 3(i), November 11, 2011. India ratified the CSC on 4 February 2016, which entered into force for India on 4 May 2016. IAEA (2016), Convention on Supplementary Compensation for Nuclear Damage: Status, IAEA Doc. Registration No. 1914.
49. The Board was constituted on 15 November 1983 by the Central Government based on the powers vested to it by the Atomic Energy Act, 1962, No. 33 of 1962, 15 September, as last amended by the Atomic Energy (Amendment) Act, 2015, No. 5 of 2016, 31 December 2015, *The Gazette of India*, Extraordinary, Part II, Section 1, No. 5, 1 January 2016.
50. The operator of a nuclear installation is the person liable. See CLNDA, Sections 3-8. The liability principles of the CLNDA are more or less identical with the international nuclear liability principles but there are differences. See, *inter alia*, Gruendel, R.J. and E. Reynaers Kini (2012), "Through the looking glass: placing India's new civil liability regime for nuclear damage in context", *Nuclear Law Bulletin*, No. 89, OECD, Paris, pp. 45-66; Pelzer, N. (2011), "The Indian Civil Liability for Nuclear Damage Act, 2010 – Legislation with Flaws?", *atw – International Journal for Nuclear Power*, Vol. 56, Issue 1, pp. 8-15.
51. The provisions referred to deal with offences affecting the administration of justice and the contempt of lawful authority.

The CLNDA does not stipulate any prerequisites for the appointment of the Claims Commissioner. In particular, it does not refer to the specifics and the potential magnitude of nuclear damage. If nuclear damage is suffered, the Central Government "shall" appoint the Commissioner (CLNDA, Section 9(2)). This wording seems to indicate that in principle the Commissioner is competent to adjudicate all types of nuclear incidents, ranging from minor ones to catastrophic incidents with mass tort litigation.

However, this legal situation will, according to CLNDA, Section 19, be changed:

> where the Central Government, having regard to the injury or damage caused by a nuclear incident, is of the opinion that it is expedient in public interest that such claims for such damage be adjudicated by the Commission instead of a Claims Commissioner, it may, by notification, establish a Commission for the purpose of this Act.

The "injury and the damage" will be taken into account. It may be concluded from this motif that the Commission will be established in case of a major nuclear incident only and this might entail mass tort litigations.

The Nuclear Damage Claims Commission shall consist of a chairperson and not more than six other members. They will be appointed by the Central Government on the recommendation of a Selection Committee consisting of three experts having experience of at least 30 years in nuclear science and a retired Supreme Court Judge (CLNDA, Section 20). Their terms of office are limited to three years but re-appointment for another three years is possible (CLNDA, Sections 20, 21).

CLNDA, Section 32(1) provides that the Commission "shall have original jurisdiction to adjudicate upon every application for compensation filed before it" regarding those cases that are filed in accordance with the requirements set out under CLNDA, Section 31(1) or that are transferred to it under CLNDA, Section 33, i.e. those cases that are pending before the Claims Commissioner. The Commission is not bound by the procedure laid down in the Code of Civil Procedure, 1908.[52] It shall be guided by the principles of natural justice[53] and subject to the other provisions of the CLNDA and any of its rules made thereunder. The Commission has power to regulate its own procedure (CLNDA, Section 32(4)). The Commission shall have, for the purposes of discharging its functions under the CLNDA, the same powers as are vested in a civil court under the Code of Civil Procedure, 1908.

A parallel provision to CLNDA, Section 16(5) for the Commissioner is CLNDA, Section 32(10) for the Commission: every award made under Section 32(6) shall be final. The decision of the Commission cannot be appealed.

All claims pending and all other future claims will be concentrated at the Commission. Every proceeding before the Commissioner or the Commission shall be

52. Act No. 5 of 1908.

53. The concept of natural justice comprises those legal sources that protect the rights of individuals. This applies in particular to Article 14 of the Indian Constitution, which guarantees equality before the law and equal protection. See also Articles 21, 22, 39, 136, 226, 233, 311 of the Indian Constitution (Constitution of India as of 9 November 2015). For a brief introduction to this concept, see Shivaraj, S. (2013), "Principles of Natural Justice in Indian Constitution", available at: www.legalservicesindia.com/article/article/principles-of-natural-justice-in-indian-constitution-1519-1.html.

deemed to be judicial proceedings within the meaning of Sections 193, 219 and 228, and for the purpose of Section 196, of the Indian Penal Code (CLNDA, Section 34).[54]

No civil court, except the Supreme Court and a High Court exercising jurisdiction under Articles 226 and 227 of the Constitution,[55] shall have jurisdiction to entertain any suit or proceeding regarding any matter in respect of which the Claims Commissioner or the Commission has competence. There is, however, an exception relating to claims against the operator made under CLNDA, Section 46 (CLNDA, Section 35).

If the Central Government is satisfied that the Commission has served its purpose, or if there is such a number of cases that the cost for the Commission would not justify its continued function, or if the Government considers it necessary or expedient to do so, the Government may, by notification, dissolve the Commission (CLNDA, Section 38(1)). With the effect of the notification, the proceedings pending before the Commission shall be transferred to the Commissioner (CLNDA, Section 38(2)).

5.2. Appraisal

Like in Canada, an Act below the level of the Constitution, namely the CLNDA, shifts the jurisdiction for nuclear compensation from the regular civil courts to other specially established bodies, namely to the Commissioner or to the Nuclear Damage Claims Commission. The Judiciary is no longer competent but the Executive is, by an ordinary law, authorised to transfer the exclusive competence from the courts to a person or to a commission that will be selected by the Government. This could – like in Canada – be interpreted as an interference with the principle of separation of powers.

The reason for this concern is that neither the decisions made by the Commissioner nor the decisions made by the Commission can be appealed before a court. This issue was the subject of discussion in India, too. An early comment made by Dipesh Patel shall be quoted here:[56]

> Concept of Judicial Review ignored
>
> According to clause 16 of the Nuclear Liability bill the matters of nuclear damage claim in case of a nuclear accident will only be dealt by a "Nuclear Damage Claims Commissioner" and any decision by the commissioner would be final. By including such a clause in the bill, the drafters have ignored the basic concept of Judicial Review under Indian Constitution. On the contrary, section 2210(n)(3) of US (equivalent Law) Price Anderson Act, has no such provision relating to the finality of the decision by the management panel, set up under the district court, for disposal of cases pertaining to claims in case of a nuclear accident.

54. The Sections referred to relate to punishment under the Indian Penal Code, 1860 as amended (No. 45 of 1860) for using false evidence (Sections 193, "Punishment for false evidence" and 196, "Using evidence known to be false"), corrupt unlawful reporting by an official (Section 219, "Public servant in judicial proceeding corruptly making report, etc., contrary to law") and insult of public servants (Section 228, "Intentional insult or interruption to public servant sitting in judicial proceeding").
55. Indian Constitution, *supra* note 53, Article 226, "Power of High Courts to issue certain writs" and Article 227, "Power of superintendence over all courts by the High Court".
56. Patel, D. (2010), "An Analysis of the Civil Liability for Nuclear Damage Bill, 2010", *India Law Journal*, Vol. 3, Issue 4, available at: http://indialawjournal.com/volume3/issue_4/article_by_dipesh.html.

Already in an earlier publication the author expressed his doubts as to "whether the Commissioner and the Commission have the appropriate judicial independence".[57] Reference to those comments can be made here. Apparently there could be a conflict with the Indian Constitution, a problem that was already discussed in India at an early stage of the CLNDA's legislative history.[58]

As summarised for Canada, it also applies to India that the establishing of fora other than courts to deal with nuclear compensation is a legally problematic approach. However, in the case of a major nuclear accident that entails mass tort litigations, it might be justified as a means to ensure prompt compensation. Nevertheless, this reason should not limit or, interfere with, the right to a public hearing before an independent court.

An Indian court expressed another view on this issue. In 2015, the High Court of Kerala ruled in a public interest litigation on the constitutional validity of the CLNDA.[59] The Court ruled under No. 19 on the independence of the Claims Commissioner:

> 19. The contention is with reference to the independence of the Claims Commissioner. When a person is appointed as claims Commissioner he performs a statutory function and is expected to carry out the statutory duty in accordance with law and it cannot be stated that he might be acting to the dictates of the Central Government. Whether an order passed by the Claims Commissioner is justifiable or not can be decided only at the relevant time and it cannot be stated that the legislation is bad. That apart such orders passed are subject to judicial review by the High Court under article 226 of the Constitution of India. Hence this ground also fails.

Under No. 22, the Court ruled on the independence of the Claims Commission as follows:

> 22. ... By virtue of Section 38 Central Government is given the power to dissolve of Commission in certain circumstances. It is stated that if the Central Government is satisfied that the purpose for which the Commission established under Section 19 has served its purpose, or where the number of cases pending before such Commission is so less that it would not justify the cost of its continued function, or where it considers necessary or expedient to do so, the Central Government may, by notification, dissolve the Commission. It is evident from the above provision that, the Commission is appointed in public interest to consider specified claims, its functioning, therefore, is always subject to the decision of the Central Government. But, in so far as statutory powers are vested in the said Commission and the procedure is regulated by the statute, there is no reason to doubt the independence of the Commission. Further, appointment of the Commission is in addition to the Claims Commissioner.
>
> For the aforesaid reasons, we are not satisfied that the impugned enactment suffers from any infirmity, arbitrariness or that it violates Part III of the

57. Pelzer, N. (2011), *supra* note 50, p. 12.
58. For references, see *ibid*. at note 62.
59. Yash Thomas Mannully and another v. Union of India and Others, W.P.(C.) No. 27960 of 2011, by the High Court of Kerala, 422 KLW 240 (21 August 2015), available at: https://indiankanoon.org/doc/105269224. See also the brief report on this judgement in NEA (2015), "Judgment of the High Court of Kerala in a public interest litigation challenging the constitutional validity of the Civil Liability for Nuclear Damage Act, 2010", *Nuclear Law Bulletin*, No. 96, OECD, Paris, pp. 69-70.

Constitution. Hence there being no merits in the writ petition, we dismiss the same.

This case is also pending at the Indian Supreme Court and more clarity on the constitutionality of the Act is expected by its ruling.[60]

6. Japan: Act on Compensation for Nuclear Damage and Related Legislation

6.1. Dispute Reconciliation Committee for Nuclear Damage Compensation

Since the early sixties of the last century, Japan has had an elaborate nuclear liability legislation that is more or less in line with the international nuclear liability principles.[61] The main instrument is the Act on Compensation for Nuclear Damage.[62] The law provides for strict liability of the operator, which is not limited in amount, and for legal channelling of liability onto the operator (CA, Articles 3-5). The Compensation Act is complemented by a number of Acts, Orders and other Instruments.[63]

According to Article 18(1) of the Compensation Act "the Dispute Reconciliation Committee for Nuclear Damage" – referred to as Reconciliation Committee – may be established. It shall, pursuant to the provisions of a Cabinet Order (CO), be an organisation attached to the Ministry of Education, Culture, Sports, Science and Technology (MEXT). It shall be in charge of arranging the settlement of any dispute arising from compensation of nuclear damage and of preparing general instructions to help operators reach a voluntary settlement of such disputes.

Paragraph 2 of Article 18 of the Compensation Act determines the tasks of the Committee in detail. It shall:

- arrange settlement of any dispute arising from compensation of nuclear damage;

60. Common Cause and others v. Union of India, W.P.(C), No. 464 of 2011, admitted by the Supreme Court of India on 16 March 2012. For more information on this case, see Common Cause (2014), "464/2011 Petition Challenging the Constitutional Validity of the Civil Liability for Nuclear Damage Act, 2010", available at: www.commoncause.in/ppil_details.php?id=9, and also on the nuclear liability legislation, Common Cause (2012), "W.P. (C) 407/2012 (Tagged with WP (C) 464/2011) to Bring Nuclear Suppliers of Kudankulam Nuclear Plant under 'Polluter Pays' and 'Absolute Liability' Principals", available at: www.commoncause.in/ppil_details.php?id=13.
61. In more detail see Vásquez-Maignan, X. (2012), "The Japanese nuclear liability regime in the context of the international nuclear liability principles", in NEA (ed.), *Japan's Compensation System for Nuclear Damage: As Related to the TEPCO Fukushima Daiichi Nuclear Accident*, OECD, Paris, pp. 9-14; Pelzer, N. (2011), "*Die Haftung für Nuklearschäden nach japanischem Atomrecht aus internationaler Sicht*" [Liability for Nuclear Damage under Japanese Nuclear Law from an International Perspective], *Zeitschrift für Japanisches Recht* [Journal of Japanese Law], Vol. 16, No. 32, pp. 97-122.
62. Act on Compensation for Nuclear Damage, No. 147, 17 June 1961, as last amended by Act No. 134 of 2014 (Compensation Act or CA). An unofficial English translation of the Compensation Act, as amended, is reproduced in NEA (2015), *Nuclear Law Bulletin*, No. 95, OECD, Paris, pp. 119-129.
63. The Japanese nuclear legal framework as of 2012 is reproduced in English in NEA (ed.), *Japan's Compensation System*, *supra* note 61, pp. 61-244. Special reference has to be made to the Act on Indemnity Agreements for Compensation of Nuclear Damage, Act No. 148 of 1961, as amended by Act No. 134 of 2014, an extract of which is reproduced in NEA (2015), *Nuclear Law Bulletin*, No. 95, OECD, Paris, pp. 131-132. Japan was not a party to any of the nuclear liability conventions until 15 January 2015 when it signed and accepted the CSC, IAEA (2016), Convention on Supplementary Compensation for Nuclear Damage: Status, IAEA Doc. Registration No. 1914.

- in the event of a dispute arising from compensation of nuclear damage, establish guidelines to judge the extent of the nuclear damage and other general guidelines to help operators reach a voluntary settlement of the said dispute;
- conduct necessary investigation and assessment of nuclear damage to deal with the matters specified in the preceding two items.

Necessary additional issues regarding the organisation and operation of the Committee as well as procedures of the request for, and handling of, mediation of settlements shall be provided in a Cabinet Order (CA, Article 18(3)). This CO apparently is not available in an English translation. The following text is therefore based on an article by Professor Toyohiro Nomura, et al. on Japan's nuclear liability system.[64]

The Reconciliation Committee is not a standing committee; rather, it is only set up if there is the concrete possibility that a dispute regarding nuclear compensation will occur. Its ten part-time members to be appointed by MEXT shall be people of high moral standing who are experienced or have academic standing relating to law, medicine, nuclear engineering or other nuclear related technologies (CO, Article 1). The Committee was for the first time established in connection with the 1999 Tokaimura accident,[65] where 8 000 claims were made. Nearly all claims were solved through settlement. Only less than 20 claims were brought to court. The total amount of compensation paid out was JPY 15 billion. The Committee relating to the Fukishima Daiichi accident was set up in April 2011.

Among the competences of the Committee as listed in CA, Article 18(2), the establishing of guidelines is of special importance. They shall promote the "voluntary out-of court settlement of disputes such as the standards for determining the scope of nuclear damage". The guidelines "have no legally binding force".[66] Nevertheless, the guidelines enjoy great authority due to the high competence of the Committee. They:

> are reasonably expected to serve as the compensation standard that can be trusted by both the victims and the nuclear operator. It is consequently expected that the Guidelines will serve as reference for the damage compensation negotiation ..., and thus will facilitate smoother settlement negotiations ... as well as promote fair compensation of similar damage.[67]

However, for the purpose of this article, there is no need to deal with the content of the various guidelines in more detail.[68]

It was recognised that courts alone would not be able to handle all claims. In implementing CA, Article 18, in 2011, an alternative dispute resolution (ADR) mechanism was established: the Nuclear Claims Dispute Resolution Centre. The Centre shall conduct mediation of settlement of Fukushima compensation disputes ("*Wakai-no-Chuukai*"). The Centre has no power to adjudicate or arbitrate the disputes. The ADR performed by the Centre is rule-oriented, which means it applies rules and general standards to ensure equal treatment of all parties involved. The

64. Nomura, T. at al. (2012), "Japan's nuclear liability system", in NEA (ed.), *Japan's Compensation System*, *supra* note 61, pp. 22-25.
65. For more information on the Tokaimura accident, see IAEA (2009), *Lessons Learned from the JCO Nuclear Criticality Accident in Japan in 1999*, available at: http://www-ns.iaea.org/downloads/iec/tokaimura-report.pdf.
66. Nomura, T. et al., *supra* note 64, p. 22.
67. *Ibid.*, p. 23.
68. The Guidelines published in 2012 are reproduced in NEA (ed.), *Japan's Compensation System*, *supra* note 61, pp. 89-183.

substantive rules governing the mediation are the Guidelines issued by the Reconciliation Committee.[69]

In the aftermath of the Fukushima Daiichi nuclear accident, the Japanese Diet issued additional acts to cope with the consequences of the accident. The Nuclear Damage Compensation Facilitation Corporation Act, 2011,[70] aims at providing additional compensation money beyond the amounts to be provided by the operator liable under the terms of the Compensation Act (Article 1). In Article 2 of that Act, the state explicitly accepts the social responsibility to provide the money taking into account that the state's responsibility comes along with promoting the nuclear energy policy. The Act on Emergency Measures Related to Damage Caused by the 2011 Nuclear Accident[71] entitles the Government to make provisional payments to parties who have sustained specified nuclear damage. For further details of the Japanese nuclear liability law and of the status of Fukushima Daiichi compensation, reference may be made to the ample literature available.[72]

6.2. Appraisal

Japan has recent and still ongoing experience with nuclear mass tort litigations to manage the consequences of the Fukushima Daiichi nuclear accident. This experience is still evolving. Fukushima taught lessons that Chernobyl could not likewise teach: a democratic state under the rule of law tries to satisfy claims for compensation of a major nuclear disaster. The main lesson that has been taught seems to be that Japanese victims preferred out-side-court settling of compensation to ordinary court procedures. This avenue was already in 1961 well paved by the 1961 version of the Compensation Act, and was "tested" after the Tokaimura nuclear accident. The Reconciliation Committee offered the framework for settlement outside courts. This approach seemed to be attractive for the victims. But nevertheless the Committee did neither close the doors to courts nor to direct negotiations with the operator liable. The Committee is not a "Tribunal" or any other

69. See in greater detail: Idei, N. (2012), The Nuclear Damage Claim Dispute Resolution Center, JCAA Newsletter, No. 28, pp. 1-4.
70. Act No. 94 of 2011, reproduced in NEA (ed.), *Japan's Compensation System*, *supra* note 61, pp. 185-204.
71. Act No. 91 of 2011, reproduced in NEA (ed.), *Japan's Compensation System*, *supra* note 61, pp. 237-241.
72. See, e.g., Matsuura, S. (2012), "The current progress of relief of victims of nuclear damage caused by the Fukushima Daiichi nuclear power plant accident", in NEA (ed.), *Japan's Compensation System*, *supra* note 61, pp. 29-39; Takahashi, Y. (2012), "The financial support by the Nuclear Damage Compensation Facilitation Corporation", in NEA (ed.), *Japan's Compensation System*, *supra* note 61, pp. 41-59; Kabashima, H. (2012), "Settlement in Pollution Cases: Contribution to the Dispute Resolution of the Fukushima Nuclear Power Plant's Melt Down", *GEMC Journal*, No. 6, pp. 14-25; Osaka. E. (2012), "Corporate Liability, Government Liability, and Fukushima Nuclear Disaster", *Pacific Rim Law & Policy Journal*, Vol. 21, No. 3, pp. 433-459; Feldman, E.A. (2013), "Fukushima: Catastrophe, Compensation and Justice in Japan", *DePaul Law Review*, Vol. 62, Issue 2, pp. 335-355; Kawasaki, K. (2014), "Introductory Statement: Japanese Experience in Nuclear Liability Compensation after Fukushima Incident", in Raetzke, C. (ed.), *Nuclear Law in the EU and Beyond: Proceedings of the AIDN/INLA Regional Conference 2013 in Leipzig*, Nomos, Baden-Baden, pp. 327-332; Rheuben, J. (2014), "Government Liability for Regulatory Failure in the Fukushima Disaster: A Common Law Comparison", *Pacific Rim Law & Policy Journal*, Vol. 23, No. 1, pp. 113-149; Weitzdörfer, J. (2013), "Liability for Nuclear Damages Under Japanese Law: Key Legal Problems Arising from the Fukushima Daiichi Nuclear Accident", in Butt, S. et al. (eds.), *Asia-Pacific Disaster Management: Comparative and Socio-legal Perspectives*, Springer, Berlin, pp. 120-139; Feldman, E.A. (2015), "Compensating the Victims of Japan's 3-11 Fukushima Disaster", *Asian-Pacific Law & Policy Journal*, Vol. 16, No. 2, pp. 127-157 (2015); Suami, T. (2015), "Legal Support to Fukushima Municipality: Law School, Lawyers, and Nuclear Disaster Victims", *Asian-Pacific Law & Policy Journal*, Vol. 16, No. 2, pp. 158-185.

body that decides finally and excludes appeals to courts. Here we see a most relevant difference from the Canadian and the Indian schemes.

On the other hand, criticism was also voiced regarding the Japanese approach of dispute resolution. Eric A. Feldman elaborates on the ADR in Japan.[73] He quite correctly identifies three ways for Fukushima victims to apply for compensation: (1) bringing an action to a court; (2) negotiating directly with the liable operator, TEPCO ("direct route"); and (3) ADR, namely claims resolution at the Nuclear Damage Claim Dispute Resolution Centre. According to his view, the Centre developed a "slow pace of claims resolution" and "the compensation process, and the awards resulting from it, should in certain ways resemble both in form and substance a conventional legal conflict".[74] If that statement is correct, ADR's advantage of quick compensation may indeed be questioned.

But it is still too early for a final assessment of the Japanese regime, and the limits of an article in a journal anyway do not allow a comprehensive assessment. In any case, the Japanese approach is worthwhile to observe and study carefully and it may perhaps produce feasible elements for other countries.

7. United States: Atomic Energy Act of 1954, as amended

7.1. Section 170 of the Atomic Energy Act

US nuclear liability law is a combination of state law and federal law. While the basis of liability – for instance, if it is based on fault or if strict liability is applicable[75] – is governed by the law of the state where the nuclear incident took place, the specifics of nuclear liability law, including the extent of liability and in particular its financial coverage ("financial protection"), are regulated by federal law, namely by Section 170 of the Atomic Energy Act, 1954, as amended (AEA).[76] The contribution of the federal law to the substantial nuclear liability law is to a large extent shaped through the definitions in AEA, Section 11 and particularly through the definitions of "extraordinary nuclear occurrence", "nuclear incident" and "public liability". They contribute to determining the extent of nuclear liability. AEA, Section 170 uses and refers to the said and to other definitions, and it mainly regulates the "financial protection". Financial protection is a condition of a licence under the Atomic Energy Act, and it is defined in AEA, Section 11(k) as follows: "the ability to respond in damages for public liability and to meet the cost of investigating and defending claims and settling suits for such damages." The total amount of financial protection currently aggregates roughly USD 12 billion, and this amount is the maximum public liability amount (AEA, Section 170(e)).

If a nuclear incident involves damages that "are likely to exceed the applicable amount of aggregate public liability" under AEA, Section 170(e)(1)(A)-(C), a Compensation Plan has to be prepared (AEA, Section 170(i)). The Secretary of the Nuclear Regulatory Commission (NRC) shall make a survey of the extent and the

73. Feldman, E.A. (2014), "No Alternative: Resolving Disputes Japanese Style", in Zekoll, Z. et al. (eds.), *Formalisation and Flexibilisation in Dispute Resolution*, BGrill Nijhoff, Leiden, pp. 130-147.
74. *Ibid*., pp. 140-146, 145. See also Nottage, L. and J. Rheuben (2015), "Resolving Claims from the Fukushima Nuclear Disaster", The University of Sydney, Japanese Law and the Asia-Pacific, available at: http://blogs.usyd.edu.au/japaneselaw/2015/01/resolving_nuclear_claims.html. In general on ADR see Zekoll, J. et al. (2014), "The Changing Face of Dispute Resolution", in Zekoll, J. et al. (eds.), *Formalisation and Flexibilisation in Dispute Resolution*, *supra* note 73, pp. 1-13.
75. Rylands v. Fletcher (1868) LR 3 HL 330, [1868] UKHL 1, LR 3 HL 330.
76. 42 USC 2011 et seq. The liability provisions, found at 42 USC 2210 (Sec. 170, "Indemnification and Limitation of Liability"), were inserted into the AEA in 1957 through the Price-Anderson Act.

causes of the damage, and the results of that survey have to be submitted to the Congress and to the Representatives and Senators of the affected states, and, provided the information will not seriously damage national defence of the US, to the public, to the parties involved and to the courts. Not later than 90 days after a court has determined, pursuant to Subsection o, that the public liability may exceed the applicable amount of aggregate public liability under AEA, Section 170(e)(1)(A), (B), or (C) the President has to submit to both Houses of Congress:

(A) an estimate of the aggregate dollar value of personal injury and property damage that arises from the nuclear incident and exceeds the amount of aggregate public liability under subsection e.(1);

(B) recommendations for additional sources of funds to pay claims exceeding the applicable amount of aggregate public liability under subparagraph (A), (B), or (C) of subsection e.(1) …;

(C) 1 or more compensation plans, that either individually or collectively shall provide for full and prompt compensation for all valid claims and contain a recommendation or recommendations as to the relief to be provided, including any recommendations that funds be allocated or set aside for the payment of claims that may arise as a result of latent injuries that may not be discovered until a later date; and

(D) any additional legislative authorities necessary to implement such compensation plan or plans.[77]

Congress has to deal with the compensation plan in accordance with an exact procedural schedule as provided for in AEA, Section 170(i) and make a resolution. "The Congress will thoroughly review the particular incident and will take whatever action is determined necessary and appropriate to protect the public from the consequences of a disaster of such magnitude." (AEA, Section 170(e)(2)).

The US Supreme Court identified that involvement of Congress with a view to ensuring compensation beyond the liability limitation of the operator liable already in its 1978 judgement as a prerequisite for accepting the arbitrary liability limitation as compatible with the US Constitution.[78]

AEA, Section 170(l)(1) obliges the US President to study "means of fully compensating victims of a catastrophic nuclear accident that exceeds the amount of aggregate public liability under subsection e (1)". This Report was published in 1990.[79] Its recommended system is divided into three categories: civil procedures, claims priorities and latent injuries. However, the findings of the Commission apparently did not have any effect on the US legislation or practice.

Major nuclear accidents impact on both the substance of nuclear liability law and the procedural rules independently of, and in addition to, possible actions by Congress. In the event of an extraordinary nuclear occurrence (AEA, Section 11(j)), AEA, Section 170(n)(1) authorises the NRC or the Secretary of Energy to incorporate provisions in the indemnity agreements with licensees and contractors that waive certain issues and defenses relating, for instance, to conduct of the claimant or to fault of the persons indemnified. Pursuant to AEA, Section 170(n)(2) the chief judge

77. AEA, Section 170(i)(2)(A)-(D).
78. Duke Power Co. v. Carolina Environmental Study Group, 438 US 59 (1978).
79. Griffith, Jr., S.C. et al. (1990), *Report to the Congress from the Presidential Commission on Catastrophic Nuclear Accidents*, Vols. 1 and 2. See on the report: Saltzman, J. (1993), "Conclusions of the Presidential Commission on Catastrophic Nuclear Accidents, I-II", in NEA, IAEA (eds.), *Nuclear Accidents: Liabilities and Guarantees*, Proceedings of the Helsinki Symposium, OECD, Paris, pp. 265-277.

of the competent court may appoint a special caseload management panel to coordinate and assign cases – but not necessarily hear cases themselves (AEA, Section 170(n)(3)(A)).

The caseload management panel may be established if the court decides that the public liability is likely to exceed the amount of primary financial protection or if the chief judge determines that cases will have "an unusual impact on the work of the court" (AEA, Section 170 (n)(3)(A)(i)-(ii)). The panel shall consist only of members who are US district judges or circuit judges (AEA, Section 170(n)(3)(B)(i)). The panel shall have the function:

(i) to consolidate related or similar claims for hearing or trial;

(ii) to establish priorities for the handling of different classes of cases;

(iii) to assign cases to a particular judge or special master;

(iv) to appoint special masters to hear particular types of cases, or particular elements or procedural steps of cases;

(v) to promulgate special rules of court, not consistent with the Federal Rules of Civil Procedure, to expedite cases or allow more equitable consideration of claims;

(vi) to implement such other measures, consistent with existing law and the Federal Rules of Civil Procedure, as will encourage the equitable, prompt, and efficient resolution of cases arising out of the nuclear incident; and

(vii) to assemble and submit to the President such data, available to the court, as may be useful in estimating the aggregate damages from the nuclear incident.[80]

AEA, Section 170(o) contains provisions on a "Plan for Distribution of Funds" if the public liability from a single nuclear incident may exceed the limit of liability under AEA, Section 170(e)(1).

In particular, the provisions on the Compensation Plan, on the Caseload Management Panel and on the Distribution Fund Plan aim at facilitating the handling and organising procedures dealing with major and catastrophic nuclear damage and including nuclear mass tort litigations.[81]

7.2. Appraisal

When the US nuclear liability law was drafted and enacted in 1957, it was a pioneer legislation: the first specialised nuclear liability law in the world. It was repeatedly amended, but those amendments did not affect its original architecture. The Price-Anderson legislation, i.e. AEA, Section 170, is not fully in line with the international nuclear liability principles. There are therefore doubts as to whether its basic legislative concept should be recommended as an example for other states. However, with regard to handling and organising major nuclear incidents and mass tort litigations resulting thereof, the amended Price-Anderson legislation deserves consideration.

80. AEA, Section 170(n)(3)(C)(i)-(vii).

81. The rich literature on the Price-Anderson Act is easily accessible in bibliographies, libraries and the internet. There is no need to present a selection here. It might, however, be interesting to give attention to an article that compares the US and the international nuclear liability regimes: Faure, M.G. and T. Vanden Borre, "Compensating Nuclear Damage: A Comparative Economic Analysis of the US and International Liability Schemes", *William & Mary Environmental Law and Policy Review*, Vol. 33, pp. 219-286 (2008).

AEA, Section 170 follows a twin-track approach. It explicitly involves the Congress with a view to increasing the compensation amount beyond the limit foreseen in the Act, and in parallel it leaves untouched the recourse of claimants to the courts. No special "tribunal" or other body outside the court regime is established to deal finally with claims for nuclear compensation. The "special caseload management panel" is only entrusted with tasks that are meant to prepare, to assist and to support the decision of the competent court. It does not have an autonomous judicial function. There is no risk that extra-judiciary bodies conflict with the judiciary and thus may interfere with the right of victims to a public hearing before a court. In cases of mass tort claims, the panel is well equipped to expedite procedures by pre-sorting classes of claims and cases. Thus, it is apt to contribute to the prompt compensation of the victims of a nuclear incident by the regular courts.

8. Conclusion

It is difficult or even impossible to draw general conclusions on how states will handle nuclear mass tort litigations since only a small number of national legislations could be looked at in more detail. So caution is advised if the author tries an assessment nevertheless.

A great majority of states do not issue any specific legislation on nuclear mass tort litigations. They apparently build on general traditional practice as most probably already tried and tested in other areas. Some states defer the decision on the way to deal with mass tort claims to the time of the nuclear incident. They insert into their nuclear liability laws respective "reminders" that contain an invitation or a demand to the legislator to take appropriate steps if and when necessary. Finally, there are a number of states that enacted elaborate regimes on how to react to, and organise, compensation of mass damages after a catastrophic nuclear incident. Among those states are in particular major nuclear states like Canada, India, Japan and the US. They developed compensation schemes where claims for compensation of nuclear damage shall be dealt with by fora that are not regular courts. In some of those states, the fora are exclusively competent without a right to appeal their decisions, while in other states the fora act in parallel or in complement to courts. So the international scenario appears to be somewhat confusing.

Of course, sovereign states are free to organise claims processing, including nuclear mass claims processing, as they deem fit. The discretion of states is, however, limited by obligations under public international law.

With regard to the victims of nuclear incidents, states are particularly bound by obligations under the 1948 Universal Declaration of Human Rights and other relevant instruments they may be a party to. National nuclear mass claim processing has in particular to comply with the obligation to guarantee "a fair and public hearing by an independent and impartial tribunal".[82]

With regard to possible international obligations *vis-à-vis* other states, it has to be taken into account that major nuclear incidents, as a rule, have transboundary detrimental effects. There is always a potential impact on territories other than the territory of the incident state.[83] As a consequence, states with nuclear programmes have to be aware that a nuclear incident may cause damage in the territories of other states and they have to take precautionary measures to prevent such impact on other territories. This brings into play the public international law principle of

82. See *supra* note 33.
83. Since Japan is an island, the transboundary effects of the Fukushima Daiichi NPP accident on the territories of states other than Japan seem to be more or less negligible.

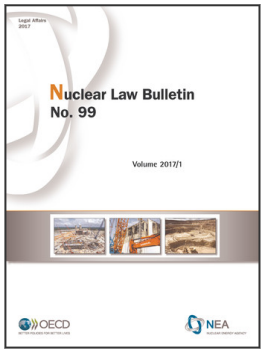
good neighbourliness. The principle imposes the obligation on a state not to use its own territory in a way that causes significant damage in neighbouring countries.[84] Of course, that principle addresses states that have nuclear programmes rather than non-nuclear states. Those programmes may be qualified as constituting a permanent potential threat to neighbouring states. So a nuclear state and its non-nuclear neighbours form a risk community. If, however, a common risk exists, there are also common obligations to contribute to preventing that the risk is materialised into a damage or, if so, to contribute to mitigating the consequences of the damage.

In Section 3.1 of this article, it has already been explained that the advantages of the international nuclear liability conventions can only fully be enjoyed if parties jointly train to fight nuclear emergencies including the nuclear claims processing. Those exercises require that states have mutual knowledge of how other parties deal with nuclear mass tort litigations. The joint practice for an emergency indeed could be seen as complying with an implied accessory obligation under the nuclear liability conventions to fully be able to use their advantages. A treaty obligation to co-operate can be identified. That obligation may be supported and strengthened by the obligations connected with being part of the described risk community.

It follows from these considerations that states would be well advised if they at least develop, establish and publish, the basic schemes of their respective nuclear mass tort litigations organisation. That requirement would not adequately be met through legislation that defers the decision to the time of the nuclear incident. Such an approach does not provide sufficient detailed advance information to be used by other states. The victim of other states should know: what will happen if there is nuclear damage in excess of the compensation money to be provided by the person liable? Will there be *pro rata* compensation or will the state step in and ensure full compensation? Is class action possible under the respective national regime? Which rules apply to the onus of proof? Legislation covering those issues that is only enacted after the nuclear incident does not sufficiently support prompt compensation. Respective legislation should be made available prior to the occurrence of a nuclear incident.

The organisation of nuclear mass tort processing is a subject that needs further observation. Perhaps it might even be advisable to establish international treaty relations on a joint skeleton of nuclear mass tort litigation.

84. Trail Smelter Case (United States of America/Canada), Reports of International Arbitral Awards (RIAA), Volume III (11 March 1941), pp. 1905-1982. See, e.g., Bratspies, R.M. and R.A. Miller (eds.) (2006), *Transboundary Harm in International Law: Lessons from the Trail Smelter Arbitration*, Cambridge University Press, Cambridge, in particular the "Introduction" by the two editors at pp. 1-10. On this issue also see the general textbooks on public international law with further references. See in particular the "Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities", in UN General Assembly (2006), *Report of the International Law Commission*, UN Doc. A/61/10, pp. 106 and 110.



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