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CHAPTER X

LIABILITY FOR ENVIRONMENTAL DAMAGE

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This chapter covers the following international agreements on liability for environmental damage:

I. Liability for nuclear damage

(117) The 1960 Paris **Convention on Third Party Liability in the Field of Nuclear Energy**, and related instruments;
(118) the 1963 Vienna **Convention on Civil Liability for Nuclear Damage**, and related instruments;
(119) the 1971 Brussels **Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material**;
(120) the 1962 Brussels **Convention on the Liability of Operators of Nuclear Ships**;

II. Civil liability for pollution damage caused by maritime transport of oil

(121) the 1969 Brussels **Convention on Civil Liability for Oil Pollution Damage**, and related instruments;
(122) the 1971 Brussels **Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage**, and related instruments;

III. Civil liability for pollution damage caused by offshore operations

(123) the 1977 London **Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources**;

IV. Civil liability for damage caused by inland transport of dangerous substances

(124) the 1989 Geneva **Convention on Civil Liability for Damage Caused During Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels.**

V. Other developments concerning liability for environmental damage

Reference is also made to current drafting work towards (a) a Protocol to the 1989 Basel Convention (No. 103) on liability and compensation for damage resulting from the transboundary movement and disposal of hazardous wastes; (b) a Council of Europe draft convention on civil liability for damage resulting from activities dangerous to the environment; and (c) related work in the U.N. International Law Commission.

A list showing the status of ratifications as of 1 January 1992 is annexed (pages 431-435).

International environmental conventions generally focus on so-called "ultra-hazardous" activities which have a number of characteristics in common:

- Activities (e.g., maritime transport of large quantities of oil, peaceful use of nuclear energy) are considered benign and economically advantageous. But they involve high risks of accidental damage. High risk implies comparatively low probability to cause relatively high damage (in contrast to high probability to cause relatively minor damage).
- In view of the complexity of technologies involved or for other reasons, the risk to cause damage may be minimized, but not entirely avoided. Any attempt to avoid such risks would result in the termination of the risk-creating activity.
- As long as activities are carried out, a certain economic risk of (large-scale) damage remains which has to allocated.

Against this backdrop, international liability conventions try to balance two conflicting goals: (a) to relieve third-party victims of damage caused by risk-creating activities; and (b) to relieve operators of unnecessary obstacles in carrying out such activities.

As a consequence, liability conventions distribute economic risks between risk-creator (e.g. operators or owners), third parties suffering damage, and the public; and they provide an internationally uniform legal framework for the regulation of liability for damage arising from certain activities.

The balance between these goals varies, of course, depending upon the specific contexts in which conventional regimes are moulded.

Generally, liability regimes are determined by five principles:

(i) Strict or absolute liability (liability regardless of fault);
(ii) limited liability;
(iii) channelling liability to a single clearly identifiable person;
(iv) compulsory insurance or other financial securities limited in amount;
(v) procedures for civil claims in competent national courts.

These principles indicate that liability conventions are construed to allocate economic risks. To the extent that they allocate economic costs of activities to risk-creators, they reflect the Polluter-Pays Principle. Generally, the principle of (strict) liability provides an incentive to minimize risks; liability regimes therefore seem to have an immediate impact on environmental protection. In so far as they remove legal and economic constraints from industrial activities that are generally considered benign, they also have a direct impact on development. In balancing the two goals, they attempt to integrate the two important elements of environment and development.

Basically, the approach of the liability regimes reviewed here provides (a) an inter-governmentally adopted and domestically implemented legal framework; and (b) regular settlement of claims below the inter-governmental level between bearers of liability, insurers and victims, supervised by national courts.

I. Liability for Nuclear Damage

The Conventions on liability for nuclear damage balance the promotion of economic activities on the one hand and economic relief for victims of damage caused by such activities on the other. They emphasize the promotion aspect, considering that international law concerning nuclear liability was developed during the early 1960s, at a time when peaceful use of nuclear energy was at its beginnings and far from being an economically powerful industrial sector. The international instruments concerning nuclear liability law are closely interrelated.

1. The Paris/Brussels Conventional Regime

The regional Paris/Brussels conventional regime was prepared within the Organisation for Economic Co-operation and Development (OECD). It consists of the following instruments:

(117) **Convention on Third Party Liability in the Field of Nuclear Energy, Paris 1960** (Paris Convention);

- (a) Additional Protocol to the Convention on Third Party Liability in the Field of Nuclear Energy, Paris 1964;
- (b) Protocol to Amend the Convention on Third Party Liability in the Field of Nuclear Energy of 29 July 1960, as Amended by the Additional Protocol of 28 January 1964, Paris 1982;
- (c) Convention Supplementary to the Paris Convention of 29 July 1960 on Third Party Liability in the Field of Nuclear Energy, Brussels 1963 (Brussels Supplementary Convention);
- (d) Additional Protocol to the Convention of 31 January 1963 Supplementary to the Paris Convention of 29 July 1960 on Third Party Liability in the Field of Nuclear Energy, Paris 1964;
- (e) Protocol to Amend the Convention of 31 January 1963 Supplementary to the Paris Convention of 29 July 1960 on Third Party Liability in the Field of Nuclear Energy as Amended by the Additional Protocol of 28 January 1964, Paris 1982.
- (f) Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, Vienna 1988.

Objectives and achievement

The objectives of the Paris Convention, based upon the intention to elaborate and harmonize legislation related to nuclear energy concerning third party liability, are (a) to ensure adequate and equitable compensation for persons suffering nuclear damage; and (b) to ensure that the development, the production and uses of nuclear energy are thereby not precluded. Unlike the regimes concerning carriage of dangerous substances and oil pollution (Nos. 97-98 and 100 below), the Paris Convention emphasizes the priority to develop nuclear energy production as compared to the relief of victims. Accordingly, it provides the following liability regime:

- The operator of a nuclear installation shall be strictly and exclusively liable for nuclear damage (Art. 3). All other persons involved, e.g. suppliers or carriers, are relieved from any liability whatsoever (Art. 6).
- Liability of the operator shall be covered by insurance or financial security (Art. 10).
- Liability is limited in time to ten years from the occurrence of an incident (Art. 8) and in amount to 15 million European Units of Account (EUA, equivalent to gold-based US dollars) (subsequently amended) per incident (Art. 7). Domestic laws may provide other limits, but the amount may not fall below 5 million EUA (later amended) (Art. 15).
- Action shall be brought in a competent court in the state in which the installation is situated (Art. 13).
- Parties may adopt additional measures concerning various aspects.

Within the limits relating to time and amount of compensation, the regime establishes a victim-oriented liability regime, while at the same time channelling economic risks to one easily identifiable person and relieving industry from covering multiple risks by insurance. However, amounts of compensation are in no way related to anticipated costs caused by severe nuclear incidents. To stabilize the "channelling" rule and the exclusive liability of the operator of a nuclear installation, additional funds had to be provided.

The sole objective of the Brussels Supplementary Convention is to supplement the measures adopted in the Paris Convention by increasing the amounts of compensation available (cf. preamble). The Supplementary Convention establishes a three-tier compensation system:

- The basis is provided by the operator's liability according to national legislation and the Paris conventional regime. Compensation must not be less than EUA 5 million (subsequently amended).
- An additional layer raises the amount available for compensation up to a total of EUA 70 million (subsequently amended). It is financed from public funds of the Party in the territory of which the damage-prone installation is situated.
- A third layer brings the compensation available up to a total of EUA 120 million (subsequently amended). It is financed by public funds through the community of Contracting Parties (Art. 8).
- Public funds of the second and third layers are subject to the same claims procedures as private funds; in practice, the court competent under the Paris Convention allocates funds available under the Brussels Supplementary Convention (Art. 9).

- Contributions to the third layer are calculated in proportion to gross national products of the Parties (50%) and in proportion to the aggregate thermal power of reactors situated in the territory of Parties (Art. 12).

The 1964 Protocols do not in substance modify the interrelated regime. It was the objective of the 1964 Additional Protocol to the Paris Convention to adapt the regional Paris Convention to the regime of the global Vienna Convention, adopted in 1963 within IAEA (see No. 118 below) to allow simultaneous participation in both instruments. Similarly, the 1964 Additional Protocol to the Brussels Supplementary Convention adapts the latter instrument to a slightly modified Paris Convention.

The 1982 Protocols incorporate a number of interpretations adopted by the Contracting Parties and introduce two modifications of the regime. They replace the European Unit of Account, which was based on the gold-based US-dollar, by the Special Drawing Right (SDR) of the International Monetary Fund as principal unit of account. Accordingly, the 1982 Protocol to the Paris Convention adjusts the amount of liability on behalf of the operator at SDR 15 million, but not less than SDR 5 million. At the same time, the 1982 Protocol to the Brussels Supplementary Convention raised the compensation limits of the second and third layers to SDR 175 million and SDR 300 million respectively.

The Paris/Brussels regime integrates environmental and developmental aspects of the peaceful use of nuclear energy, although priority is placed upon the latter. Due to low limitation amounts (as compared to the anticipated costs of a major incident), it might have only an indirect influence on environmental protection. Moreover, it does not provide for compensation for measures designed to prevent damage.

Participation in the Paris/Brussels regime is currently limited to Western Europe. It does not take into account the special situation of developing countries. Nevertheless, since it was the first international regime on liability for nuclear damage, the Paris Convention heavily influenced the development of domestic laws concerning nuclear liability all over the world. Its general approach was incorporated, with only minor modifications, into the global Vienna Convention (No. 94). Accordingly, it introduced internationally applied standards concerning liability for a type of ultra-hazardous activities.

One objective of the Conventions, namely the creation of a uniform law of liability for nuclear damage, has been achieved far beyond their regional territorial application. The intention to provide uniformity of law to remove obstacles for the development of new sources of energy proved to be successful. There has been no serious attempt to modify the basic principles of the Paris/Brussels conventional regime.

As far as the provision of "adequate and equitable" compensation is concerned, the result is more ambiguous. No serious nuclear incident has occurred in the territorial jurisdiction of the Conventions to test the compensation mechanism. There is no doubt that compensation limits are low. They were not increased in light of growing economic risks involved in the exploitation of nuclear energy for peaceful purposes, or growing economic capabilities of nuclear and insurance industries in Western Europe. As a consequence of modifications introduced by the 1982 Protocols, the part of compensation financed by public funds increased significantly, while the part of privately financed compensation was allowed to decrease. In proportion many Contracting Parties provide by domestic law compensation far beyond the limits of the first two layers of the interrelated regime; e.g., Germany provides for unlimited operators' liability, with

DM 500 million (approximately SDR 200 million) to be covered by private insurance and insurance pools, and another DM 500 million provided by public funds. The OECD Steering Committee for Nuclear Energy recommended in 1990 to adjust operators' liability to SDR 150 million, ten times that provided for by the Paris Convention[1]. As a consequence, the authority of the Paris Convention as reliable guide in matters of nuclear liability seems at risk of being gradually undermined, while the Brussels Supplementary scheme may lose its relevance owing to high national standards.

Participation

The Paris Convention is regional in scope. It was elaborated within OECD (then OEEC). The first paragraph of the preamble expressly mentions as signatories to the Convention seventeen European members of OECD. Other member countries of OECD and States associated with that organization may join the Convention. However, States that are neither signatories nor members of or associated with OECD may become members by unanimous assent of the Contracting Parties (in fact, the USSR was invited to join, in the course of a G-7 meeting in Tokyo). Participation in the Brussels Supplementary Convention depends upon participation in the Paris Convention. Yet, non-signatories to the Brussels Supplementary Convention may accede only upon unanimous assent of Contracting Parties. The various Protocols do not introduce other procedures.

Under both the Paris and Brussels Supplementary Conventions, reservations to one or more provisions may be made by a Party at any time prior to its ratification or accession. Yet, reservations are admissible only in case they have been expressly accepted by the Signatories. The Paris Convention, as amended, is accompanied by five accepted reservations, which are applicable to several Parties.

The Paris Convention is in force for 14 Parties which are exclusively European members of OECD. 11 of these States are also members of the Brussels Supplementary Convention. Developing countries neither attended negotiations nor joined the Conventions at a later date. In light of the existence of the Vienna Convention (No. 118), there has been no attempt to encourage developing countries to participate.

Participation of countries in the Paris Convention was, without doubt, influenced by the conviction that the limits of compensation provided were insurable and could be covered by operators. With respect to private operators, States would not incur any costs.

The decision to participate in the Brussels Supplementary Convention was primarily based on the desire to remove possible obstacles to the development of nuclear power, provided that compensation by public funds was limited to a reasonable amount. US-based suppliers of nuclear technology had indicated they might stop supply due to compensation amounts that were too low to preclude claims under regular (i.e. non-nuclear) US liability laws. Therefore, it appears that the decision to participate may to a significant degree be attributed to the influence of industrial non-governmental organizations.

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[1] See (OECD) Nuclear Law Bulletin No. 45/1990, p. 75.

Reservations contributed to flexibility without over-burdening the treaty regime with exemptions of interest only to a limited number of Parties concerned. However, since reservations cannot be made unilaterally, they are subject to negotiation and form part of the overall compromise commonly adopted.

Implementation and information

The Paris Convention entered into force upon deposit of the fifth ratification, in April 1968. However, as its primary purpose was the unification of national laws on nuclear liability, its incorporation into domestic legal systems did not depend upon its formal entry into force. The Brussels Supplementary Convention required six ratifications. It seems evident that fund schemes require a minimum participation number to become operative in order to distribute the economic risks involved. Despite the late entry into force of the Brussels Supplementary Convention (December 1974), the requirement appears not to have been overly restrictive.

The 1964 Protocols provide for simultaneous ratification of Conventions and their respective Protocols. They were thus incorporated into the regular ratification process. According to the Paris Convention, the 1982 Protocol entered into force in October 1988 upon ratification by two-thirds of the Parties. However, according to the Brussels Supplementary Convention, amendments require "agreement" by Parties, i.e., the 1982 Protocol required ratification by all Parties to the Convention. The fact that the Protocol entered into force only in August 1991 may be attributed to this strict requirement. Both Protocols of 1982 stipulate that Parties are under an obligation to undertake ratification of the respective instruments as soon as possible. While the intention of the clause seems to be clear, its effect remains doubtful.

Under the Paris Convention, Parties are primarily obliged to implement the regime on nuclear liability into national law. It includes provisions for jurisdiction of courts, enforcement of judgements of foreign courts, and application of the Convention without discrimination as to nationality or residence. Likewise, Parties to the Brussels Supplementary Convention are primarily obliged to incorporate regulations concerning additional compensation into domestic law.

Compliance concerning obligations of the interrelated conventional regime can only be monitored by assessment of domestic laws on nuclear liability. While the Conventions do not provide for supervisory mechanisms, the OECD Nuclear Energy Agency (NEA) as responsible parent organization for the Paris Convention carefully follows up and provides information on developments in domestic nuclear laws.

According to the Brussels Supplementary Convention, Parties shall submit a list of all installations for peaceful uses of nuclear energy and update these lists as appropriate. Moreover, in case of nuclear incidents, Parties shall communicate early information about the incident and have to make available public funds for compensation. Yet, as of now, no such incident has occurred. No other obligations as to data disclosure exist.

Promotion of compliance largely depends upon consultations within the NEA-Steering Committee on Nuclear Energy. The Steering Committee also promotes rapid ratification of instruments that are adopted and signed.

Beside informal consultation in the Steering Committee, the Brussels Supplementary Convention institutes a formal procedure with regard to objections concerning lists of nuclear installations submitted by the Parties. Parties may notify such protests to the depositary (the Belgian Government) within three months upon submission of the list concerned. Any (other) disputes arising between two or more Parties to either of the Conventions shall be submitted to the European Nuclear Energy Tribunal. However, as of now, no dispute has been brought before the Tribunal.

The texts of all instruments are widely disseminated in English and French by OECD. The principal vehicle for the dissemination of information on the operation and implementation of Conventions, as well as on domestic laws or nuclear third party liability in general, is the Nuclear Law Bulletin published twice a year by NEA in the working languages of OECD. It closely follows law-making and implementation processes and reproduces texts of new instruments, decisions and recommendations prepared and adopted by the OECD/NEA Steering Committee, etc. Decisions and recommendations of the Steering Committee interpreting the Paris Convention have been compiled in a bilingual booklet re-issued in 1990. Most recently, OECD/NEA issued a study of domestic and international nuclear liability laws under the title "Nuclear Legislation: Third Party Liability" (Paris 1990).

NEA and OECD have also repeatedly organized symposia addressing specific issues of international nuclear liability laws. The proceedings are published.

Operation, review and adjustment

While the OECD performs depositary functions for the Paris Convention, the Belgian Government performs depositary functions for the Brussels Supplementary Convention. Neither the Paris nor the Brussels Supplementary Conventions or any of the Protocols establish a separate institutional mechanism, but instead rely on the institutional mechanism of the parent organization. Within the framework of OECD/NEA, there exists a Steering Committee for Nuclear Energy composed of government representatives, which meets regularly, and which has established a permanent subsidiary body, the Group of Governmental Experts on Third Party Liability in the Field of Nuclear Energy. Through these bodies, the provisions of the Paris Convention are subject to continuous review and interpretation. Although the institutional mechanism of NEA is not formally responsible for the Brussels Supplementary Convention, in fact it fully includes the latter instrument in its monitoring and review process.

There are no institutionalized mechanisms for bringing scientific and technical advise into the decision-making process. With regard to the Paris regime, co-operation between States and industries concerned has been, and still is, close, especially with associations representing insurers and electric power producers. By contrast, there is no participation of environmental NGOs in relevant international fora, in particular in the Steering Committee and its subsidiary body.

The Paris Convention provides for a review conference five years after entry into force. In the Brussels Supplementary Convention there is no provision for such a review. In practice, however, both instruments are under continuous review within the Steering Committee and the Group of Governmental Experts.

Neither Convention stipulates provisions for regular review of compensation limits and their adaptation to changing conditions. Each modification of compensation figures is subject to a time-consuming ad hoc amendment and ratification process.

Codification programming

Currently, no drafts or revisions of existing instruments are under preparation at the regional level. Future work by Paris/Brussels Convention Parties within the framework of NEA/OECD has to be closely coordinated with parallel work proceeding within IAEA. It may be expected that the Paris/Brussels regime will have to be adapted to results achieved at the global level.

Co-ordination between the regional and the global level is accomplished by close co-operation between the two secretariats concerned (NEA and IAEA), and by participation of Paris/Brussels Convention Parties in proceedings at the global level. In fact it has been attempted to integrate the two parallel liability regimes through adoption of a Joint Protocol (see No. 94/b below).

Two principal gaps exist in the Paris/Brussels scheme. The regime lacks institutional flexibility, whereas more recently adopted instruments concerning other ultra-hazardous activities frequently contain simplified amendment procedures for rapid adaptation of provisions to changing circumstances. This is particularly relevant with respect to changes of amounts of liability and compensation.

The Paris/Brussels regime does not compensate for expenditures incurred for preventive measures. Since compensation depends on clear causal evidence, successful preventive measures may interrupt the causal chain. The "Chernobyl" incident made clear that beyond the borders of the country in whose territory an incident occurs, costs arise primarily with regard to preventive measures. Ways of incorporating such measures into the compensation scheme are now being considered.

Due to the institutional inflexibility of the Paris/Brussels regime, decisions or recommendations of the NEA Steering Committee or the OECD Council gain relevance for the development of internationally co-ordinated nuclear liability laws. If implemented into domestic laws, they may - to a certain extent - replace amendments of formal legal instruments.

2. The Vienna Convention

The regime consists of three instruments:

(118) the Vienna Convention on Civil Liability for Nuclear Damage, 1963;

(a) the Optional Protocol Concerning the Compulsory Settlement of Disputes, Vienna 1963;

(b) the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, Vienna 1988.

Objectives and achievement

The Vienna Convention, which is global in scope, primarily establishes minimum standards providing financial protection against damage resulting from nuclear installations. In this way, the Convention was intended to contribute to the development of friendly relations between countries with differing constitutional and social systems (preamble). Unlike the Paris Convention (No. 117 above), it does not address the issue of adequacy or equitableness of compensation. However, the liability regime of the Vienna Convention resembles closely that of the regional Paris Convention:

- Operators of nuclear installations shall be absolutely and exclusively liable for nuclear damage (Arts. II, IV).
- They shall cover their liability by financial security, e.g., insurance. However operators that are States or their constituent parts (regional entities) shall not be required to hold insurance cover. Licensing States shall ensure payment of compensation beyond the yield of insurance (Art. VII).
- Liability may be limited in amount, but to no less than gold-based US$ 5 million, and in time to no less than 10 years from the occurrence of an incident (Art. V).
- Action shall be brought in a competent court in the installation state (Art. XI).

An important objective of the Vienna Convention was to facilitate the development of nuclear programmes, i.e., of ultra-hazardous activities, in member countries. The Convention balances the promotion of industrial development (developing a uniform and widely recognized law of liability for nuclear damage) and environmental protection (relieving victims from economic costs of nuclear damage).

The Convention does not expressly address the special situation of developing countries. However, the cost-effective element of the regime, i.e. the minimum amount of compensation, has been adjusted in view of the participation of developing countries at a lower figure as compared to the Paris/Brussels regime (No. 117 above) and to the Nuclear Ship Convention (No. 120 below).

The Vienna Convention has, as a concomitant to the Paris Convention, contributed to promoting uniform laws on liability for nuclear damage. However, its effect remained limited because only 14 States are party to the Convention, several of which do not have any nuclear

programme. At present, the Convention is applicable only to 8 existing reactors and four under construction, whereas the Paris Convention applies to 153 existing installations and 13 under construction[2].

Participation

The Vienna Convention is open for signature and subsequent ratification by States represented at the International Conference on Civil Liability for Nuclear Damage, Vienna 1963. Accession is possible for the members of the United Nations, its specialized agencies or the IAEA.

The Convention does not address the issue of reservations.

Currently[3], the Convention is in force for 14 countries, namely Argentina, Bolivia, Cameroon, Chile, Cuba, Egypt, Hungary, Mexico, Niger, Peru, Philippines, Poland, Trinidad & Tobago and Yugoslavia. No member of the Paris Convention as of now has ratified the Vienna Convention.

The Convention was prepared by an Intergovernmental Committee attended by representatives from seven Western industrialized countries (four European, three others), three Eastern European industrialized countries, and four developing countries (Argentina, Brazil, India and Egypt). The Diplomatic Conference that adopted the Convention was attended by 58 delegations of which 29 were from industrialized countries (18 from Western Europe, 6 from Eastern Europe, and 5 others), whereas 25 represented developing countries (9 from Asia, 10 from America, 3 from Africa, and 4 from Europe); two additional developing countries were represented by observers[4].

No regular meetings or programme activities are envisaged. However, within the framework of IAEA, a Standing Committee on Civil Liability for Nuclear Damage was established that met occasionally to discuss issues relevant to the Convention. It was composed of 15 States, including 5 developing and 10 industrialized countries. Limitations concerning participation were removed as the Committee was transformed into an open-ended negotiation forum with a broader mandate. Currently, about sixty delegations from both developing and industrialized countries as well as non-governmental organizations attend its sessions.

The principal benefit for all countries participating in the Convention, including developing countries, is the right of their nationals to claim compensation in case of nuclear damage caused by installations situated in a Contracting Party. Currently, the minimum amount of compensation is subject to review and subsequent adaptation; the benefit may be expected to substantially increase in the near future.

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[2] Figures from Status of nuclear installations as of 31 December 1990; IAEA Bulletin 1/1991, p. 43.

[3] As of 1 January 1992.

[4] Figures from: International Conventions on Civil Liability for Nuclear Damage, IAEA Legal Series No. 4, Vienna 1976.

Participation in the Convention does not depend on technical and scientific assistance. However, IAEA may provide legal assistance if requested. In case of countries without nuclear programmes, participation does not imply any financial obligations.

Implementation and information

The Convention entered into force three months after the deposit of the fifth instrument of ratification (Article XXXII). This requirement appears not to have been overly ambitious, even though it took 14 years until the Convention entered into force on 12 November 1977.

Obligations imposed upon Parties extend primarily to implementation of the regime set out in the Convention. States Parties ensure the payment of compensation in case they do not provide for insurance of the operator or beyond the yield of such insurance and up to the operator's liability. Parties shall provide for necessary jurisdictional competences, and recognize final judgements entered by foreign courts in accordance with the Convention. They shall not invoke immunities in legal proceedings under the Convention. There is no systematic monitoring of implementation. Parties do not regularly report about implementation and do not have to disclose or supply data.

While the Convention has no rules concerning the settlement of disputes, the 1963 Conference adopted a Protocol Concerning Compulsory Settlement of Disputes. The Protocol is optional and subject to ratification. It enters into force upon the second ratification. As of now, only one ratification has been deposited.

The Convention was drafted and published in four languages, English, French, Spanish, and Russian[5]. Travaux préparatoires have been published in English[6], French, Spanish and Russian.

Operation, review and adjustment

The Director-General of IAEA is the depositary. The Convention does not provide for institutional or administrative arrangements. There are no regular meetings and programmes. In consequence, no costs of attendance or administration are incurred by Parties under the Convention.

While there are no separate mechanisms under the Convention for the regular review of provisions or consideration of scientific and technical information, the Board of Governors of IAEA may decide, and has decided, specific minor technical issues. Pursuant to Article XXV, a review conference shall be convened by the Director General of IAEA upon request by at least one-third of the Contracting Parties any time after the expiry of five years from entry into force of the Convention (i.e. since 1982). As of now, no such conference has taken place, but a review conference may be called in 1992.

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[5] International Conventions on Civil Liability for Nuclear Damage, IAEA Legal Series No. 4, Vienna 1966.

[6] Civil Liability for Nuclear Damage, Official Records, International Conference, Vienna, 29 April - 19 May 1963, IAEA Legal Series No. 2, Vienna 1964.

Beside the arrangements provided for under the Convention, the IAEA Standing Committee on Civil Liability for Nuclear Damage provided an arena for deliberations concerning the Convention. With respect to the current review of the Vienna Convention, the mandate of the Committee, renamed "Standing Committee on Liability for Nuclear Damage", was extended to include international liability matters.

Codification programming

The Chernobyl incident dramatically demonstrated that neither the regime of the Vienna Convention nor its geographical scope are satisfactory. Since 1987, a review of all aspects of international law on liability for nuclear damage has been instituted within the framework of the IAEA. The first stage of this work led to the adoption in 1988 of the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention. With regard to the revision of the Vienna Convention, major issues under consideration concern the following: a revision of the limitations of liability of the Vienna Convention, with regard to the minimum amount of compensation, the period of time within which compensation may be claimed, and the exclusion of compensation for preventive measures. The Standing Committee has also addressed an evaluation of possibilities for introducing additional compensation, such as the compensation provided by the Brussels Supplementary Convention in addition to liability of the operator under the Paris Convention (No. 93). Supplementary layers of compensation may either be incorporated into the Vienna conventional regime or in a new draft instrument. Issues of State responsibility and liability are also under consideration.

The review and revision process of the Vienna Convention, and the drafting of some possible new mechanism has to be closely related to developments proceeding within OECD/NEA in respect of the Paris/Brussels conventional regime. Drafting is coordinated through close relations between the two international organizations, i.e. OECD/NEA and IAEA, and through participation of Paris/Brussels Convention Parties in the current deliberation process within IAEA. Measures adopted at the global level may require subsequent adaptation of the regional Paris/Brussels conventional regime.

Developments in international law have been influenced by developments at the domestic level. Domestic laws extend the scope of liability far beyond the minimum standards contained in international conventions. Therefore, the current revision of the Vienna Convention attempts to re-establish a higher degree of international uniformity of nuclear liability laws.

3. The Joint Protocol relating to the Application of the Vienna Convention and the Paris Convention, Vienna 1988.

Objectives and achievement

Third party liability for nuclear damage from stationary sources is governed by two regimes that are, even though similar in approach, independent from each other. One lesson that can be drawn from "Chernobyl" accident is that the two regimes should be merged. Accordingly, the objective of the Joint Protocol is to establish a link between the Vienna and Paris Conventions. Such an approach appears to be unique. A single Protocol, signed by the Parties to both regimes, is intended to amend both Conventions at the same time. It provides that an operator situated in a country participating in the Paris Convention shall be liable (also) for damage suffered in the territory of a Party to the Vienna Convention, if it has acceded to the Joint Protocol; and vice versa.

Since the Joint Protocol has been adopted only recently (1988), it is not yet clear whether it will meet its objective. To a large extent, its success will depend upon increasing acceptance of the Vienna Convention by Eastern European countries having nuclear programmes. The number of ratifications, in particular by countries with nuclear installations, will indicate its success.

Participation

Participation is limited to Parties to the Paris and Vienna Conventions.

Currently, 22 States have signed the Joint Protocol, including 14 Parties and one additional signatory to the Paris Convention (Western Europe) and 6 Parties to the Vienna Convention (5 developing countries and one East European country). As 0of now[7] 10 countries have deposited their instruments of ratification, accession or approval, including 5 participants of the Paris Convention, and 5 participants of the Vienna Convention, among them two East European industrialized States and 3 developing countries.

The issue of reservations is not addressed in the Protocol.

Negotiations proceeded within IAEA and were open to all countries. At the time of negotiations (1987), developing countries were the only Contracting Parties of the Vienna Convention.

Implementation and information

Having received the required ten ratifications (five from each Convention), the Joint Protocol will enter into force on 27 April 1992.

Obligations imposed upon Parties extend to a revision of their domestic nuclear liability laws. The Protocol does not include any reporting obligation. There is no provision on supervision.

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[7] 1 January 1992.

Promotion of compliance and dispute settlement depends upon the institutional mechanisms of the two Conventions and their respective parent organizations.

While the Joint Protocol does not address the Brussels Supplementary Convention compensation scheme, the territorial extension of the operators' private liability under the Paris Convention may result in earlier application of the additional compensation scheme. Implementation by Parties to the Paris Convention that are also Parties to the Brussels Supplementary Convention may therefore also depend upon accommodation of obligations between the Contracting Parties of the latter Convention.

The Protocol was issued in the six working languages of the United Nations; it has been widely disseminated in English and French through the Nuclear Law Bulletin. No additional information is available except that produced and disseminated under the two conventional regimes.

Operation, review and adjustment

The Joint Protocol is deposited with the Director General of the International Atomic Energy Agency. It does not provide for any secretariat, administration or regular meetings.

The Protocol has no mechanism for review, nor does an amendment clause exist. Policy-making and review functions will be discharged under the two Conventions.

Codification programming

Within the current process of reviewing and revising of the Vienna Convention, one or more additional systems of compensation supplementary to the private liability of the operator of a nuclear installation may be introduced. In consequence, the Paris and Vienna Conventions may be supplemented by a single regime of additional compensation in the future.

However, the Joint Protocol emphasizes that policy-making in either of the two regimes is of concern for Parties to the other regime. Until formal institutional structures are developed, mutual participation and close cooperation are of major importance.

4. Maritime Transport of Nuclear Material

(119) Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material, Brussels 1971.

Objectives and achievement

Both the Paris and the Vienna Convention "channel" liability for nuclear damage to operators of nuclear installations. Damage occurring during transport is usually attributed to the sending and, in some cases, to the receiving installation. However, both Conventions do not interfere with existing conventions of traditional maritime law. Accordingly, during maritime carriage of nuclear material parallel liabilities may arise: strict but limited liability of the operator of the nuclear installation concerned under nuclear law, and traditional fault liability of the carrier under maritime law. In certain cases, this latter liability may be unlimited. In consequence, maritime insurers did not cover nuclear risks, and maritime carriers refused to accept nuclear cargo.

The objective of the Maritime Carriage Convention is to ensure that operators of nuclear installations are exclusively liable for nuclear damage caused during maritime transport of nuclear material. It provides that any person that might be liable under national or international maritime law shall be exonerated from liability if the operator of a nuclear installation is liable either under international nuclear law (Paris or Vienna Conventions, Nos. 93 and 94 above), or under national nuclear law provided that national law is in all aspects as favourable to victims as the relevant international conventions.

Like the Joint Protocol, the Maritime Carriage Convention bridges an existing gap between parallel legal systems. It does not establish an independent liability regime.

The underlying objective of the Convention, namely the removal of obstacles to maritime carriage of nuclear material, has been successful only to a limited degree. Most ratifications have been deposited by Western European States, i.e. Paris Convention States. Generally, interest in the Convention remained low. The general principle, however, namely the separation of nuclear and maritime liability, gradually enters instruments of maritime law.

Participation

Participation follows the "Vienna formula", i.e. participation is limited to members of the United Nations, its specialized organizations, IAEA and the Statute of the ICJ.

Reservations are possible upon ratification, accession or approval in case they have been made according to the requirements of the Paris and Vienna Conventions. Of the 13 Contracting Parties, only Germany made a reservation.

The current membership is as follows: 10 Parties from Western Europe, and 4 Parties that are developing countries.

Whereas the instrument was prepared within OECD/NEA and the Comité Maritime International (CMI), an association of shipping interests, it was drafted within the IMCO Legal Committee and adopted by an IMCO Diplomatic Conference. The IMCO meetings were attended

by a considerably higher number of delegations, including developing countries. 38 States were represented at the Diplomatic Conference that adopted the Convention, including 19 from developing countries (6 from America, 6 from Asia, 5 from Africa, and 2 from Europe), and 19 industrialized countries (15 from Western Europe and 4 Others). In addition, five developing countries were represented by observer delegations[8].

The Maritime Carriage Convention is in fact an instrument for joint amendment of nuclear liability conventions and several maritime liability conventions; no other programme activities are therefore foreseen. Two groups of States benefit from participation: States with nuclear power programmes benefit from being able to transport nuclear material by sea; and maritime countries enable their commercial fleet to accept nuclear cargo.

Implementation and information

The Convention required the deposit of five ratifications, accessions or approvals for its entry into force, on 15 July 1975.

The Convention obliges Parties to implement relevant provisions into national nuclear and maritime law. It does not provide for organized monitoring or data reporting. However, despite its being part of international maritime law, it is of interest primarily for the development of nuclear energy. It is, therefore, subject in particular to NEA nuclear law supervisory activities.

There are no institutional mechanisms for the promotion of compliance or for the settlement of disputes.

The text of the Convention has been published by IMO in four languages (English, French, Russian, and Spanish), accompanied by the Final Act of the relevant Conference.

Although it is administered by IMO, information largely relies upon NEA activities, including reports in the Nuclear Law Bulletin.

Operation, review and adjustment

The Secretary-General of IMO performs depositary functions under the Convention. The Convention does not provide for the establishment of a secretariat or the conduct of regular meetings or programme activities.

The depositary organization shall call a conference for revision of the instrument upon request of one third of the Parties. This provision has not been applied so far. Since the Convention does not establish an independent liability regime, it does not require continuous adaptation to changing circumstances.

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[8] Final Act of the International Legal Conference on Maritime Carriage of Nuclear Substances 1971.

Codification programming

As far as the international regulation of maritime carriage of nuclear material is concerned, new draft instruments or draft revisions are not under consideration. However, the concept of separation of nuclear and maritime liability is incorporated in an ongoing process of continuous incorporation into revised or new instruments of international maritime law, e.g., the Convention on Limitation of Liability for Maritime Claims, London 1976.

5. Liability of Operators of Nuclear Ships

(120) Convention on the Liability of Operators of Nuclear Ships, Brussels 1962.

Objectives and achievement

The launching of the first nuclear-powered freighter made it apparent that commercial competitiveness relied on the principle that coastal states generally accept the calling of such ships in ports under their territorial jurisdiction. At the same time, an increasing number of nuclear-powered ships, including warships, raised the risks of large-scale (nuclear) damage, for which commercial shipping was liable according to traditional maritime law.

The objective of the Nuclear Ship Convention is, therefore, to determine by agreement uniform rules concerning the liability of operators of nuclear ships (preamble). For this purpose, the Convention establishes the following regime:

- The operator shall be absolutely liable for nuclear damage caused by the operation of a nuclear ship. Other persons shall be exonerated from any liability that might arise under any other law (Art. II).
- Liability shall be limited to 1500 million gold-based francs (approximately gold-based US$ 100 million) (Art. III).
- The licensing State shall determine the amount up to which the operator shall be obliged to cover his liability by insurance. The licensing State shall ensure the availability of the full amount of compensation by providing the necessary funds beyond the yield of such insurance (Art. III).
- The regime extends to any nuclear-propelled ship, including warships (Art. I).
- Action for compensation may be brought in a court of the licensing State or of any Contracting Party in whose territory damage is sustained. However, in case the limitation amount does not satisfy all claims, or the ship causing nuclear damage is a warship, the competent court shall be that of the licensing State (Arts. X, XI).

With reference to the operation of nuclear-propelled ships being commercially used, the Convention attempts to effectively integrate environmental and developmental aspects. Without the existence of a sufficiently effective liability regime, coastal States would not accept the entrance of nuclear-propelled vessels in their waters and ports. With regard to economic risks involved in new and ultra-hazardous industrial activities, the responsibility of Parties creating and being in a position to minimize such risks (i.e., operators and licensing states), protects possible victims and removes obstacles to such activities.

The Convention has not been successful as it never entered into force. Two factors contributed to its failure: States with nuclear-propelled warships refused to accept the application of a conventional regime based on private-liability to warships, and nuclear propulsion turned out not to be economically competitive.

Participation

The Convention is open for signature and subsequent ratification by States having attended the 1962 Diplomatic Conference on Maritime Law. Members of the United Nations, its specialized agencies and the IAEA may accede to it.

The Convention has been signed by 15 States, including five European industrialized countries and ten developing countries (6 Asian, 2 African, 1 American, 1 European). It has been ratified by two West-European States and acceded to by 2 developing countries[9].

The Convention had been prepared within the Comité Maritime International, the private association of shipping interests on maritime law, and the IAEA. The relevant CMI session was not attended by any national shipping association from developing countries and only one from Eastern Europe[10]. The IAEA "Panel of Legal Experts" was attended by members from the following regional groups: Western Europe (10), Eastern Europe (5); other industrialized countries (3); developing countries (4), of which three from Europe plus India[11]. The eleventh session of the Diplomatic Conference on Maritime Law (first phase) was attended by delegations from 49 countries, including 30 from industrialized countries (18 West-European, 7 East-European, 5 others) and 19 from developing countries (8 Asian, 4 African, 3 American, 4 European) plus 8 observer delegations from developing countries. Of the 50 delegations that attended the second phase of the Conference, 28 represented industrialized countries (17 West-European, 7 East-European, 4 others) and 22 developing countries (8 Asian, 4 African, 6 American, 4 European). Out of five observer delegations, three represented developing and two industrialized countries[12].

Until nuclear propulsion of commercial ships becomes more widespread, or until States operating nuclear-propelled ships accept application of a civil liability regime to ships in non-commercial service, including warships, no incentive for further participation is apparent.

Implementation and information

To enter into force, the Convention requires the deposit of two ratifications, including at least one ratification by a licensing state. The requirement reflects the very minimum condition making the conventional regime applicable at least between two States and for at least one nuclear-propelled ship. However, to date no licensing State ratified the Convention.

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[9] Cf. Nuclear Law Bulletin 13/1974, p. 32-33.

[10] International Maritime Committee XXIVth Conference - Rijeka 1959.

[11] Liability of Operators of Nuclear Ships, Report of the Panel of Legal Experts; Doc. No. 3, Diplomatic Conference on Maritime Law, Brussels 1961. Panel members were mostly governmental experts, but acted in a personal capacity.

[12] Cf. Royaume de Belgique, Ministère des affaires étrangères et du commerce extérieur: Conférence Diplomatique de Droit Maritime, Onzième Session, Bruxelles 1961, Brussels 1962; and Royaume de Belgique, Ministère des affaires étrangères et du commerce extérieur: Conférence Diplomatique de Droit Maritime, Onzième Session (2e phase), Bruxelles 1962, Brussels 1963.

Obligations imposed upon Parties extend primarily to incorporating the liability regime into domestic legislation. The regime includes provisions for the supply by licensing States of public funds beyond the yield of private insurance of operators in case of nuclear damage, necessary jurisdictional provisions, the waiving of immunity as far as the conventional regime is concerned, and the undertaking of appropriate measures to prevent nuclear ships from flying flags of Contracting States without their licence or authority.

The Convention does not provide for monitoring. There are no obligations as to data reporting, compliance and follow-up on non-compliance. Disputes between two or more Parties shall be submitted to arbitration, if they cannot be settled by negotiation. If, within six months, the Parties concerned are unable to agree on arbitration procedures, any one of them may refer the dispute to the International Court of Justice. Upon signature, ratification or accession, a Party may declare that it does not consider itself bound by the dispute-settlement mechanism. The mechanism has not been used.

The text of the Convention was drafted in four languages, English, French, Russian, and Spanish. Proceedings of the 11th Session of the Diplomatic Conferences on Maritime Law were published by the depositary, the Government of Belgium. The published proceedings reproduce documents in English and French, as submitted, and other documents in (French) translation.

Operation, review and adjustment

The Convention is deposited with the Belgian Government. It does not provide for institutional mechanisms, nor is it related to an existing international organization. The Depositary Government shall convene conferences for the purpose of revising the Convention five years after its entry into force or upon request of one-third of the Contracting Parties.

Codification programming

Currently no draft instruments or draft revisions of the Convention are in preparation. Unless nuclear-propelled and commercial vessels become operative and economically competitive, the international legal regime on liability for nuclear damage caused by these ships does not have much relevance.

Although the Convention did not enter into force, its liability regime served as model for a number of bilateral port-visit arrangements concerning two nuclear-powered carriers, namely Savannah (USA) and Otto Hahn (Germany). To facilitate and to guide time-consuming bilateral negotiations, the OECD- Nuclear Energy Agency elaborated a "Model for Bilateral Agreements on the Visits of Nuclear Ships"[13], which contributed to the development of international law concerning liability of operators of nuclear ships.

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[13] Cf. Nuclear Law Bulletin 12/1973, pp. 31-37.

II. Civil Liability for Pollution Damage Caused by Maritime Transport of Oil

The regime concerning civil liability for pollution damage caused by maritime transport of oil consists of the following interrelated instruments:

(121) **the International Convention on Civil Liability for Oil Pollution Damage,** Brussels 1969 (CLC);
- (a) the Protocol to the International Convention on Civil Liability for Oil Pollution Damage, London 1976 (1976 CLC Protocol);
- (b) the Protocol of 1984 to amend the International Convention on Civil Liability for Oil Pollution Damage, London 1984 (1984 CLC Protocol);

(122) **the International Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage,** Brussels 1971 (Fund Convention);
- (a) the Protocol to the International Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage, London 1976 (1976 Fund Protocol); and
- (b) the Protocol to amend the International Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage, London 1984 (1984 Fund Protocol).

Objectives and achievement

The oil pollution liability regime must be seen in the context of traditional maritime liability law regulating the relationship among different parties directly involved in maritime transport (e.g. ship-owners, freight-owners, ports, salvors). Maritime pollution liability relates maritime transport with third parties, including coastal states, which are not directly involved and do not directly benefit from these economic activities.

In order to balance these interests related to maritime transport of oil and victims' interests, the CLC stipulates two basic objectives: (a) to ensure that adequate compensation is available to persons suffering from pollution damage through oil escaping during its maritime transport by ship, and (b) to adopt uniform regulations on liability and compensation for oil pollution damage (cf. preamble).

To meet these objectives, the Convention establishes a uniform liability regime with the following basic features:

- The owner of an oil tanker is liable for pollution damage caused by oil regardless of fault or negligence, except for some exonerations (Art. IV). The regime therefore clearly identifies an addressee against whom claims must be brought without, however, denying the owner's right of recourse under domestic law (Art. III).
- The owner has to cover his liability by insurance or other financial instruments (Art. VII). Bankruptcy or the dissolution of the company will therefore not preclude compensation.

- The owner may limit his liability depending upon the tonnage of the ship, but not exceeding the amount of 210 million gold-based francs (Art. V, subsequently amended). In practice, the limits have been set with reference to the structure of the insurance market.
- The right to limit liability is based upon the establishment of a fund with a competent court or authority within the territory of any one of the Contracting Parties in which action has been brought.
- The fund is exclusively established for paying out claims in compensation for pollution damage occurring in the territory or territorial sea of a Contracting Party and for measures to prevent such damages.
- The Convention does not apply to warships and other state-owned ships not engaged in commercial activities (Art. XI).

The 1971 Fund Convention tries to cover the remaining economic risks. Its basic objectives are (a) to provide for a compensation system, supplementing that of the CLC, in order to ensure full compensation of victims; and (b) to distribute the economic burden between shipping and cargo interests (cf. preamble).

The Fund Convention establishes an International Oil Pollution Compensation Fund:

- The Fund provides compensation up to a flat-rate ceiling to victims above the compensation provided under the CLC, as well as in case ship-owners are financially incapable to pay, or are exonerated (Art.4).
- The Fund also covers part of the liability imposed upon the ship-owner (Art. 5, later amended).
- Fund compensation for a single incident is limited to 950 million gold-based francs, including the amount paid under the CLC (later amended).
- The Fund is financed by contributions from companies ("persons") residing in the territory of Contracting Parties and receiving oil which has been subject to maritime transport. Contributions are determined in proportion to the amount of oil received above a specific minimum quantity which remains unassessed (Art. 10).

The 1976 Protocols have the objective to replace the gold-based unit of accounts by Special Drawing Rights (SDR) of the International Monetary Fund. Figures for ceilings were accordingly adjusted to SDR 14 million (CLC) and SDR 60 million (Fund).

The objectives of the 1984 Protocols are (a) to draw conclusions in the context of past legal and Fund practice without, however, changing the principles of the existing liability and compensation regime; and (b) to adapt the ceilings to inflation and increased economic risks involved in maritime transport of oil. Ceilings were thus raised to SDR 59.7 million for owners' liability under the revised CLC (Art. 6, CLC-Protocol, applicable to large tankers), and to SDR 135 million for compensation with respect to the revised Fund (including the amount paid under CLC); this amount is to be increased to SDR 200 million in case certain major contributors join the Fund Convention as revised by the Protocol (Art 6, Fund Protocol). The 1969 CLC and its 1984 Protocol, as well as the 1971 Fund Convention and its 1984 Protocol are to form single instruments.

Due to the rapid growth of large-size oil tankers, the combined CLC/Fund regime did in fact reset the traditional balance between promotion of an economic activity and protection of third-party interests, including protection of the coastal environment, fish stocks etc.

The CLC achieved to a large extent its objective concerning the introduction of a uniform regime on oil pollution liability into the body of traditional maritime law. The success of the uniform regime for oil pollution liability can be measured in terms of participation. Following its entry into force in June 1975, the CLC was ratified or acceded to by 71 States[14]. The liability regime today is accepted by most maritime and coastal States concerned.

With regard to the objective to ensure adequate compensation to victims including coastal States, the effect of the regime is more ambiguous. At the time of its adoption, the compensation available under the CLC was adequate to meet the costs of oil spills. The disastrous Torrey Canyon casualty caused costs of about French francs 78 million, that is, well below the ceiling. Yet, over time the rate to which damage from major accidents could be compensated by the funds made available under CLC steadily decreased[15].

For major incidents, the International Oil Pollution Compensation Fund provides a necessary supplementary compensation. The Fund Convention establishes an unprecedented system of compensation by which a sector of the economy has to bear its share of the economic burden of risks involved in maritime transport of oil. Although it had attracted considerably less members as compared to the CLC, the Fund Convention must be deemed to be a highly successful international legal instrument. Since its entry into force in October 1978, 47 countries joined the scheme[16]. Yet, due to the limitation of funds available, and due to inflation and increase in costs, it was not possible in any case to ensure that full compensation was paid[17].

The 1976 Protocols, on the other hand, attracted a considerably lower rate of participation; the Fund Protocol (1976) did not even come into force. But the objective of the Protocols has been largely met as the Special Drawing Right has replaced the former gold-based standard on a interim basis.

The 1984 Protocols revise slightly the generally successful interconnected regime and try to solve its major drawback, namely the low fixed ceilings for compensation. However, they have not yet come into force.

Participation

The CLC (1969) is open to members of the United Nations system (UN, Specialized Agencies, IAEA and ICJ). Due to its provision of an additional layer of compensation, participation in the Fund Convention (1971) depends upon ratification of the CLC (1969). Accordingly, withdrawal from the CLC is considered as simultaneous withdrawal from the Fund Convention.

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[14] Status as of 1 January 1992.

[15] Cf. OECD: Combating Oil Spills, Paris 1982.

[16] Status as of 1 January 1992.

[17] Out of about 60 cases in which the Fund has so far been involved, in one case it had not been possible to fully compensate damage. A second case in which claims may exceed the ceiling is still pending. (Information provided by the Secretariat of the Oil Pollution Compensation Fund.)

The admissibility of reservations is not addressed in any of the various instruments. With regard to the CLC, two States (the former USSR and German Democratic Republic) submitted reservations concerning a general waiver of State immunity in case of oil tankers being commercially used but State-owned. Several States declared that they were unable to accept that reservation[18].

According to the 1976 Protocols, changing the basis of the unit of account from gold-based franc to SDR, States that are not members of IMF can declare that they continue to use the gold-based franc. No State made such a declaration. No similar clauses were inserted into the 1984 revisions.

Of the currently 71 Parties to the CLC (1969), 47 are developing countries (17 Asian [including Pacific], 11 American [including Caribbean], 16 African, and 3 European [including Cyprus]), and 24 industrialized countries (17 West European, 2 East European, 5 others). Of the 38 Parties to the 1976 CLC Protocol, which entered into force in 1981, 19 are developing countries (11 Asian, 4 American, 2 African, 1 European), and 19 industrialized countries (15 West European, 2 East European and 2 others). Of the current 7 Parties to the 1984 CLC Protocol, which has not yet entered into force, 2 are developing countries (both from South America), and 5 are industrialized countries (3 West European and 2 others).

Of the currently 47 countries that are Parties to the 1971 Fund Convention, 29 are developing countries (12 from Asia, 1 from America, 13 from Africa, and 3 from Europe), and 18 industrialized countries (14 from West Europe, 2 from East Europe, and 2 others). Of the 19 Parties to the 1976 Fund Protocol, which has not yet entered into force, 6 are developing countries (2 Asian, 1 American, 1 African, 2 European), and 13 industrialized countries (11 West European, 2 East European). So far only two 2 Parties from West Europe have ratified the 1984 Fund Protocol which has not yet entered into force.

Many developing and industrialized States participated in the preparation of the various legal instruments of the regime. The 1969 International Legal Conference on Marine Pollution Damage, which adopted the CLC, was attended by 48 delegations, including 21 from developing countries (9 from Asia, 4 from America, 6 from Africa, and 2 from Europe), and 27 from industrialized states (17 from Western Europe, 4 from Eastern Europe and 6 others). In addition, six more countries were represented by observers, including four developing countries[19]. The 1971 Conference on the Fund Convention was attended by 49 delegations, of which 26 were from developing countries (8 from Asia, 8 from America, 8 from Africa, 2 from Europe), and 23 from industrialized countries (16 West European, 3 East European and 4 others)[20]. Among the 69 countries represented at the 1984 Diplomatic Conference, which adopted 2 Protocols to amend the CLC and the Fund Convention, 43 were developing countries (11 from Asia, 16 from

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[18] No State did, however, refuse the entry into force of the Convention between itself and those having deposited reservations.

[19] Figures from IMCO: Official Records of the International Legal Conference on Marine Pollution Damage 1969, London 1973.

[20] IMCO: Official Records of the Conference on the Establishment of an International Compensation Fund for Oil Pollution Damage 1971, London 1978.

America, 13 from Africa, and 3 from Europe) plus 2 additional observer delegations from developing countries, and 26 industrialized countries (16 West European, 5 East European, and 5 others)[21].

The integrated regime offers benefits for both coastal and maritime shipping States. For coastal States it ensures, in case of oil spills from maritime transport of oil, access to resources for financing preventive measures and rehabilitation of the environment, and for compensation of victims. Maritime States benefit from unified liability systems facilitating international shipping.

Participation in the regime requires financial commitments, in the case of the CLC by owners of oil tankers, in the case of the Fund Convention by oil recipients. However, incremental costs are comparatively low. The first Director of the Fund estimated for 1980, a year with high damage due to oil pollution, an incremental cost of about £ 0.027013 per ton of crude oil and heavy fuel oil[22]. Likewise, coverage of risk in terms of civil liability for pollution damage under the CLC is, in fact, only a small portion of total insurance costs[23]. While adoption of the CLC results in promotion of maritime shipping, the Fund constitutes an insurance system as such. Participation involves regular contributions in exchange for a reduction of coastal States' economic risks.

Except for general legislative and administrative capacity, neither technical nor scientific assistance is required to implement the Conventions. The Secretariat of the Fund offers assistance and information concerning the legal implementation of the regime.

As far as participation is concerned, a number of factors are noteworthy. First, the liability regime focuses on damage that is geographically confined and occasionally catastrophic, i.e., oil spills (as compared to the quantitatively more important voluntary release of oil by tankers and other ships). Negotiations leading both to the 1969/1971 regime and to its 1984 revisions were prompted by incidents that attracted major press coverage, i.e., the 1967 Torrey Canyon accident, and the 1978 Amoco Cadiz accident.

The regime is of particular importance to a globally trading industry, i.e., maritime carriage of oil. The industry, through the International Maritime Committee (CMI), played an active role in the preparation of the CLC and its 1984 revision. Since the CMI is made up of national committees, and members of national committees also participated in several delegations during the negotiations, it may be assumed that the shipping industry also influenced the decision and implementation process at the domestic level in several countries.

The influence of the oil processing industry is also relevant. Oil companies, organized in the Oil Companies' International Marine Forum (OCIMF), have generally accepted to bear

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[21] IMO: International Conference on Liability and Compensation for Damage in Connexion with the Carriage of Certain Substances by Sea 1984, Final Act.

[22] Reinhard Ganten: International System for Compensation for Oil Pollution Damage, Oslo 1981, p. 17.

[23] Henri Smets: Oil Spill Risk: Economic Assessment and Compensation Limit, 14 Journal of Maritime Law and Commerce 1983, p. 33, gives the following rates for a typical West European supertanker on a Gulf-Rotterdam itinerary: 7 Ffrs./DWT (Dead Weight Ton) for the hull; 7 Ffrs./DWT for the cargo; and 1,2 Ffrs./DWT for civil liability, 10% of which accounting for oil pollution damage. Doubling the latter portion would therefore increase insurance costs of 15,6 Ffrs by another 0,16 Ffrs.

a share of economic risks in order to avoid the negative implications of unilateral measures for the business of large-scale maritime transport of oil. During the period of inter-governmental negotiations establishing the CLC, they adopted in 1968 the "Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution" (TOVALOP) which provides for owners' liability parallel to that under the CLC. TOVALOP entered into force in 1969 and within a short period of time covered nearly 90% of the world tanker fleet. Likewise, during the negotiations on the Fund-Convention, companies adopted the "Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution" (CRISTAL) which is similar to the Fund and provides compensation supplementary to TOVALOP. Like the Fund, CRISTAL is financed by cargo interests. Both voluntary agreements have been revised and adapted to their intergovernmental corollaries. The revised agreements apply regardless of whether or not the CLC or the Fund Convention apply to the incident. TOVALOP applies virtually to all tankers, CRISTAL covers approximately 80% of all cargoes of oil carried by sea[24].

As to reservations, the 1976 Protocols stipulate that Parties that are not members of the IMF may declare that they continue to use the gold-based unit of account. This clause is of interest predominantly for East-European countries. Yet, the clause was never used and did not gain practical relevance for the regime.

Implementation and information

The CLC and its 1976 Protocol entered into force after ratification, accession or approval by 8 States, including 5 States having at least one million units of gross tanker tonnage. The CLC came into force in June 1975 for 14 Parties, almost six years after its adoption; the tonnage requirement clearly delayed entry into force. Likewise, the 1976 Protocol to the CLC entered into force in April 1981 for 9 Parties; here again, the tonnage requirement was a constraint. The 1984 Protocol to the CLC increased minimum requirements to 10 ratifications, including 6 by States having at least a million units of gross tanker tonnage. However, since one of the objectives of the CLC is to provide uniform law, not least to avoid competitive disadvantages to early participants, such a requirement covering ratifications and tanker tonnage appears appropriate.

The Fund Convention and its 1976 Protocol were to enter into force after ratification, accession or approval by at least 8 states, and a minimum representation of 750 million tons of contributing oil. Moreover, the Fund Convention was not to enter into force prior to entry into force of the CLC. While the Convention entered into force for 15 Parties almost seven years after its adoption in October 1978, the 1976 Fund Protocol, with currently 19 ratifications, has not been able to secure the requirement as these Parties represent only approximately two-thirds of the amount of contributing oil required. In both cases, the minimum requirement concerning provisions of oil has considerably constrained entry into force.

Since the Fund is principally an insurance pool, a minimum of contributing oil appears to be essential for its operation, because it ensures a minimum distribution of risks. After all, the Fund Convention provides a limit for compensation for each single incident but the actual

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[24] Copies of TOVALOP and CRISTAL may be obtained from the International Tanker Owners Pollution Federation, London.

amount of annual contributions is not limited as it depends on the number and gravity of incidents which have to be compensated.

The 1984 Fund Protocol provides rules for accelerated entry into force, i.e., eight ratifications, accessions or approvals representing 600 million tons of contributing oil. However, Parties may declare that participation will become effective only upon joint withdrawal from the CLC (1969) and Fund (1971) Conventions as soon as at least 750 million tons of contributing oil are represented. Moreover, the Fund Protocol of 1984 shall not enter into force prior to the entry into force of the CLC Protocol of 1984.

The requirement to pay high initial contributions immediately upon ratification, which may have been an obstacle to early ratification[25], was dropped. Moreover, entry into force was implicitly eased by another provision which is not part of the final clauses. The Fund (1984) enters into force with a compensation limit of SDR 135 m. In case, however, that three member States combine 600 million tons of contributing oil, the limit automatically increases to SDR 200 million. In practice, the fulfillment of this condition depends upon participation by the USA (either in combination with Japan, or with Italy and France, or with Italy and the Netherlands)[26]. The Fund may enter into force without participation by the USA, but it will only operate to full capacity upon participation by the largest consumer of oil carried by sea.

The CLC establishes a civil liability regime for oil pollution damage. The main commitment imposed on Contracting States is to implement the regime in domestic law, while actual liability arises exclusively for owners of oil tankers. Contracting States have to perform some auxiliary duties. They shall ensure that competent authorities attest and certify that ship owners cover oil pollution risks by appropriate insurance. They shall mutually accept certificates issued by Contracting States. They shall ensure that oil tankers, wherever registered (e.g. in non-contracting states), do not enter or leave ports or offshore installations situated in their territory or territorial sea without such a certificate. Parties shall ensure that courts have the necessary competences, and they shall recognize judgements of courts competent under the Convention. Finally, Contracting Parties shall waive immunity with regard to ships that are State-owned but involved in commercial trading. The 1984 CLC Protocol does not impose any substantially different commitments upon Parties.

Institutionalized monitoring of the implementation of these duties or reporting obligations do not exist. However, the cost-effective part of the CLC liability regime, the coverage of economic risk by insurance, is subject to decentralized control by port States.

The Fund Convention imposes on Contracting Parties primarily the obligation to implement the rules concerning contributions to the Fund into domestic law. States do not guarantee contributions; and normally they do not contribute. But they shall ensure that contributions are paid, e.g., by imposing sanctions. They shall ensure that the Fund is recognized as a legal person entitled to sue oil-receiving persons. They shall ensure that the Fund has a right to intervene in case of Fund incidents in legal proceedings concerning CLC

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[25] Cf. Reinhard Ganten: Oil Pollution Liability. Amendments Adopted to Civil Liability and Fund Conventions; 2 Oil & Petrochemical Pollution 1985, p. 102.

[26] Cf. Reinhard Ganten: Oil Pollution Liability. Amendments Adopted to Civil Liability and Fund Conventions; 2 Oil & Petrochemical Pollution 1985, p. 100 and note 30.

liability, since judgements on CLC liability may have an impact on additional Fund compensation. In case Contracting Parties declare that they will contribute in the place of their nationals, they have to waive their immunity in that respect. Finally, Parties shall communicate annually a list of oil-receiving persons under their jurisdiction and the amount of oil received by each person. Although this list is indispensable for the assessment of contributions by the Fund Secretariat, late submission was frequent during the initial period. The 1984 Fund Protocol provides for a modest sanctioning mechanism, as it holds States liable for any financial losses of the Fund due to late submission of their annual lists. Apart from this slight modification, the 1984 Protocol does not impose any substantially different commitments upon States.

Like the CLC, the Fund Convention does not provide for organized monitoring of implementation. However, the most cost-effective part of obligations, i.e., regular contributions on the part of persons receiving oil above a certain quantity, as well as the only regular obligation of Contracting States, i.e. the annual submission of lists of contributing persons, are closely monitored by the Fund Secretariat. Moreover, the Fund Secretariat is fairly well informed about relevant national law and maintains close informal relations with administrative units of Contracting Parties that are responsible for implementation of the regime. As a consequence, the implementation process is promoted by informal consultations. So far, the Fund did not have to sue any non-contributing, financially capable person. The Assembly of Contracting Parties to the Fund Convention does not play a major role in the promotion of implementation.

Once the decision to join one or more of the instruments of the CLC/Fund regime is taken, implementation generally does not seem to have raised major problems. This may be due to the fact that the cost-effective parts of commitments are to some degree self-enforcing and removed from the intergovernmental level. Also, the Secretariat also provides training and assistance for implementation, especially for developing countries.

The IMO (former IMCO) Secretariat publishes Final Acts of diplomatic conferences. Texts of agreements are disseminated primarily in English and French. Since international conventions on maritime law are frequently used in legal proceedings, the International Maritime Organization published the Official Records of the Diplomatic Conferences of 1969 (CLC) and 1971 (Fund Convention) in English. Fund practice is reported to the biennial meetings of the Assembly of Contracting Parties. The Fund Secretariat has issued a number of papers facilitating implementation of the regime and the submission of claims, including a non-technical "Claims Manual" for the information of victims about claims procedures, etc. For a broader public, current developments are reported in regular IMO publications (e.g., IMO Newspaper).

Operation, review and adjustment

The Secretary-General of IMO (former IMCO) performs depositary functions for both the CLC and the Fund Conventions.

Except for a decentralized port State control system, the CLC does not have its own institutional apparatus, e.g. a regular conference of Parties. Commitments are not regularly reviewed. However, IMO, as depositary organization, shall convene a conference of Contracting Parties if so desired by at least one-third of the Parties. Such a conference was called twice for the adoption of Protocols: in 1976 and in 1984. In fact, the IMO Legal Committee, initially established as an ad hoc forum for the preparation of CLC and Fund Conventions, has assumed the role of a deliberation forum, responsible for general supervision and review of the CLC.

The 1984 Protocol designates the IMO Legal Committee, expanded by those Contracting Parties that are not members of IMO, as a forum for discussion and decision-making about amendments of limitation amounts according to simplified procedures. Because IMO provides the deliberation forum and the necessary servicing functions, separate secretariat and administrative costs do not arise under the CLC.

By contrast, the Fund Convention established a comprehensive institutional apparatus. A secretariat, led by the Fund Director, is responsible for the conduct of business, including collection of contributions and most final settlements. The 1971 Fund Convention establishes two decision-making bodies, the Assembly of Contracting Parties which meets annually, and the Executive Committee comprising one third of Parties and meeting at least annually. However, because of annual rotation in membership of the Executive Committee, the supervisory structure did not work satisfactorily. Under the 1984 Protocol, the Executive Committee is not re-established. Instead, the Assembly as the principal policy-making body controls the Fund and its Secretariat and may establish technical working groups for the supervision of financial settlements for particular incidents[27].

Despite regular meetings of the Assembly of Parties, amendments of compensation limits according to simplified procedures under the 1984 Fund Protocol are to be deliberated and decided within the IMO Legal Committee in order to co-ordinate changes in the limitation amounts of both Conventions by a single decision-making body.

Annual Secretariat costs amount to £ 500,000 - 600,000. Expenses are paid from the Fund, i.e., by contributing persons and not by Contracting States. Expenses for delegations, travel etc. are paid by Contracting Parties.

The CLC/Fund regime has no system or rules by which scientific and technical knowledge are incorporated into the decision-making process. As the regime is primarily concerned with allocation of economic risks involved in maritime transportation of oil, the input of scientific and technical knowledge plays a minor role in the decision-making process.

The Fund Secretariat, the Assembly and the Executive Committee, all play a role in the evolution of the legal regime. In particular, financial settlements provide some "case law" as to the authoritative interpretation of the two conventions.

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[27] On the reasons for this revision, see Reinhard Ganten: Oil Pollution Liability. Assessment of Possible Revisions; Oil & Petrochemical Pollution 1983, pp. 21-22.

Limitation amounts have to be regularly adapted to increasing risks and inflation. The 1969 CLC does not contain any provision in this regard. The 1971 Fund Convention allows an increase of compensation limits up to 100% by Assembly decision. In 1979, following the Amoco Cadiz accident, the Assembly increased the limit by 50% (from SDR 30 to SDR 45 million), in 1987 up to the limit of SDR 60 million. In both 1984 Protocols, provision is made for a simplified amendment procedure concerning limitation amounts that is applicable under several restrictions. Amendments are deliberated within the IMO Legal Committee and decided upon by a two-thirds majority of Parties. Amendments enter into force after a period of 18 months unless at least one quarter of Parties submit objections within that period. Amendments adopted under this procedure are binding upon all Parties.

Codification programming

With regard to liability for damage caused by maritime transportation of oil, no revisions beyond the 1984 Protocols are currently pending. However, preparations for a separate Convention on Liability and Compensation in Connexion with the Carriage of Noxious and Hazardous Substances by Sea (HNS Convention) have been resumed within IMO.

Work in the two fields of liability for pollution caused by maritime carriage of dangerous substances proceeds within the Legal Committee of IMO. Co-ordination is thus facilitated by the uniformity of the negotiation forum. Co-ordination of the HNS project negotiated within IMO with its corollary addressing liability for damage during inland transport of dangerous substances negotiated within ECE (No. 124 below) has been accomplished by avoidance of simultaneous preparation of instruments. When adoption of the Draft HNS Convention failed in 1984, the project was abandoned until the ECE corollary was virtually finalized.

With respect to liability for damage from maritime carriage of dangerous substances, the HNS Convention under consideration will bridge a major gap existing in international maritime law on third party liability. As far as damage from maritime carriage of oil is concerned, some risks remain uncovered by the CLC/Fund regime, including damage other than pollution damage, e.g., resulting from explosion of tankers, and oil pollution damage from unidentified sources, e.g., caused by deliberate release of oil residues. Finally, if the oil business is considered as an integrated industry, risks of oil pollution and other damage not arising from maritime carriage of oil, but e.g., from offshore operations, are not yet covered by globally applicable international regulations on liability (see No. 123 below).

International law concerning liability for oil pollution damage arising from maritime carriage of oil has been developed in close collaboration with major oil companies. It has been influenced by TOVALOP and CRISTAL, the voluntary liability and compensation contracts agreed upon by oil companies. The CLC/Fund legal regime is continuously developed by Fund practice in respect of the settlement of claims, and through joint authoritative interpretation by the Fund Assembly.

III. Civil Liability for Pollution Damage Caused by Offshore Operations

(123) Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources, London 1977.

Objectives and achievement

The major oil spill off the coast of Santa Barbara, California, in 1972 and the beginning exploitation of oil resources in the North Sea continental shelf area brought attention to the importance of large-scale accidental oil spills caused by offshore operations. Responding to this development, the regional London Convention concerning offshore operations pursues two objectives: (a) to ensure that adequate compensation is available for victims of oil pollution from offshore operations, and (b) to provide uniform rules and procedures for determining questions of liability and compensation (preamble). The Convention establishes the following regime:

- Operators shall be strictly liable for oil pollution damage caused by offshore installations and for costs of measures for the prevention of such damage (Art. 3); they shall have a right of recourse according to national law.
- Liability shall be limited per incident to SDR 30 million; this amount shall automatically increase to SDR 40 million after a period of five years from the opening of the instrument for signature (Art. 6).
- Liability shall be covered by insurance or financial security up to SDR 22 million, to be increased automatically to SDR 35 million after the same five year period (Art. 8). These amounts seemed to be the limits for which insurance cover was obtainable.
- In case of an accident, legal action shall be brought in courts of any Contracting State in which damage occurred or of the licensing State. The operator shall establish a limitation fund in one of these courts which shall, in turn, be competent to decide on matters of compensation (Art. 11).
- Contracting Parties may provide for higher limits or unlimited liability (Art. 15).

The Convention intends to make operators liable for dangerous, but generally beneficial commercial activities involving economic risks. It thus directly integrates industrial development and environmental aspects.

The territorial applicability of the Convention is restricted to the areas of the North Sea, the Baltic Sea and the North Atlantic, adjacent to the European coastline. Although the Convention does not have an immediate bearing on global environmental protection and sustainable development, it is apt to serve as a precedent for the negotiation of similar liability regimes balancing developmental and environmental aspects of dangerous activities in offshore areas of other regions or regional seas. Since the Convention focuses exclusively on Western Europe, it does not take into account the special situation of developing countries.

If achievement is measured in terms of the number of States which have ratified the Convention and implemented the regime, the Convention did not achieve its objectives; it did not receive any ratification so far. Nevertheless, the negotiation process caused the establishment of a voluntary compensation scheme by oil companies involved in North Sea offshore operations ("Oil Pollution Liability Agreement", OPOL) providing, in its current version, for compensation

up to US$ 100 million[28]. In connection with domestic laws of liability, OPOL provides a better claims situation for victims than the Convention would have done. Hence, while the Convention has not met its objective of providing uniform rules and procedures, it has, in an indirect way, ensured the availability of adequate compensation for victims.

Participation

The Convention is restricted to the group of countries having been invited to the Intergovernmental Conference which adopted the Convention. The Conference was attended by nine West-European States. The Contracting Parties may, however, by unanimous agreement invite other States having coastlines on the North Sea, the Baltic Sea, or the Atlantic Ocean north of 36°N (i.e., European coastlines).

No reservations may be made under the Convention.

The major reason for non-ratification by interested countries has been the existence of the above-mentioned Oil Pollution Liability Agreement.

Implementation and information

The Convention requires four ratifications to enter into force. The principal commitment imposed on Parties is domestic legal implementation of the regime set out in the Convention. This commitment includes provision of necessary jurisdictional competences and waiving of immunities in case of a State Party itself being operator of offshore activities. No obligations exist as to reporting or data supply. Implementation has to be monitored decentralized, that is, by Parties and NGOs, e.g., oil companies concerned.

The Convention does not contain any provision addressing the promotion of implementation or dispute settlement.

The United Kingdom Government published the Convention and the Final Act of the 1977 Diplomatic Conference in English.

Operation, review and adjustment

The Government of the United Kingdom performs depositary functions. There are no institutional arrangements as to the establishment of a secretariat or regular meetings.

While mechanisms for regular review of provisions do not exist, the Convention sets out a mechanism for accelerated adaptation of limitation figures. Under the Convention a Committee composed of one representative of each Contracting Party is established and shall be convened if a Party considers limitation figures no longer adequate. The Committee may, by a majority of three-quarters of the Parties, adopt a recommendation on the modification of these figures. Figures recommended enter into force upon acceptance by all Parties. Parties not responding within six months are deemed to have accepted the modification. If a Party objects within six months, amounts recommended shall enter into force for all other Parties.

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[28] Copies may be obtained from The Offshore Pollution Liability Limited, Ewell, Surrey, United Kingdom.

Codification programming

At present no specific draft revisions or new draft instruments are discussed, although some States concerned closely monitor the situation with a view to revising the Convention in terms of imposing unlimited and strict liability of operators.

IV. Civil Liability for Damage Caused by Inland Transport of Dangerous Substances

(124) Convention on Civil Liability for Damage Caused During Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD), Geneva 1989.

Objectives and achievement

The Convention covers risks involved in inland transport of dangerous goods. The objective of the Convention is to establish uniform rules ensuring adequate and speedy compensation for damage during inland carriage of dangerous goods (preamble). It creates the following liability regime:

- The carrier, i.e., the registered owner or other person controlling a road vehicle or an inland navigation vessel or the operator of a railway line, is liable for damage caused during transport of dangerous goods (Art. 5). Damage extends to loss of life or personal injury, loss or damage of property, loss or damage by contamination to the environment, including reasonable measures for the reinstatement of the environment, and the costs of preventive measures (Art. 1).
- The carrier's liability shall be covered by insurance or financial security (Art. 13), except that carriers being States or their constituting parts do not require insurance cover (Art. 16).
- The carrier may limit his liability per incident, in case of a road or rail carrier to SDR 18 million for claims concerning loss of life or personal injury and to SDR 12 million with respect to other claims, and in the case of inland navigation vessels to SDR 8 million and SDR 7 million respectively (Art. 9).
- No claim may be made beyond the regime against the carrier or any person engaged in the transport operation or in related salvage activities (Art. 5).
- Action may be brought in courts of Contracting Parties in which either the incident has occurred, or damage was sustained, or preventive measures were undertaken, or the carrier has his habitual residence (Art. 19). The carrier may establish a limitation fund in one of the courts where action has been brought. The court at which the fund has been established will be responsible to decide about distribution of compensation.

The Convention intends to integrate development and environment by balancing the prerequisites of a generally benign activity, i.e. transportation of dangerous substances, and its adverse effects and inherent economic risks of causing damage to the environment and to third parties.

The Convention refers to locally confined incidents of accidental damage. Even though it was prepared under the auspices of the UN Economic Commission for Europe (ECE), its possible impact is not limited regionally. It may be joined by States beyond the membership of ECE and it may serve as a precedent for conclusion of similar agreements applicable to other regions, although the principal territorial focus is Europe and some neighboring States.

The Convention does not specifically take into account the circumstances of developing countries.

Since the Convention was adopted only in October 1989, little can be said about the degree of achieving its objectives. However, its success may be measured both in terms of the number of States accepting and implementing the regime, and in terms of the amount of compensation available under the Convention as compared to the costs caused by incidents.

Participation

Although adopted in a regional forum (ECE), membership is open to all States. Reservations may be made on three specified points relating to higher standards for the protection of victims. Reservations other than those specified are not possible.

The Convention has not yet entered into force. While two countries, including one non-European developing country, have signed the Convention, no instrument of ratification has been submitted so far.

The Convention was drafted by the International Institute for the Unification of Private Law (UNIDROIT) and negotiated within the Inland Transport Committee of ECE. These fora generally address a European membership. There are no particular incentives for the encouragement of participation by developing countries. Measures for the promotion of participation by developing countries have not been adopted.

Implementation and information

The Convention enters into force after five instruments of ratification, approval, acceptance or accession have been deposited.

Parties are primarily under the obligation to implement the legal regime set out in the Convention. It includes the necessary jurisdictional competences, the designation of one or more authorities for issuing certificates of insurance, the designation of the authority for issuing or receiving communications related to compulsory insurance, the waiving of immunity in case a State or constituting part thereof is a carrier.

The Convention does not require Parties to regularly report implementation or supply and disclose data. However, Parties having made reservations to the Convention shall notify the depositary of the contents of their national law.

No mention is made in the Convention of measures to enhance compliance, of reactions to non-compliance, or of the settlement of disputes.

The Convention has been disseminated by ECE as a UN document in English, French and Russian. Publication of the Convention was accompanied by an explanatory report providing guidance for the interpretation and implementation of the regime.

Operation, review and adjustment

Depositary functions under the Convention are performed by the Secretary General of the United Nations. The Convention does not provide for the establishment of a separate institutional mechanism. However, the Inland Transport Committee of ECE provides the standing forum for deliberations in matters concerning the Convention. Upon request of one

third of, but at least three Parties, the Inland Transport Committee shall convene a Conference of Parties for revising or amending the Convention. Moreover, the Inland Transport Committee shall convene, upon request of one quarter of, but at least three Parties, a Committee constituted of one representative from each Contracting Party for amending compensation amounts according to simplified amendment procedures.

The Convention does not provide for regular meetings or programme activities, nor for a secretariat.

There are no mechanisms for regular or periodic review of the regime. Nevertheless, the Convention provides for simplified procedures for amendment of compensation figures. Requests for such amendments shall be supported by one quarter of, but at least three Parties. Requests are considered by the Committee of the Parties which adopts amendments of limitation figures by a two-thirds majority. An amendment is deemed to have been accepted if within a period of 18 months not at least a quarter of Parties has communicated its non-acceptance. Amendments accepted are binding for all Parties. In deciding, the Committee shall take into account past experience with incidents, changes in monetary value, and the anticipated impact of an amendment on insurance costs.

Codification programming

No drafts or draft revisions are currently under consideration with regard to inland transport of dangerous substances. A related instrument addressing liability for damage from maritime transport of dangerous substances is currently being prepared within IMO (see section II above), and an instrument addressing liability for dangerous activities is under consideration within the Council of Europe.

V. Other Developments Concerning Liability for Environmental Damage

Apart from the above-mentioned projects concerning liability for hazardous activities referring to maritime carriage of noxious and hazardous substances (IMO) and nuclear damage (IAEA), a number of other specific liability regimes are currently under preparation.

1. Liability for environmental damage in the framework of comprehensive instruments

Preparation of detailed rules on liability for environmental damage is being considered, or such rules are currently being prepared, as part of several comprehensive international treaty systems addressing specific hazardous activities:

- Within the framework of the United Nations Environment Programme (UNEP), a protocol on liability and compensation for damage resulting from the transboundary movement and disposal of hazardous wastes, to supplement the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (No. 103), is being negotiated. An Ad Hoc Working Group of Legal and Technical Experts has elaborated some "elements for a protocol" to be submitted to the first meeting of the Contracting Parties to the Convention. The meeting will be convened upon entry into force of the Convention which is expected to take place in 1992. The purpose of the draft protocol is to provide a comprehensive regime to ensure adequate and prompt compensation for damage from transboundary movement and disposal of hazardous wastes and other wastes, to deter violations of the Basel Convention and to enable restoration of the environment. The "elements" suggest to supplement private liability of operators either by an international fund, or by state liability, or by a combination of both concepts. Drafting is to be closely co-ordinated with the Draft Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, which is currently under preparation in the Council of Europe (see below). It should also be coordinated with any future regulations on liability for damage from ocean dumping within the framework of the 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (No. 35). Consideration of such regulations, however, have been postponed for the time being (see below).
- Within the framework of the Antarctic Treaty System (No. 14), the 1991 Protocol on Environmental Protection to the Antarctic Treaty, envisages the development of and annex on "rules and procedures relating to liability for damage arising from activities taking place in the Antarctic Treaty area and covered by this Protocol"[29]
  No further action has been taken so far.
- Within the framework of IMO, the question has been raised whether to prepare an instrument on liability for damage arising from ocean dumping of wastes, supplementing the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, London 1972 (No. 35). Drafting has been postponed in order to facilitate co-ordination with two other projects addressing matters of liability for damage from waste management, i.e., the above-mentioned UNEP Protocol on Liability and Compensation

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[29] Article 16, as adopted in Madrid on 4 October 1991.

for Damage Resulting from the Transboundary Movement and Disposal of Hazardous Wastes and the Draft Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (Council of Europe, see below).

- Within the framework of the 1982 UN Convention on the Law of the Sea (No. 38), the Preparatory Commission for the International Sea-Bed Authority and the International Tribunal for the Law of the Sea drafts specific rules on liability for damage caused by deep sea-bed mining activities, as part of a comprehensive set of Draft Regulations on the Protection and Preservation of the Marine Environment from Activities in the Area.

2. Liability for dangerous activities (Council of Europe)

Responding to the "Sandoz" incident which heavily polluted the Rhine River, a Draft Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment is currently being prepared within the Council of Europe. The draft elaborated by a Committee of Experts has been published in July 1991 with a view to organizing consultations with interested (e.g., non-governmental) actors. The project is regional in scope. Its objective is to ensure adequate compensation and to provide means for the prevention of damage and the reinstitution of the environment. It channels liability to the operator of a dangerous activity and provides for some institutional arrangements, including a Standing Committee. The Draft Convention addresses a broad range of dangerous activities, including the production and handling of dangerous substances and genetically modified organisms or dangerous micro-organisms, technologies producing dangerous non-ionising radiations, the incineration, handling, treatment or recycling of wastes, and the operation of sites for the permanent disposal of wastes. Drafting has to be closely co-ordinated with all existing liability regimes and current developments in various areas of liability for environmental damage, including liability for nuclear damage (OECD/NEA, IAEA), maritime carriage of dangerous substances and oil (IMO), inland carriage of dangerous substances (ECE), and transboundary movement and disposal of hazardous wastes and other wastes (UNEP).

3. International liability for injurious consequences arising out of acts not prohibited by international law (International Law Commission)

The most comprehensive, and therefore most general, project is currently under discussion in the UN International Law Commission (ILC). While its primary focus is on international, i.e., inter-governmental, liability for activities involving risks and activities with harmful effects, it recently extended to civil liability matters as well.

As the project extends to dangerous activities for which liability conventions are existing or under preparation, drafting has to be coordinated with developments concerning all other liability regimes now in the process of drafting. While there have been some co-ordinating efforts with regard to law-making projects under preparation within IAEA and the Council of Europe, the special rapporteur of the project was (as Chairman) personally involved in the UNEP Ad Hoc Working Group of Legal and Technical Experts for the elaboration of elements to be included in a Protocol on Liability and Compensation for Damage Resulting from the Transboundary Movement and Disposal of Hazardous Wastes and other Wastes. Co-ordination basically depends upon members of the ILC, in particular upon the special rapporteur, and on the annual deliberations in the Sixth Committee of the UN General Assembly to which the Commission annually reports.

STATUS OF RATIFICATIONS AS OF 1 JANUARY 1992

GLOBAL INSTRUMENTS (Treaty numbers see page 392)

Parties	118	119	120	121	122
Afghanistan					
Albania					
Algeria				x	x
Angola					
Antigua & Barbuda					
Argentina	x	x			
Australia				x	
Austria					
Bahamas				x	x
Bahrain					
Bangladesh					
Barbados					
Belarus*					
Belgium		x		x	
Belize				x	
Benin				x	x
Bhutan					
Bolivia	x				
Botswana					
Brazil				x	
Brunei Darussalam					
Bulgaria					
Burkina Faso					
Burundi					
Cambodia					
Cameroon	x			x	x
Canada				x	x
Cape Verde					
Central African Republic					
Chad					
Chile	x			x	
China				x	
Colombia				x	
Cook Islands					
Comoros					
Congo					
Costa Rica					
Cote d'Ivoire				x	x

Parties	118	119	120	121	122
Cuba	x				
Cyprus				x	x
Czech & Slovak Fed. Rep.					
Democr. People's Rep. of Korea					
Denmark		x		x	x
Djibouti				x	x
Dominica					
Dominican Republic				x	
Ecuador				x	
Egypt	x			x	
El Salvador					
Equatorial Guinea					
Estonia*					
Ethiopia					
Fiji				x	x
Finland		x		x	x
France		x		x	x
Gabon		x		x	x
Gambia				x	x
Germany		x		x	x
Ghana				x	x
Greece				x	x
Grenada					
Guatemala				x	
Guinea					
Guinea-Bissau					
Guyana					
Haiti					
Holy See					
Honduras					
Hungary	x				
Iceland				x	x
India				x	x
Indonesia				x	x
Iran (Islamic Republic of)					
Iraq					
Ireland					
Israel					
Italy		x		x	x
Jamaica					
Japan				x	x

Parties	118	119	120	121	122
Jordan					
Kenya					
Kiribati					
Kuwait				x	x
Lao People's Democratic Rep.					
Latvia*					
Lebanon			x	x	
Lesotho					
Liberia		x		x	x
Libyan Arab Jamahiriya					
Liechtenstein					
Lithuania*					
Luxembourg				x	
Madagascar			x		
Malawi					
Malaysia					
Maldives				x	x
Mali					
Malta				x	x
Marshall Islands					
Mauritania					
Mauritius					
Mexico	x				
Micronesia					
Monaco				x	x
Mongolia					
Morocco				x	
Mozambique					
Myanmar					
Namibia					
Nauru					
Nepal					
Netherlands		x	x	x	x
New Zealand				x	
Nicaragua					
Niger	x				
Nigeria				x	x
Niue					
Norway		x		x	x
Oman				x	x
Pakistan					

Parties	118	119	120	121	122
Palau					
Panama				x	
Papua New Guinea				x	x
Paraguay					
Peru	x			x	
Philippines	x				
Poland	x			x	x
Portugal			x	x	x
Qatar				x	x
Republic of Korea				x	
Republic of Yemen		x		x	
Romania					
Rwanda					
St. Kitts & Nevis					
St. Lucia					
St. Vincent & the Grenadines				x	
Samoa					
San Marino					
Sao Tome & Principe					
Saudi Arabia					
Senegal				x	
Seychelles				x	x
Sierra Leone					
Singapore				x	
Solomon Islands					
Somalia					
South Africa				x	
Spain		x		x	x
Sri Lanka				x	x
Sudan					
Suriname			x		
Swaziland					
Sweden		x		x	x
Switzerland				x	
Syrian Arab Republic			x	x	x
Thailand					
Togo					
Tonga					
Trinidad & Tobago	x				
Tunisia				x	x
Turkey					

Parties	118	119	120	121	122
Tuvalu				x	x
Uganda					
Ukraine*					
Union of Soviet Socialist Rep.*				x	x
United Arab Emirates				x	x
United Kingdom				x	x
United Republic of Tanzania					
United States of America					
Uruguay					
Vanuatu				x	x
Venezuela					
Viet Nam					
Yugoslavia*	x			x	x
Zaire			x		
Zambia					
Zimbabwe					

* Membership status subject to further clarification.

REGIONAL INSTRUMENTS

(93) Convention on Third Party Liability in the Field of Nuclear Energy (Paris 1960)

Belgium
Denmark
Finland
France
Germany
Greece
Italy
Netherlands
Norway
Portugal
Spain
Sweden
Turkey
United Kingdom