

# NUCLEAR LAW Bulletin

number 5

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European Nuclear Energy Agency

Organisation for Economic Co-operation and Development



### FOREWORD

With this issue, the Nuclear Law Bulletin enters into its third year of existence, and the attention it has received since its creation encourages us to continue with this formula.

From now onwards, the Bulletin, which is sold on annual subscription, benefits from the assistance of an enlarged network of correspondents, who not only cover the OECD countries, but also other countries in Africa, Latin America, etc... We should like to thank the many lawyers for their kind and able collaboration to this publication.

The Nuclear Law Bulletin will endeavour in future to provide more details on the progress in nuclear law and also to increase its range of information.

As from this, the fifth issue, a new chapter will be devoted to the publication of monographs on certain important aspects of nuclear law, and there will be contributed articles where legal problems concerning nuclear energy will be discussed, and points of doctrine explained.

Readers are of course invited to make any suggestions for further improving the contents and layout of the Bulletin.



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# LEGISLATIVE AND REGULATORY ACTIVITIES

## • *Australia*

### RADIATION PROTECTION

The General Post Office Guide published by the Australian Postmaster General's Department ( No. 46, 1969) lists various articles which are generally prohibited from transmission by post within Australia or its territories and these include radioactive materials whether in solid, liquid or gaseous form. Transmission by post, however, of certain radioactive materials may be approved if this is in accordance with the conditions prescribed by the Postmaster General's Department. These conditions have recently been published and include, inter alia, provisions relating to certification, packing requirements, labelling, mass and activity limits for the material and contamination limits.

## • *Brazil*

### NUCLEAR LEGISLATION

Nuclear energy legislation in Brazil mainly includes texts on the regime for prospecting and exploiting mines, as well as the conditions for utilization of X-rays and radioactive substances.

There is no special Act on nuclear third party liability at present in Brazil.

At institutional level, the National Research Council was set up under Act No. 1310 of 15th January 1951 (Official Gazette of 16th January 1951), then the Institute for Atomic Energy was created by Decree No.39-872 of 31st August 1956 (Official Gazette of 31st August 1956), and subsequently the National Commission for Nuclear Energy was established by Decree No. 40-110 of 10th October 1956 (Official Gazette of 10th October 1956).

The Commission was reorganised within the framework of Act No. 4118 of 27th August 1962, which laid down a national nuclear energy policy (Official Gazette of 19th September 1962). This Act was enforced by Decree No. 51.726 of 19th February 1963 (Official Gazette of 21st February 1963). Several subsidiary bodies, concerned in particular with mining activities, were set up later, under the supervision of the Commission.

The most recent regulatory provision related to nuclear energy is Decree-Law No. 764 of 15th August 1969 (Official Gazettes of 15th August 1969 and 20th August 1969) authorizing the establishment of a Company for prospecting of mining resources, including radioactive ores; the Chairman of the National Commission for Nuclear Energy is on the Board of Directors of the Company.

## • *Canada*

### THIRD PARTY LIABILITY

1. There is at present in Canada no special legislation on third party liability in the field of nuclear energy. What provisions do exist are contained in an Order of the Committee of the Privy Council approved by the Governor General on 26th April 1960 and justified by the development of the nuclear activities of "Atomic Energy Canada Limited" (AECL).

Since then, the need for comprehensive legislation in this field has been felt and a Bill on nuclear third party liability was given a first reading by the Canadian Parliament at the end of 1969. Such future legislation will apply equally to insuring nuclear plant other than that of AECL.

The Bill is divided into three parts. After a section containing definitions, as is customary in the legislation of the English-speaking countries, the first part is concerned with the regime governing the liability of the nuclear operator, and with provisions regarding insurance for nuclear damage. The second part, which deals with special measures relating to compensation, first explains the conditions of State financial intervention and then defines measures for provisional financial assistance. The third part determines the scope of the legislation and contains the usual general provisions.

2. The beginning of the Bill, dealing with interpretation, gives a definition of specific terms used in the body of the Bill and also defines the competent bodies or agencies. A nuclear operator is defined as the holder of a licence issued pursuant to the Atomic Energy Control Act for the operation of a nuclear installation (Section 2).

3. Under the Bill, a nuclear operator in Canada is absolutely and solely liable, except when he is jointly and severally liable for the same incident with other operators, for any breach of the duty placed upon him to secure that no injury to any other person or damage to property is occasioned by nuclear material of which he is deemed under the Bill to be the holder, sender or consignee. Exoneration from liability is provided for, as usual, in the case of acts of armed conflict or intentional damage. The operator is not responsible for damage to the installation itself or to the means of transport. The limitation periods for actions for damages are those adopted in most nuclear legislations, viz. either three years

from the date when the damage became known or ten years from the date of the incident, respectively. Finally, the provisions dealing with the courts of competent jurisdiction state that an action must in principle be brought before the court of the place where the nuclear injury or damage occurred or, failing that, the court of the place where the installation is situated (Sections 3 to 14).

4. The operator must, with respect to each nuclear installation, and not each incident, provide financial security which must consist of basic insurance, in an amount prescribed by the Atomic Energy Control Board not exceeding Can.\$ 75 million (which is about 70 million EMA u/a), and of supplementary insurance, in an amount equal to the difference, if any, between the amount of the basic insurance and the ceiling of Can.\$75 million. The Government has power to reinsure the amount covered by the supplementary insurance; in such event any payments are to be made out of a special account in the Consolidated Revenue Fund called the Nuclear Liability Reinsurance Account (Sections 15 to 17). It should be noted that the figure of Can.\$75 million given in the Bill corresponds roughly to the maximum total of private insurance policies demanded in the United States of a nuclear operator. It would seem that the advantage of this system of graduated financial security lies in the fact that it allows the authorities to equate the financial burden of basic insurance to be taken out by each operator with the extent of the risk entailed by his installation.

5. There are detailed provisions covering special measures in regard to compensation which the Government may take in the event of specific situations arising. In this respect, it is essential to distinguish between Government financial assistance to supplement compensation paid by the nuclear operator, and emergency measures. When the nuclear operator's liability seems likely to exceed the maximum of Can.\$75 million or when public interest demands it, the Governor in Council issues a proclamation introducing special measures in regard to compensation. This proclamation has the immediate effect of relieving the nuclear operator of his liability towards victims; he nevertheless is liable to the Government for the amount of compensation awarded by it, within the limits of his financial security. In such event the Governor in Council is also required to set up a Nuclear Damage Claims Commission, which is responsible for dealing with all claims arising from the nuclear incident. This Commission consists of members of the judiciary, and has power to adjudicate on claims for compensation brought before it; its decisions are final and may take the form of compensation orders which are sent to the competent Minister for implementation. Payments from the special account mentioned above are made in accordance with the special regulations drawn up for this purpose by the Governor in Council (Sections 18 to 30). Measures for providing interim financial assistance may also be taken, when necessary, by the Governor in Council. Payments made in this latter context are also made from the special Nuclear Liability Reinsurance Account. The total paid out both in the form of State financial intervention and by way of interim financial assistance cannot, without special authority from Parliament exceed the ceiling of Can.\$75 million (Sections 31 and 32).

6. The provisions regarding this Bill's scope of territorial application exempt the nuclear operator from liability for any damage to persons or property that he may cause outside Canada. However, the Governor in Council may make rules to the contrary, in respect of any countries entering into reciprocal arrangements. These provisions may, in particular, modify the provisions in the Bill relating to the competent court for hearing claims (Sections 33 and 34).



7. The Canadian Bill, while having a more limited objective, is on some points fairly close to the United Kingdom Nuclear Installations Act, which came into force in 1965. Despite the fact that Canada is not a Signatory to any convention on nuclear third party liability, the principles laid down by these Conventions have undoubtedly influenced Canadian legislation. It should be pointed out that the ceiling of Can.\$75 million set for the liability of the nuclear operator is much higher than that specified in the Paris and Vienna Conventions, doubtless in order to provide a rate of private financial cover comparable to that of United States' operators, although the total amount of compensation that may be awarded is lower than the ceiling of 120 million EMA u/a provided for in the Brussels Supplementary Convention. The importance of the duties entrusted to the Nuclear Damage Claims Commission should be emphasized, since this body has scarcely any counterpart in nuclear legislation elsewhere.

Finally, special mention should be made of the original nature of the method whereby the liable operator's obligations in terms of compensation payable are limited financially, without there being an official limitation of liability.

#### CARRIAGE OF RADIOACTIVE MATERIALS

The publication of the 8th Amendment to the Canadian Transport Commission "Regulations for the Transportation of Dangerous Commodities by Rail", effective 30th November 1969, has completed the revision of all Canadian modal regulations for the transportation of radioactive materials in general conformance with the International Atomic Energy Agency (IAEA) Safety Series No. 6, "Regulations for the Safe Transport of Radioactive Materials, 1967 Edition". Although no detailed regulations have yet been promulgated for road transport, the rail regulations are applied to this mode through the Atomic Energy Control Board's Shipping Containers Order 1/200/63. For air transport, the Air Regulations, Section 800, and Information Circular 0/22/64 refer to the International Air Transport Association Restricted Articles Regulations and to the Official Air Transport Restricted Articles Tariff as published in the United States. For marine transport the IAEA Regulations are applied pending the formal adoption of the IMCO International Maritime Dangerous Goods Code, Class 7, Radioactive Substances.

The Atomic Energy Control Board continues to serve as the technical adviser to the Canadian modal regulatory authorities and as the acting competent authority for road transport.

### • *Denmark*

#### THIRD PARTY LIABILITY

The Bill on nuclear installations which has been in preparation for several years will probably not be submitted to Parliament (Folketing) for scrutiny before October 1970. It should be recalled that ratification by Denmark of the Paris Convention and the Brussels Supplementary Convention is subject to this Act being voted. The possible explanation for the relative delay in the adoption of this new Act is the fact that nuclear third party liability problems in Denmark are not considered urgent ones, as the only nuclear installation in operation is owned by the State.

## • *France*

### THIRD PARTY LIABILITY

Decree No. 69-690 of 19th June 1969 (Official Gazette of the French Republic of 22nd June 1969)

This Decree was laid down pursuant to Section 22 of Act No. 65-956 of 12th November 1965 on third party liability of operators of nuclear ships, amended by Act No. 68-1045 of 29th November 1968 (see Bulletin No.3).

Section 22 of the 1965 Act provides that any foreign nuclear ship may be refused the right of entry into French territorial waters, inland waterways and ports, if the operator of such a ship and the flag State expressly refuse to furnish cover which is at least equal to that provided by the present Act (a minimum of 500 million francs per nuclear incident). Consequently, the present Decree submits the rights of entry of a foreign nuclear ship into territorial or inland waters and ports, to an authorization from the competent authorities. The flag State must obtain an authorization from the Ministry for Foreign Affairs, and also provide the necessary information on the nature and the amount of cover furnished by that State and the operator of the nuclear ship for compensating damage caused by a possible nuclear incident. This cover forms the subject of an agreement between the interested Governments.

This Decree has been adopted within the perspective of negotiations between the United States and French Governments in respect of the procedure for the admission of the N/S Savannah into French waters and ports. However, until now, no agreement has been concluded on the provision of cover for compensation for nuclear damage, between the French Government and any other foreign government.

## • *Greece*

### THIRD PARTY LIABILITY

Decree-Law No. 336 (Official Gazette No. 269/A of 16th December 1969)

By this Decree, the Greek Government decided the ratification of the Paris Convention on Third Party Liability in the Field of Nuclear Energy signed on 29th July 1960, as well as its Additional Protocol signed on 28th January 1964. This ratification has not yet come into effect however, because this depends on the deposit of the instruments of ratification with the Secretary-General of the OECD, who is the official trustee, designated by the Convention. Deposit of these instruments of ratification would bring the number of ratifications to the Convention up to seven. Until now, the Convention has been ratified by Belgium, France, Spain, Sweden, Turkey and the United Kingdom.

## • *Ireland*

### ORGANISATION AND FRAMEWORK

A Bill on the setting up of an Irish Atomic Energy Commission is currently being drafted. This body will be charged with advising the Government on all questions related to nuclear energy. Its duties will also include the supply of radioactive materials and nuclear fuels, as well as the study of safety measures for the utilization of such substances and the operation of nuclear reactors.

## • *Italy*

### GENERAL REGIME

Act of 19th December 1969, No. 1008, to Amend the Act of 31st December 1962, No. 1860 on the Peaceful Uses of Nuclear Energy

The fourth issue of the Nuclear Law Bulletin gave the text of a Bill amending the Act of 31st December 1962, No. 1860, on the peaceful uses of nuclear energy. Under this Bill, certain exemptions may be made to the requirements of the general regime on declarations and authorizations prescribed by the Act of 31st December 1962, in respect of the possession, trade in, and transport of small quantities of special fissionable materials, source material and other radioactive materials, by Decree of the Minister for Industry, Commerce and Handicrafts in agreement with the Minister for Health after consultation with the CNEN (Comitato Nazionale per l'Energia Nucleare).

This Act has now been approved by the Chamber of Deputies and the Senate, and promulgated by the President of the Republic. It has appeared in the Official Gazette of the Italian Republic, No. 4, of 7th January 1970.

### RADIATION PROTECTION

Draft Decree in Pursuance of Section 1 of the Decree of the President of the Republic, No. 185, of 13th February 1964, on Radiation Protection

In accordance with the Decree of the President of the Republic, No. 185 of 13th February 1964, activities concerning the possession, storage, production, utilization, handling, processing and disposal of natural or artificial radioactive substances, must be carried out in a manner to ensure, as efficiently as possible, the safety of the installations, and the protection of workers and the population against the hazards of ionizing radiation.

Section 1 of this Decree grants the Government the powers necessary to determine, within the framework of this text, the specific quantities of radioactivity, the specific activity or the concentration

and intensity of exposure doses involved in such activities, account being taken of the technical progress and the values determined by the competent international organisations.

The draft decree of the President of the Republic which is being published in the Official Gazette, results from a proposal by the President of the Council of Ministers, drafted in agreement with the Ministers for Industry, Commerce and Handicrafts, Labour and National Insurance, the Merchant Navy, and Health, after consultation with the CNEN and the Interministerial Council for Co-ordination and Consultation.

Under Section 1 of the draft decree, activities which require the utilization of radioactive nuclides whose total quantity of radioactivity is equal to or exceeds certain values are governed by the provisions of the 1964 Decree (0.1, 1, 10 or 100 microcuries respectively, according to the group of radionuclides).

Also, the draft decree sets the thresholds of specific activity or concentration for radioactive substances, the weight for natural uranium, thorium and depleted uranium, or the intensity of the exposure dose for devices containing radioactive substances.

In addition, Section 4 of the draft submits to the provisions of the 1964 Decree, activities which require radioactive substances, for medical, veterinary or agricultural uses, and the activities which require the addition of radioactive substances in consumer goods (foodstuffs, or household products, pharmaceuticals, cosmetics, paint, luminescent objects, toys etc.) even when the total quantity of radioactivity, the specific activity, the concentration or the weight are lower than the values set by Section 1.

Section 5 also brings within the scope of application of the 1964 Decree, several mining activities, when certain values are met or exceeded (uranium and thorium content in the ore, mean concentration of radioactive substances in the air inhaled by the workers, mean intensity of exposure dose in the atmosphere of the place of work....).

Finally, Section 6 lists the radionuclides which do not fall within the scope of the 1964 Decree.

## • *Netherlands*

### GENERAL REGIME

#### Regulations in Pursuance of the Nuclear Energy Act of 21st February 1963

The Nuclear Energy Act of 21st February 1963 [Bulletin of Acts, Orders and Decrees, No. 82, 1963] came into force in its entirety on 1st January 1970. Several regulatory provisions to define and supplement the Act were laid down simultaneously and published. Since the Nuclear Law Bulletin No. 4 was issued listing the first texts, the following Orders have been published:

- Order of 8th October 1969 implementing Sections 13 and 14 of the Nuclear Energy Act (Fissionable Materials and Ores Registration Order) [Stb\* 1969, 471].
- Order of 16th October 1969, implementing Sections 27 and 58 of the Nuclear Energy Act (Radioactive Materials Registration and Costs of Food Inspection Services Order) [Stb 1969, 472].
- Order of 13th October 1969 implementing Section 56 of the Nuclear Energy Act (Appeals Order, referred to in the Act) [Stb 1969, 473].
- Order of 22nd October 1969 implementing Section 58 of the Nuclear Energy Act (Duties of Officials in the Food Inspection Services Order) [Stb 1968, 474].
- Order of 16th October 1969 implementing Section 74 of the Nuclear Energy Act (Operators' Contributions towards Expenses Order, referred to in the Act) [Stb 1969, 475].
- Order of 20th October 1969 implementing Sections 14, 21, 28, 32, 34 and 75 of the Nuclear Energy Act (National Defence Exemption Order) [Stb 1969, 476].
- Order of 12th November 1969 implementing Sections 21, 29, 32, 34, 73, 74 and 89 of the Nuclear Energy Act (Order on the Entry into Force of the Nuclear Energy Act) [Stb 1969, 514].

Also, several regulatory texts have been issued in the Netherlands by the Ministry for Economic Affairs and the Ministry for Social Affairs and Public Health, to supplement certain Orders relating to the Nuclear Energy Act:

Ministry for Social Affairs and Public Health

- Classification of radiotoxicity 1969 [Stc\*\* No. 234 of 2nd December 1969] (in pursuance of Section 6 of the Order on Radioactive Materials [Stb 1969, 404]).
- Biological efficiency of the radiation dose absorbed [Stc No. 234 of 2nd December 1969] (in pursuance of Section 2 of the Order on Definitions [Stb 1969, 358]).
- Control over the observance of the Nuclear Energy Act [Stc No. 239 of 9th December 1969] (in pursuance of Section 58 of this Act [Stb 1963, 82]).
- Establishment of a register for radioactive materials [Stc No. 240 of 10th December 1969] (in pursuance of Section 27 of the Nuclear Energy Act [Stb 1963, 82] and of Section 2 of the Order on the Registration of Radioactive Materials [Stb 1969, 472]).
- Designation of the first offices as provided by the Nuclear Energy Act [Stc No. 240 of 10th December 1969] (in pursuance of Sections 26 and 29 of the Order on the Transport of Fissionable Materials, Ores and Radioactive Materials [Stb 1969, 405]).

\* Stb. Staatsblad: Bulletin of Acts, Orders and Decrees.

\*\* Stc. : Staatscourant.

- Declaration of devices referred to in the Nuclear Energy Act (in pursuance of Section 28 of the Order on Devices [Stb 1969, 406]).

Ministry for Economic Affairs and Ministry for Social Affairs and Public Health

- Designation of countries as provided by the Nuclear Energy Act [Stc No. 240 of 10th December 1969] (in pursuance of the Order on the Transport of Fissionable Materials, Ores and Radioactive Materials [Stb 1969, 405]).

Ministry for Economic Affairs

- Declaration of fissionable materials and ores [Stc No. 240 of 10th December 1969] (in pursuance of Section 10 of the Order on the Registration of Fissionable Materials and Ores [Stb 1969, 471]).

Analyses or in extenso translations of the different texts will be published in the forthcoming issues of the Bulletin.

THIRD PARTY LIABILITY

Act of 8th October 1969 [Bulletin of Acts, Orders and Decrees No. 453, of 1969]

A General Administrative Order, dated 11th September 1968, in accordance with the Nuclear Energy Act of 27th October 1965, has extended the scope of third party liability of operators of nuclear installations in the Netherlands to damage which may be suffered on the territories of Belgium, France, the Federal Republic of Germany and Luxembourg [see Nuclear Law Bulletin No. 3, page 9].

The provisions in this Order have been included recently in the Act of 8th October 1969, which has also been laid down pursuant to the Act of ~~27th~~ 27th October 1965 (Section 4(4)). Consequently, the Order of 11th September 1968 has now been repealed.

• *United Kingdom*

ORGANISATION AND STRUCTURE

Atomic Energy Authority Bill

This Bill has been introduced into Parliament and is expected to become law by the end of the summer. It is part of the Government's plans to reorganise the UKAEA and implement the second stage of this reorganisation. The first stage, now complete, was the formation of two companies to design and construct reactors in the place of the three existing groups.

The Bill makes provision for the transfer, on a day to be appointed by the Minister, to two new companies to be set up by the Minister and the UKAEA for the purpose, of substantial parts of the undertaking of the UKAEA. In effect, there will be transferred to British Nuclear Fuels Limited the whole of the UKAEA's existing nuclear fuel business. In this transfer

there would be included Springfields and Windscale and the establishments at Capenhurst, Chapelcross and Drigg (a waste disposal site). The UKAEA's radiochemical business carried on at the radiochemical centre at Amersham and at Harwell will be transferred to the Radiochemical Centre Limited. Included in these transfers will be the property, rights, liabilities and obligations of the UKAEA in relation to the transferred undertakings.

As consideration for these transfers, the Bill provides for shares in the two new companies to be issued to the UKAEA but the Minister of Technology may by Order transfer to himself from the UKAEA any or all of such shares. The shares held by the UKAEA and the Minister shall be such as to ensure that the Minister and the UKAEA between them retain control of the new companies.

Government loans may be made to the new nuclear companies in addition to the initial capital subscribed by the State and the total amount of Government loans and share capital subscribed by the Minister and the UKAEA shall not exceed £70 million in the case of the Nuclear Fuels Company or £5 million in the case of the Radiochemical Company (these sums may be increased to £100 million and £7 million respectively by Order). The accounts of the new companies have to be laid before Parliament annually.

There are also certain miscellaneous and supplementary provisions, including an amendment to the Nuclear Installations Act 1965 in connection with permits for the extraction of plutonium or the enrichment of nuclear fuel.

When this Bill becomes law in due course it is intended to publish the text of it in a future issue of the Nuclear Law Bulletin.

#### RADIATION PROTECTION

The Radioactive Substances Act 1948 Appropriate Minister Designation (No. 3) Order 1969 /SI 1969 No. 1495/

This Order designates the Secretary of State for Employment and Productivity as the appropriate Minister for making safety regulations under the Radioactive Substances Act 1948 for shops in which irradiating apparatus is used for making examinations for the purposes of fitting persons with footwear.

#### • *United States*

#### RADIATION PROTECTION

The United States Department of Health, Education and Welfare, after reviewing the comments received in response to the notice on the Federal Register of 16th October 1969, on proposed performance standards for television receivers under the provisions of Section 358 of the Radiation Control for Health and Safety Act of 1968, has issued revised performance standards that are to be applicable to all television sets manufactured after 15th January 1970. These revised standards were published in the Federal Register of 25th December 1969 and lay down, inter alia, that the emission of X-radiation from television receivers shall not exceed a radiation exposure rate of 0.5 milliroentgens per hour at a distance of 5 centimetres from any point on the external surface.

## PROTECTION OF THE ENVIRONMENT

An Act entitled "National Environmental Policy Act of 1969" has been passed and came into effect on 1st January 1970. The purposes of this Act were to encourage productive and enjoyable harmony between man and his environment; to promote the prevention or elimination of damage to the environment and biosphere and the stimulation of the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the nation; and to establish a Council on Environmental Quality.

This Act does not deal directly or explicitly with questions concerning nuclear or other power generating facilities and how it may affect current or future nuclear power programmes in the United States is a matter which will be receiving careful consideration.



# CASE LAW AND ADMINISTRATIVE DECISIONS

## CASE LAW

- *United States*

In an en banc decision, the United States Court of Appeals for the District of Columbia Circuit affirmed the Commission's determination that nuclear power reactors which will produce electricity for sale are licensable for construction by the AEC as developmental facilities under Section 104(b) of the Atomic Energy Act until the Commission has determined the "practical value" of the types of facilities involved pursuant to Section 102 of the Act. The Court also held that the Commission is without authority to consider anticipatory antitrust factors in a Section 104(b) licensing proceeding, in which the issues for consideration concern only radiological safety and national security. The decision rejected the contentions of various municipal electric utilities that the reactors involved were not licensable under Section 104(b) but licensable only under Section 103 as "commercial" facilities (consideration of antitrust matters is within the Commission's Section 103 licensing jurisdiction), and that, in any event, the Commission must consider antitrust contentions in a Section 104(b) licensing proceeding. Cities of Statesville v. Atomic Energy Commission (No. 21,706); and Power Planning Committee v. Atomic Energy Commission (No. 21,844) (decided 5th December 1969).

# INTERNATIONAL ORGANISATIONS AND AGREEMENTS

## INTERNATIONAL ORGANISATIONS

### ● *International Atomic Energy Agency*

#### REVIEW OF ARTICLE VI OF THE STATUTE

The Ad Hoc Committee of the Board of Governors held a series of meetings on 10th December 1969 and 19th and 20th February 1970 to consider the matter further. At the February meetings the Committee had before it a number of different proposals relating to the amendment of Article VI: proposals were put forward by Belgium, the Democratic Republic of the Congo, Mexico, Nigeria and Pakistan, respectively; a joint proposal was made by the Lebanon and the United Arab Republic; another proposal was presented by a group of seven Member States; finally, there was a proposal sponsored by twenty-three Member States.

At the conclusion of the meetings, it appeared that further consultations will be necessary in order to arrive at an acceptable draft amendment and the Committee is to be reconvened should a more broadly supported proposal be forthcoming.

#### SEMINAR ON THE DEVELOPMENT OF NUCLEAR LAW

The experience and recent trends in the development of nuclear law were reviewed at a seminar convened in Bangkok from 6th to 11th April, at the invitation of the Government of Thailand. The meeting was attended by eighteen experts and observers nominated by eleven Member States in South and South East Asia, the Pacific and the Far East. Reports were presented by the participants, invited experts from the European Nuclear Energy Agency

and the United States Atomic Energy Commission as well as by members of the IAEA Secretariat on the current status of nuclear legislation in Asian countries, the basic legal requirements for nuclear activities, the licensing of nuclear installations, the international supply of nuclear materials, the harmonization of nuclear and maritime conventions in connection with the maritime carriage of nuclear substances, and legal arrangements for visits by nuclear ships and for co-operative research and development projects in the field of atomic energy. The papers presented at the seminar will be published in the Agency's Legal Series in the course of this year.

#### TRANSPORT OF RADIOACTIVE MATERIALS

From 2nd-13th February 1970 a panel of thirty-five experts from thirteen Member States and eleven experts from eight international organisations met in Vienna to review the Agency's Regulations for the Safe Transport of Radioactive Materials. This is the second comprehensive review of the Regulations, which were first issued in 1961.

The overall aim of the panel was to improve, where necessary, the practicability, clarity and conciseness of the Regulations so as to facilitate their adoption and implementation, while at the same time maintaining an adequate standard of safety.

The panel discussions were based on: general comments and detailed proposals for amendment from twenty-two Member States and nine international organisations; a report of a small panel of specialists which met in Vienna in December 1969 to review, in the light of those comments, the provisions dealing with criticality control in the transport of fissile materials; and the report of the Radioactive Transport Study Group, an informal meeting of representatives of the competent authorities of a number of countries, which met in Vienna in January 1970 to review the administrative requirements.

Although a considerable number of changes have been proposed, there has been no proposal to change the basic requirement that radioactive and fissile materials should be so packaged that they can be handled by carriers in the same manner as any other conventional, potentially dangerous goods.

The draft text resulting from the panel meeting will be reviewed by panel members prior to its submission to all Member States and competent international organisations for comments. It is anticipated that a second meeting of the panel will be required in mid-1971 to review further comments and prepare a final draft text for submission to the Board of Governors for approval and subsequent publication in 1972.

#### SAFEGUARDS AGREEMENTS

On 25th February 1970 the Board of Governors approved a trilateral agreement for the implementation of safeguards provisions by the Agency in relation to the bilateral agreement for co-operation in the peaceful uses of atomic energy which India and the United States signed on 8th August 1963. The trilateral agreement relates to the nuclear plant at Tarapur, which comprises two reactors with a total output of 380 MW(e). The station, largest in Asia, has been in operation since October 1969 and provides power to the States of Gujarat and Maharashtra.

## NON-PROLIFERATION TREATY

The Treaty on the Non-Proliferation of Nuclear Weapons entered into force on 5th March 1970 when the necessary number of ratifications was obtained (i.e. forty non-nuclear weapon States and three depository governments: the United Kingdom, the United States and the USSR). Both the United States and the USSR, as well as five other Signatory States, deposited their instruments of ratification on that date. The United Kingdom had ratified the Treaty previously (on 27th November 1968) as had forty-one non-nuclear weapon States, thus bringing the total number of ratifications to forty-nine on 5th March 1970. Each non-nuclear weapon State, which was a party to the Treaty on its original entry into force, will thereupon be under the obligation to start negotiations within 180 days thereafter for the conclusion of a safeguards agreement with the Agency, in the manner provided for in Article III of the Treaty for the exclusive purpose of verification of the fulfilment of obligations assumed under the Treaty, with a view to preventing the diversion of nuclear materials from peaceful uses.

Much study and thought has recently been devoted to the content of the requisite agreements and to various technical considerations relevant to the evolution of safeguards procedures appropriate to the new requirements. The Board of Governors held a special session on 1st April 1970 to consider the Agency's safeguards responsibilities in the light of the Non-Proliferation Treaty and agreed to establish a committee for this purpose, it being understood that any Member State may be represented on it. Work is now underway in preparation for the first series of meetings due to begin on or about 12th June 1970.

## ● *European Nuclear Energy Agency*

### THIRD PARTY LIABILITY

1. Since the international Symposium, organised jointly by ENEA and IAEA and held in Monaco in October 1968, on third party liability and insurance in the field of maritime carriage of nuclear substances, further studies have been pursued in active co-operation with the other organisations concerned, namely, IAEA, IMCO and CMI.
2. Two meetings have been held (in November 1969 and March 1970) by the International Sub-Committee of CMI on Sea Carriage of Nuclear Substances which was set up to study these problems, and representatives of ENEA, IAEA and IMCO have taken part in the discussions. In addition, the Legal Committee of IMCO, in a meeting which took place in January 1970 and at which ENEA and IAEA were represented, has decided to consider the problems of maritime carriage of nuclear substances during the year 1970.
3. The main question has been that of finding the best possible means of overcoming the difficulties caused by the simultaneous application of the Paris Convention (or the Vienna Convention) and the various relevant international maritime conventions, the application of which was expressly stated not to be affected by the Paris (or Vienna) Conventions. <sup>See</sup> Article 6(b) of the Paris Convention and Article II.5 of the Vienna Convention.

4. The nuclear conventions provide for the channelling of liability on to one single person (the operator of the installation concerned) but the effect of the maritime conventions is to impose liability on the carrier, shipowner or some other person concerned with the maritime carriage. The existence therefore of the possibility of a carrier being held liable in this way for damage caused by nuclear substances which he was carrying, notwithstanding that the nuclear operator is made solely responsible under the nuclear conventions, has led to difficulties for nuclear operators who wished to have their nuclear substances transported by ship, as the carrier has demanded an unlimited indemnity against his possible liability under the maritime conventions. As such an indemnity could not normally be covered by insurance it has usually been given by governments, although reluctantly.

5. In order to alleviate the difficulties, two possible alternative solutions have been proposed, namely, the amendment of the international maritime conventions themselves so as to exclude damage caused by nuclear substances in the course of maritime transport from the carrier's liability, when liability falls on the nuclear operator, and the drafting of a short new maritime convention to be signed by the parties to the maritime conventions which would have the same effect.

6. It is hoped that, as a result of these useful discussions among interested organisations and governments, a suitable solution may soon be found which could then be put before the competent bodies and, in particular, the ENEA Group of Governmental Experts on Third Party Liability at their next meeting towards the end of 1970, with a view eventually to a recommendation being made to governments for the appropriate action in due course.

# STUDIES AND ARTICLES

## STUDIES

### THE FIELD OF APPLICATION OF THE NUCLEAR CONVENTIONS<sup>(1)</sup>

1. The geographical scope of the conventions covers, naturally, the territories of the Contracting Parties themselves<sup>(2)</sup>, and this is also understood to include their territorial waters.<sup>(3)</sup> It is also recognized that they are applicable to incidents occurring and damage suffered on the high seas where the operator liable is subject to the regime of the conventions.<sup>(4)</sup>

Incidents occurring or damage suffered in the territory of a non-Contracting State are specifically excluded from the scope of the Paris Convention, unless provision is made to the contrary in the legislation of the Contracting Party in whose territory the liable operator's installation is situated.<sup>(5)</sup>

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(1) The Paris Convention on Third Party Liability in the Field of Nuclear Energy, the Brussels Convention Supplementary to the Paris Convention, and the Vienna Convention on Civil Liability for Nuclear Damage.

(2) Article 23 of the Paris Convention provides for its application to the metropolitan territories of the Contracting Parties and it can also be extended to overseas territories.

(3) Paris Convention, Exposé des Motifs, paragraph 7.

(4) Recommendations adopted by the ENEA Steering Committee on 25th April 1968, and Report by the Standing Committee on Civil Liability for Nuclear Damage in April 1964, IAEA, CN-12/SC/9.

(5) Paris Convention, Article 2.

2. The Vienna Convention however is silent on the question of its territorial scope and a provision similar to Article 2 of the Paris Convention was omitted at the International Conference in Vienna which adopted the Convention. This left the position somewhat confused and the Vienna Standing Committee at its meetings in April 1964 expressed the view (which is not binding on any of the Signatories) that so far as non-contracting States were concerned nuclear damage suffered within their territory would not be covered even if the nuclear incident concerned took place within the territory of a Contracting Party or on the high seas.<sup>(1)</sup>

Even though the Vienna Convention does not contain any provision for the extension of its application, any Contracting Party to it could, if it wishes, make such a provision in its own national legislation so long as it is realized that in the event of an incident any other Contracting Party concerned might claim that the whole of the available funds should be reserved for damage within the Convention. This means, in effect, that any Contracting Party which seeks to extend the Vienna Convention in the same way as the Paris Convention must be prepared to provide State funds if the operator's own financial security is not sufficient.

3. In addition to the Paris and Vienna Conventions it should not be overlooked that the Brussels Supplementary Convention contains some limitations on the scope of its application. The nuclear incident must be one which has not occurred entirely in a non-contracting State's territory and the damage must have been suffered in the territory of a Contracting Party on or over the high seas in a ship or aircraft registered in such territory, or suffered on or over the high seas by a national of a Contracting Party, provided the ship or aircraft damaged was registered in such territory.<sup>(2)</sup> These restrictions on its scope are reasonable in view of the large sums of money which the Contracting Parties agree to make available and it is not surprising that the benefits of the Convention were intended to be restricted to its Contracting Parties.

4. In connection with the extension of the Paris Convention under Article 2 it would appear that the laws of the Contracting Parties at present differ somewhat over this. It may be useful therefore to try to set out the way in which some countries have exercised this option and then to consider the various alternatives and their merits or demerits.

5. (a) In Sweden Article 2 is made use of partially so that in the case of an incident occurring within Swedish territory for which a Swedish operator is liable, damage suffered in a non-contracting State is covered. Apart from this there is no extension.<sup>(3)</sup> Norway and Denmark are understood to be making similar provision in their draft laws<sup>7</sup>.

(b) In the United Kingdom liability of a United Kingdom operator is extended to incidents occurring in non-contracting States but not to damage suffered there except by persons or property on a ship or aircraft registered in the United Kingdom.<sup>(4)</sup>

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(1) Standing Committee on Civil Liability for Nuclear Damage, Vienna, 13th-17th April 1964, IAEA, CN-12/SC/9.

(2) Brussels Supplementary Convention, Article 2(a).

(3) Nuclear Liability Act No. 45 of 8th March 1968, Section 3(b).

(4) Nuclear Installations Act 1965, Sections 12(1)(a) and 13(2).

(c) In Austria, in the case of an incident within Austrian territory causing damage outside such territory, compensation is limited to Austrian nationals who suffer such damage.<sup>(1)</sup>

(d) In the Netherlands the law provides the possibility of extending the liability of the operator to include nuclear damage suffered outside the Netherlands resulting from a nuclear incident occurring either within or outside the Netherlands and this extension appears to have been exercised in relation to possible damage suffered in Germany, Belgium, France and Luxembourg.<sup>(2)</sup>

(e) The laws of France, Italy, Spain and Switzerland do not extend the scope of the Convention to either damage suffered in, or an incident occurring in, a non-contracting State.

6. The various possibilities of extension under Article 2 would seem to be as follows:

(a) for no extension at all of the scope of application of the Convention, i.e. an explicit or implicit provision that liability shall not extend to incidents or to damage in a non-contracting State;

(b) for extension only to damage suffered in a non-contracting State from an incident occurring within the State where the installation responsible is situated. Such extension might be limited to damage suffered only by nationals of the State where the installation responsible is situated or made subject to some reciprocal agreement about claims;

(c) for extension to an incident occurring in a non-contracting State; liability might, however, be limited, for example, to damage suffered in the territory of the State where the installation responsible is situated, or to damage suffered in the non-contracting State by nationals of the Contracting Parties, or to damage suffered by any person on a ship or aircraft registered in the State where the installation responsible is situated, or might be subject to reciprocal agreement with a particular non-contracting State.

7. The various alternatives mentioned above are not intended to be an exhaustive list and they might be extended in a number of ways with various combinations of circumstances. All three of those main alternatives have some advantages and disadvantages which appear to be as follows:

(a) If all the Parties to the Paris Convention provided not to extend liability to incidents or damage in a non-contracting State there would be at least uniformity between their laws in this respect. There would also be less difference between the Paris Convention and the Brussels Supplementary Convention which has a rather more restricted scope than Paris. It might thus be easier to amend the Supplementary Convention so as to have the same scope as Paris. The following example also might be used to argue the merits of not extending at all; an operator's law extends his liability to damage suffered in a non-contracting State. There is a

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(1) Federal Act of 29th April 1964 on Third Party Liability in the Field of Nuclear Energy, Section 33.

(2) Act of 27th October 1965 on Third Party Liability in the Field of Nuclear Energy, Section 4(2) and Act of 8th October 1969.



major incident near the borders of his country for which he is liable and considerable damage is caused both in a neighbouring Contracting State and in another neighbouring non-contracting State. The total claims exceed the limit of his liability and have to be reduced pro rata. The victims in the neighbouring Contracting State cannot legally complain about this because Article 2 allows such extension but they would be justifiably resentful of a system which allowed non-contracting States to share in and reduce the funds available to the Contracting Parties themselves.

The disadvantage of not extending at all might be that victims in the State where the installation responsible is situated who suffered damage from a transport incident occurring just across the border in a non-contracting State might not be able to recover compensation at all. It is suggested that they would not be able to bring an action in their own courts because their own law would not have extended the application of the Convention to such an incident or damage and it is doubtful whether their courts would give competence to the courts of the place of the incident (the non-contracting State). There could be no liability at common law because the Convention expressly excludes all such other liability.<sup>(1)</sup> They would be left with the doubtful possibility of bringing an action in the non-contracting State and, even if a judgment could be obtained there, the operator's insurance might not cover such liability and the judgment would be of no value. Another consideration is that it is not at all certain whether the courts of the non-contracting State would apply their own law or whether their rules of conflict of laws would have the effect of importing the Convention system as a whole into their law (including the jurisdiction provisions) or only the Convention's liability rules.

(b) Apart from mere uniformity there would appear to be no great advantage in extending the application of the Convention to damage in a non-contracting State caused by an incident in a Contracting State unless it were limited to nationals of Contracting States or in pursuance of some reciprocal agreement. Without such limitation the effect could only be to lessen the potential compensation available for victims in the Contracting State (see the example quoted in the first paragraph of (a) above). In practice an extension of this sort would only have any relevance in relation to immediately neighbouring countries and only a rather limited effect when all the Paris Signatories have ratified the Convention.

(c) The advantage of extending the application to incidents occurring in non-contracting States would be that transport of nuclear substances which might have to cross non-contracting States would be covered by the same liability regime as transport across territories of Contracting Parties (including their territorial waters) and there would be both for operators and insurers some certainty and uniformity. On the other hand, if the Convention were thus extended there would be no need at all for non-contracting States to ratify the Paris Convention or adhere to it as they would receive all the benefits without incurring any of the disadvantages. A completely universal extension of this sort would probably not find favour with many of the countries which have ratified the Paris Convention but such an extension limited to damage suffered in a Contracting State might be acceptable or it might perhaps be necessary to limit the extension to damage suffered by nationals of Contracting States or on ships or aircraft registered there.

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(1) Paris Convention, Article 6(c)(ii).

8. It may be pertinent to ask the question as to whether there is any real need for the harmonization of laws in this sphere. The following example may be mentioned as showing some need for such harmonization: a ship is carrying two separate consignments of nuclear substances for which nuclear operators in different Paris countries are liable. There is a nuclear incident in the territorial waters of a non-contracting State and damage is suffered within that State. Responsibility is jointly on the two operators. Operator A's law does not extend liability to such incidents or damage but operator B's law does. As a result, operator B will be held solely liable for all damage even though operator A was equally responsible and he will be unable to recover any contribution from operator A. In such circumstances it would obviously be an advantage for the Contracting Parties' laws to be the same.

9. Whatever the Parties to the Convention may agree about extension they cannot in any way affect the application of the non-contracting State's law. They cannot prevent the courts of that State from taking jurisdiction in cases of incidents or damage in that State nor can they limit their liability in any way before those courts. It might be said that a Contracting Party which extended its operator's liability to incidents and damage in non-contracting States should thereby be taken to have made the operator's insurance or other financial security automatically available freely to meet claims in the courts of those non-contracting States. From the point of view of insurance cover it is understood that it does not matter where the incident occurs or the damage is suffered, as insurers normally grant world-wide cover, except where the political situation in certain countries may not make this possible. It is suggested, however, that there may be a difficult problem over this because insurance is linked to liability under the Convention and the law giving effect to it, and the jurisdiction provisions form part of the Convention. Jurisdiction in the case of an incident in a non-contracting State falls to the courts of the State where the installation responsible is situated.<sup>(1)</sup> The full insurance or other financial security should therefore be kept available to meet claims made before the proper forum and should not be used to settle claims in non-contracting States if to do so would prejudice the settlement of all claims made in the courts of the State where the installation responsible is situated.<sup>(2)</sup> It might therefore become a question of having to provide some State backing in case the financial security proved insufficient to meet all such claims in full. As there may in theory be some conflict in certain circumstances between the Paris and Vienna Conventions as to jurisdiction, as a result of which one operator might be held liable in more than one court for up to the full amount of his insurance or other financial security, the State might also have to provide public funds to meet this. The Contracting Parties to the Vienna Convention would rightly complain if their own nationals could not receive compensation in full because part of the funds were needed to pay **victims** in what would be, to the Vienna Contracting Parties, a non-contracting State.

10. A possible compromise between the various alternatives discussed above would be for the Contracting Parties to the Paris Convention to agree to extend its scope of application under Article 2 so as to cover nuclear

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(1) Paris Convention, Article 13(b).

(2) Article VII.3 of the Vienna Convention lays this down expressly and it is certainly implicit in the Paris Convention.

damage suffered in a Contracting State or on the high seas, even if the nuclear incident itself occurred in a non-contracting State. One merit of this solution would be that there would probably be no conflict between the Paris and Vienna Conventions as to the scope of their application.

Another advantage would be that all victims in a Contracting State would be indemnified in the same satisfactory way, without regard to the place of the incident, which has no great relevance in this particular case.

## ARTICLES

### CIVIL LIABILITY AND NUCLEAR LAW

José Mariá Lopez Olaciregui\*

A Symposium on Legal and Economic Aspects of Nuclear Energy, organised from 22nd-25th July 1968 in Buenos Aires by the Argentine National Atomic Energy Commission and the Law Faculty of the University of Buenos Aires, was attended by about thirty lawyers and economists from Latin America, the United States and Europe. During the discussion on problems of liability for nuclear damage, Dr. José Mariá Lopez Olaciregui, Professor for Civil Law at the University of Buenos Aires, made a much noted statement linking modern developments of liability law to well-established principles of Roman Law. Professor Lopez Olaciregui has kindly agreed to publication of his paper in the Nuclear Law Bulletin. The translation from the Spanish original into English was made by the IAEA Languages Division and that into French by the OECD Translation Service.

I. The heart of the problem is to determine a set of laws for something new (nuclear damage) within a standard framework of something very old (the laws relating to damage). In order to start we have to reflect for a while. And reflect on matters from their origin.

II. The first reflection leads us to the observation that in the evolution of what comes to pass there is never anything that we can call absolutely new. Aristotle once said - and it continues to be true - that there is nothing new under the sun.

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\* The idea expressed and the facts given in this article are under the sole responsibility of the author.

The possibility of creating new situations is limited as a result of immutable natural laws.

Whatever is done, it is done by human beings whose creative power is limited.

But those same human beings - and this is the crux of the matter - have enough understanding to enable them to relate the new to the old, whether in terms of similarity or of contrast, in such a way that if the new is similar to something already known the rule to be applied to it (in the realm of law) will be the same as applied to a similar development that was already known. If, on the other hand, the new development is such that it runs counter to all that has gone before, this contrast will be absorbed within the framework of a jurisprudential logic which, by being rational, is timeless, and by virtue of this fact the new development contrasting with the previous development requires the application of a set of provisions contrasting with those that have governed the other, former developments. And so, since there is nothing that lies outside the laws of nature, there is nothing absolutely new in law, though what is contained in it may always be recast in a new form.

III. The foregoing digression provides us with guidelines: if the circumstances attendant upon the new development (nuclear damage) are totally opposed to all that is known, the difference will of necessity give rise to a new form of law to govern it. Otherwise, the already existing form of law may be applied to it after the necessary amendment and adjustment.

Now, the question arises: is nuclear damage really a new development that disrupts the pattern of all that is known? The answer is a very difficult one. I cannot give it. I note that in certain cases there would seem to be "qualitative" differences in the concept of "damage caused by nuclear energy" that require their own provisions. I refer to the possibility that the damage sustained by a person is later transmitted to his descendants over several generations. This would seem to represent a disruption of the pattern, since individuals as yet unborn would come to be passive victims of this damage, or in other words, individuals who are not persons at law. That might perhaps be one of the points of difference which necessitate special provisions for this new category of damage. However, if we consider the problem for a moment, we observe that the difference is more quantitative than qualitative, for "remote" damage inflicted on generations as yet unborn is not something that was unknown in former times; congenital diseases of a certain type could and are still able to produce long-term effects of this type on passive individuals. I will not make more than a passing reference to this fact. I only want to stress what has already been said, namely, that it is very difficult, if not impossible, for something to be completely new.

IV. For a very long time the theory of liability was interwoven with the theory of infringement of the law.

Liability as a legal creation was the legitimate and sole offspring of a union between infringement and damage.

It is only for damage and infringement together that there is liability; there is no liability for infringement without damage, nor for damage without infringement.

V. What is referred to in the previous paragraphs is a dogma of the nineteenth century. It does not date further back, nor could it do so, since the theory of liability is of recent formulation. Furthermore, under Roman law and under the legal system of the intervening period there were specific, though irregular, cases of liability without infringement.

The French Code contained legal texts of some obscurity on the subject. So obscure were they that the sense of one of them (Article 1384) has only recently been "unravelling" - almost a century after its approval.

VI. At a particular moment in time - the end of the last century - the foundations on which this interpretation stood were seen to crack. As always happens, developments and sensibilities began to exert an influence. There were formed branches of law based entirely on liability without fault, for example, as was the case in law on industrial accidents. Although the idea was good for a branch of law which dealt with relations between two private persons (or in other words, private law), it could not be considered as totally divorced from another branch (civil law), which likewise governs the relations between two individuals at private law.

VII. On the periphery of the law of liability by fault there grew up another system which broadened its foundations without refuting them. It was not denied that whenever one of the protagonists involved in private damage was at fault, the one at fault ought to be considered the one liable for the damage, but the scope of the problem was broadened by the provision of solutions that were different for cases in which neither of the two parties was at fault.

VIII. Having indicated the form, let us now go on to describe the content.

Liability law is part of something more extensive - the law relating to private damage.

The chief problem in the law relating to private damage is that of apportionment, for which there are two rigid alternatives: either the injured party bears the damage or it devolves upon the perpetrator or originator to make reparation.

Liability law includes this second category (liability of the perpetrator) which is of necessity combined with the former category (where the perpetrator is not liable and the injured party bears the damage), since the two categories cover all possible areas (excluding the principle of third party). The matter of damage should therefore be settled with consideration for both aspects, and liability cannot be made an autonomous sphere. The decision whether the perpetrator should make good private damage or whether the injured party should bear the blame should rest on justice or equity. Liability law relates to those cases in which justice or equity require that the perpetrator must make reparations.

IX. Private damage is a physical prerequisite of liability. It has to be clarified: (a) what is damage, and (b) what is private damage.

Damage is that which by affecting the person of an individual (termed the injured party) results in prejudice to a subjective right. A simple injury or violation of interest is not enough for the damage to be legitimately termed as such. Something else is needed, namely that it should be a legally protected interest, or in other words a subjective right.

X. But then, not all damage is private damage. Damage inflicted on a private individual by a force that is alien to the sphere of any other person (for example, damage due to acts of God) is not private damage, although it is a private person who sustains it. The private aspect of the damage presupposes that it is bilateral: the damage must be caused by forces that relate to the sphere of one individual and affect another individual.

XI. Whenever, for reasons of solidarity, assistance is given to the victims of a flood, that is not settlement of a problem of private damage. It is a case which, conceptually, pertains to public law.

XII. There is need to apply the very broad formula "damage caused by forces relating to the sphere of an individual" so that damage imputed to an individual can include damage caused by his employees or by articles which he uses or has in his keeping. The forces pertaining to that person's employees and to the articles are ones that pertain to his sphere.

XIII. The considerations that in a case of private damage determine whether the perpetrator of the damage makes reparation or the injured party bears the damage do not have to be based on purely physical facts of inflicting or sustaining, but on facts or considerations that are of significance in giving preference to one aspect or the other ("inflicting" determines that the damage is something that to some extent "belongs" to the perpetrator since it is something resulting from his actions, while "sustaining" also makes the damage something "belonging to the injured party", since it is his legal being that has been affected).

XIV. The advocates of the theory of fault considered that damage could only be attributed to the perpetrator by virtue of an infringement of the law. Basing themselves on the idea that a particular system of law guarantees for every individual a sphere of action within which he can operate freely without contravening the law, they considered that only the one who had transgressed that sphere, or in other words had infringed the law, at the time of the damage should be punished by the imposition of reparations. Such was the basis of the concepts prevailing in the nineteenth century.

XV. The point on which this construction rests, as emerges from the formula established in the previous paragraph, is that "no one can be punished" who has acted in conformity with the law. Liability for private damage is construed as a sanction or punishment. Perhaps that is where the argument is fallacious.

XVI. Liability law does not necessarily have to be a law of sanction. It can be (and in our view, should be) a law by which the responsibility is apportioned.

The madman who in a fit of dementia injures another person cannot be punished since he acted without discrimination, but if he is not compelled to make reparations the result is that the injured party who has not infringed the law in any way is the one punished. The commitment not to punish persons unintentionally causing damage used to lead to the punishment of injured parties who were even more innocent.

XVII. The argument that the party at fault should alone be liable applies whenever, in a confrontation between two individuals, one is guilty and the other innocent; but if both are innocent, or in other words if neither is at fault, that rule for assigning liability proves inadequate.

XVIII. What is more - if one maintains that it is harshly materialistic to direct that the perpetrator is liable simply because he has caused the damage through his physical actions, resignation to the idea that the injured party (who is just as innocent) should bear the blame for the damage simply because he happened to have borne the brunt of that unintentional aggressive force, could develop into a fatalistic attitude that is equally as materialistic.

XIX. In the light of these ideas the statement "liability in case of fault" could be broadened without being derogated. In the event of accidental damage (that is to say, when neither of the protagonists is at fault), the penalty should be imposed on the individual with respect to whom there are legal grounds showing that it is more equitable for him to make reparations.

XX. This put into practice a long-standing concept of ancient legal heritage that one who engages in acts that work to his advantage should be responsible for the harm that such acts may cause; where there is "commodum" there should be "periculum".

XXI. This concept was combined with another that is perhaps the most daring concept in the whole of private law - that of an act perpetrated by an object (thing).

XXII. We normally think of an object as an object of the law, but it is clear that in certain cases objects appear to be endowed with force which makes them the "subjects" of an act. The overflowing of a river is an act of the object "river" in the same way that the quaking of the earth is an act of the object "earth". Grammar expresses this idea by sometimes making an object the true subject of the sentence (for example, "the river overflowed"), while in other cases it resorts to impersonal words (such as "it is cold", "yesterday it rained", or "there was an earthquake").

On the other hand, the law considers the object - in this case as vast and indefinite an object as nature - as the subject of the act, and we then have the concept of "natural damage" or damage caused by the object nature. Since nature does not bear any relation to any fixed subject at private law, the damage it produces is natural damage outside the bounds of the theory of liability.

XXIII. Something different occurs when we deal with "particular objects" which do bear an equally particular relation to a subject. In this case the linked terms "subject-object" and "object-damage suffered by the injured party" set in motion an imputative link whereby the damage is imputed to the subject that maintains with the object causing the damage a legal relationship of significance on which the imputation can be based, whether a relationship through ownership, custody, or something similar.

XXIV. It is very difficult to specify to what extent relationships of ownership or custody do or do not entail acts of conduct. For example, the relationship of "custody" assumes an "obligation" to safeguard something, and if the individual fails to do so ("culpa in vigilando"), the damage that results physically from the object legally arises out of the individual's negligence. Hence imputation of the blame still falls under the general framework of unlawful conduct by the guardian.

XXV. However, there may be other instances where liability applies, even though there has not been any negligence. We see that the relationships of custody or ownership are by themselves sufficient for the damage caused by the object to be imputed to the subject.

XXVI. But even in these instances it is not possible to say that the relationship is purely objective: behind the object there is always an act by a human being. Even when the flowerpot fell from the balcony, it resulted from an act by the person who put it there and thereby exposed it to the gusts of wind that later dislodged it.

XXVII. In this extensive atmosphere of uncertainty the appraisal of specific cases plays an important part, and that is why many people claim that behind the alleged acts perpetrated by objects there are personal acts involving "setting in motion" or "lack of care", and that the indirect liabilities are therefore simply an extension of direct liabilities to cases where the connection is more remote but where there is always reprehensible conduct as underlying cause.

XXVIII. Damage caused by nuclear energy will have to fall within these bounds. There are no others left. The extent of the nuclear damage is a quantitative and not a qualitative problem - it is not because the nuclear undertaking is potentially more hazardous that it represents a new development within a wealth of developments that the law has to assimilate in order to regulate questions of damage. Nor is the principle that the community interest in the existence of such undertakings determines that a limit be imposed on the reparations a new development. It is something that is already known in aeronautical law and has always been known in maritime law, and is still being practised. The Romans, furthermore, used to apply the same idea on the basis of abandonment for torts. The introduction of some form of limitation of the damages is nothing new; on the contrary, it is a reversion to the past. The Romans did not formulate the liability law in the same terms as modern law has constructed it - on the basis of equivalence between damage and reparations. Just the opposite - there were penalties that were imposed "without damage", and a person who suspended flowerpots in dangerous places was punished even though the flowerpots may not have fallen down or caused any damage. It was a very effective policy for avoiding damage. Somewhat similar is the policy adopted nowadays by our administrative law in imposing penalties on those who speed on the highways. It is the prevention of civil damage from non-civil branches of modern law. Since in Roman times no such distinctions were made in the branches of law, everything used to be conducted on the basis of an appeal to considerations of reason. And even in cases where damage was caused, the reparations did not always correspond to the exact amount of damage. There was a set of rules and while at times the exact amount was paid, at others a payment of twice, four or eight times as much was imposed (especially if bad faith was in evidence during the law suit).

All this now arises again when we see in aeronautical or in nuclear law that the reparations are not equivalent to the damage or that the reparations have a limit. It is always the same ideas that come and go. Meanwhile there remains a world of people who call for the same old justice for the new developments.

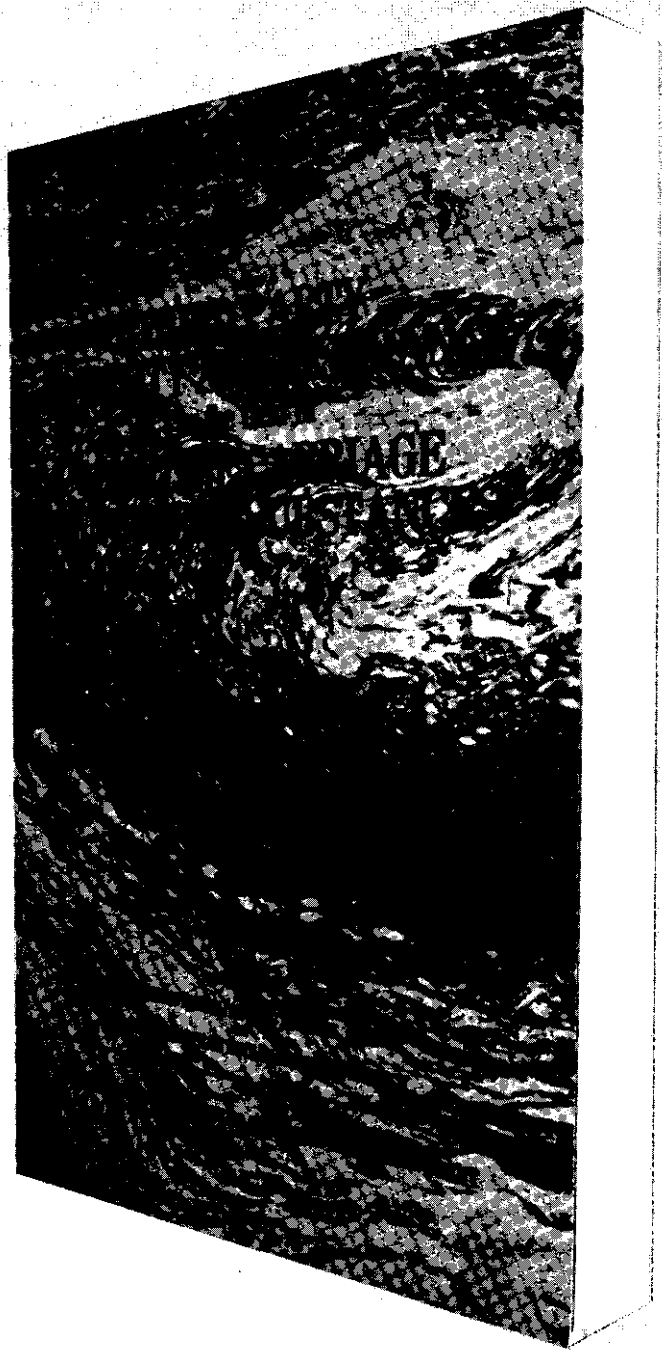
### Conclusion

Liability law developed around nuclear damage on the basis of limited liability on the part of the perpetrator that is objectively determined, without need of proof of fault, is not entirely new in jurisprudence. It represents the application of old concepts of justice to many new developments. The solutions to such problems are predetermined by the wisdom of centuries.



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The maritime carriage of nuclear substances raises complex legal problems due to possible conflicts between liability rules set by the nuclear conventions, the international maritime conventions and the legislative provisions in countries which are not signatories to the nuclear conventions. These uncertainties give rise to serious insurance difficulties.

The purpose of the Symposium which was organised in October 1968 by ENEA, in collaboration with the International Atomic Energy Agency, was to study the problems in detail and to envisage practical solutions to improve and possibly complete the existing legal regime.



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