THE JOINT CONVENTION ON THE SAFETY OF SPENT FUEL MANAGEMENT AND ON THE SAFETY OF RADIOACTIVE WASTE MANAGEMENT

A. Introduction

1. The origins of the "Joint Convention"

The importance of the safe and environmentally sound management of radioactive wastes had been strongly reaffirmed by the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992. This question was dealt with in Chapter 22 on "safe and environmentally sound management of radioactive wastes" of Agenda 21, adopted at the time of the Conference,[1] which specifically referred to the necessity for States to "support efforts within IAEA to develop and promulgate radioactive wastes safety standards or guidelines and codes of practice as an internationally accepted basis for the safe and environmentally sound management and disposal of radioactive waste". This political statement was probably the first step in the process which has led to the adoption, in September 1997, of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (hereafter the "Joint Convention"). In 1994 the importance of elaborating safety standards for radioactive waste management appears again in the Convention on Nuclear Safety of 20 September 1994, the Preamble to which (paragraph ix) reads: "Affirming the need to begin promptly the development of an international convention on the safety of radioactive waste management as soon as the ongoing process to develop waste management safety fundamentals has resulted in broad international agreement."

This was followed by Resolution GC(XXXVIII)/RES/6—"Measures to resolve international issues related to the management of radioactive waste"—adopted by the General Conference of the IAEA at its 38th Session in September 1994, which invited the Board of Governors of the IAEA to commence preparations for a convention on the safety of waste management, "taking into account the views of Member States on the basic concept and framework of the said Convention".

Finally, in a letter of 23 December 1994, the Director-General of the IAEA announced the preparatory meeting, in February 1995, of the Group of Legal and Technical Experts entrusted with preparing the draft convention. The Group was open to participation by all member States of the Agency and to observers from intergovernmental organisations competent in the field.

Some weeks later, in March 1995, the Board of Governors adopted the "Safety Fundamentals" (Safety Series No.111–F) "The Principles of Radioactive Waste Management". With this document the process of preparing a basis for the safety of waste management, referred to in the Preamble to the Nuclear Safety Convention, was formally closed and the preparation of the Convention could begin.

After a preparatory meeting and six other meetings with much debate and compromise by all, the Group of Experts decided that the legal and technical work

1. This document is referred to in para.(xv) of the Preamble to the Joint Convention.

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was finalised and asked to submit the draft text of the Convention to the Board of Governors of the IAEA. Following a decision by the Board of Governors at its meeting on 11 June 1997, the Director-General of the IAEA convened a diplomatic conference to adopt the draft Joint Convention. The conference, with representatives from 84 States, met in Vienna at the headquarters of the IAEA from 1 to 5 September 1997 and adopted the text of the Joint Convention.

2. *Basic concept and structure of the Joint Convention*

The Group of Experts took the Nuclear Safety Convention as a model. The main obligations under the Joint Convention are:

(1) to establish a legislative and regulatory framework for the safety of spent fuel management and radioactive waste management;
(2) to set up an independent regulatory body (safety authority);
(3) to apply general safety principles.

As with the Nuclear Safety Convention, the contracting parties must "report" on implementation of these obligations at "review meetings" held at regular intervals—a relatively informal implementation procedure.

To repeat an expression in the Preamble to the Nuclear Safety Convention, the Joint Convention is an "incentive Convention" with the objective of developing an appropriate "safety culture" in countries which use nuclear materials that generate radioactive waste. The obligations cover various aspects of the safety culture without imposing technical requirements on the contracting parties.

While using the Nuclear Safety Convention as a model, difficulties of a different nature arose before the Group of Experts. The negotiations have been particularly sensitive on the issue of the scope of application. The discussions on this aspect are addressed in the next part of this article. These issues have economic and political implications and the article describes the willingness to reach a political compromise. The third part of the article focuses on the relationship of the Joint Convention with other relevant international instruments. It is based on the legal arguments put forward by the Group of Experts in order to evaluate the consequences of possible gaps and overlaps in relation to other instruments.

B. *Scope of Application*

1. *Spent fuel/radioactive waste: a Joint Convention*

(a) Background to a controversy: spent fuel as a resource. From the outset of the discussions there was clear disagreement between those countries which wanted spent fuel to be covered by the Convention (the Nordic countries, the United States, the United Kingdom, etc.) and those that did not (France, China, India, Pakistan, the Netherlands). The latter were in a clear minority in the Group of Experts.

The difference of approach did not mean that those countries opposed to including spent fuel considered it unnecessary to apply to spent fuel management safety principles similar to those applicable to radioactive waste management. It appeared clear that in safety terms spent fuel and radioactive waste must be subject to the same management requirements.

The reason certain countries were opposed to including spent fuel was that they feared that treating the two types of material on the same basis would restrict their freedom of choice in regard to fuel cycle policy. For these countries, spent fuel is not the same as radioactive waste, i.e. material for which no further utilisation is envisaged. It is, on the contrary, a valuable and, after reprocessing, a precious source of energy. It is, in other words, a "resource".

This being so, the discussions, sometimes heated, centred on this "controversy" and rapidly came to a standstill, each delegation maintaining its position.

A first attempt at compromise resulted from a proposal by Professor Baer, the Chairman of the Group of Experts. The compromise was summarised by the words "as far as the gates of the reprocessing plant" and entailed the Convention covering spent fuel up to its transfer to a reprocessing plant. Interim storage facilities for spent fuel pending final disposal or pending reprocessing, or for which no decision as to disposal or reprocessing had yet been taken (outside the reprocessing plant), as well as final disposal sites for spent fuel would have been covered by the Convention. This proposal (the Baer compromise), which was still unclear on whether radioactive waste/spent fuel would be treated in the same way, did not obtain general consensus within the Group of Experts and positions hardened still further.

At a meeting of the Group of Experts in June 1996, France, to resolve the waste/spent fuel problem, proposed as a compromise that only spent fuel declared by the contracting party concerned as having no further use be covered by the Convention. This proposal was dictated by a concern for clarity and logic: it was better clearly to distinguish the two materials. On the one hand there would be radioactive waste and spent fuel of no further use (rightly treated as waste) which would be covered by a "Waste Convention". On the other, there would be spent fuel for reprocessing which would not be covered by the Convention.

This proposal, which had the major drawback of leaving spent fuel for reprocessing, as well as that for which no decision had been taken, outside any treaty system, was not received favourably by countries wishing to see more extensive coverage of spent fuel, and discussions once again came to a standstill.

(b) The turning point of November 1996. At the meeting of the Group of Experts held in South Africa, at the invitation of that country, in November 1996, the French delegation to the Group of Experts submitted an entirely revised text relating to both spent fuel and radioactive waste: the dual-purpose Convention. The aim was to distinguish the two materials without ambiguity—spent fuel on the one hand and radioactive waste on the other—formulating the text as two separate conventions.

The thinking underlying the proposal is reflected in paragraphs (ii) and (vii) of the Preamble to the Convention:

> Recognising that the same safety objectives apply both to spent fuel and radioactive waste management;
>
> Recognising that the definition of a fuel cycle policy rests with the State, some States considering spent fuel as a valuable resource that may be reprocessed, others electing to dispose of it.

The concern of countries wishing to include spent fuel in the scope of application

of the Convention (applying safety principles to spent fuel management irrespective of its destination) was therefore met; as was the concern of countries seeing spent fuel as a valuable resource (choice of fuel cycle remaining open with reprocessing as a legitimate and safe option).

The French proposal was well received by a majority of participating countries. Reservations were expressed only by China, India and Pakistan (the Russian Federation was not represented at the meeting—otherwise it is likely that it too would have had reservations).

Discussion continued on this new basis and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management saw the light of day at the seventh and last meeting of the Group of Experts in March 1997. The term "joint", proposed by the US delegation at that meeting, well reflects the underlying concept of the Convention as applying to two separate subject matters.

(c) Implications for the scope of application. To define the scope of application of the Convention as regards spent fuel, reference must be made to Article 3.1, on the scope of application,[2] and to Article 2(o), which defines spent fuel management.[3] These Articles reveal two cases where spent fuel is not covered by the Convention.

The first is that of transport. According to the definition of "spent fuel management" the safety principles under the Convention will apply if spent fuel is transported from one facility to another within a given site. As regards off-site transportation, whether national or international, the Group of Experts considered it preferable, as stated in paragraph (xiv) of the Preamble, to refer to "existing international standards relating to the safety of the transport of radioactive materials". Such standards are numerous and highly detailed[4] and it did not seem necessary to introduce new ones or clarify existing ones.

The Joint Convention therefore contains no provisions concerning the safety of transportation (types of packages, transport modes, etc.). But it does contain rules applicable to transboundary movements (Article 27, which defines how and when spent fuel can be transferred from one country to another). As we shall see below, Article 27 does not contain any transport safety rules, but sets out the broad principles with which countries must comply when undertaking a transboundary movement.

The second case in which spent fuel might be excluded from the scope of the Convention is that of active reprocessing: "spent fuel held at reprocessing facilities

2. Art.3.1: "This Convention shall apply to the safety of spent fuel management when the spent fuel results from the operation of civilian nuclear reactors. Spent fuel held at reprocessing facilities as part of a reprocessing activity is not covered in the scope of this Convention unless the Contracting Party declares reprocessing to be part of spent fuel management."

3. Art.2(o): "Spent fuel management" means all activities that relate to the handling or storage of spent fuel, excluding off-site transportation. It may also involve discharges.

4. Convention for the Safety of Life at Sea (SOLAS) adopted 1 Nov. 1974. Convention on International Air Transit Services adopted in Chicago 7 Dec. 1944. European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and International Regulations concerning the Carriage of Dangerous Goods by Rail (RID). IAEA Regulations for the safe transport of radioactive materials as revised in 1996.

as part of a reprocessing activity is not covered in the scope of this convention" (Article 3.1). Within any given site, whether it is for research, produces electricity or reprocesses spent fuel, all activities relating to the handling or storage of spent fuel are covered by the Convention in line with Article 2(o). But when spent fuel is actively reprocessed ("as part of a reprocessing activity"), i.e. once it is sheared to be dissolved and processed, it is outside the scope of the Convention.

It should be understood that, although reprocessing is excluded from the scope of the Convention, storage on the site of a reprocessing facility, pending reprocessing, is covered by the Convention, since in such a case we are dealing with spent non-processed fuel.[5]

It should also be understood that if "active reprocessing" is excluded from the scope of the Convention as a general rule, it can be brought within the Convention on a voluntary basis, by a declaration by a contracting party: "unless the contracting Party declares reprocessing to be part of spent fuel management". This last sentence of Article 3.1 was added during the Diplomatic Conference following an attempt by the British delegation to have all spent fuel, including during active reprocessing, included in the scope of the Convention on a mandatory basis. As it was not possible to achieve consensus on this mandatory coverage of all spent fuel and reprocessing, the Diplomatic Conference, in order to accommodate the views of those countries (principally India and Pakistan) opposing mandatory coverage, decided to have an "optional/voluntary coverage". The new consensus resulted in the sentence.

By the end of the Diplomatic Conference, the three main reprocessing countries (France, Japan, the United Kingdom) made a common declaration stating that "they shall, on a voluntary basis, report on reprocessing as if it were part of spent fuel management within the meaning of the convention and invite all other countries which undertake reprocessing to do the same".

Certainly the "voluntary coverage" of reprocessing will be discussed during the first "review meeting" to take place after the entry into force of the Convention.

2. *Spent fuel and radioactive waste of military or defence origin*

(a) Two tendencies emerge. The progress of the negotiations was marked by the sensitive issue of whether and to what extent radioactive waste and spent fuel generated by military or defence programmes should be covered by the Joint Convention. Written declarations submitted by countries at the first meeting of the Group of Experts (July 1995) show a clear determination to include this item on the agenda. Out of 15 declarations, nine expressly refer to waste of military origin: seven countries stated themselves to be in favour of including this type of waste in the scope of the future Convention (Canada, Cuba, Estonia, Finland, Norway, Sweden, Ukraine), one country reserved its position while recognising the interest of examining the issue (the United States), and one country favoured excluding

5. This interpretation of art.3.1 was not shared by all States which had participated in the negotiations. A minority of States considered that the words "as part of a reprocessing activity" mean "intended for reprocessing more or less in the near future". Consequently, these countries consider storage of spent fuel on site of a reprocessing facility, as intended for reprocessing, outside the scope of the Convention.

waste of military origin (China). Thus, at the first formal meeting, among the five nuclear weapon States according to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT),[6] only the United States and China had submitted official declarations clarifying their positions.

The United States and France played a key role in this part of the negotiations. The United States, before coming to support "mandatory inclusion" of this type of waste in the scope of the Joint Convention, had reserved its position, while stating its readiness to accept the inclusion of most activities concerning waste or spent fuel undertaken by the Department of Energy (DoE). At the second meeting of the Group, in December 1995, the United States circulated a proposed article on the scope of application. The proposal provided that the Joint Convention should apply to radioactive waste and spent fuel of "non-civilian" origin resulting from activities under military and defence programmes and intended for long-term storage or final disposal. This approach aimed to set an objective criterion as the dividing line: the current stage of management of the waste (only when waste is under long-term storage or final disposal). Since long-term storage and final disposal are generally undertaken by civilian bodies, the dividing line proposed by the US delegation implied, *de facto*, prior transfer of the waste to non-military bodies. Although in most countries (e.g. the United States, France and the United Kingdom) this step is under the control of civilian bodies, other countries follow the so-called "closed cycle" approach: waste of military origin should be subject to military surveillance "from the cradle to the grave". The distinction between "civilian" and "military" bodies became clearer in the proposal submitted by the United Kingdom, also at the second meeting of the Group of Experts: one of the conditions for applying the Joint Convention to waste of military origin is that it be managed by the holder of a licence for a civilian facility. This view was shared by France, which nevertheless favoured "voluntary inclusion" of radioactive waste in the Convention.

The US and the UK proposals were in fact a reaction to the article on the scope of application in the initial draft of the Convention.[7] The issue had considerable political implications and the initial draft article offered a cautious and realistic solution: it excluded radioactive waste from non-civilian activities, unless the contracting party expressly declared otherwise. This meant that countries were given total discretion. This approach was supported by France in particular. It is interesting to note that, in order to take account of the proposals by the United States and the United Kingdom mentioned above, the discretionary element was deleted from the second draft of the Convention discussed in March 1996: that version of the text proposed to exclude from the scope of application radioactive waste generated by military or defence programmes which was not in long-term storage or final disposal. Conversely, radioactive waste of military origin under the long-term management phase, or finally disposed of, would automatically be covered by the Convention. On this point, the Russian Federation was hesitant and proposed to clarify the definition of "long-term storage" as compared to "final disposal".

6. The Treaty on the Non-Proliferation of Nuclear Weapons was concluded on 1 July 1968 and extended for an indefinite period in 1995.

7. The initial draft had been submitted to the delegations for consideration in Dec. 1995 at the second meeting of the Group of Experts.

Moreover, at this point in the negotiations the expression "military and defence programmes" was used for the first time. These two distinct terms, proposed by the US delegation, remained enigmatic as did the dividing line between the two. While recognising the possible overlap of the two terms, the experts agreed that they could not be seen as synonymous. The advantage of using both was that the two terms taken together covered all sensitive radioactive waste from non-civilian uses.[8]

The third draft marked a return to the starting point: not only did it reintroduce the discretionary element (non-application of the text to this type of waste and exceptional application at the request of the contracting party) but it also put brackets around any reference to waste of military or defence origin (reflecting the absence of consensus).

(b) Towards a compromise: how to reconcile the two tendencies? The fact that no compromise could be reached in the plenary session led the Chairman of the Group of Experts to set up an informal working group open to all interested countries. The group consisted of the five nuclear weapon States and some ten other (mainly Nordic) countries. The idea of combining the two tendencies, as in the present wording of Article 3.3, began to emerge: the first tendency favours the discretionary approach while the second introduces the idea of mandatory cover. The negotiations on this point subsequently continued in restricted session among the five nuclear weapon States.

The declaration by the Chinese delegation distributed at the fourth meeting of the Group of Experts affirmed that the inclusion of waste from military reactors raised difficulties. In its opinion the Convention should follow the Nuclear Safety Convention, which applies exclusively to civilian facilities. In a spirit of compromise China was nevertheless prepared to accept the inclusion of radioactive waste transferred to and managed by civilian bodies. The Russian Federation favoured a voluntary approach, with the aim of avoiding the inclusion of confidential information in national reports by contracting parties. On this point, the nuclear weapon States recognised the need for a special provision on military waste in the article on confidentiality. As it stands now, Article 36 therefore protects confidential information supplied by parties: countries retain sovereign rights to protect the disclosure and confidentiality of information on spent fuel and radioactive waste generated by military and defence programmes. Article 3.3 on the scope of application must therefore be read together with the article on confidentiality.

Moreover, France and the Russian Federation, supported by other countries, recognised the importance of a provision in the Preamble imposing a moral obligation. The current text of the Preamble therefore affirms that spent fuel and radioactive waste within military and defence programmes which are not covered by the Joint Convention should nevertheless be managed in accordance with the objectives of the Joint Convention.

During the negotiations a series of arguments were put forward to support either the "voluntary" or "mandatory" approach. Advocates of the "voluntary"

8. Some experts consider defence programmes to cover, *inter alia*, military programmes. In other words, some defence programmes are undertaken by military bodies (under the Ministry of Defence) and others by civilian agencies (CEA in France, DoE in the US, etc.).

approach (in first place France, China and the Russian Federation) argued that, in order to be realistic, a degree of flexibility was necessary. An over-mandatory approach could have led to a text that was perfect on paper but with no likelihood of implementation. The risk of possible intrusion into the military activities of States would have made the Joint Convention a dead letter. Those advocating a "mandatory" approach (primarily the United States and the United Kingdom) took the view that, from a legal standpoint, a "voluntary" approach gave no guarantee that the Joint Convention would be uniformly applied by all the contracting parties. There would be no such danger with a "mandatory" approach. Although the parties would still be responsible for identifying and declaring radioactive waste subject to the Joint Convention, such declarations would be based on clearly defined and objective criteria identical for all countries. It was argued that the "mandatory" approach would have the advantage of covering similar situations in all the contracting parties.

After long discussions among the five nuclear weapon States, a compromise text was submitted to the Group of Experts in plenary session. Article 3.3[9] combines "voluntary" and "mandatory" elements. The voluntary element is contained in the first part of paragraph 3: radioactive waste and spent fuel[10] of military and defence origin are outside the Joint Convention regime unless the contracting parties expressly opt for inclusion. The "mandatory" element is in the second part of paragraph 3: the inclusion of waste and spent fuel of military or defence origin is automatic once they are transferred permanently to civilian programmes and managed exclusively under such programmes. This provision was favourably received by most delegations. The Nordic countries, after having stressed that their expectations were not entirely met, recognised that this provision represented an innovation in this field: not only had sensitive terminology been used in international law for the first time, but the contracting parties had agreed to disclose information on what had previously been a protected area. The implication of this provision is difficult to assess at this stage and an evaluation will be possible only after the first national reports are submitted by contracting parties. This provision is in line with the spirit of the Joint Convention, conceived as an "incentive" instrument.

To conclude on this first part of the negotiations it should be stressed that Article 3.3 is not exclusively addressed to the five nuclear weapon States. Although it covers primarily radioactive waste from facilities producing nuclear weapons and spent fuel from nuclear submarines, other military activities generating this kind of waste or fuel are in principle covered. This is the case, for example, for waste produced in military hospitals or during war situations. Radioactive waste from such activities is also subject to the relevant provisions of the Joint Convention.

9. Art.3.3 provides: "This Convention shall not apply to the safety of management of spent fuel or radioactive waste within military or defence programmes, unless declared as spent fuel or radioactive waste for the purposes of this Convention by the Contracting Party. However, this Convention shall apply to the safety of management of spent fuel and radioactive waste from military or defence programmes if and when such materials are transferred permanently to and managed within exclusively civilian programmes."

10. The inclusion of spent fuel of military origin follows the same lines as the decision to extend the scope of application of the Convention to spent fuel.

C. Links Between the Joint Convention and Other International Legal Instruments

1. The 1994 Nuclear Safety Convention

(a) Two problems: overlapping and gaps. The Nuclear Safety Convention was used as a model for the Joint Convention. Some experts have even referred to them as sister conventions. The two texts are related, not just in terms of structure and of the safety principles defined, but also in terms of their respective scopes of application.

Regarding any potential interaction between the fields of application of the two texts, the Group of Experts was faced with the twofold task of minimising instances of overlapping, where the two texts might apply to the same subject or to the same situation, and of preventing any gaps from arising which might leave a given object or situation not covered by any convention. The objective was, of course, to produce a consistent system able to provide a satisfactory solution to all questions, as a whole, relating to the safety of spent fuel and radioactive waste management. With this in mind, when the discussions began, the participants in the Group of Experts developed different strategies.

Some countries, which might be said to be in favour of strict legal orthodoxy, would have liked the two texts to remain entirely separate without any potential overlapping. They thought that the Joint Convention might therefore include a provision expressly laying down that it would not apply wherever the Nuclear Safety Convention already applied for a contracting party to both Conventions. This had the disadvantage of creating discriminatory treatment which might prejudice any States which were parties to the Joint Convention but not to the Nuclear Safety Convention. These States would not be able to have access to the technical information contained in national reports and relating to waste located on the premises of a nuclear facility covered by the Nuclear Safety Convention. There was also the risk that situations dealt with solely under the Nuclear Safety Convention might be dealt with less thoroughly than if they had been under the Joint Convention, which develops a safety approach specific to spent fuel and radioactive waste whereas the Nuclear Safety Convention focuses mainly on the intrinsic safety of power reactors.

The other countries took the pragmatic view that no situation should be overlooked so that all the parties to the Joint Convention could have access to the information on all spent fuel and all radioactive waste, whether or not they were covered by the Nuclear Safety Convention and "dealt with" within that context, and, finally, that the review process should be as comprehensive as possible. To this end they were prepared to accept that, in certain cases, the contracting parties to both Conventions might have to "review" given situations twice, under each of the Conventions.

A few concrete examples are given before describing the solutions finally adopted.

(b) Case examples: spent fuel and radioactive wastes/decommissioning of nuclear facilities. Let us first deal with the case of spent fuel and radioactive waste which are on the site of a nuclear installation within the meaning of the Nuclear Safety Convention.

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Under Article 2 of the Nuclear Safety Convention, "nuclear installation" within the meaning of the Convention is "any land-based civil nuclear power plant ... including such storage, handling and treatment facilities for raw materials as are on the same site and are directly related to the operation of the nuclear power plant". In other words, spent fuel or radioactive waste storage facilities located at the site of a nuclear power plant are subject to the safety principles defined by the Nuclear Safety Convention. These principles do not go into great detail concerning spent fuel and radioactive waste management, but Article 19(viii) does lay down that:

> the generation of radioactive waste resulting from the operation of a nuclear installation is kept to the minimum practicable for the process concerned, both in activity and volume, and that any necessary treatment and storage of spent fuel and waste directly related to the operation and on the same site take into consideration conditioning and disposal.

Nevertheless, the members of the Group of Experts considered that the safety principles laid down by Article 19(viii) were inadequate and that it would be preferable to apply specific safety principles defined in the Joint Convention to the storage of spent fuel and radioactive waste on a power plant site. Consequently, in the absence of a provision excluding the application of the Joint Convention wherever the Nuclear Safety Convention already applies (which was the solution finally adopted by the Group of Experts), both Conventions will apply cumulatively.

Turning to the decommissioning of nuclear installations, Article 2(i) of the Nuclear Safety Convention stipulates that "such a plant ceases to be a nuclear installation when all nuclear fuel elements have been removed permanently from the reactor core and have been stored safely in accordance with approved procedures, and a decommissioning programme has been agreed to by the regulatory body".

Here it is quite clear that the Nuclear Safety Convention ceases to apply whenever a decommissioning programme has been approved. The decommissioning of installations and ensuing dismantling operations are therefore not covered by that Convention.

In view of this, the Group of Experts considered that it would make sense for the Joint Convention to take over at the point where the Nuclear Safety Convention ceased to apply. Decommissioning/dismantling operations are connected with the problems of spent fuel and radioactive waste safety, which are specifically addressed by the Joint Convention. The Joint Convention therefore includes an Article 26, entitled "Decommissioning", which lays down that "Each Contracting Party shall take the appropriate steps to ensure the safety of decommissioning of a nuclear facility. Such steps shall ensure that ..."

It should be noted that Article 26 applies to "nuclear facilities" according to the definition in Article 2(f): "nuclear facility means a civilian facility and its associated land, buildings and equipment in which radioactive materials are produced, processed, used, handled, stored or disposed of on such a scale that consideration of safety is required". This definition of nuclear facilities under the Joint Convention is, therefore, very broad and covers spent fuel and radioactive waste management facilities, which are the main subjects of the Convention, as well as other facilities such as research reactors or power plants, which under normal circumstances fall outside the scope of application of the Joint Convention.

It must therefore be concluded that, for decommissioning, the Group of Experts

intended to broaden the "natural" scope of application of the Joint Convention to all kinds of facility. This decision, which may seem surprising at first sight, should be viewed in the light of two considerations. First, the Group of Experts wished to remain practical and deal with a situation, i.e. decommissioning, which would otherwise have remained outside any legal cover. Second, technical grounds for this pragmatism were that the concept of decommissioning could be argued as falling within the realm of waste management, this being one of the two subjects of the Convention.

(c) Review and reports. The concern of the Group of Experts to address all situations involving spent fuel or radioactive waste satisfactorily by opting for a convention with a broad field of application would not, in its view, lead to systematic duplication of review procedures conducted under the two Conventions for States party to both.

The risk of duplication of review procedures arises for the case of spent fuel and radioactive waste located at the site of a facility covered by the Nuclear Safety Convention. It does not arise in the case of decommissioning since in this respect the Joint Convention will not apply cumulatively, but will take over at the point (approval of the decommissioning programme) where the Nuclear Safety Convention ceases to apply.

In the first instance, that of spent fuel or radioactive waste located at a power plant site, the Group of Experts thought that the problem might be settled as follows. The Nuclear Safety Convention as well as the Joint Convention will in effect be implemented through review meetings, held at regular intervals, during which the contracting parties will review and discuss the national reports prepared by each of them on the measures taken to fulfil every obligation listed in the Convention.[11]

For the detailed implementation of the review process, it is provided that once the Joint Convention enters into force the contracting parties will adopt rules of procedure and financial rules for the review meetings. This was done in April 1997 on the occasion of the first meeting of the contracting parties to the Nuclear Safety Convention.

The Group of Experts considered that it was in the context of rules of procedure to be adopted by the contracting parties to the Joint Convention that the provisions preventing the contracting parties to both Conventions from duplicating unnecessarily the national reports and review meetings concerning spent fuel and radioactive waste at a power plant site could be inserted.

2. 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal and the Directive 92/3/Euratom of 3 February 1992

(a) Importance of a mandatory international instrument. One issue which was closely examined from the legal and the political standpoint concerns the regime applicable to the transfer of spent fuel and radioactive waste beyond national boundaries.

11. Arts.5 and 20 of the Nuclear Safety Convention and Arts.30 and 32 of the Joint Convention.

As soon as the negotiations began, the experts' attention was drawn to the need to impose a binding legal regime on transboundary movements of radioactive waste. Some ambiguity concerning the international regime applicable was noted. The Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal states in Article 1.3 that: "wastes which, as a result of being radioactive, are subject to other international control systems, including international instruments, applying specifically to radioactive materials, are excluded from the scope of this Convention". As a result of this provision, one year later a Code of Practice for the International Transboundary Movement of Radioactive Waste was adopted by the IAEA.[12]

The question before the Group of Experts was to decide whether the Code of Practice, being an instrument of a non-binding nature, could fulfil the requirements contained in Article 1.3 of the Basel Convention and therefore avoid the application of the Convention's regime to transfers of radioactive waste across national borders. A group of legal experts met separately and reached the conclusion that Article 1.3 did not require the adoption of a mandatory international instrument. However, the group agreed on the importance of going a step further and creating a binding regime by the inclusion of a specific provision on transboundary movements in the Joint Convention.

(b) An interesting metamorphosis. The draft article on transboundary movements of radioactive waste and spent fuel underwent considerable change during the six official meetings of the Group of Experts. When comparing the first and the final draft versions there is a substantial difference in approach. In the beginning, two tendencies were followed: one favouring a simple and short provision, the other aiming at incorporating the key principles laid down both by the IAEA Code of Practice and the Basel Convention. Later, the Group opted for the second approach in its concern for precision and legal consistency. As a result, Article 27 is now highly structured and relatively complex.

After specifying the spirit in which any movement of radioactive waste and spent fuel should be undertaken (in accordance with the provisions of the Joint Convention and relevant binding international instruments), Article 27 lists the obligations and rights of the countries concerned by the movement (country of origin, country of destination and country of transit). In this respect, it is interesting to compare the regime under the Joint Convention with both the Basel Convention, which applies to different but highly dangerous substances (hazardous waste of chemical origin), and the European Directive 92/3/Euratom on the transfer of radioactive waste within and outside the Community area (regional instrument).

Article 27 specifies that the export may be authorised after notification to and consent of the country of destination. This step is therefore an essential prerequisite to any movement. It should be noted that the Basel Convention and Directive 92/3/Euratom both introduce an additional element: the consent of the country of

12. The Basel Convention was adopted on 22 Mar. 1989, whereas the Code of Practice for the International Transboundary Movement of Radioactive Waste was adopted by the IAEA on 21 Sept. 1990.

destination must be given in writing to the notifying authority of the country of origin. Furthermore, the Directive specifies that the written reply should be sent within two months of the notification.

The country of origin authorises the movement only after having verified, by means of the consent of the country of destination, that the latter has the administrative and technical capacity as well as the regulatory structure needed to manage spent fuel or the radioactive waste in a manner consistent with the principles of the Joint Convention. The country of destination can therefore authorise the movement only if it has the administrative and technical capacity required.

Finally, the country of origin must admit re-entry into its territory of radioactive waste or spent fuel if the movement thereof cannot be completed in conformity with Article 27. The scope of this principle is made more flexible by means of a derogation. The country of origin may circumvent this requirement if an alternative safe arrangement can be made with the country of destination. It should be pointed out, however, that no deadline is set for the conclusion of such an alternative arrangement. The Basel Convention lays down, for example, a specific time limit of 90 days. The European Directive gives to this principle a more strict interpretation since it provides for no possibility of an alternative arrangement.

Care was taken in the Article to specify that shipment intended for storage or disposal at a destination south of latitude 60 degrees south is not permitted. The arguments put forward for this provision referred to the Antarctic Treaty[13] and to the need to comply with this pre-existing binding international instrument. On the other hand, Article 27 includes no reference to transboundary movements to developing countries. Whilst the Preamble recognises the sovereign right of each country to ban the import into its territory of foreign spent fuel and of radioactive waste, the text does not follow the same approach as Directive 92/3/Euratom, Article 11 of which states that the competent authorities of member States shall not authorise shipments to a State party to the Fourth ACP–EEC Convention which is not a member of the Community.[14]

(c) The contentious issue of transit States. Article 27 also mentions transit States. Paragraph 1(ii) stipulates that "transboundary movement through States of transit shall be subject to those international obligations which are relevant to the particular modes of transport utilised". This provision was much debated. The majority of the delegations to the Group of Experts considered that since several

13. The Antarctic Treaty was adopted in Washington on 1 Dec. 1959.

14. Art.39 of the Fourth Convention between the African, Caribbean and Pacific (ACP) countries with the EEC signed in Lomé on 15 Dec. 1989 states that the Community bans any direct or indirect export of hazardous and radioactive wastes to the ACP States. It should also be noted that the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (adopted in Bamako on 29 Jan. 1991) prohibits, as its title suggests, any imports of hazardous waste, including radioactive waste, into Africa. This is a regional convention which is open exclusively to countries of the African Continent. Similarly, another regional instrument, the Convention to Ban the Importation into Forum Countries of Hazardous and Radioactive Wastes and to Control Movement and Management of Hazardous Wastes within the South Pacific Region (adopted in Waigani on 16 Sept. 1995) bans the import of radioactive waste in the South Pacific Region.

technical regulations already apply to the transport of radioactive materials, including waste, it was not appropriate to address this matter in detail in the text of the Joint Convention.

Paragraph 1(ii) of Article 27 is also closely linked to the issue of the identification of the rights of transit States. More precisely, a choice had to be made from three possible procedures: the prior consent of transit States, simply notifying/informing transit States, or taking no particular step in relation to those States before the transfer. Four proposals were submitted to the Diplomatic Conference in charge of adopting the text of the Joint Convention. The proposals requested, directly or indirectly, the prior consent of and/or notification to transit States. In the end, none of these proposals was endorsed and the text as it stands now contains no reference to either notification or consent.

Article 27.3(i) affirms that public international law should prevail: "Nothing in this Convention prejudices or affects (i) the exercise, by ships and aircraft of all States, of maritime, river and air navigation rights and freedoms, as provided for in international law." This entails that only the rights recognised by existing international instruments are protected during a transboundary movement of radioactive waste. In other words, if, for instance, a ship carrying radioactive waste or spent fuel crossed the territorial waters of another country, the latter could not invoke the right of prior consent or of prior notification since the principle of innocent passage through territorial waters recognised under the law of the sea would prevail.[15]

A comparative analysis of this provision with Directive 92/3/Euratom again shows several differences. The Directive makes a distinction between the procedure applicable to movements within the European Union and that applicable to movements outside the Union. On the one hand, during transfers between member States, the country of origin must send an application for authorisation to the country of destination and a request to the country or countries of transit for approval. Transit States must notify their approval or refusal, including the reasons for the refusal, to the country of origin within two months. On the other hand, where the transfer takes place outside the European Union, two different regimes apply. If the waste is imported into the Union, the EU State of destination acts as if it were a State of origin (it has therefore the obligation to authorise the transfer only after the prior consent of transit States which belong to the Union). Surprisingly, if the waste is exported from the Union, transit States are not mentioned at all (therefore there is no obligation to receive prior consent, nor to notify transit States in advance of the passage of radioactive waste through their territorial waters or airspace).

(d) Reasoned assessment. While comparative analysis of the Basel Convention and the Joint Convention shows that transboundary movements of hazardous waste are subject to a more demanding regime than shipments of radioactive waste and spent fuel, this difference in regime is explained largely by the political context in which the Basel Convention was framed. The 1980s were affected by scandals connected with the discovery of major flows of toxic chemical wastes to

15. Convention on the Law of the Sea adopted at Montego Bay on 10 Dec. 1982.

developing countries, and in particular to the African Continent. The Organisation of African Unity (OAU) therefore played a major role in the negotiations on the Basel Convention, the purpose of which was to set up a legal framework which would reduce the risk of hazardous waste being dumped on the territory of countries not equipped with suitable management techniques. The negotiations for the Joint Convention were held in a much quieter political climate. Instances of dumping of radioactive waste have so far been practically non-existent.[16] Nuclear countries are highly aware of the negative impact that the discovery of suspect practices relating to the shipment of radioactive wastes might have on activities connected with the peaceful use of nuclear energy.

Furthermore, moving beyond a comparison of the Joint Convention and the Basel Convention to refer to the international law applicable, attention should be drawn to another major difference between the two regimes concerning compensation for damage likely to arise during the shipment of hazardous and radioactive waste. The Joint Convention does not mention the concept of nuclear civil liability for damage due to radioactive waste, since the Group of Experts agreed that other international instruments would apply in such cases.

Both in the 1960 Paris Convention and in the 1963 Vienna Convention,[17] the definitions of "nuclear substances" and of "nuclear materials" cover radioactive waste. Consequently, since both Conventions apply to the transport of nuclear substances and materials, the civil liability regime established by the Conventions would come into play for all damage caused during the transboundary movement of radioactive wastes. A similar situation involving hazardous wastes within the meaning of the Basel Convention would remain unsolved at the level of public international law. During the Basel Convention negotiations, in the absence of a compromise among countries, the issue of compensation was postponed to a later stage. Thus Article 12 of the Basel Convention merely recommends the parties to co-operate with a view to adopting a protocol setting out appropriate rules and procedures in the field of liability and compensation for damage resulting from the transboundary movement and disposal of hazardous wastes. In 1992 an *ad hoc* working group was set up after the entry into force of the Basel Convention and given the task of preparing the protocol. To date, discussions on this additional protocol are not yet concluded.

(e) Extension to non-contracting countries. One last point of discussion before the Group of Experts was the decision to broaden the scope of application of Article 27 to all transboundary movements of spent fuel and radioactive waste, provided that at least one of the two countries (those of origin and destination) is party to the Joint Convention. The decision to cover transfers involving a non-contracting country was taken after close assessment of the consequences. Three

16. It should be noted that the project to ship 60,000 barrels of low-level radioactive waste from Taiwan to North Korea did not have any impact on the Joint Convention negotiations. The countries found out about the planned shipment at the beginning of 1997, when the negotiations concerned were reaching the final stage.

17. Convention on Third Party Liability in the Field of Nuclear Energy adopted in Paris on 29 July 1960 and the Convention on Civil Liability for Nuclear Damage adopted in Vienna on 21 May 1963.

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arguments were put forward to emphasise the risks of confining cover to transboundary movements between contracting parties only:

(1) In as much as the Joint Convention would enter into force in countries at different times depending on dates of ratification, it did not seem desirable to apply different procedures to transboundary movements originating in the same country depending on whether or not the country of destination was a contracting party.
(2) Assuming that movements with non-contracting parties had not been covered, the Basel Convention could have applied, with the risk of applying two different regimes to the same materials.
(3) Finally, in order to prevent illegal traffic, a non-contracting party with inadequate facilities for waste management, according to the safety standards established by the Joint Convention, should nevertheless be protected by the regime of the Joint Convention.

The decision to broaden the scope of the Joint Convention opened up a political issue. China expressed its sovereign regarding its sovereign rights on Chinese Taipei. More precisely, since the decision to broaden the scope of Article 27 implies that the Convention will apply to transboundary movements between a contracting party and an entity which is not a State in its own right, this could create a risk of weakening the position of the State of this entity. This issue was discussed at length among the directly interested countries but no compromise could be reached.

D. Conclusion

The profile of the Joint Convention may now be outlined. This is an "incentive" Convention that contains most of the modern principles recognised in international law. The incentive spirit of the Convention, which follows the example of the 1994 Nuclear Safety Convention, consists of encouraging the contracting parties to pursue work at national level in order to meet, progressively, the objectives defined by the Convention. No sanction is therefore laid down for lack of execution of these obligations. However, this "incentive" approach takes a different turn from the Nuclear Safety Convention. The Joint Convention, in its Article 38 on the resolution of disagreements, introduces the opportunity to ask for mediation, conciliation and arbitration if the consultation procedure proves unproductive. This provision, which was negotiated during the Diplomatic Conference, is not identical to the corresponding article in the Nuclear Safety Convention, where only consultation is mentioned. To what extent is the "incentive" spirit consistent with a possible decision of an arbitrator?

The Joint Convention is also imbued with a set of key principles recently recognised in international law. These principles are stated not only in the Preamble but also in the main body of the text. More specifically, the Preamble to the Joint Convention runs through the principles of self-sufficiency and of safe environmentally sound management of radioactive waste (cf. Agenda 21/Chapter 22) as well as through more technical principles proper to nuclear law, such as providing information to the public and the promotion of a nuclear safety culture.

It is in the main body of the text, however, that many key principles of international law appear, making this instrument a modern convention. The principles of protection of the environment, of prevention of accidents and mitigation of

their consequences, of sustainable development, the ALARA ("as low as reasonably achievable") principle, and the principles of protection of future generations and of good neighbourliness are all mentioned in the text.

All these elements make this Convention an important step in the field of international nuclear law.

AMELIA DE KAGENECK and CYRIL PINEL*

ARE JUDGES BEYOND CRITICISM UNDER ARTICLE 10 OF THE EUROPEAN CONVENTION ON HUMAN RIGHTS?

A. Introduction

On the premise that democratic government is founded, *inter alia*, on the accountability of public bodies and their officials, as well as on the popular participation in collective decision-making by the governed at all levels of government, there is merit in the proposition that it is improper to curb open debate, especially in matters which are of public interest. In so far as the work of the judiciary in general, and of judges in particular, is in the public domain and thus of public interest, the value of the freedom of expression applies, in principle, with equal force. Freedom of expression in the legal domain and in relation to the work of judges serves a variety of useful purposes in democratic society. Freedom of expression serves to uphold the integrity of the principles of democracy which require that governmental institutions should be transparent and accountable, and in that sense the judicial domain, very much like other branches of government, benefits from a healthy exchange and interaction of opinions. The administration of justice is better served by well-informed participants than by ignorance, and freedom of expression can contribute to a full and rigorous assessment of information in the judicial context. Similarly, in modern democratic society, all individuals, but especially legal journalists, lawyers and other officials of the legal establishment, contribute to the architecture of judicial policy through the expression of their opinions. Freedom of expression in this context can also prove to be an instrument of individual and professional self-fulfilment. This is considered crucial in any society which is dependent upon the participation of the people.[1]

The European Court of Human Rights (the Court)[2] has endorsed the import-

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1. For the place of these values in a democratic society see Barend van Niekerk, *The Cloistered Virtue. Freedom of Expression and the Administration of Justice in the Western World* (1987), chap.1. On the general principles relating to the value of freedom of expression see Eric Barendt, *Freedom of Speech* (1987) and Frederick Schauer, *Free Speech: A Philosophical Enquiry* (1982).

2. The supervision of contracting States' compliance with the Convention is presently undertaken by the European Commission of Human Rights (Arts.19–37 of the Convention),