



THE PROS AND CONS OF INTERNATIONAL NUCLEAR LIABILITY REGIMES AND THE WAY FORWARD

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Introduction

Nuclear energy production involves a serious risk of nuclear accident having very damaging consequences. That damage could occur to people, property and the environment. The damage may be both onsite and offsite. The potential effect of such an accident do not respect the state borders and may extent to other bordering countries or countries far beyond the territories of the state in which the accident occurs. A state that has nuclear program must have legal regime in place to provide compensation to the victims of any such nuclear accident. Due to the trans boundary impact of nuclear accident, the states not having nuclear installation should have legal regimes in place to compensate the victims for the damage to life, property and environment. The nuclear damage has huge financial implications which are unquantifiable. This potential liability is of a matter of grave concern not only to the nuclear power plant operator but to all the stakeholders involved in design, sitting, construction, operation, and decommissioning of a nuclear power plant.

It was not only the public that need protection but also the fear among the potential investors, builders and suppliers of equipment, services and technology regarding fear of financially huge liability claims that might be instituted by the victims of nuclear accident. All these stakeholders were concerned that a liability threat that was potentially unlimited in time as well as amount could ruin their business because there is no likelihood of obtaining adequate insurance in the normal course of business.

The governments assessed that there is a need for special liability regime for nuclear accidents. The one major hurdle was the application of ordinary rules of tort law in nuclear accidents. The tort rules, while appropriate for conventional risks but inadequate due to overwhelming technical nature of such a subject. They were also seen to inhibit victims of nuclear accident from successfully proving how the acts and omissions of one or more of those defendants actually responsible for the damage. Moving away from the ordinary tort law rules opened the door for the imposition of the liability and compensation rules which address these conflicting objectives, rules which, when taken together, form a special regime that takes into account the exceptional risks involved with the production of nuclear energy. That liability regime presently forms the basis of national nuclear liability legislations of most of the countries and it has been adopted in the international conventions on nuclear civil liability.

The Price-Anderson Act, 1957 in the United States is the first legislation in the world on the issue of nuclear civil liability followed by United Kingdom Nuclear Installations (Licensing and Insurance) Act 1959, German Atomic Energy Act (1959), Swiss Federal Law on the Exploitation of Nuclear Energy for Peaceful Purposes and Protection from Radiation (1959) and Japanese Law on Compensation for Nuclear Damage (1961). The principles contained in these national legislations meant to be applied in substitute for tort law and becomes the founding principles of the international nuclear liability regimes.

The first nuclear liability regime was established in the form of Paris Convention on Third Party Liability in the Field of Nuclear Energy in the year 1960 under the auspices of the Organization for European Economic Corporation (presently OECD). The Paris convention was adopted by western European OECD member countries as regional convention. Then in 1963, the International Atomic Energy Agency facilitated the adoption of the Vienna Convention on Civil Liability for Nuclear Damage, which is broader geographical scope. Existing nuclear liability regimes were revised after Chernobyl nuclear accident in the former USSR in the year 1986. The first modification surfaced with the drafting of Joint Protocol, 1988 relating to the application of the Vienna Convention and the Paris Convention, to provide a mechanism to link the two liability regimes. There are also amendments and revisions to the provisions of both the Paris and the Vienna Convention.

The most recent nuclear liability regime is the Convention on Supplementary Compensation for Nuclear Damage, 1997 (CSC). The CSC aims to emerge as global nuclear liability regime supported by the United States. CSC provides additional state funds in the event of a nuclear accident and to recognize the national nuclear liability legislation of certain

states as the basis for inclusion in the international nuclear liability regime. CSC came into force on 15 April 2015 after 90 days of its ratification by Japan on 15 Jan. 2015. India is a signatory of CSC and ratified it very recently on 04 Feb. 2016 and this ratification came into force after 90 days i.e. 04 May 2016, after the submission of instrument of ratification to the depository of the convention i.e. IAEA.

Principles of Nuclear Liability

- *Exclusive liability:* total liability is legally channeled to the operator of nuclear installation, to the exclusion of any other entity. The operator is only liable under these nuclear liability provisions and not under any other law or legal regime such as national tort law;
- *Strict liability:* the operator is strictly liable to pay compensation to the victims of nuclear damage irrespective of fault or negligence;
- *Liability is limited in amount:* the installation state sets minimum and maximum limits on the amount of the operator's liability;
- *Liability is limited in time:* claims must be brought within a defined period of time from the date of the nuclear accident and from the date on which the victim has, or should have had, knowledge of the damage;
- *Mandatory financial coverage:* operator must be required to maintain financial security to cover a specific amount of liability by the way of liability insurance or other forms; and
- *Non-discrimination:* states must not discriminate in the provision of compensation on the basis of nationality, domicile or place of residence, so that claimants, wherever they are located, can access the available compensation.

Concerns Regarding Nuclear Liability Regimes

One of the prime concerns regarding the nuclear liability regimes is whether the funds available for compensation to the victims of nuclear damage are sufficient or not? This debate is going on before the adoption of first nuclear liability regime till date. Nuclear accident is a low probability but very high damage event. It is very difficult to assess the real financial damage and the amount to compensation needed but even more difficult than this is to arrange huge funds to compensate the victims and insurance coverage.

In the negotiations to amend or adopt new protocols and conventions, representatives of the nuclear insurance market opined that some of the proposed provisions would be difficult to implement. There may not be sufficient market capacity to insure nuclear operators for enhanced liability limits at least for some countries, provided that insurance capacity varies

from country to country as a reflection both of national insurance markets and the available amount of re-insurance. There are also some concerns that coverage would not be available for the duration of 30 years as under the revised conventions in respect of personal injury. The one basic point for this concern is that many cancers resulting from exposures consequent upon a nuclear accident are likely to manifest themselves only decades after exposure to ionizing radiation. At a later stage, those cancers will likely be indistinguishable from those suffered naturally by the population.

Insurers have also pointed that coverage might not be available to secure all the additional heads of damage for which operators would be liable under the revised conventions. Specifically, they are concerned with the lack of a precise definition for “impairment of the environment” which is not defined either in terms of minimum levels of radioactivity or the effects of radioactive contamination. Insurers have taken the position that preventive measures would not necessarily be considered an insurable risk in many countries, even if the measures had been retroactively approved by the competent authorities. The condition that preventive measures be reasonable under the law of the competent court involves a measure of uncertainty and raises the possibility of speculative claims from people who might take any manner of preventive action that they think as reasonable.

The potential problem regarding onsite damage to property of the nuclear installation is also an area of concern. There is no right to compensation under the international conventions for damage to the nuclear installation itself or to any property on that same site which is used or to be used in connection with any such installation. The main point for this exclusion is to avoid the financial security maintained by the operator from being used to compensate damage to such property at the sake of compensation to victims of nuclear damage, as compensating victims is the prime concern.

The nuclear liability conventions are unclear on the question of how to deal with damage to the nuclear installation itself and on-site property. The provisions which channel liability for nuclear damage to the operator are silent on this issue. Thus it is not clear whether an operator has a right of action against a negligent supplier of goods, technology or services for damage incurred at its nuclear installation. On this issue, there are two contradictory views, on the one hand the overriding principle of the nuclear liability conventions is to channel liability exclusively to the operator, on-site damage to property should not be recoverable from any other entity but on the other hand, since the overriding purpose of the nuclear liability conventions is to compensate damage suffered by the third party victims, on-site

property damage should not fall within the scope of nuclear liability conventions and can be recovered under ordinary tort law principles.

This concern can be solved effectively by amending the text of the nuclear liability conventions to make the wording clear that operators of nuclear installations either do or do not have any such right or requires contracting parties to include a specific provision in their national legislations. While negotiating to adopt the Paris Protocol, states were asked by the representatives of nuclear industry to adopt the first view as it would lead to legal clarity but the states decline to do so for various reasons.

Liability for Environmental Damage

Insurers in all sectors including nuclear energy are reluctant to offer insurance for some aspects of environmental damage particularly biodiversity damage due to relatively little experience as how loss patterns might develop. In the nuclear liability conventions, extending the scope of nuclear damage to include damage to the environment is a material change from the original texts. Having no data for hazardous industries like nuclear setting a premium for an uncertain type of loss is very complex and thus insurers have been reluctant to go for this not clearly defined head of damage.

Terrorism and Nuclear Liability Insurance

Insurers of the nuclear industry have always had to reckon with the possibility that an accident could cause catastrophic damage. There has always been a latent threat of attacks by opponents of nuclear energy or anti state groups and in this respect the threat of terrorism cannot be considered to be a totally new phenomenon to insurance industry. What is new, or at least not thought of as a realistic scenario so far, is the risk of a simultaneous series of terrorist attacks on several nuclear installations resulting in a total loss under both material damage and liability cover. Due to the international pooling mechanism and depending on a number of targets attacked simultaneously, this could not only threaten the continuation of the pool or pools concerned but also of the entire insurance mechanism. This threat is enhanced by the fact that nuclear installations are considered to be ranked among possible targets of terrorism.

Conclusion

After the Chernobyl nuclear accident, the international nuclear community reacted immediately by linking two nuclear liability regimes i.e. the 1960 Paris Convention and the 1963 Vienna Convention through Joint Protocol with the hope of enhancing the situation of nuclear accident victims. That improvement will be brought about once all of the relevant international instruments have entered into force and have attracted a good number of states.

Comparatively more funds will be available to compensate more number of victims and that funds will be more readily and easily accessible. Moreover, the period in which claims for compensation can be made in respect of personal injury and loss of life has been increased, by recognizing the fact that some injuries may not manifest themselves for many years after the occurrence of nuclear accident.

But in spite of the efforts to make these new or amended conventions more attractive but their acceptance has not been widespread, at least not presently. This is specifically true in the case of the Vienna Protocol 1997 and the Convention on Supplementary Compensation where the required liability amounts and financial security limits were intentionally kept at low levels to be acceptable to the large number of potential member states. Some nuclear power generating states as well as some non-nuclear power generating states have indicated that they are unlikely to make a decision on joining one or more of the conventions until they have adopted or revised their national legislation on the issue.

There are some states which are not tempted or adhere to any convention on nuclear liability for a number of legal as well as political reasons. Some governments may simply take the view that these conventions are regional in scope or that their countries are geographically too remote for them to be of real advantage. This could well be correct in case of certain Asian countries who might wish to explore the idea of concluding bilateral or multilateral regional arrangements with their neighboring countries.

The international nuclear liability regimes are the result of negotiations between the states which utilize nuclear energy for peaceful purposes and those which do not, states which impose liability limits on their operators and those who do not, states which implement the principles of legal channeling of liability and those which do not, states which have thousands of units of installed nuclear capacity and those which have relatively low production, states which are primarily concerned with the nuclear accident during transport of nuclear substances and states which are major transporters of nuclear material.

It is very difficult to establish a global nuclear liability regime because international issue are difficult to negotiate due to contradictory interests of the states involved and moreover nuclear liability is a more complex issue. It's an emerging international regime emerged from 1960's. Continuous efforts by states are required to make improvements in the liability regimes with the passage of time and development and maturity in the field of nuclear energy production. Efforts are needed to attract as many states as possible to adhere to liability regime to make it a global nuclear liability regime.

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