Reassessing the nuclear liability regime

by Ha-Vinh Phuong

More than two decades after its establishment at the international level and the progressive adoption of its principles and rules by many countries around the world, the nuclear liability regime was thoroughly reviewed recently by nuclear plant operators, officials of regulatory authorities, and legal and insurance experts.

The setting was the Symposium on Nuclear Third Party Liability and Insurance, jointly organized by the IAEA and the OECD Nuclear Energy Agency (NEA), and held in September 1984 in Munich, Federal Republic of Germany. About 250 participants from 40 countries and various international organizations attended, addressing topics ranging from nuclear compensation levels to the scope and future of nuclear conventions.

The symposium greatly contributed to highlighting specific areas where adjustments or improvements would be needed in order to cope with practical problems encountered or emerging issues. By focusing on questions of legitimate concern to the public, it also sought to promote confidence in a compensation system for public protection that is in many ways unique.

Emphasis on greater harmonization

Within the ambit of the Paris Convention and the Brussels Supplementary Convention to which most European countries are parties, it was stressed that a speedy entry into force of the 1982 Protocols of Amendment would bring about greater harmonization of the compensation amounts for nuclear damage established in different countries. The variations noted in this respect may indeed affect the credibility of the nuclear liability regime.

Greater harmony in the territorial scope of the application of the Paris Convention also could be achieved by wider implementation of a recommendation of the NEA Steering Committee of 1971, providing for the inclusion of nuclear damage suffered in the territory of a contracting party but irrespective of where the accident occurred. This would contribute to dealing more equitably with the indemnification of victims.

Some countries have adopted a system of compensation out of public funds to cover nuclear damage for which indemnification would exceed the aggregate amount available under the Brussels Supplementary Convention, which is currently 120 million SDR, or approximately US $122 million, pending the entry into force of the 1982 Protocols of Amendment. This is the case of the Federal Republic of Germany, the Netherlands, and Sweden, where the maximum amount of the State's liability has been set at 1000 million Marks, 1000 million guilders, and 3000 million kroner per incident, respectively. These amounts include any compensation paid pursuant to the Paris and Brussels Conventions.

Concept of unlimited liability

In the case of Switzerland, which is not a party to these Conventions, the maximum compensation from public funds has been fixed at 1000 million Swiss francs, and this includes the yield from compulsory insurance up to 300 million Swiss francs. A notable feature of the Swiss law of 1983 on this subject was the introduction of the concept of *unlimited liability*.

This novel approach was advocated as possible – even under the existing conventions – in the light of economic and safety-related technical development of the peaceful uses of nuclear energy. Doubts were, however, expressed whether resorting to unlimited liability would lead to an effective increase in the financial security available and, also, whether it would be possible to couple the concept of *absolute liability* with that of unlimited liability, in view of the inevitable limitation of nuclear operators' resources. Moreover, the adoption of unlimited liability for nuclear damage might have an adverse impact on public opinion, as well as at the economic level.

Compensation claims

The time limitation for compensation claims as set out in both the Paris and Vienna Conventions is 10 years. Nonetheless, this period may be extended by national legislation, provided that the nuclear operator's liability is covered by insurance or other financial security over the extended period. A number of countries have thus opted for a longer period to take account of certain latent injuries. In the opinion of insurers, this optional system is flexible enough to enable law makers to depart from the reference period of 10 years, subject to the availability of public funds for compensation claims over any longer period.

In the United States, the time limitation is being proposed to be extended from 20 to 30 years. It was

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Nuclear liability and insurance: Background

Nuclear damage may result from an accident involving a nuclear installation or radioactive material during transport. To allay public concerns over financial protection of potential victims, liability to third parties for nuclear damage is regulated at the international level by two basic conventions adopted in the early 1960s.

These are (1) the Convention on Third Party Liability in the Field of Nuclear Energy of 29 July 1960 (the Paris Convention), for which the Organisation for Economic Co-operation and Development (OECD) is the depositary and which entered into force on 1 April 1968; and (2) the Vienna Convention on Civil Liability for Nuclear Damage of 21 May 1963, for which the IAEA is the depositary and which entered into force on 12 November 1977.

Both Conventions establish a special liability regime aimed at ensuring adequate compensation for damage that may arise from certain peaceful uses of nuclear energy. The regime is based on the following principles:

- Absolute and exclusive liability of the operator of the nuclear installation concerned
- Limitation of the operator's liability in amount and in time
- Obligation for the operator to cover his liability by insurance or other financial security
- Guarantee of State intervention to meet compensation claims exceeding the operator's financial security

Supplementary Conventions and Amendments

To establish a system of mutual financial assistance among the contracting parties, the Paris Convention was supplemented by the Brussels Supplementary Convention of 21 January 1963. Under this system, compensation for nuclear damage is to be provided in three stages: (1) by the operator of the nuclear installation concerned, up to the liability limit established by national legislation; (2) by the State where the nuclear installation is located; and (3) by the contracting parties on a collective basis.

The Brussels Supplementary Convention, for which the Belgium Government is the depositary, entered into force on 4 December 1974. Both it and the Paris Convention were first revised by the Additional Protocols of 28 January 1964 to be in harmony with the Vienna Convention, which is of worldwide application. The Paris and Brussels Conventions are limited in scope to Europe.*

Within the OECD framework, two further Protocols to amend the Paris and Brussels Conventions were adopted on 16 November 1982. These are not yet in force. The main amendments relate to the adoption of the Special Drawing Rights (SDR) of the International Monetary Fund as unit of account for the compensation amounts established by both Conventions; and the increase of the State compensation and of the aggregate compensation payable to third parties under the Brussels Supplementary Convention from 70 to 175 million SDR, and from 120 to 300 million SDR, respectively.

The field of transport

The Paris and Vienna Conventions do not affect the application of any existing international convention in the field of transport. Therefore, under certain circumstances, both the operator of a nuclear installation and the carrier may be held liable for nuclear damage that arises during international transport of nuclear materials. The ensuing cumulation of liabilities under the nuclear and transport conventions may thus cause serious problems in obtaining adequate insurance coverage for such transport.

The Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material, adopted in Brussels on 17 December 1971, seeks to solve this problem by exonerating any person, who might be held liable for nuclear damage under an international maritime convention or national law, from such liability where the operator of a nuclear installation is liable.

This Convention, for which the International Maritime Organization is the depositary, entered into force on 15 July 1975.*

Nuclear insurance

In the establishment of this special liability regime through international co-operation, insurers were associated from the outset and their views and experience taken into account. This was aimed at ensuring that the liability amounts to be imposed by law upon nuclear operators could be matched by the insurance markets.

Over the past 25 years, the demands on insurers for the provision of coverage against nuclear risks have grown considerably. However, as a result of the collective efforts of national insurance pools and re-insurance among them, nuclear insurance is currently available in many countries. Through such an international pooling system, insurance against material damage and liability risks is now available in some 24 countries.

The capacity of each market varies greatly, but together the insurance pools can provide upwards of US $160 million worth of capacity. This is well beyond the limitations by law of the liability of nuclear operators in most countries, except in a few such as the Federal Republic of Germany, Switzerland, and the United States. In their cases, the margin between the commercially insurable amounts and the liability limits established by law is to be covered from public funds or by a combination of public funds and contributions from the nuclear industry.

In the United States, however, the Government's indemnity was terminated in November 1982, when the liability limit of US $560 million (established by the 1957 Price-Anderson Act) was matched by a combination of the insurance market capacity (US $160 million) and retrospective premiums required, at the rate of US $5 million per reactor, from the owners of 80 nuclear power plants then operating (a total of US $400 million). Under this system, the maximum compensation available will thus automatically increase as more nuclear power reactors are licensed to operate.

* The contracting parties to the Paris Convention are Belgium, Denmark, Finland, France, Federal Republic of Germany, Greece, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Turkey, and the United Kingdom; to the Brussels Supplementary Convention: Denmark, Finland, France, Federal Republic of Germany, Italy, the Netherlands, Norway, Spain, Sweden, and the United Kingdom; and to the Vienna Convention: Argentina, Bolivia, Cameroon, Cuba, Egypt, Niger, Peru, Philippines, Trinidad and Tobago, and Yugoslavia.

* The contracting parties are Argentina, Denmark, France, Federal Republic of Germany, Italy, Liberia, Norway, Spain, Sweden, and Yemen Arab Republic.

also reported that there has been no satisfactory resolution to the problem of proving causation, which is inherent in claims for injuries from occupational radiation exposure. Court decisions have failed to establish a rational basis for determining eligibility for compensation in such cases. Thus, on the complex and controversial question of the causality link, no consensus as yet has emerged to offer guidance for dealing with deferred radiation damages.

Concept of nuclear damage

Related to the concept of nuclear damage embodied in existing conventions, it was questioned, *inter alia*, whether the operator's liability might include the costs of emergency measures taken to prevent or minimize the consequences of a nuclear accident. Conversely, it was pointed out that such an extension of the concept would directly affect the order of priority of compensation claims and, consequently, the distribution of compensation. It also appears doubtful whether a nuclear accident directly attributable to acts of terrorism might constitute a case exonerating the nuclear operator from liability, since the conventions do not expressly provide for such an exemption.

Future of conventions

Several reports focused on liability in connection with the decommissioning of nuclear installations and the disposal of radioactive waste. These called attention to the need for further studies and international action to cope with special problems at the back-end of the nuclear fuel cycle, either through a broader reading of the existing conventions or by means of additional legal instruments.

In a survey of the status and prospects of the Vienna Convention, it was stressed that the Convention merely sets out *minimum standards* for financial protection against damage that might result from certain peaceful uses of nuclear energy and that, as such, it provides a broad framework with sufficient flexibility to facilitate co-operation between countries in different stages of nuclear development. Though the Convention may have to be updated with respect to some of its provisions – in particular, regarding the unit of account used in determining the minimum amount of the operator's liability – there was a consensus among contracting parties to defer a revision pending further acceptances.

Insurance coverage

Reports from insurers at the symposium confirmed that through international co-operation the pools were able to meet increasing demands for coverage against nuclear risks. In their view, a prerequisite for such contribution to the peaceful uses of nuclear energy is the stabilization of the liability and coverage concepts. In this connection, the 27-year experience of nuclear insurance in the United States was referred to as noteworthy, in regard to the paucity of incidents involving liability to the public. The Three Mile Island accident has been a unique event – and its most significant feature was damage to the reactor and not to the public.